

Highlights of Tianjin







CONTENTS



City of Coordinated Development

- 1 Tianjin embraces big opportunities in the 5th year of Beijing-Tianjin-Hebei coordinated development
- 2 Tianjin accelerates the construction of “one base, three zones”
- 3 Tianjin undertakes the non-capital functions of Beijing
- 4 Tianjin Binhai-Zhongguancun Science and Technology Park to develop into a highland for collaborative innovation
- 5 Speeding up the construction of the Beijing-Tianjin-Hebei Big Data Comprehensive Experimental Zone
- 6 Various alliances in Beijing-Tianjin-Hebei region are dedicated to collaborative innovation
- 7 Implementing a talent service green card system in Beijing, Tianjin and Hebei
- 8 Beijing-Tianjin-Hebei intercom traffic cards cover bus and subway transport
- 9 Tianjin-Xiong’ an Intercity High Speed Railway is included in the national plan
- 10 Interconnection of ports in Tianjin and Hebei
- 11 The pattern of four high-speed rail corridors in Beijing and Tianjin is taking shape
- 12 Tianjin Cargo Airlines is permitted to start operations
- 13 A new pattern of technological achievements transformation is taking shape

City of Intelligent Innovation

- 14 Tianjin ranks fourth in China's urban innovation competitiveness
- 15 Building Tianjin Intelligent Harbor on the basis of the intelligent technology industry clusters
- 16 Promulgation of the Smart Manufacturing Ten-Article Policy of Tianjin
- 17 Implementation of “30 Articles on Financial Reform” in Tianjin
- 18 Tianjin accelerates the construction of a national advanced manufacturing R&D base
- 19 Financial Innovation Operation Demonstration Zone becomes a new business card of Tianjin
- 20 “Ten robots” in the Three-Year Action Plan
- 21 The “In-depth Reform Program” of Tianjin Pilot Free Trade Zone won approval from the central government
- 22 China-Singapore Tianjin Eco-City: a model of successful smart city construction
- 23 World record of water gliders’ dive depth is renewed
- 24 "Tianhe-3" exascale supercomputer prototype successfully developed
- 25 New-generation AI technology industry funds of 100 bln CNY established in Tianjin
- 26 FAW-Volkswagen North China Base, Samsung Motor MLCC and other high-level projects completed and put into operation
- 27 Ten national research institutes introduced to Tianjin
- 28 The world's largest earthquake engineering simulation research facility built in Tianjin
- 29 Successful development of the global leading "super yeast"



City of Opening Up

- 30 World Intelligence Conference focuses on new achievements in intelligent innovation
- 31 International Promotion of Tianjin Vocational Education "Luban Workshops"
- 32 Attractive policies help multinational companies to settle in Tianjin
- 33 Summer Davos in China – World New Champions Annual Meeting
- 34 “Green Passage” in the Northern International Shipping Core Zone
- 35 China International Mining Conference promotes innovation cooperation between domestic and foreign mining companies
- 36 Overseas Chinese Expo becomes a national characteristic “Belt and Road” corridor
- 37 Tianjin National Convention and Exhibition Center – an exhibition platform in northern China
- 38 Tianjin Port opened Sino-Russian International Freight Train
- 39 Kim Baldridge, a foreign professor at Tianjin University, wins Chinese Government Friendship Award
- 40 Remarkable results have been achieved in the construction of Sino-Egyptian TEDA-Suez Economy and Trade Cooperation Zone
- 41 Punjab Tianjin University of Technology starts operation in Pakistan as scheduled
- 42 A good business environment to help foreign companies to take root in Tianjin



City of Innovation and Entrepreneurship

- 43 Tianjin is the first in the country to implement the new enterprise registration system
- 44 Tianjin completely cancels urban supporting infrastructure fees
- 45 “Tianjin Eight Articles” — optimizing the business environment
- 46 Government Services Campaign for Enterprises
- 47 Approval system reform contributes to continuous improvement of the business environment
- 48 Tianjin launched the pilot reform to separate operating permits from business licenses
- 49 Fee reduction and efficiency improvement at Tianjin Port
- 50 Eight new measures for "reduction of costs"
- 51 From “Tianjin Eight Articles” to “Nineteen Articles on Private Economy”
- 52 Tianjin Pilot Free Trade Zone launched the first batch of new electronic business licenses
- 53 Tianjin has established 50 “unmanned supermarkets” of government services
- 54 Night economy gathering areas are built in Tianjin
- 55 Tianjin ranks among China's “Top Ten” in urban business environment
- 56 Tianjin implements five major projects to revitalize time-honored brands
- 57 Attracting entrepreneurs from home and abroad to Tianjin



City of Wonderful Life

- 58 Tianjin Municipality implements 20 livelihood projects every year
- 59 Tianjin became the first national demonstration city for public transport improvement
- 60 Keeping the warmth of the city—Tianjin began to prolong heating supply in the winter of 2016
- 61 Tianjin completed the first batch of ecological protection red line delineations in China
- 62 Tianjin plans green ecological barriers for liveable city construction
- 63 China-Singapore Tianjin Eco-City started the construction of 65 “Sponge City” pilot projects
- 64 Implementation of Tianjin Ecological Environmental Protection Regulations
- 65 The opening of Shuixi Park, the largest urban park in Tianjin
- 66 Tianjin implemented the three-year action plan for shantytown renovation
- 67 Tianjin was selected as one of the “Top Ten Cities of Electronic Services”
- 68 Tianjin accelerates the three-year operation of rural settlements improvement
- 69 A new round of rural power grid upgrading is launched in Tianjin



City of Humanistic Landscapes

- 70 Haihe River Sightseeing Tour: a business card of Tianjin
- 71 Italian Style Tourist Area becomes a cultural model by the Haihe River
- 72 Wudadao: International Architecture Expo
- 73 Zhou Enlai & Deng Yingchao Memorial
- 74 Yangliuqing Woodblock New Year Paintings carry forward the heritage of four hundred years
- 75 City Lounge: Tianjin Cultural Center
- 76 Jiefangbei Road Financial Street: “Wall Street” in North China
- 77 Tianjin Finance Museum, a place of historical significance
- 78 Beijiang Museum: the living fossil of modern Chinese museums
- 79 National Maritime Museum: The Forbidden City on the sea
- 80 Xiaozhan Military Training offers a glimpse of Tianjin in the modern history of China



City of Cultural Attractions

- 81 Tianjin successfully hosted the 13th National Games
- 82 Zhang Liming and Jiang Zilong won the title of “Reform Pioneer”
- 83 The birthplace of the first community volunteer organization in China
- 84 The first city to issue cultural cards in the country
- 85 A popular library of Tianjin attracts attention from home and abroad
- 86 An asteroid is named after Tianjin University
- 87 Nankai University through a century: patriotic struggles and talent cultivation
- 88 Tianjin has launched the civilization city construction
- 89 Theatrical traditions of Tianjin
- 90 Tianjin: hometown of northern Quyi arts
- 91 The first overseas college of Juilliard School is established in Tianjin

City of Coordinated Development



01-13



01 Tianjin embraces big opportunities in the 5th year of Beijing-Tianjin-Hebei coordinated development



On February 26, 2014, General Secretary Xi Jinping heard the Beijing-Tianjin-Hebei work report and delivered an important speech, which promoted the coordinated development of the three places to the level of a major national strategy.

In response, Tianjin adopted a global awareness and took specific measures to implement the strategy.

Four implementation opinions on accelerating the construction of "one base, three zones" were re-released. The thousand-people mobilization meeting for deepening the Beijing-Tianjin-Hebei coordinated development caused a sensation in Tianjin.

Seizing the historical opportunity of development, Tianjin issued the "Guidance Opinions" on undertaking the non-capital functions and developed the "1+16" undertaking pattern with Binhai New Area as the comprehensive carrying platform.

Thanks to the close cooperation between Tianjin and Hebei, the strategic cooperation agreement for the construction and development of Xiong'an New Area has been comprehensively deepened in eight aspects.

Tianjin party and government delegations visited Beijing, Hebei and Xiong'an New Area several times, and signed more strategic cooperation framework agreements with Beijing and Hebei Province.

Over the past five years, Tianjin has focused on implementing the national strategy, and made significant achievements in the coordinated development of Beijing-Tianjin-Hebei region.

The railway network in Beijing-Tianjin-Hebei region has been well developed, along with the Beijing-Tianjin inter-city monthly ticket system and the half-hour-access road network. 21,000 pollution enterprises have been shut down or



regulated, and the number of days with heavy pollution weather in 2018 decreased by 13 days, the best monitored level since 2013. The number of days above the standard was 207, an increase of 0.2 percentage point.

The 736-square-kilometer area between the downtown area and Binhai New Area has been planned as ecological barrier area; the 875-square-kilometer wetlands such as Qilihai, Beidagang, Tuanbo and Da-huangpu will be fully upgraded to protect the “Kidney of Beijing-Tianjin-Hebei region”.

The “1+16” industry undertaking platforms have been completed. From 2014 to 2018, Beijing enterprises invested more than 640 billion CNY in Tianjin, accounting for more than 40% of Tianjin’s domestic investment. Over the past two years, Binhai-Zhong-guancun Science and Technology Park alone attracted more than 900 enterprises with a registered capital of 10.4 billion CNY.

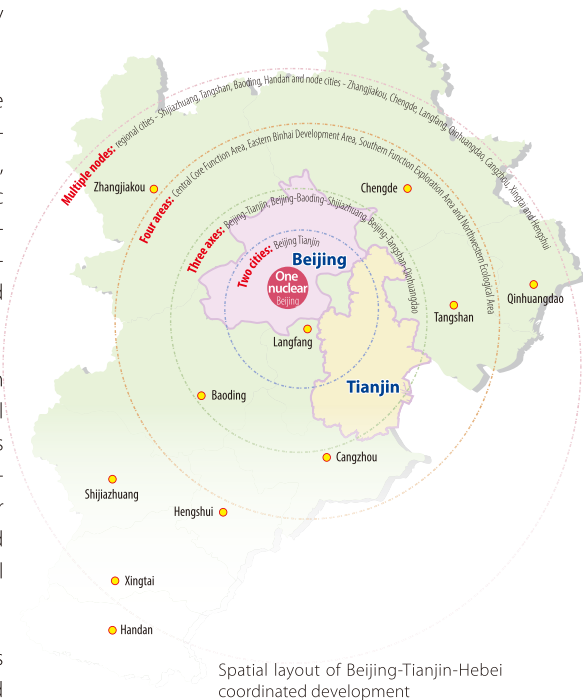
By deepening cooperation with scientific research institutions in Beijing and Hebei, 160 state-level research institutes and high-level R&D institutions have been established in Tianjin. With the introduction of collaborative innovation policy, the number of national high-tech enterprises in Tianjin exceeded 5,000, and its level of comprehensive technological innovation ranks among the top in the country.

Tianjin Airport opened passenger and cargo routes to more than 20 “Belt and Road” countries and regions. The number of Tianjin Port International Container Lines reached 127. With the support of infrastructure interconnection, the “Beijing-Tianjin-Hebei on railroad tracks” has taken shape . . .

On January 17, 2019, General Secretary Xi Jinping inspected Tianjin and delivered an important speech at the Beijing-Tianjin-Hebei Collaborative Develop-

ment Symposium in Beijing. He emphasized the necessity of spontaneity, initiative and creativity in the coordinated development, and encouraged the people to dedicate themselves to achieving new progress in the collaborated development of Beijing-Tianjin-Hebei region.

Spring is a season for revival. The constructors of Tianjin will follow the call of the era to compose new chapters of achievements.



Spatial layout of Beijing-Tianjin-Hebei coordinated development

02 Tianjin accelerates the construction of “one base, three zones”

Since the proposal of the strategy for the coordinated development of Beijing-Tianjin-Hebei, which defined the “one base, three zones” (National Advanced Manufacturing R&D Base, Northern International Shipping Core Zone, Financial Innovation Operation Demonstration Zone and Reform and Opening-up Pioneer Zone) function of Tianjin, Tianjin has conscientiously implemented the Beijing-Tianjin-Hebei coordinated development plan and pushed forward its development by taking over the non-capital functions from Beijing, improving the “traffic networks”, optimizing the “ecological circles” and connecting the “industrial chains”. Four “Implementation Opinions” for further accelerating the construction of “one base, three zones” were introduced. In 2018, the implementation of “one base, three zones” policy was accelerated, and the plan was established for the project-based support system. Out of the first batch of 126 major projects and items, 50 have been completed.

The construction of the national advanced manufacturing R&D base has been fully launched. Tianjin promoted the “1+10” action plan and support policy for the intelligent technology industry, introduced the implementation rules for the “10-article intelligent manufacturing policy”, held the 2nd World Intelligence Conference, signed more than 320 intelligent technology projects such as Ziguang Cloud Headquarters, and formed the independent safe industry chain represented by “Tianhe 1 Supercomputer”, Dawning Computer, and “Galaxy Kirin” operating system.

The function of the Northern International Shipping Core Zone has been significantly improved. Tianjin issued the “Implementation Opinions on Accelerating the Construction of the Northern International Shipping Core Zone”, where 19 key tasks were proposed, which provided fundamental guidance for the con-

struction of the core zone. In 2018, fee reduction and efficiency improvement activities were carried out at Tianjin Port in a solid manner. The “one-stop sunshine price” list benefited 1.38 million TEUs of goods, and over 290 million CNY was exempted. These business environment improvement practices were promoted all over the country by the General Office of the State Council.

Progress has been made in the construction of the Financial Innovation Operation Demonstration Zone and Reform and Opening-up Pioneer Zone. In 2018, drawing on its advantages in port economy, shipping center, financial leasing, etc., Tianjin created more than 200 financial innovation products; 11 projects such as financial leasing collecting foreign currencies were promoted all over the country; the pilot policy of foreign debt facilitation for leasing enterprises was implemented; and the cross-border aircraft, ship and offshore platform leasing business accounted for more than 80% of the national total.

Significant achievement has been made in the construction of Reform and Opening-up Pioneer Zone. On December 28, 2017, Binhai New Area proposed the goal of accelerating the construction of a prosperous and livable smart new city. A new round of reform was initiated, transforming the original seven functional areas into five, thereby realizing city-industry integration, alliances among giants, and complementary advantages.



Airbus A320 series aircraft Tianjin final assembly line



FAW-Volkswagen north China base was put into operation in Tianjin

03 Tianjin undertakes the non-capital functions of Beijing



Tianjin Wenzhou International Trade Center was opened, more than 3,000 merchants from Beijing Zoo wholesale market and Dahongmen wholesale market settled in.

By taking over the non-capital functions, Tianjin deepened its functional cooperation with Beijing. In 2018, Beijing enterprises invested a total of 102.523 billion CNY in Tianjin, accounting for 42.7% of the domestic investment.

Tianjin has formulated a “three-level list” of taking over the non-capital functions: identifying docking industries, key undertaking platforms, and key docking projects. It has also coordinated the effective docking of the districts in Tianjin and Beijing, and focused on building a “1+16” undertaking pattern.

“1” refers to Tianjin Binhai New Area District, which is also a strategic cooperation function area defined in the “Beijing-Tianjin-Hebei Collaborative Development Plan”. Mainly consisting of Tianjin Binhai-Zhongguancun Science and Technology Park and Lingang Economic Zone High-end Equipment Manufacturing Industry Base, etc., it is a comprehensive hosting platform. “16” refers to the 16 key undertaking platforms of the other 15 districts in Tianjin, including Baodi Zhongguancun Science and Technology Park, Jinghai Tuanbo Health Industry Park, Jinnan High-end Research Park, etc.

Tianjin also deepened its functional docking cooperation. The non-capital function undertaking projects were rechecked, and a meeting was held for Tianjin and the central enterprises to implement the Beijing-Tianjin-Hebei coordinated development strategy, signing agreements on 46 central enterprise projects with a total investment of more than 220 billion CNY. Agreements were also signed for a number of important cooperation projects, such as Tsinghua University High-end Equipment Manufacturing Research Institute, China Science and Technology Intelligent Identification Research Institute, and Guoneng New Energy Vehicle.

On December 20, 2017, the Beijing-Tianjin-Hebei Cooperation Office held a press conference in Beijing on strengthening the construction of key platforms for the promotion of Beijing-Tianjin-Hebei industrial transfer, and issued the “Opinions on Strengthening the Construction of Key Platforms for the Transfer of Beijing-Tianjin-Hebei Industry”. Beijing City Sub-center and the Hebei Xiong’an New Area were designated as the centralized undertaking areas, and four strategic cooperation functional areas were defined, namely Caofeidian Collaborated Development Demonstration Zone, Beijing New Airport Linkong Economic Zone, Tianjin Binhai New Area, and Zhangjiakou-Chengde Ecological Function Area. Of the 46 professional and characteristic undertaking platforms, there are 15 collaborative innovation platforms, 20 modern manufacturing platforms, 8 service industry platforms and 3 modern agricultural cooperation platforms.

In the future, Beijing, Tianjin and Hebei Province will cooperate closely to guide relevant innovation resources and transferrable industries to the above platforms. Now, the industry transfer and undertaking have entered a more precise track.



04 Tianjin Binhai-Zhongguancun Science and Technology Park to develop into a highland for collaborative innovation

Strengthening the link between Beijing and Tianjin and accelerating the construction of the Beijing-Tianjin-Hebei Innovation Community are important measures of Tianjin to promote the coordinated development of the Beijing-Tianjin-Hebei region. The Binhai-Zhongguancun Science and Technology Park, with a planning area of 10.3 square kilometers, enjoys the innovation policies of both Zhongguancun in Beijing and Tianjin Binhai New Area. It will undertake the transfer of high and new technology enterprises and transformation of significant scientific and technological achievements, become the concentrated place for advantageous resources of the capital, and turn into a new landmark in the Beijing-Tianjin-Hebei collaborative innovation development.

To improve the multi-level capital market service system and finance-enabled system, and explore the financing channels for micro, small and medium enterprises, Binhai-Zhongguancun Science and Technology Park and Tianjin Binhai Over-The-Counter Market (Tianjin OTC) signed an agreement on comprehensive strategic cooperation to guide enterprises to benign development in the capital market. On February 6, 2018, Tianjin OTC Binhai Zhongguancun Operation Center and Binhai Zhongguancun Board were launched, and the first batch of 23 enterprises was listed on the innovation board and the through board. This is not only the first step for Binhai-Zhongguancun Science and Technology Park to build a platform of technological and financial services, but also an important part of the Technological and Financial Service Center of Binhai-Zhongguancun Science and Technology Park.

Tianjin Binhai-Zhongguancun Science and Technology Park and other industrial cooperation platforms for coordinated development of the Beijing-Tianjin-Hebei region were highlighted at the 21st China Beijing International Science and Technology Industry Expo on May 18, 2018. In the exhibition area of the expo, the Beijing-Tianjin-Hebei



Tianjin Binhai-Zhongguancun collaborative innovation exhibition center

Industry Collaborative Development Achievements Exhibition was held for the first time, with more than 40 platforms from the three regions.

By the end of 2018, a total of 941 enterprises have been registered in Binhai-Zhongguancun Science and Technology Park, including more than 240 enterprises from Beijing with a registered capital of about 10.4 billion CNY. Zhongguancun Intelligent Manufacturing Street, Artificial Intelligence Laboratory and other quality projects have settled down here. The Binhai Sub-Center of the Sino-Eu Regional Economic Cooperation Center has been established, and six Sino-Eu industrial cooperation projects, including the Ukraine Barton Welding Institute and Tidfore European Research Center, have been signed and implemented. The Northern Aviation Logistics Base has actively cooperated with the Capital Airport and various airlines to build a cooperative carrier for the development of the Beijing-Tianjin-Hebei Airport System, and completed the construction of a transport service center in the aviation logistics area with a total area of about 15,000 square meters, greatly improving the efficiency of customs clearance. The Future Sci-Tech City strengthened the cooperation with Beijing Capital Group, promoted the planning of Beijing-Tianjin Cooperation Demonstration Zone, and accelerated the attraction of innovative talents from Beijing, Tianjin and Hebei.



05 Speeding up the construction of the Beijing-Tianjin-Hebei Big Data Comprehensive Experimental Zone



Beijing-Tianjin-Hebei—Tianjin intelligent technology industry demonstration base project promotion and exchange meeting • signing ceremony

The Beijing-Tianjin-Hebei Big Data Comprehensive Test Area is the only cross-provincial one among the seven national big data comprehensive test areas approved by the National Development and Reform Commission and other departments. On December 22, 2016, its construction was officially launched.

According to the "Beijing-Tianjin-Hebei Big Data Comprehensive Test Area Construction Plan", the Beijing-Tianjin-Hebei region will promote the interconnection of data resources, cooperation between data enterprises, construction of data parks, and build a big data industry integration pattern with Beijing as the innovation core, Tianjin as the comprehensive support, and cities in Hebei Province (Zhangjiakou, Langfang, Chengde, Qinhuangdao, Shijiazhuang) as application extensions.

Tianjin will build a sound system for the development and support of big data industry, promote col-

laborative innovation, and create an environment for the fusion of big data with supercomputing, cloud computing and cloud storage. It will also promote innovative application of big data in shipping, finance and cross-border e-commerce, and construct a demonstration area for tourism big data development and application. Paces will be accelerated to build internationally competitive big data industrial bases and data resource aggregation service areas.

In September 2018, the big data projects undertaken by the National Supercomputing Center in Tianjin, Dawning Information Industry Co., Ltd. and Tianjin Nankai University General Data Technology Co., Ltd. were included in the list of "2018 Big Data Industry Development Pilot Demonstration Projects" by the Ministry of Industry and Information Technology. Among them, the "demonstration platform of self-supported industrial innovation and public sharing big data" of the Supercomputing Center can provide

data resources, computing power and other data-based technical support services; Dawning Company's "big data intelligent platform for urban people's livelihood services" can meet the needs of public service collaboration for the sharing of information resources on people's livelihood, and promote the application of big data technology in people's livelihood services, social management and other smart city construction; the project of "universal big data storage, management and analysis platform research, development and application promotion" of Nankai University General will realize the collection, sorting, storage and analysis of massive, multi-source and heterogeneous big data, so as to solve the common problems of users in the financial, telecommunications and other industries in the unified storage and management of big data.

In 2018, the largest Internet data center in Tianjin was built and put into use in the high-tech zone, and strategic cooperation agreements were signed with 11 enterprises including Jingdong Cloud, Tianjin Unicom and CEI Cloud Data Center. It can accommodate 40,000 to 70,000 servers running at the same time, filling the gap of large-scale high-grade data centers in Tianjin. By the end of 2018, the scale of big data core and related industries in Tianjin had exceeded 35 billion CNY.



Beijing STACO has settled in Tianjin Airport Economic Zone, exemplifying the coordinated development of the Beijing-Tianjin-Hebei region



Aviation simulation training equipment developed by Tianjin Huayi Blue Sky Technology Co., Ltd.

06 Various alliances in Beijing-Tianjin-Hebei region are dedicated to collaborative innovation

In order to thoroughly implement the national strategy of Beijing-Tianjin-Hebei coordinated development and enhance its collaborative innovation capability in higher education services, Beijing University of Technology, Tianjin Polytechnic University and Hebei University of Technology established the Beijing-Tianjin-Hebei Collaborative Innovation Alliance in Beijing. It was clarified that Beijing University of Technology would lead the establishment of the "Beijing-Tianjin-Hebei Traffic Collaborative Innovation Center"; Tianjin Polytechnic University would lead the establishment of the "Beijing-Tianjin-Hebei Environmental Pollution Control Collaborative Innovation Center"; Hebei University of Technology would lead the establishment of "Beijing-Tianjin-Hebei Intelligent Equipment Technology and System Collaborative Innovation Center."

The alliance universities will jointly build an international open experiment platform for resources, and promote cross-school exchanges and training among students through measures such as sharing of excellent teachers, mutual engagement of professional teachers, and management of cadres through titular positions. Alliance universities will use the collaborative innovation center as a carrier to focus on the major needs of the coordinated development of Beijing-Tianjin-Hebei, jointly apply for the undertaking of national and local major research projects or international cooperation projects, and create a world-class collaborative innovation system that meets the national and local needs.

The Beijing-Tianjin-Hebei Research Institute Alliance was jointly established by Beijing Science and Technology Research Institute, Tsinghua University School of Public Administration, Tianjin Science and Technology Cooperation Promotion Association, and Hebei Academy of Sciences.

The Alliance comprehensively serves the coordinated development of Beijing-Tianjin-Hebei and the construction of Xiong'an New Area. With science and technology innovation, it will promote comprehensive innovation and development. It will focus on promoting the formation of a new cooperative pattern of open sharing of scientific and technological resources and free circulation of innovative elements, and establish a platform for sharing and collaboration of science and technology resources and collaborated innovation data network in the Beijing-Tianjin-Hebei region. It will also explore demand-oriented major projects and results-based service mechanisms, establish technology industry docking platforms and guidance funds for achievements transformation; strengthen the coordinated development strategy of Beijing-Tianjin-Hebei region and the implementation of the decision on the construction of Xiong'an New Area, and establish think tanks for modern city governance and technology strategy development.

The alliance has attracted 91 institutions as its members, including 51 research institutes, 29 universities, and 11 enterprises. The alliance also received attention from international academic organizations.

On December 21, 2018, the Beijing-Tianjin-Hebei Food Industry Association of Education and Industry was established at Tianjin Modern Vocational and Technical College. The 52 food enterprises and universities in the Beijing-Tianjin-Hebei region, as the first members of the Alliance Council, will actively promote the in-depth exchanges and cooperation between universities and enterprises in the region, realize the sharing of high-quality resources and give full play to the complementary advantages of universities and enterprises.



Workshop of Tianjin Youfa Dezhong Steel Pipe Co., Ltd.



The Beijing-Tianjin-Hebei collaboration and innovation exchange meeting was held in
Tianjin Binhai-Zhongguancun Science and Technology Park

07 Implementing a talent service green card system in Beijing, Tianjin and Hebei

At the end of 2017, the relevant departments of Tongzhou District of Beijing, Wuqing District of Tianjin, and Langfang City of Hebei Province jointly issued the "High-level Talent Service Green Card System (Trial)", so as to give full play to the roles of high-level talents, offer them convenience in work and life, and make the area more competitive and attractive.

Green cards are issued to the high-level talents with titles above provincial and ministerial level in Tongzhou, Wuqing and Langfang (TWL). The identity of applicants is reviewed and approved by the TWL Talent Work Joint Conference. The green cards can be used in the TWL area.

When the cardholders move between Tongzhou, Wuqing and Langfang, their academic qualifications and professional titles are recognized in corresponding levels, and they can enjoy the corresponding talent policies in the area. The three places regularly organize cardholders to participate in various forms of exchange activities such as training, seminars, investigations, and visits, and open channels for talent exchanges to further broaden the horizons of talents and improve their capability.

Cardholders have access to the resources on the TWL innovation platform. When applying for scientific and technological innovation platforms and scientific research projects, the cardholders can enjoy priority recommendations by relevant departments. Priority is also offered to them while making appointments for on-site office business, making enquiries about policies for talents and technology, and participating in the activities for recruitment and innovative projects.

Cardholders have access to a comprehensive health checkup once a year at designated agencies in the three places. Cardholders who seek medical treatment in public medical institutions in the three

places can enjoy priority treatment services through appointments. Every two years, the talent offices of the three places will take turns to organize a vacation and recuperation activity, so as to deepen cooperation among the high-level talents in the three places.

In order to better undertake the non-capital function projects, on October 15, 2018, Tianjin and Beijing signed a framework agreement to further strengthen their strategic cooperation, of which "TWL" regional cooperation is an important part. Innovative mechanisms will be adopted as a pilot measure in such areas as regional transportation interconnection, industrial docking cooperation, and comprehensive ecological environment management. Efforts will be made to build Wuqing Beijing-Tianjin Industrial New Town, explore the establishment of "TWL" Industrial Cooperation Demonstration Park and solve the problem of urban public transportation service supply across administrative regions.



Genetic engineering researchers



The Beijing-Tianjin-Hebei region has implemented a green card system for high-level personnel services

08 Beijing-Tianjin-Hebei intercom traffic cards cover bus and subway transport



Beijing-Tianjin-Hebei intercom traffic cards with full coverage of buses and subways

The Beijing-Tianjin-Hebei Intercom Traffic Card is an intercommunication card jointly issued by Beijing, Tianjin and Hebei. All passengers with these cards have access to all ground bus routes (excluding customized commercial bus routes) and rail transit lines in the urban area of Beijing; all traffic lines in Shijiazhuang, Cangzhou, Baoding, Handan, Zhangjiakou, Chengde, and Langfang in Hebei Province; and bus and subway lines in the urban area of Tianjin and Binhai New Area, with preferential policy for payment through the cards. Thus, a unified traffic mode was basically formed in the Beijing-Tianjin-Hebei region.

On the basis of the full coverage of buses and subways in the Beijing-Tianjin-Hebei intercom cards, Tianjin also tried to extend this service to a wider

scale. At the end of December 2018, Tianjin cardholders could use the cards for traffic services in 225 cities in China (including big cities outside the region, such as Shanghai, Shenzhen and Chongqing), and enjoy the same preferential treatment as the local people.

Statistics show that by the end of September 2017, the Beijing-Tianjin-Hebei region had issued a total of more than 811,800 intercom cards. The cards issued in Beijing had 8,812 consumptions in Tianjin and 24,986 in Hebei; the cards issued in Tianjin had 3,177 consumptions in Beijing and 2,377 in Hebei; the cards issued in Hebei had 59,945 consumptions in Beijing and 6,432 in Tianjin. The cards issued in the Beijing-Tianjin-Hebei region had 274,311 consumptions out of the region (such as Jiangsu, Jilin



and other areas where the card can be used), and the cards issued outside the region had 91,108 consumptions in the Beijing-Tianjin-Hebei region.

By the end of December 2018, a total of 1.75 million intercom cards were issued in Tianjin and 3.27 million were issued in the Beijing-Tianjin-Hebei region.



Beijing-Tianjin-Hebei intercom traffic card



Tianjin Metro

09 Tianjin-Xiong'an Intercity High Speed Railway is included in the national plan

On April 1, 2017, the CPC Central Committee and the State Council decided to establish Xiong'an New Area in Hebei. This "millennial plan" with great practical significance and far-reaching historical significance has launched a new powerful engine for the coordinated development of Beijing-Tianjin-Hebei. Steady progress has been made in Tianjin's key tasks in the construction of Xiong'an New Area. In cooperation with China Railway Corporation, Tianjin has worked on the railway network plan for Xiong'an New Area and surrounding areas. At the end of 2017, Tianjin-Xiong'an high-speed railway was included in the plan.

On April 20, 2018, the CPC Central Committee and the State Council announced the approval of the "Hebei Xiong'an New Area Planning Outline" to the public. According to the plan, a regional high-speed railway network will be built in Xiong'an New Area, consisting of four longitudinal and two latitudinal railways so as to strengthen the links between Xiong'an New Area and Beijing, Tianjin, and Shijiazhuang.

The four longitudinal railways are Jingguang High-speed Railway, Jingxiong-Xiongshang section of Jinggangtai High-speed Railway, Jingxiong-Shixiong Intercity Railway, and the Express Line between the New Area and Beijing New Airport. The two latitudinal railways are Jinbao Railway, Tianjin- Xiong'an Intercity and Xinxiong Section of Jingkun High-speed



The Beijing-Tianjin high-speed trains operate safely and efficiently

Railway. These railways enable convenient transportation from Xiong'an New Area to Beijing New Airport in 20 minutes, to Beijing and Tianjin in 30 minutes and to Shijiazhuang in 60 minutes.

According to the plan, Xiong'an High-speed Railway Station and Intercity Station will be built in Xiong'an New Area. The high-speed railway station hub will be deployed in Zangang to contribute to convenient transport relying on the national high-speed rail network. The intercity station hub will be deployed in the Starting Area, so as to be directly connected to the core cities in the Beijing-Tianjin-Hebei region.

At present, the operation mileage of railways in Tianjin is 1,270 kilometers, including 300 kilometers of high-speed and inter-city railways. The railways are in the pattern of passenger transport inside and freight transport outside. The passenger transport is "cross-shaped", with Beijing-Tianjin and Beijing-Shanghai as the longitudinal railways and Tianjin-Baoding and Tianjin-Qinhuangdao as the latitudinal railways. The freight transport is ring-shaped. With the accelerated construction of railways such as Jing-Zhang and Jing-Xiong, the rail transportation is increasingly convenient in the Beijing-Tianjin-Hebei region.





10 Interconnection of Ports in Tianjin and Hebei



Tianjin Port

In April 2018, the “Yalu River” ship carrying 17 containers with a total of 34 parallel imported cars started from the Dongjiang Area of Tianjin Port in Tianjin Pilot Free Trade Zone (TPFTZ) and arrived at Caofeidian Comprehensive Bonded Area Terminal. This indicates that the first foreign trade container liner route between Tianjin Port and Caofeidian Port was officially put into operation, which constituted a major breakthrough in the extension of TPFTZ function to the ports in Hebei. It is also an important exploration in Tianjin’s application for “Beijing-Tianjin-Hebei Free Trade Port”.

In accordance with the “Work Program for Accelerating the Coordinated Development of Ports in Tianjin and Hebei (2017-2020)”, aiming at becoming an international first-class shipping center, Tianjin Port implemented the upgrade program for the port and shipping business, gave full play to the advantages of the Bohai International Container Hub, followed the national strategy of Integrated Development of Beijing-Tianjin-Hebei and the “Belt and Road” Initiative, explored international container liner routes, vigorously developed the transshipment business of marine containers, and accelerated the replication and promotion of the maritime transport policy of

the Free Trade Pilot Zone in Hebei ports, so as to create a world-class business environment and promote the collaboration of ports in Tianjin and Hebei onto a new stage of high-quality development.

After the opening of the new route from Tianjin Port to Caofeidian Comprehensive Bonded Area Terminal, parallel imported cars can go through customs clearance in Caofeidian. Imported containers can enjoy policies of Tianjin Pilot Free Trade Zone, Bonded Port Area and Comprehensive Bonded Zone. The free flow of goods between the ports contributed to the interconnectivity of the ports in Tianjin and Hebei, which greatly facilitates the cross-border business of foreign trade enterprises and reduces the related logistics costs.

Relying on the container terminals jointly established in Huanghua Port and Tangshan Port, Tianjin Port strives to build a boutique route for foreign trade container liners between ports in Tianjin and Hebei, which effectively upgrades the ecosphere of the ports, and promotes the transformation of the ports from mere transportation hubs to the composite mode of “shipping + logistics + trade + finance”, accelerates the construction of a world-class port group with Tianjin Port as the core and the ports in Hebei as the wings, featuring reasonable layout, clear division of business, complementary functions, safety, greenness, smoothness and efficiency.



11 The pattern of four high-speed rail corridors in Beijing and Tianjin is taking shape



Tianjin Railway Station transportation hub

In 2018, the construction of the Beijing-Binhai and Beijing-Tangshan railways was accelerated, and the preliminary work of the Tianjin-Beijing New Airport Line also progressed. Together with the existent Beijing-Tianjin Intercity High-Speed Railway (including extension line) and Beijing-Shanghai High-Speed Railway, there will be four high-speed railways between Tianjin and Beijing.

The year 2018 witnessed accelerated construction of the third high-speed railway between Beijing and Tianjin – Beijing-Binhai Intercity Railway and Beijing-Tangshan Intercity Railway. According to the plan, Beijing-Binhai Intercity Railway mainly connects Bei-

jing and Binhai New Area, going through important development areas such as Baodi and Tianjin Airport. The total length of the line is about 180 kilometers. The section from Beijing to Baodi will be shared by Beijing-Binhai Intercity Railway and Beijing-Tangshan Intercity Railway.

After the Beijing-Binhai Intercity Railway is completed and opened to traffic, it will take only about one hour to travel from Beijing to Binhai New Area. Its connection with the Beijing-Shenyang Passenger Line will form a new channel connecting Tianjin with the Northeast of China. The construction of the Tianjin Hub will effect direct connection between



Beijing-Tianjin Intercity High-Speed Railway



Yujiapu high-speed railway station, Binhai New Area

the Northeast of China, East China and South China, further enhancing the status of Tianjin as a hub of railway passenger transport.

The Beijing-Tangshan Intercity Railway has a total length of 148.7 kilometers, going eastward through Tongzhou District of Beijing, Langfang City of Hebei Province, Baodi District of Tianjin, until it finally reaches Tangshan City. It is expected to be put in operation in 2020. The construction of the Beijing-Tangshan Intercity Railway will accelerate the coordinated development of Beijing-Tianjin-Hebei and promote the integration of Tangshan into the Beijing-Tianjin-Hebei region.

In 2018, the construction of Tianjin-Beijing New Airport Line, the fourth high-speed railway between Beijing and Tianjin, progressed smoothly. At the same time, Tianjin will accelerate the construction of Beijing-Shanghai high-speed railway and the preparation for Tianjin-Chengde intercity railway. Thus the railway network will be further expanded.

12 Tianjin Cargo Airlines is permitted to start operations

In February 2018, Tianjin Cargo Airlines received the approval of the Civil Aviation Administration of China (CAAC) to introduce three B737 series freighters. This not only marks a breakthrough in the preparation of Tianjin Cargo Airlines, but paves the way for Tianjin Cargo Airlines to contribute to air cargo growth in Tianjin and promote regional development in economy and trade.

The three B737 freighters that were approved will fly from Tianjin to Zhengzhou, Xi'an, Chongqing, Shenzhen, Urumqi, Pudong and Guangzhou. In the future, Tianjin will continue to introduce wide-body freighters such as B767 and B747, aiming at forming a fleet of 50 freighters in three years and a fleet of 100 in five years. At that time, these freighters will fly along intercontinental cargo routes which form a global air freight network, helping Tianjin to develop into a core shipping area in northern China.

On August 16, 2018, Tianjin Cargo Airlines obtained the CCAR-121 Air Carrier Operation Certificate issued by the Civil Aviation North China Administration. With the operation qualification and capability, it is about to start operations.



Tianjin Cargo Airlines wide-body freighter

Tianjin Cargo Airlines is an airline jointly established by the Tianjin Municipal Government and HNA Group. After successfully passing the operation certification, the company will step up its application for the traffic rights and slots for its maiden voyage. As an important part of HNA Group, Tianjin Cargo Airlines will contribute to the implementation of the national strategies "Beijing-Tianjin-Hebei Integration" and "Building a Shipping Center in Northern China". At the same time, in line with HNA



Tianjin Binhai International Airport

Group's strategy of focusing on the main aviation business, it will strive to develop into a comprehensive carrier of air cargo.

Tianjin Cargo Airlines contributed 15,000 tons of cargo traffic to Tianjin Binhai International Airport last year. Supported by the "air network" of Tianjin Cargo Airlines, supplemented by the "ground network" of ground transport and the "digital network" of smart logistics, Tianjin Bohai Modern

Logistics of HNA Modern Logistics Group will further assist the development of logistics industry in the Beijing-Tianjin-Hebei region, and build a global fast-delivery air-ground network with Tianjin as its core hub.

13 A new pattern of technological achievements transformation is taking shape

In 2018, Tianjin implemented the action plan for the transfer and transformation of scientific and technological achievements, vigorously promoted the science and technology entrepreneurship and the transformation of achievements, and accelerated the construction of Tianjin's technology transfer system. In 2018, the number of registered technology transfer institutions in the city reached 60, the number of model institutions reached 16, and 200 new technology brokers were cultivated. The annual technical transaction volume reached 70 billion CNY.

In 2017, three steps were taken in Tianjin to implement the state policy of Scientific and Technological Achievements Transformation: revising regulations for promoting the achievements transformation, adopting breakthrough policies such as releasing the innovative vitality of scientific and technological staff, and vigorously promoting the transformation of scientific and technological achievements and the construction of technology transfer systems. Efforts were made to create an operation center for the display, transaction and transformation of the achievements, and more than 2,200 science and technology commissioners, with their technology and achievements, were assigned to 2,000 service enterprises. In 2017, more than 12,000 contracts were signed in the technology trading market, with a total transaction volume of over 65 billion CNY. The proportion of transactions in high-tech fields has continuously increased, and a new pattern of market-

oriented transfer and transformation of scientific and technological achievements is to take shape.

In 2018, Tianjin further implemented the construction plan of the technology transfer system, built a display and transaction operation center for scientific and technological achievements, formulated and implemented a subsidy policy for scientific and technological achievements, vigorously cultivated specialized technology transfer institutions and broker staff, assigned 500 enterprise technology commissioners to enterprises to promote Tianjin's technology enterprises and Beijing-Tianjin-Hebei universities to build a community of production, teaching and research, and offered guidance on the transformation of outstanding scientific and technological achievements.

To meet the industry's development needs, Tianjin encourages leading companies to conduct pilot tests and industrialization demonstrations of scientific and technological achievements, explore R&D crowdsourcing such as "Internet +" new product development and technical problem bidding, and new modes such as order-based technology R&D cooperation.

According to the "Action Plan for Promoting the Transfer and Transformation of Scientific and Technological Achievements" of Tianjin, by 2020, an internationally influential transfer and transformation trading center will be basically established in Tianjin; 10 municipal-level scientific and technological achievements transformation demonstration bases will be established; 30 municipal-level professional technology transfer demonstration institutions will be fostered; 30 collaborative innovation laboratories will be constructed by enterprises and universities; 2,000 scientific and technological achievements will be transformed and applied; 1,000 high-tech enterprises and a group of leading enterprises in science and technology will be fostered to form strategic emerging industry clusters with more than 100 billion CNY.



Technicians of Tianjin Nanotechnology Industrialization Base



City of Intelligent Innovation



14-29



14 Tianjin ranks fourth in China's urban innovation competitiveness

On November 21, 2018, the first "Report on Chinese Cities' Innovation Competitiveness Development (2018)" was issued. Beijing, Shanghai, Shenzhen and Tianjin rank among the top four Chinese cities in urban innovation competitiveness.

The "Urban Innovation Competitiveness Research Group" established China's urban innovation competitiveness index evaluation system from five aspects: innovation fundamental competitiveness, innovation environment competitiveness, innovation input competitiveness, innovation output competitiveness and innovation sustainability competitiveness.

The fundamental competitiveness mainly consists of six indicators: GDP, per capita GDP, fiscal revenue, per capita fiscal revenue, foreign direct investment, and financial deposit balance. The environment competitiveness is mainly composed of six indicators: the number of Internet users per 1,000 people, the number of mobile phone users per 1,000 people, the number of national high-tech parks, the number of national high-tech enterprises, the number of colleges and universities, and the e-government development index. The investment competitiveness is mainly made up of the total expenditure of R&D

funds, the proportion of R&D expenditures to GDP, the per capita R&D expenditure, R&D staff, the proportion of R&D staff, and the fiscal expenditure on science and technology. The output competitiveness is mainly composed of seven indicators: the number of patent grants, the output of high-tech industries, the export volume of high-tech products, the proportion of high-tech product exports, the labor productivity, the number of registered trademarks, and the pollution discharge per unit of industrial output. The sustainability competitiveness mainly consists of six indicators: total public education expenditure, proportion of public education expenditure to GDP, per capita public education expenditure, technological personnel growth rate, technology fund growth rate, and per capita disposable income of urban residents. In terms of all the above indicators, Tianjin ranks in the forefront.



Tianjin Economic-Technological Development Area (TEDA)



15 Building Tianjin Intelligent Harbor on the basis of the intelligent technology industry clusters

In order to speed up the construction of a national leading innovative city and intelligent technology industry innovation center, Tianjin issued the "Overall Action Plan for Accelerating the Development of Intelligent Technology Industry in Tianjin" in early 2018, with a view to promoting the in-depth integration of the Internet, big data, artificial intelligence and the real economy, planning a strategic layout of "Big Intelligence"; building industrial clusters and fostering innovation systems, cultivating a national first-class intelligent technology innovation ecosystem, and creating "Tianjin Intelligence Harbor".

By 2020, smart technology industry will become the new engine of Tianjin's economic development. An intelligent economy system will be established gradually, featuring data driving, human-machine synergy, cross-border integration, and joint creation and sharing. Tianjin will basically become the most influential smart technology industry pilot area in China, a source of smart technology innovation and a cradle of smart technology companies.

The "Overall Action Plan" offers detailed schemes to accelerate the cultivation of smart technology emerging industries, promote the intelligent upgrading of key industries, foster and expand the core of smart technology industry, build intelligent high-tech innovation highlands, and create a national top-class intelligent technology innovation ecosystem.

Tianjin will accelerate the transformation and application of smart key technologies, promote technology integration and business model innovation, and actively cultivate smart technology emerging industries which focus on intelligent robots, intelligent driving, intelligent hardware and software, and smart sensors. By 2020, 10 smart manufacturing equipment and software suppliers will be cultivated whose main



business income exceeds 5 billion CNY.

Tianjin will promote the in-depth integration of intelligent technology with various industrial fields; deepen the application of intelligent technology to production and operation, remote operation and maintenance services, supply chain management, etc.; and promote the high-end development of traditional industries. By 2020, more than 10 national smart manufacturing pilot demonstration projects will be built.

Tianjin will attract leading enterprises of smart tech-



China-Singapore Tianjin Eco-City smart city operation center

nology and cultivate a group of leading enterprises with core competitiveness, so as to create “Tianjin brands” of intelligent technology. By 2020, there will be 5 international brand enterprises in Tianjin.

Tianjin will strengthen the original innovation supply of intelligent technology, and build an intelligent technology innovation system featuring open sources, common sharing, and coordinated development. By 2020, key problems will be tackled in 100 key common technologies and “killer” products, and Tianjin will be part of the national plan in three to five key fields.

Tianjin will coordinate the allocation of international and domestic innovation resources, continuously expand the brand effect and influence of the World Intelligence Conference, and create “Tianjin Intelligence Harbor”.

16 **Promulgation of the Smart Manufacturing Ten-Article Policy of Tianjin**

In 2018, "Policies on Accelerating the Development of Intelligent Science and Technology Industry of Tianjin" was issued. On June 21, Tianjin Industrial and Information Committee formulated ten implementation rules in accordance with the "Policies".

Guided by the important needs and key links of the intelligent manufacturing industry chain and innovation chain, the policy focuses on supporting the intelligent transformation of traditional industries, supporting the development of industrial Internet, accelerating the promotion of emerging industries such as intelligent robots and intelligent software and hardware, creating a number of model workshops and demonstration factories, and optimizing the development environment of Tianjin's intelligent technology industry.

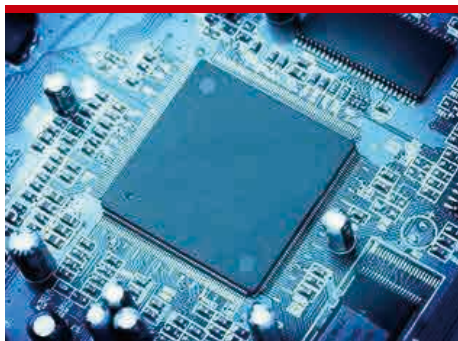
Tianjin is committed to providing application scenarios and market space for enterprises. The manufacturing enterprises on the list of Tianjin's first major technical equipment products are entitled to subsidies for up to three batches or 100 sets per year, 3% of the sales value for each listed set. For enterprises that receive the national premium subsidy for the first (set) major technical equipment, an additional one-off grant of 1.5 million CNY will be offered. The policy also supports Tianjin enterprises to purchase

robots, networked CNC machine tools, additive manufacturing and other intelligent manufacturing core equipment to enhance their level of intelligent production.

Tianjin also provides full-process services to enterprises. Policy support is offered throughout the whole process, from the preliminary consultation and diagnosis, program design, to the purchase of equipment, intelligent manufacturing upgrades, and then to the uploading to cloud, model building, and operation.

Measures are taken to foster the ecological environment of the smart industry. To support the development of key enterprises of integrated circuit design, a one-off fund reward is granted to the applicant enterprises with annual sales revenue exceeding 50 million CNY and 100 million CNY for the first time. Big data enterprises are supported to deepen application in key industries throughout the life cycle of research, development, design, production and management. Projects that meet the requirements may receive up to 5 million CNY financial support, not more than 20% of the actual investment. For the leading enterprises whose main products have the top three market shares in the country, 5 million CNY will be awarded. For the leading enterprises whose main product market share ranks among the top ten in the country and among the top two in the city, 3 million CNY will be awarded.

Great effort has been made in Tianjin to support enterprises to build high-level R&D collaboration platforms. In view of the great demand for innovation and development of manufacturing industry in Tianjin, gratuitous grants are offered to the innovation capacity building projects of the manufacturing innovation centers at municipal level, and to those upgraded to national manufacturing innovation





Large logistics unmanned helicopter developed by Yifei Intelligent Control (Tianjin) Technology Co., Ltd.

centers, financial support is offered at the equal amount of the special fund granted by the national manufacturing innovation center. Major national projects with special fund support, “Core Fire” bases (platforms), and other IC industry pilot demonstration projects may receive funds equal to the amount of the national support, not exceeding 30 million CNY for each. The major special projects in software and information service industry can receive up to 10 million CNY subsidies.

In 2018, the new products of Tianjin Smart Manufacturing Industry brought substantial profits, and the output of the smart manufacturing equipment industry increased by 15.4%. The growth of high-end products was decent; the outputs of new energy vehicles, service robots, and industrial robots increased by 4.1 times, 94.3%, and 20% respectively.

With the implementation of various support policies, Tianjin will give full play to the advantages of manufacturing industry. With smart manufacturing as a breakthrough, it will promote the development of smart technology industry and create new points of economic growth.

17 Implementation of “30 Articles on Financial Reform” in Tianjin



Tianjin's "30 Articles on Financial Reform" set up "a golden bridge of financing" for the development of small and micro private enterprises

Since the "People's Bank of China's Guiding Opinions on Financial Support for the Construction of China (Tianjin) Free Trade Pilot Zone" ("30 Articles on Financial Reform") was officially implemented, milestone progress has been made in the financial reform and innovation of Tianjin Pilot Free Trade Zone. By 2018, all the "30 Articles on Financial Reform" have been implemented, 24 measures have achieved remarkable results, and 11 measures have been replicated throughout the country.

Trade investment and financing enjoyed more freedom and convenience. Significant growth occurred in the agreement signing of cross-border RMB foreign debts and the issuance of overseas RMB loans. Goods trade Class A enterprises in the region do not need to open to-be-inspected accounts while handling trade income business at banking institutions.

Administration streamlining in trade and investment has improved the efficiency of financial services. Individuals in the region are allowed to conduct cross-border RMB business under the current account, which effectively enhances the convenience of personal cross-border use of RMB.

The efficiency of capital use continues to increase. By offering two-way RMB fund pool business, the multinational corporation groups in the region have realized the transfer of funds between different markets under the global fund management mode.

The leasing innovation policy has gradually taken effect. In finance lease, foreign currency can be accepted as rent or payment for sale-leaseback, reducing the enterprises' exchange cost by up to 2%. With intensified effort in innovation, Tianjin Branch



has created several new records throughout the country. Full play has been given to the radiation effect of Tianjin's characteristic leasing industry, which plays an important role in accelerating the construction of the national leasing innovation demonstration zone.

Cross-regional financial collaborated innovation and cooperation in Tianjin Pilot Free Trade Zone has been continuously strengthened, and financial institutions have increased credit supply to key projects in the Beijing-Tianjin-Hebei region, especially those closely connected with the Beijing-Tianjin-Hebei collaborated development. Efforts have been made to innovate financial products, broaden financing channels, and accelerate financial infrastructure. The establishment of Beijing-Tianjin-Hebei Industrial Structure Adjustment and

Guidance Fund in Tianjin plays an important supporting role in the financial agglomeration effect in Tianjin Pilot Free Trade Zone.

Cross-border financial business has developed rapidly. By the end of March 2018, the main entities in the region had opened more than 50,000 accounts in domestic or foreign currencies, handled nearly 140 billion USD in cross-border income and expenditure, and nearly 300 billion CNY in cross-border RMB settlement. Institutional innovation greatly stimulated the vitality of the market. The business environment has been continuously improved in the rule of law, internationalization, and facilitation. The dividends from reform and opening-up have continued to emerge.



Youyibei Road Financial Street

18 Tianjin accelerates the construction of a national advanced manufacturing R&D base

In the "Opinions on Further Accelerating the Construction of the National Advanced Manufacturing R&D Base" promulgated by Tianjin, it is clarified that by 2020, the national advanced manufacturing R&D base will be basically completed, the proportion of advanced manufacturing will reach 70%, and the independent innovation capability will be significantly improved. The global competitiveness and brand influence will be significantly enhanced. The manufacturing industry will be increasingly friendly to resources environment, and the comprehensive competitiveness will be of the world's advanced level. By 2030, a world-leading advanced manufacturing R&D base will be completed.

The goal of building a national advanced manufacturing R&D base requires Tianjin to optimize its structure through transformation and upgrading, develop high-end industry chains and clusters, and expand

manufacturing industry clusters of the international advanced level.

The year 2018 saw the completion of 136 projects, such as FAW-Volkswagen North China Base, Guo'an-MGL New Energy Lithium-Ion Power Battery, and Jieke Bio-Pharma R&D and Production Base (Phase I). The construction accelerated for major projects such as Zhongsha 260,000 tons/year polycarbonate project and SMIC expansion project, causing further demonstration boosting effect.

The number of national new industrial demonstration bases in Tianjin is 11, the second highest among key cities. A number of emerging industry bases, such as the Binhai New Area UAV Industrial Cluster, the Sino-Eu Advanced Manufacturing Industrial Park and the High-tech Zone Software Park are becoming important support for the construction of the



The "Tiankun" heavy-duty self-propelled suction dredger invested by CCCC Tianjin Waterway Bureau Co., Ltd. was successfully launched



Tianjin CanSino Biologics Inc is involved in the development of China's first ebola vaccine

national advanced manufacturing R&D base.

In 2018, the number of patent applications filed by Tianjin industrial enterprises exceeded 70,000, and the number of patents granted exceeded 40,000. Tianjin's 12-inch semiconductor silicon single crystal broke the international monopoly, and Tianjin's water gliders broke the world record of dive depth. The "Galaxy Kirin" operating system is providing system operation and maintenance services for "Long March 5" rockets, "Beidou" system, and "Tianzhou-1" spacecraft.

Tianjin has more than 5,000 national high-tech enterprises, 61 national enterprise technology centers, and 609 city-level enterprise technology centers. The number of national technology innovation demonstration enterprises has increased to 17.

The added value of industrial enterprises above designated size increased by 2.6%, of which the added value of high-tech manufacturing increased by 6.6%. The output of high-end products in the city maintains a sound growth momentum. The output of new energy vehicles increased by 3.8 times, the output of service robots increased by 1.1 times, and the outputs of optoelectronic devices, lithium-ion batteries, medical instruments and equipment increased by 45.9%, 25.4% and 15.4% respectively.

19 Financial Innovation Operation Demonstration Zone becomes a new business card of Tianjin

The Outline of Beijing-Tianjin-Hebei Collaborative Development Plan clarifies the functional orientation of Tianjin as "one base, three zones". The Financial Innovation Operation Demonstration Area will become a new tag of Tianjin. Binhai New Area has become one of the most dynamic areas of financial innovation in China.

The aggregation effect of the leasing industry in Dongjiang is obvious. At the end of October 2018, there were 3,155 registered leasing companies in Dongjiang, with a cumulative registered capital of more than 492.57 billion CNY. The number of domestic financing and leasing pilot enterprises reached 85 (accounting for more than 70% of the total in the city). Overseas leasing companies have achieved remarkable effects in attracting investment, and four foreign airline leasing companies such as Waypoint, LCI, Falko4 and NOVUS have settled. A total of 1,294 aircraft, 110 engines, 149 international ships and 13 offshore oil rigs were leased. Cross-border leasing of aircraft, international ships and offshore engineering accounted for more than 80% of the country. A number of pilot projects have been implemented: willingness settlement of foreign exchange capital, collection of foreign currency as rent for operating lease, centralized operation management of the leasing company's foreign exchange fund, and the facilitation reform of financial leasing enterprise's foreign debt. Progress has been made in deepening the remote commissioned customs supervision, cross-zone customs supervision of the import of leasing aircraft, and innovation of the customs tax guarantee mode.

The Insurance Industrial Park has attracted such legal entities as Bohai Life Insurance, Zhongsheng Insurance Sales, Xin'ao Insurance Broker, Huaming Insurance Agency, Huixin Insurance Sales, etc., and introduced branches of large-scale insurance com-

panies such as China Life Insurance, Ping An Property Insurance, and PICC Insurance. In total, more than 40 insurance companies have been attracted to this park.

Tianjin Development Zone actively promotes financing through the mode of accounts receivable. Within the approved credit limit of the buyer, the factoring company in the zone can provide up to 100% buyer credit risk guarantee for the accounts receivable free of commercial disputes, which is a good solution to the slow payment to these small and medium-sized enterprises and their difficulties in financing.

In terms of asset securitization, the development zone established contact with Shanghai Stock Exchange, Hengtai Securities and other related enterprises, and completed the first ABS business of Founder Factoring Asset ABS – a factoring enterprise in TPFTZ, thereby establishing a model of a commercial factoring company conducting asset securitization business.

As of November 2018, the new area has gathered nearly 500 commercial factoring companies, more than 600 equity investment and management institutions, and 15 financing institutions. In particular, more than 2,000 leasing companies have been gathered, with a contract balance of 100 billion CNY, accounting for 1/3 of the total assets of the national financial leasing companies.



20 “Ten robots” in the “Three-Year Action Plan”



Tianjin OSTAR Underwater Vehicle Co., Ltd.

In response to the needs for family services of the aged and the handicapped, intelligent household robots are developed with SI speech recognition technology to identify various types of voices, with functions such as vacuuming, face recognition, blood pressure monitoring, and fall alarms, which can be connected to electronic devices throughout the home. Through the infrared system, they can learn various remote control functions, control all the household appliances. To meet the needs of microinvasive surgery automation, surgical robots are developed based on such technologies as visual recognition, virtual force haptics feedback capability, three-dimensional imaging technology, and computer precision remote control.

In August 2018, Tianjin Industrial and Information Committee issued the "Three-Year Action Plan for the

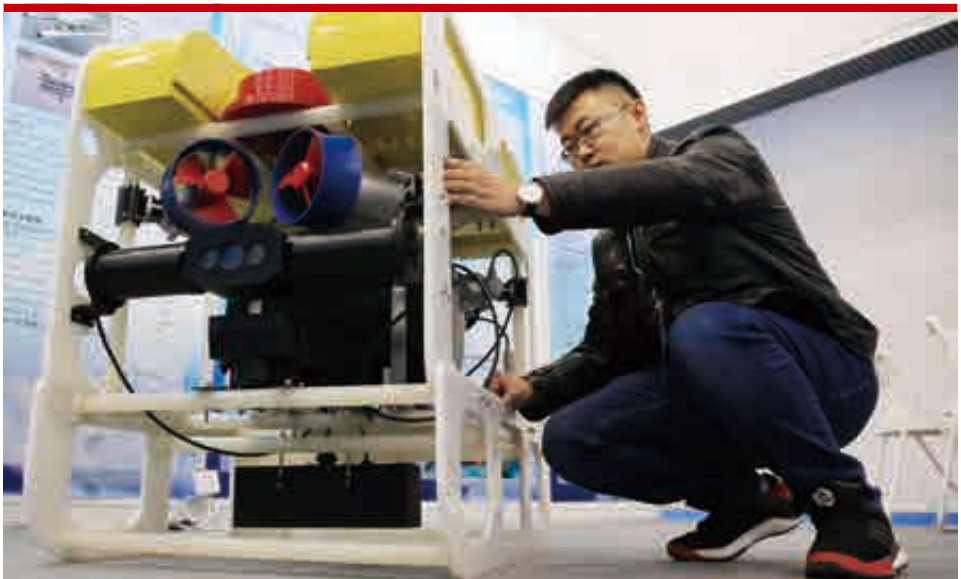
Development of Tianjin Robot Industry (2018-2020)". According to the Action Plan, by 2020, Tianjin will make breakthroughs in two of the 10 types of major robot products, the other eight kinds being hybrid robots, light cooperative robots, high-pressure water-jet derusting-painting robots, liquor industry robots, automated flexible high-speed train weld grinding systems, flying robots, water gliders, and educational robots.

It is clarified in the Action Plan that in the next three years, efforts will be made to accomplish the following: establish Tianjin Robot Industry Technology Research Institute, with a wide range of functions such as technical research, high-level personnel training, product inspection and testing, and information consultation; improve the industry organization mechanism consisting of robot alliances, associa-



tions and societies; create China's largest and most influential global robot expo (exhibition); complete the training of 3,000-5,000 robot workers; cultivate 3-5 listed enterprises with robots and robot components as the main business; increase Tianjin robot industry scale to 20 billion CNY; make 3-5 major scientific and technological achievements (provincial level and above); accomplish 30-50 projects of robot substitution and smart factory.

In 2018, there were more than 100 enterprises in Tianjin with robots as their main business. The robot products are of a full range, including industrial robots, service robots and special robots, with a scale of 3 billion CNY. Considering the related software, components and system integration applications, the overall industry scale is about 10 billion CNY.



Underwater vehicles made in Tianjin on show in China Marine Economy Expo

21 The “In-depth Reform Program” of Tianjin Pilot Free Trade Zone won approval from the central government



China (Tianjin) Pilot Free Trade Zone

On May 24, 2018, the State Council officially approved the "Program on Deepening the Reform and Opening-up in China (Tianjin) Pilot Free Trade Zone." The program consists of 25 measures on management reform, 48 on investment and trade, 22 on finance, 15 on shipping and 18 on collaborative development of Beijing-Tianjin-Hebei.

Regarding the management reform, the Program proposed substantial measures like "simplifying the procedures for integrated investment projects and exploring the management mode of construction before acceptance check", and "The land in the Pilot Free Trade Zone can be used according to different functions, allowing the same land parcel or building to fulfill a variety of functions, and the industrial land

is subject to flexible supply according to industrial policies and project categories, such as rent-before-transfer and differentiated transfer periods". The measures can improve the quality of public services and enhance the attractiveness to market players.

In the field of investment and trade facilitation, the measures proposed in the Program include "supporting the establishment of foreign-owned or holding enterprises in the Pilot Free Trade Zone to carry out branch line and general aircraft maintenance business", and "piloting high-tech and high value-added projects for domestic and foreign inspection, maintenance and remanufacturing business." These measures will significantly improve the level of investment and trade facilitation and promote the



development of cutting-edge emerging industries.

Regarding the financial and taxation policies, the “Program” proposed such measures as “exploring pilot projects for comprehensive financial supervision in the central business district of Binhai New Area” and “supporting the establishment of shipping insurance institutions with local legal personality.” The measures are conducive to further improving the capability for finance to serve real economy.

In terms of shipping port service functions, the reform measures include “gradually opening classification inspection of international navigation ships with Chinese nationality”, “supporting the construction of the special Internet data channel from the Pilot Free Trade Zone to the International Communications Gateway Exchanges.” These measures can further en-

hance international shipping and port service functions and promote the construction of the northern international shipping core zone.

In implementing the strategy of Beijing-Tianjin-Hebei coordinated development, the “Program” proposed substantial reform measures such as “issuing local government bonds to domestic and foreign investors in the Pilot Free Trade Zone” and “encouraging qualified financial leasing companies and enterprises to issue bonds and asset securitization products through inter-bank markets to support Beijing-Tianjin-Hebei coordinated development of key industrial projects”. Proactive measures will be taken to implement the national strategy and accelerate the creation of a high-level open platform for Beijing-Tianjin-Hebei.



Xiangluowan Business District

22 **China-Singapore Tianjin Eco-City: a model of successful smart city construction**

China-Singapore Tianjin Eco-City is a government-to-government cooperation project between China and Singapore. Through continuous reform and innovation, a prosperous, liveable and intelligent green new city has risen on the salt-alkali waste beach in Tianjin Binhai, constituting a new path for sustainable development under resource constraints.

In the past 10 years, 22 control indicators were adopted for the Eco-City. With the greening of 7.55 million square meters and the construction of 8 green parks, the green coverage rate of the district is over 50%. The rate of access to municipal pipe networks is 100%. The living environment has undergone a significant improvement.

The Eco-City also improved public services to become more liveable. Every community is equipped with children's rooms, elderly caring rooms, and commercial areas. One-stop solutions are available to residents within 15 minutes' walk for schooling, shopping, medical treatment, and entertainment. At the 2018 China Happiness City Forum held in Guangzhou, China-Singapore Tianjin Eco-City was awarded as "China's Happiest Ecological City".

In December 2018, at the 6th International "Green Solution Award" Granting Ceremony held in Poland, the southern part of China-Singapore Tianjin Eco-City won the first place in the "Sustainable Urban Solution Award".

Focusing on the overall goal of building "a modern Tianjin" and creating a prosperous liveable urban area, the Eco-City strives to enforce greening measures in every part of it: parks, residential areas, roads, walls, fences, roofs, etc.

China-Singapore Tianjin Eco-City has taken a series of concrete and practical measures to foster an excellent environment for entrepreneurship and invest-



ment, such as talent housing project, talent strategy system, "health care plans" for entrepreneurs, etc. In the Eco-City, there are now over 6,000 registered enterprises from smart industry, with registered capital more than 200 billion CNY. The settlement of leading projects here, such as Digital China, Taiji Computer and Inspur, boosts the development of big data, cloud service, smart facilities and other industry clusters.



China-Singapore Tianjin Eco-City

23 World record of water gliders' dive depth is renewed

8,213 meters! Tianjin University "Haiyan" set a new world record for the dive depth of water gliders!

In April 2018, "Xiangyanghong 18" Scientific Research Ship of Qingdao National Laboratory for Marine Science and Technology completed her 30-day mission of shared voyage.

With 31 sets of equipment with complete independent intellectual property rights of China, such as "Haiyan-4000" water glider and "Haiyan-10000" water glider, "Xiangyanghong 18" sailed to the Mariana Trench and completed the survey of 18 profiles, three of which were more than 4,000 meters deep. The maximum working depth was 8,213 meters — a new work record of dive depth. A large quantity of deep-sea survey data was obtained and passed marine tests.

"Haiyan" is a water glider developed by Tianjin University with the latest hybrid propulsion technology. It can work continuously for 30 days independently under water. After continuous technical improvement and dozens of sea trials, the design of "Haiyan" water glider was finalized, and in 2016 it won the second prize of the national technical invention. This project not only enables China to obtain profile data of deeper sea areas, but also breaks the technical blockade of some developed countries.

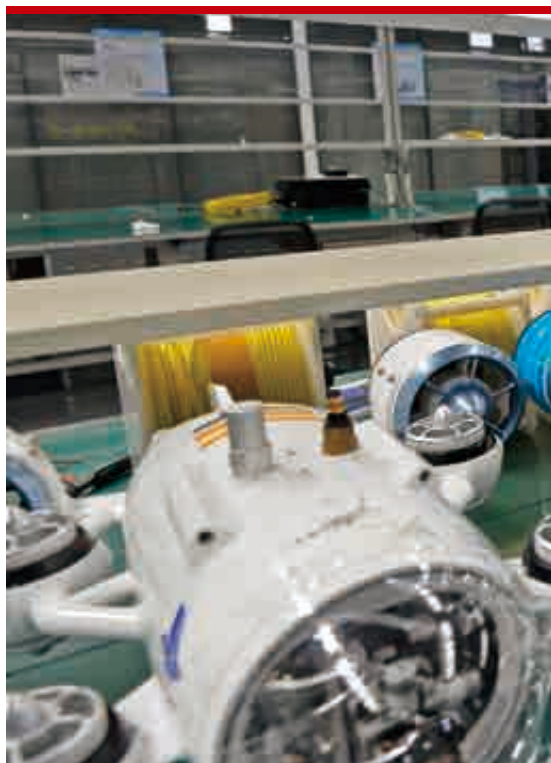
In late November 2018, "Haiyan" once again set new records of the longest continuous working hours and the longest cruising range of domestically produced water gliders.

The new records were set by "Haiyan-L" long-range water glider (No. CHC03). This model was jointly developed by Tianjin University and Qingdao National

Laboratory for Marine Science and Technology with the special support of the national key research and development program "Deep Sea Key Technologies and Equipment".

In late November 2018, it was safely recovered in the northern part of the South China Sea. It successfully completed the mid-term sea trial of the project after 141 days of fault-free operation, with the maximum working depth 1,010 meters, 734 continuous profiles surveyed, and cruising range 3,619.6 kilometers.

In the first half of 2018, "Haiyan-L" long-range water





glider (No. CHC01) continuously operated for 119 days and surveyed 862 profiles, with a sailing mileage of 2,272.4 kilometers, which set new records of the longest continuous working time, the most profiles surveyed and the longest cruising range of domestic water gliders at that time.



Tianjin Subblue Ocean Science & Technology Co., Ltd. has settled in TEDA intelligent unmanned equipment industrial park

24 "Tianhe-3" Exascale Supercomputer Prototype Successfully Developed

In July 2018, Tianhe-3 E-class prototype system was successfully developed by the National Defense University of Science and Technology and the National Supercomputing Tianjin Center. It was deployed at the National Supercomputing Tianjin Center, and passed the acceptance test organized by the High Technology Center of the Ministry of Science and Technology. It will gradually enter the open application phase.

E-class supercomputers can perform more than a quintibillion operations per second, and are recognized as "the next crown in the super-computer realm". Through years of accumulation and continuous technological innovation, "Tianhe" supercomputer system has achieved overall controllability on the core key technologies. "Tianhe-3 prototype system" is equipped with domestic chips, with a flexible architecture that can meet the needs of scientific computing and data processing applications. It can support high-speed interconnection of 100,000 nodes and opto-electric hybrid high-speed signal transmission technology. Based on the prototype system, the "Tianhe-3" supercomputer is expected to be successfully developed in 2020. Its computing power will be 200 times higher than that of "Tianhe-1" and the storage capacity will be increased by 100 times.

"Tianhe-3 E-class prototype" is the achievement of the first phase of the national key R&D plan "exascale computer development". In the next step, "Tianhe-3 E-class prototype" will support the rapid development and deployment of exascale computers in China, and provide high-quality services and technical support for high-performance computing, artificial

intelligence and big data at home and abroad. It will contribute to fostering innovation in big data and artificial intelligence, and improving scientific and technological innovation capabilities of research institutes and the core competitiveness of enterprises. In addition, it will support the implementation of the national strategy of innovation-driven development, and help China develop into a technological power.

On the basis of "Tianhe-3" supercomputer, a high-performance computing platform will be built, which integrates supercomputing with cloud





computing and big data. In the fields of ultra-large-scale calculation and simulation, government data, health care, genetic health, smart city, transportation, geography, ocean and other big data analysis and processing for long-term high-resolution climate and weather forecasting, large-scale aerospace numerical wind tunnel, seismic geological research, oil and gas energy exploration, and life science research, it will offer strong support and serve as a platform to promote the new generation artificial intelligence and network construction. With the “Beijing-Tianjin-Hebei Big Data Collaborative Processing Center” as

the carrier, and Xiong'an New Area as the focus, it will comprehensively serve the Beijing-Tianjin-Hebei collaborative innovation and become an important engine for the innovation and development of the Beijing-Tianjin-Hebei region.



Tianhe-3 exascale supercomputer prototype system was developed and deployed

25 **New-generation AI technology industry funds of 100 bln CNY established in Tianjin**



From 2018, to implement the plan of building an “National Advanced Manufacturing R&D Base”, Tianjin established a market-oriented innovation system for manufacturing industry with enterprises as the mainstay, featuring deep integration of production, education and research. By gathering resources, the system can enhance the independent innovation capability of enterprises. In the above-scale industrial enterprises, the expenditure on research and experiments accounted for 1.49% of the revenue from main business. The number of patent applications filed by industrial enterprises was 77,300, a year-on-year increase of 10.8%; the number of patents granted to industrial enterprises increased by 34.7% to 45,800.

On May 17, during the second World Intelligence Conference, the “Policies on Accelerating the Development of Smart Technology Industry of Tianjin” was promulgated, which proposed the establishment of new-generation artificial intelligence technology

industry funds of 100 billion CNY and bio-pharmaceutical industry parent fund group of 30 billion CNY, so as to assist the development of the intelligent technology industry and promote the high-quality development of Tianjin.

The funds were raised by Haihe Industry Fund Management Company through marketization. Domestic and foreign financial institutions, enterprises and other organizations of social capital promoted the establishment of a mother fund for new-generation artificial intelligence technology industry, and then established sub-funds to form a fund group of 100 billion CNY. The funds target at intelligent technology emerging industries such as intelligent robots, intelligent hardware and software, smart sensors, virtual reality and augmented reality, and smart cars. The sub-fund group with a total scale of 30 billion CNY will be invested in intelligent manufacturing terminal products and intelligent transformation of traditional



industries. The 30% limitation of guiding fund investment in the parent fund may be exceeded; the scale and proportion of investment may be adjusted according to the situation.

The establishment of the 100-billion-CNY intelligent technology industry funds in Tianjin aroused strong repercussions. Many enterprises have applied for it in the hope of obtaining special funds for smart manufacturing. After the Second World Intelligence Conference, Tianjin Industrial and Information Committee invited experts from the national ministries and commissions and scientific research institutions to form an expert group to screen 259 experts recommended by various departments, and finally selected 214 experts into the expert pool of intelligent manufacturing special fund projects.

In 2018, 183 projects for special funds for smart

manufacturing were established in Tianjin, with financial support at municipal and district levels 620 million CNY and total estimated investment about 6 billion CNY. There are 109 supportive projects and 74 award or subsidy projects, including 45 projects for enterprise intelligence upgrading, 8 projects for industrial Internet development, 32 projects for the development of robot industry, 5 projects for the development of big data industry, 23 projects for the cultivation of emerging industries, 40 projects for military-civilian integration and development in intelligent technology, 25 projects for intelligent technology research and development innovation capabilities, and 5 key enterprises to be cultivated or introduced.



Innovation demonstration base of artificial intelligence industry—Tianjin Wisdom Valley of iFLT TEK

26 **FAW-Volkswagen North China Base, Samsung Motor MLCC and other high-level projects completed and put into operation**



FAW-Volkswagen north China base and other high-level projects were completed and put into operation in Tianjin

In 2018, the construction of advanced manufacturing projects was accelerated in Tianjin. 136 projects were completed, including FAW-Volkswagen North China Base, Toyota New Plant, Guoan MGL New Energy Lithium-Ion Power Battery, and Jieke Bio-Pharma R&D and Production Base (Phase I). Construction was accelerated for such major projects as Samsung Motor MLCC, Zhongsha 260,000 tons / year polycarbonate project, and SMIC expansion project, which brought further demonstration and driving effect.

The FAW-Volkswagen North China Base, located in Tianjin Development Zone, has workshops for stamping, welding, painting and final assembly, as well as supporting facilities. It is estimated that by 2020, the accumulated investment in the North China Base will reach 13 billion CNY. August 2018 saw

the completion and operation of FAW-Volkswagen North China Base. The total output value of the relevant parts suppliers is estimated between 30 billion to 40 billion CNY. It will promote the improvement of the upstream and downstream industrial chains of Tianjin Development Zone, and bring new growth points of local economy. The base will also provide industrial talents for regional economic development, leading to the employment of nearly 3,500 people, the emergence of more than 1,500 external suppliers, and more than 20,000 new jobs in the future.

In August 2018, the new energy vehicle renovation project of Tianjin FAW-Toyota TEDA Plant was approved. This project plans to transform five process plants and production lines, so as to increase the an-



nual production capacity by 120,000 new energy vehicles, including 110,000 plug-in hybrid models and 10,000 pure electric vehicles. This is a typical project of intelligent manufacturing and green manufacturing in Tianjin. Compared with the existing factories, it has achieved a significant reduction in energy consumption per unit, 40% reduction in water, 15% reduction in energy, and 50% reduction in VOC emissions. This is a veritable "Green factory."

As one of the Chinese areas with the most investments from Samsung, Tianjin is also one of Samsung's major overseas production bases. In 2018, the main plant of the Samsung SDI Phase II project was completed, a production line was installed, and equipment commissioning was underway. 800 million USD was invested to build a cylindrical battery project, which covers an area of 100,000 square meters. Samsung SDI is a well-known company in the field of small secondary batteries, with global sales of 6 billion USD in 2017. In addition, Samsung Electro-Mechanics also invested 2.4 billion USD in Tianjin Development Zone to build an MLCC plant for automobiles. MLCC is the main electronic component in the fields of mobile phones, computers,

and automotive electronics. The project is expected to be completed by the end of 2019 and put into operation in 2020. Upon completion, Tianjin will become one of Samsung Motor's major overseas MLCC production bases.

SMIC is a globally leading OEM of integrated circuit chips. The project has a total investment of 1.5 billion USD, mainly producing 8-inch integrated circuit wafers. After completion, it is expected to have a monthly production capacity of 150,000 wafers, offering 3,500 new jobs. At the same time, development space is reserved for the 12-inch integrated circuit wafers, which will effectively boost the concentration and development level of the integrated circuit industry in the city.

In 2018, Tianjin introduced leading enterprises and projects, improved the industrial chains, and strove to implement the three-year action plan for 16 industries. The proportion of advanced manufacturing industry accounted for more than 60% of the city's total industrial output value.



Tianjin FAW Toyota production line



SMIC Tianjin

27 **Ten national research institutes introduced to Tianjin**

In 2018, to implement the innovation-driven development strategy, Tianjin introduced 10 national research institutes such as China Institute of Atomic Energy, Zhongke UAV Application Research Institute, Tianjin Artificial Intelligence Innovation Center, etc. A number of state-level innovation platforms were established in Tianjin, such as the large-scale earthquake engineering simulation research facility, China University of Nuclear Technology, Hematology and Traditional Chinese Medicine and Acupuncture National Clinical Medicine Research Center.

The total number of state-level institutes and domestic high-level R&D branches has exceeded 170, of which more than 60 are from Beijing. The New Generation Artificial Intelligence Development Strategy Research Institute, China Engineering Science and Technology Development Strategy Tianjin Research Institute, Tianjin (Binhai) Artificial Intelligence Military-civilian Integration Innovation Center and other innovative platforms have been established by the Chinese Academy of Engineering and the Academy of Military Sciences in Tianjin. A number of new R&D institutions such as Tsinghua University High-end Equipment Research Institute and Tsinghua University Tianjin Electronic Information Research Institute have been established in Tianjin.

Tianjin will further promote the establishment of large-scale research institutes, especially in the field of intelligent science and technology, and cooperate with the Chinese Academy of Sciences, the Chinese Academy of Engineering and other institutions of higher learning to establish research institutes to carry out industry-university-research cooperation, build innovative resource gathering areas, guide and serve business incubation, achievements transformation, and technology finance.

Tianjin will continue to apply for major platforms such as the National Synthetic Biotechnology Innovation Center, and strive to assist the platform for military-civilian collaborative innovation in science and technology (Tianjin platform) to apply for the first batch of projects. At the same time, with the focus on artificial intelligence frontier technology, efforts will be made to accelerate the transformation of advanced technological achievements of the Academy of Military Sciences in Tianjin.



"Hundreds of institutes enter Tianjin • Beijing-Tianjin-Hebei coordination and innovation" series activities



Tianjin Institute of Industrial Biotechnology, Chinese Academy of Sciences

28 The world's largest earthquake engineering simulation research facility built in Tianjin

In August 2018, approved by the National Development and Reform Commission, Tianjin University led the construction of large-scale earthquake engineering simulation research facility, which is China's first major national technological infrastructure in the field of earthquake engineering. Once completed, this large-scale scientific installation will become the world's largest and most powerful major seismic engineering simulation research facility, which will help to shift from reducing earthquake losses to mitigating earthquake risks, and comprehensively enhance the prevention capability against natural disasters.

An earthquake-simulating shaking table is an effective test platform for seismic simulation research. Numerous shaking table facilities exist worldwide today, although most are relatively small, and with limited experimental functions, unable to ensure engineering security or service in the event of an

earthquake and unable to simulate the load effect of earthquakes and other types of disasters simultaneously. The earthquake engineering simulation research facility led by Tianjin University will build an earthquake simulating shaking table of a larger scale and load capacity and a shaking table array test device capable of simultaneously simulating the coupling of seismic and underwater wave currents. After the completion of the facility, it will greatly enhance the innovation capability and level of engineering technology in China.

It will be built on the Beiyang Park campus of Tianjin University, with a total construction area of 77,000 square meters and a construction period of 5 years. The facility consists of earthquake engineering simulation test system, high performance computing and intelligent simulation system, and test supporting and sharing system. Its construction involves many



The world's largest earthquake engineering simulation research facility located in the Beiyangyuan Campus of Tianjin University



fields and disciplines, such as water conservancy engineering, civil engineering, ship and ocean engineering, mechanics, control science and engineering, mechanical engineering, precision instrument science, computer science, materials science and engineering, disaster prevention and safety. Tianjin University has four national key laboratories. With rich experience in the construction and management of scientific research facilities, it can provide strong guarantee for the construction and operation management of large-scale earthquake engineering simulation research facilities.

Large scientific devices tend to reflect the innovation potential of a country. The large-scale earthquake engineering simulation research facility is another significant invention of China, following Five-hundred-meter Aperture Spherical radio Telescope (FAST), China Spallation Neutron Source, and Shanghai

Synchrotron Radiation Facility. After the completion of this large-scale earthquake engineering simulation research facility, it will be open to the whole world, and facilities, data and results will be shared. It will attract more scientists and engineering experts from around the world to work together to contribute to the development of science and technology.



Large-scale earthquake engineering simulation research facility

29 Successful development of the global leading "super yeast"



Professor Yuan Yingjin's team from Tianjin University published a thesis in the journal *Science*, introducing major breakthroughs in the design and synthesis of eukaryotic genomes

To ordinary people, yeast is only used for making wine, making bread and producing ethanol. But in the hands of the synthetic biology research team led by Professor Yuan Yingjin of Tianjin University, yeast can not only become a raw material for β -carotene to fight cancer, prevent cardiovascular diseases, cataracts and other diseases, but it also has potentials for industrial application as it is highly yielding and tolerant.

In May 2018, the synthetic biology team led by Professor Yuan Yingjin of Tianjin University applied the precise control genomic rearrangement technology and cultivated a "super yeast" capable of geometric growth. This achievement fills in the technical gap of domestic genomic structural variation and improves the efficiency of cell factory production. Three pa-

pers on the research results were published in the journal *Nature Communications*.

"Super yeast" is a yeast rearranged by genetic rearrangement. This is one more major technological advancement of Chinese scientists in "designing, recreating, and reshaping life", after Chinese synthetic yeast chromosome broke the boundary between non-living matter and living matter.

The research team of Tianjin University developed a method to accurately control gene rearrangement, so that the synthetic yeast produced geometrically-grown genomic variation in a limited time which drove its rapid evolution.

In order to accurately regulate the rearrangement process of recombinant yeast genome, the research-





ers found that through the interaction of galactose and estrogen, multiple rounds of iterative rearrangement of the synthetic yeast genome were carried out using this precise control technique. The diversity of the yeast was greatly enriched. The researchers selected a large number of high-yield β -carotene strains. After 5 rounds of iterative genomic rearrangement, the yield of β -carotene in the synthetic yeast increased by 38.8 times.

On this basis, through heterologous diploid genome rearrangement and cross-species genomic rearrangement respectively, the researchers obtained a strain with accelerated growth at 42 degrees Celsius and a yeast strain with significantly enhanced tolerance to caffeine. Researchers at Imperial College of Science and Technology in the United Kingdom also applied the yeast of the synthetic chromosome-5

of Tianjin University for genome rearrangement to achieve rapid evolution of the chassis cells, which significantly improved the synthesis of yeast purple bacillus and metabolism of pentose.

This research is of great significance for improving the production and synthesis of energy and pharmaceutical chemicals in the future, and for the discovery of industrial strain evolution and its functions. The study was supported by the National Natural Science Foundation of China, the 973 Program of the Ministry of Science and Technology, and international cooperation projects.



Beiyangyuan Campus of Tianjin University

City of Opening up



30-42



30 World Intelligence Conference focuses on new achievements in intelligent innovation

As the frontier of innovation, intelligent technology has profoundly changed people's production and life, injected new energy into economic and social development, and brought the society to the era of great intelligence.

The World Intelligence Conference is becoming a symbol that, by vigorously developing strategic emerging industrial system represented by the intelligent technology industry, Tianjin promotes the construction of a national advanced manufacturing R&D base. Ma Yun, Liu Qiangdong, Zhang Ruimin, Zhou Hongyi, Liu Qingfeng and other leaders of domestic intelligent technology companies have been invited to this conference. Huawei, Baidu, 360,

iFLT TEK, Siasun Robot, UFIDA, and other enterprises have signed strategic cooperation framework agreements with Tianjin, with a total investment of more than 100 billion CNY. ZBJ, Foxconn Group, China Guangdong Nuclear Power Group, TCL Group, etc. also negotiated with Tianjin for cooperation.

From May 16 to 19, 2019, the World Intelligence Conference will be held at Tianjin Meijiang Convention and Exhibition Center. With the theme of "New Era of Intelligence: Evolution, Strategy and Opportunity", the conference will focus on implementing the "1+10" action plan of the smart technology industry, exhibit the intelligent solutions and application scenarios of Tianjin, and create a source and production place



The Second World Intelligence Conference opened at Tianjin Meijiang Convention and Exhibition Center



of intelligent solutions. This conference will be dedicated to promoting scientific and technological exchanges and cooperation in the field of intelligence in the world, fostering emerging intelligent technology industries, promoting the coordinated development of Beijing-Tianjin-Hebei, and contributing to economic and social development, so as to become the largest, most authoritative global event with the best quality in the field of intelligent technology.

By highlighting internationalization, specialization, intelligence, marketization, and interaction, the World Intelligence Conference aims at becoming an international platform that fulfills the functions of conference, exhibition, contests and intelligent experience.

An intelligent experience zone will be offered at the conference, so as to integrate the intelligent experience with conferences, exhibitions, and competitions.



31 International Promotion of Tianjin Vocational Education “Luban Workshops”



The Luban Workshop jointly built by Tianjin and Ayutthaya, Thailand

In March 2016, Tianjin Bohai Vocational and Technical College built China's first overseas Luban Workshop in Thailand. This indicates that the international development of Tianjin's vocational education has entered a new phase of international exchanges and cooperation.

In 2017, Tianjin built three “Luban Workshops” in the UK, India and Indonesia. In July 2018, the “Luban Workshop” established by Tianjin Modern Vocational and Technical College and the Punjab Technical Education and Vocational Training Authority (TEVTA) was completed and put into operation, so as to cultivate technical talents of mechatronics and electrical automation technology for Pakistan, to promote cooperation of local international capacity in Pakistan, and to meet the needs of local industry for the training of technical skills. The “Luban Workshop” in Pakistan will become a new window for

China-Pakistan cooperation and exchanges and a new pivot for “China-Pakistan Vocational Education + International Capacity Cooperation” to contribute to the construction of the China-Pakistan Economic Corridor.

In October 2018, Lancang-Mekong Vocational Training Center and Cambodian “Luban Workshop” jointly established by Tianjin Sino-German University of Applied Sciences and the Cambodian National Institute of Technology was unveiled, marking the start of the largest cooperation project between China and Cambodia in the field of vocational education. It is an important achievement for Tianjin to give full play to its advantages of vocational education and contribute to the construction of the “Belt and Road”.

In December 2018, an unveiling ceremony was held



for the Luban Workshop jointly established by Tianjin Electromechanical Vocational and Technical College and the Portuguese Polytechnic Institute of Setubal. The Chinese party attaches importance to teacher training, independently develops professional teaching materials, formulates unified teaching standards, and provides 16 sets of advanced mechanical equipment such as modern electrical control systems, automated production line installation and commissioning equipment, industrial robots and intelligent vision systems, and drug filling production lines. The workshop will cultivate high-quality technical staff urgently needed in Portugal.

With the accelerated development of Tianjin's vocational education overseas, Tianjin has already built 7 Luban Workshops, and has formed a vocational education output system with full coverage from

secondary vocational schools to higher vocational colleges and undergraduate institutions, from technical skills training to academic education.

By 2020, 10 Luban Workshops will have been built by Tianjin in Africa, including those under construction in Egypt and Djibouti.



32 Attractive policies help multinational companies to settle in Tianjin

In November 2017, Tianjin Municipality promulgated “Provisions on Encouraging Transnational Corporations to Establish Regional Headquarters and Headquarters-type Organizations”, filling the policy gap in the support for transnational corporations at the municipal level, following Shanghai, Beijing, Guangdong and Jiangsu Province. The Provisions consists of specific incentive policies on the entry and exit, talent introduction, foreign exchange, and customs clearance for regional headquarters and headquarters-type organizations of transnational corporations.

In May 2018, the “Measures for the Use and Management of Special Funds for the Development of Regional Headquarters and Headquarters-type Organizations of Transnational Corporations in Tianjin” was implemented. The Measures includes offering subsidies and incentives for business starting, premise renting, turnover-based rewarding, energy level upgrading and equity integration. The regional headquarters of transnational investment or management corporations, which are recognized by Tianjin after November 16, 2017, will be granted a one-off reward of 5 million CNY the first time their turnover exceeds 1 billion CNY since the year of recognition. The headquarters-type organizations of transnational corporations recognized by Tianjin after November 16, 2017 will receive a one-off reward of 5 million CNY when their annual turnover exceeds 500 million CNY for the first time since the year of recognition.

In order to improve the attractiveness of the policy, the standard threshold of the incentive policy is lower than that of other provinces and cities. The enterprise does not need to pay the registered capital, and



Magna Powertrain (Tianjin) Co., Ltd.

the relevant subsidies and rewards can be available as long as the corresponding conditions are met.

By the end of 2018, the regional headquarters and headquarters-type organizations of 15 transnational corporations, including Novo Nordisk, have been identified in two batches for favorable policies in fund management, entry and exit, talent introduction, and customs clearance. Some enterprises that have met the conditions have begun to apply for subsidy funds. The third batch of identification work is carried out in an orderly manner.



Unilever (Tianjin) Co., Ltd.



Novo Nordisk (Tianjin) Biotechnology Co., Ltd.

33 Summer Davos in China – World New Champions Annual Meeting



Tianjin Summer Davos Forum

The 2018 New Champions Annual Meeting (referred to as Summer Davos) was held at the Meijiang Convention and Exhibition Center in Tianjin from September 18th to 20th. More than 2,500 elites from more than 100 countries gathered in Tianjin, and more than 160 forums were organized. A lot of new ideas were proposed on the theme of “building an innovative society in the fourth industrial revolution.” This event not only contributed to the sustainable development of the global economy, but also provided valuable reference for the transformation and development of Tianjin.

The year 2018 was the 40th anniversary of China’s reform and opening up, and the annual meeting of the new champions was the sixth in Tianjin. This not only presented to the world a China that is deepening reform, expanding opening up and making progress

in civilization, but also provided the opportunities, platforms and space for enhancing Tianjin’s international reputation, competitiveness and influence. To draw on the opportunities brought by the New Champions Annual Meeting, Tianjin planned to arrange staff from district governments and other commissions to visit headquarters of transnational corporations, invite high-level corporate executives to visit, promote the conversion of intention projects into result projects, and implement the projects under negotiation in Tianjin as investment enterprises or business entities. Impressed with the efforts and achievements of Tianjin in recent years, the founder of the World Economic Forum, Prof. Klaus Schwab, praised Tianjin as a city of vision and a pioneer in the fourth industrial revolution.

New-type plasmas will play an important role in fight-



ing cancer and making the human body invisible. Meat produced from stem cells will contribute to the elimination of greenhouse gas emissions. On the list of the top ten emerging technologies released at the 2018 New Champions Annual Meeting, artificial intelligence, biomedicine and other technology have attracted attention from the whole world.

At the New Champions Annual Meeting, Tianjin Municipality arranged for the first time the Municipal Cooperation and Exchange Office, the Municipal Overseas Chinese Affairs Office, the Municipal State-owned Assets Supervision and Administration Commission and 16 districts to send special personnel to offer services to enterprises. At the same time, dozens of entrepreneurs were hired as “investment ambassadors” to strengthen communication with participating companies and at-

tract more high-quality enterprises to settle in Tianjin. Through the 2018 New Champions Annual Meeting, a positive interaction has been established between Tianjin and the World Economic Forum and global leading companies, so as to launch comprehensive, long-term, strategic cooperation in financial investment, information consulting, technological innovation, innovative urban construction, and globalization strategy.

By the end of 2018, Tianjin Smart Factories had spread over 146 industry sectors, the number of technological innovation platforms related to the intelligent technology industry had grown to 300, and the number of national high-tech enterprises had exceeded 4,000.

34 “Green Passage” in the Northern International Shipping Core Zone

To give full play to the role of Tianjin Port in the coordinated development of the Beijing-Tianjin-Hebei region and the “Belt and Road” construction, Tianjin vigorously promoted the construction of the Northern International Shipping Core Zone in 2018.

To co-ordinate regional and port development, enhance the influence of shipping core zone, and promote the coordinated development of Tianjin and Hebei ports, proactive efforts are made in Tianjin to establish a logistics network with dry ports as nodes, railways and highways as linking lines, and the entire hinterland as its service area.

Five shipping service cluster areas have been built in Xiaobailou, Dongjiang, Yujiapu, Beijiang and Nanjiang, and Aviation Logistics Area. Efforts will be made to improve the shipping service system, improve traditional shipping services such as ship transportation, vigorously develop high-end service industries such as shipping finance and factoring, and attract more shipping companies, financial institutions, and maritime legal organizations to settle in Tianjin.

At the 2nd World Intelligence Conference, the Northern International Shipping Research Institute was established. This fills the gap in the research field of international shipping in Tianjin and further improves the decision-making level for the construction of the Northern International Shipping Core Zone.

In June 2018, the first sea-rail intermodal train carrying photovoltaic glass and other goods for export set off from Anyang and arrived at Tianjin Port. This is the second multimodal transport corridor closely connected with the Central Plains region of China, which offers strong support for Tianjin to accelerate the construction of the northern international shipping core zone and develop an open pattern of land-sea linkage and east-west mutual aid.

In August 2018, the “Baodi” ship carrying 3,300 tons of Shougang cold coils berthed at the 14th wharf of Tianjin Port, marking a successful maiden voyage of the Tianjin Port “Water Bus”. The project reduced the transportation cost of cargo collection and transportation, effectively promoted the emission reduction of heavy-duty diesel vehicles, enhanced the effect of cargo aggregation, gave full play to the advantages of the route, magnified the function of Tianjin as the northern international shipping core zone, and realized the mutual benefit and win-win cooperation between steel mills and the port.

In October 2018, Tianjin Port Haihe Smart Logistics Fund was established, with an initial fundraising scale of 4.2 billion CNY. The fund aims at expanding the influence of the modern logistics network with Tianjin Port as the center, strengthen the economic ties with the countries in the hinterland and those along the “Belt and Road”, and create golden pivots for the “Belt and Road” initiative. At the same time, the fund will help Tianjin Port to accelerate its construction to become a hub for global resource allocation and provide high-quality integrated port services for the construction of Xiongan New Area.

To give full play to the role of Tianjin Port in serving the coordinated development of Beijing-Tianjin-Hebei and the construction of the “Belt and Road”, Tianjin regulated charging at the port, improved the efficiency of customs clearance, created a “green channel” of services, and promoted the construction of the Northern International Shipping Core Zone.



35 China International Mining Conference promotes innovation cooperation between domestic and foreign mining companies

To promote the international cooperation of mining enterprises, thanks to 19 years' intensive effort since 1999, China International Mining Conference has become an important platform to grasp the industry trends and promote exchanges and cooperation in the international mining industry. It has become China's largest and highest-level event in the international mining industry. The number of participants increased from over 100 to more than 10,000 from 54 countries and regions in 2017. In 2018, China International Mining Conference attracted 11,167 delegates from 69 countries and regions.

The 2018 China International Mining Conference opened on October 18 at Tianjin Meijiang Convention and Exhibition Center. With the theme of "New Pattern of Opening, New Mode for Cooperation", the mining conference held more than 60 forums and mining exhibitions, which showed new features and characteristics.

1. To build a better platform for investors to access information and opportunities.
2. To provide mining rights holders with access to investment funds.
3. To provide the surveyors with an information board to know the market trends.
4. The conference has become a bridge between scientists and the mining industry.
5. The conference has become a platform for better understanding of policies and regulations and investment environment of the mining industry.
6. The conference will try to become a platform with "infinitely extended sessions and unlimited expansion."

At the 2018 China International Mining Conference, a special promotion conference was set for Tianjin, for the first time building platforms of investment cooperation and exchanges for 16 districts in Tianjin, where policies and technology were introduced. The heads of investment promotion departments from Binhai New Area, Wuqing District, Baodi District and other districts introduced their investment policies, and then released the latest technologies of Tianjin in the fields of energy and resource development such as geothermal exploration.

At the 2018 China International Mining Conference, Report on Chinese Mineral Resources (2018) prepared by Ministry of Natural Resources was released. This annual report introduced China's progress in mineral resources exploration and development, mine geological environment protection, geological and mineral resources survey and evaluation since 2017, as well as new measures in mineral resources planning, mineral resources management policies and regulations, mining tax and fee system reform and ecological environment, new developments in the scientific and technological innovation for the exploration and utilization of mineral resources, theoretical research in earth sciences, and new achievements in the "Belt and Road" international cooperation on geological and mineral resources.



36 Overseas Chinese Expo becomes a national characteristic “Belt and Road” corridor

The first Overseas Chinese Expo was held in Tianjin in 2017. It focused on the major national development strategies, built platforms for investment from overseas Chinese, attracted 232 overseas Chinese delegations with 1500 guests from 83 countries and regions. At the expo, 200 contracts were signed with a total investment of 17.26 billion CNY.

The 2018 Overseas Chinese Expo was held at Meiji-ang Convention and Exhibition Center from July 13 to 16. With the theme of “Innovation, Cooperation and Development”, this expo continued to focus on the country's major development strategy and actively promoted the construction of overseas Chinese industrial clusters and the development and opening up of Binhai New Area.

The 2018 Overseas Chinese Expo consisted of Tianjin Forum, Science and Technology Innovation Projects Matchmaking Fair, “Belt and Road” Construction Project Cooperation Fair, “Qiaomengyuan” Construction and Development Forum, Matchmaking Fair for Overseas Talents and Innovation Projects, Overseas Chinese Media Forum and other activities. At the same time, “World Overseas Chinese Business Projects and Commodities Expo” was held, with participants from overseas Chinese business associations, professional associations and overseas Chinese enterprises. It mainly exhibited major “Belt and Road” projects involving overseas Chinese and compatriots from Hong Kong SAR and Macao SAR, achievements of Beijing-Tianjin-Hebei Collaborative Development and the construction of “Qiaomengyuan”, show-



The 2018 Overseas Chinese Expo



cased the famous Chinese and foreign specialty products, promoted cooperation in economy, trade, science and technology as well as talent exchanges, and built a transaction platform for economy, trade, science and technology related to overseas Chinese.

The first day of the 2018 China Tianjin Overseas Chinese Entrepreneurship and Development Conference was fruitful. Cooperation intentions were reached on 217 projects in such fields as smart manufacturing, life sciences, biotechnology, health care, new energy and new materials, financial services, tourism and care for the aged, digital entertainment, modern management, and real estate development. The agreed investment amount is about 23.19 billion CNY.

The projects that reached cooperation intentions were not only numerous, but also contained substantial content. At the Fair for High-level Overseas Talents and Innovation Projects, 208 overseas Chinese doctors from 21 countries (regions), including 2 academicians, with 212 innovative projects, had discussions with more than 200 universities, research institutes, key enterprises and overseas entrepreneurship parks in Tianjin. In the end, agreements were signed for 11 cooperation projects, as well as 90 projects with cooperation intentions on talent introduction, technical cooperation and project implementation.



37 Tianjin National Convention and Exhibition Center – an exhibition platform in northern China

Tianjin National Convention and Exhibition Center (TNCEC) is a joint project of Ministry of Commerce and Tianjin Municipal People's Government. It is a strategic move of Ministry of Commerce to develop China's convention and exhibition industry and build a new high ground for the global exhibition industry. Upon completion, it will put an end to the lack of large-scale exhibition halls in the Beijing-Tianjin-Hebei region, and become a flagship platform for exhibitions in Northern China.

On November 2, 2018, the construction of TNCEC, the largest state-level exhibition platform in China, was officially started on the south bank of the Haihe River in Jinnan District. The project covers 2.2 square kilometers, with a construction area of 1.34 million

square meters, an indoor exhibition area of 400,000 square meters, and an outdoor exhibition area of 100,000 square meters. The project will be constructed in two phases. In the first phase, 16 exhibition halls and a comprehensive supporting area will be built, with a net exhibition area of 200,000 square meters.

The supporting area and the exhibition halls area are independent of each other, with the functions of hotels, businesses, conferences and offices to serve the exhibition halls and surrounding areas. The first phase of TNCEC will be completed by the end of 2020, and put into use in 2021. According to the relevant person in charge, TNCEC is designed as a



Tianjin National Convention and Exhibition Center (design sketch)



green intelligent three-star building to offer top-class services.

To achieve in-depth integration of “exhibition”, “belt” and “buildings”, Tianjin follows the national strategy for the development of convention and exhibition industry, focuses on the construction of Haihe River Service Economy Comprehensive Development Belt, and makes flexible use of the existing buildings. At present, plans are being prepared for the exhibition industry and the construction of supporting infrastructure, so as to pave the way for the successful operation of TNCEC. As the third state-level international convention and exhibition center jointly built by Ministry of Commerce and the local government, TNCEC integrates the functions of exhibitions, con-

ferences, offices, hotels and businesses to meet the needs of international first-tier exhibitions and top-level conferences.



38 Tianjin Port opened Sino-Russian International Freight Train



The first COSCO Sino-Russian international liner departs from Tianjin

Tianjin Port is the maritime gateway of the Chinese capital, an important node on the Eurasian Bridge, and a strategic fulcrum for the Sino-Mongolia-Russia economic channel.

In January 2018, the first Sino-Russian international freight train of COSCO Shipping set off from Tianjin Port for Moscow, Russia.

The first Sino-Mongolia-Russia sea-rail transport corridor in North China was jointly created by COSCO Shipping Group, China Railway Corporation and Tianjin Port Group Corporation. It greatly reduces logistics costs and improves the competitiveness of products in the Beijing-Tianjin-Hebei region. It used to take 45 days to transport the goods from the southeast coast to St. Petersburg and then to Moscow. After the opening of the train, the transportation time was shortened to 14 days. More importantly, according to the freight rate of 20,000 CNY per container and the average cargo load of 25 tons per container, the freight rate of 1 kilogram of goods is no more than 1 CNY.

In recent years, to give full play to its advantages, Tianjin Port opened Tianjin-Moscow sea-rail joint transport to offer better services to the members of Shanghai Cooperation Organization (SCO). The national demonstration project of Tianjin Port Sino-Russian Economic Corridor Container Multimodal Transport will offer strong support for Tianjin to develop into a golden intersection of "21st Century Maritime Silk Road" and "Silk Road Economic Belt".

At present, there are three sea-rail transit lines connecting Tianjin Port with Central Europe and Central Asia. Through Manzhouli and Erlianhot, Chinese goods can be transported to Russia; through Alataw Pass and Horgos, goods can be transported to Kazakhstan, Kyrgyzstan and other SCO countries.

According to statistics, the overall transport volume of the trains bound for Central Europe and Central Asia from Tianjin Port maintained a high growth momentum. In 2018, the number of international trains was 547, an increase of 36.4%.



39 Kim Baldridge, a foreign professor at Tianjin University, wins Chinese Government Friendship Award

On September 29, 2018, Professor Kim Baldridge of Tianjin University won 2018 Chinese Government Friendship Award. Her husband, Professor Jay Siegel, dean of the School of Pharmacy and Life Sciences of Tianjin University, won the award in 2015.

The Chinese Government Friendship Award is the highest honor for foreign experts who have made outstanding contributions to China's modernization drive. In 2018, 50 foreign experts from 21 countries won the award. Kim Baldridge is the third foreign professor from School of Pharmacy and Life Sciences of Tianjin University (hereinafter referred to as School of Pharmacy) who has won the Chinese Government Friendship Award. Prof. Jay Siegel, Dean of School of Pharmacy, and Professor James Fraser Stuart, molecular scientist and winner of Nobel Prize in Chemistry, won the award in 2015 and 2017 respectively.

Professor Kim Baldridge, of American and Swiss nationality, is a computational chemistry expert, former professor of Faculty of Science at the University of Zurich, director of San Diego Supercomputer Center, and currently Associate Dean and Professor of School of Pharmacy, director of High Performance Computing Center of Tianjin University, winner of 2016 Tianjin Haihe Friendship Award. She is dedicated to the research of computer theory chemistry, molecular dynamics simulation, supramolecular models and reaction mechanism. She has published more than 220 theses, which have been cited more than 22,000 times. She is also a member of the editing committee of the famous academic journal *Chemical Theories and Calculation*.

Thanks to the effort to attract outstanding experts from overseas, a high-level intelligence structure has gradually emerged in Tianjin University. In the School of Pharmacy, one of the first four international pilot schools in China, there are more than 40 foreign experts from 18 countries and regions, and the foreign teachers account for more than half of the staff. In 2017, five Nobel Prize winners were engaged by Tianjin University.



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40 Remarkable results have been achieved in the construction of Sino-Egyptian TEDA-Suez Economy and Trade Cooperation Zone

Egypt is the first Arab country to establish diplomatic relations with China.

After more than ten years' effort, solid progress was made in the Sino-Egyptian Suez Economic and Trade Cooperation Zone, under the operation of China-Africa TEDA Investment Co., Ltd., a subsidiary of China Tianjin TEDA Investment Holding Co., Ltd. January 21, 2019 marked the third anniversary of the expansion area project of this zone, which was unveiled by the leaders of both countries.

Sino-Egyptian Suez Economic and Trade Cooperation Zone not only contributes to the economic development of Egypt, it is also a classic case of

overseas investment of China. There is no doubt that this is a paradigm of mutual benefit and win-win cooperation.

Sino-Egyptian Suez Economic and Trade Cooperation Zone is located 120 kilometers from Cairo, the capital of Egypt. Seated in the vast Gobi on the Suez Canal, it is divided into a starting area and an expansion area. The starting area of 1.34 square kilometers attracted nearly 80 enterprises, with an investment over 1 billion USD and a total output value of about 1.2 billion USD. The starting area alone offers employment of more than 3,500 people, and the industry offers about 30,000 jobs.



Sino-Egyptian TEDA Suez Economic and Trade Cooperation Zone



The water entertainment park, dinosaur theme park, restaurants, hotels... the starting area is full of vitality. The industries of new building materials, petroleum equipment, high and low voltage equipment and machinery manufacturing have gradually matured in Egypt.

Compared with the starting area which developed through exploration, the 6-square-kilometer expansion area follows the mode of "leading enterprises driving industrial clusters" and strives to form new industrial clusters in passenger car manufacturing, textile and garment.

Since its inception in 2016, the Sino-Egyptian

state-level strategy has brought a rare historical opportunity for its rapid development. The combination of its advantageous location and favorable policies has brought the park from the entrepreneurial stage to the development stage. At present, 2-square-kilometer infrastructure has been constructed in the expansion zone, attracting 8 industry leading enterprises, with an agreed investment of 200 million USD. Through the economic and trade cooperation zone, China and Egypt, two developing countries, are demonstrating the effect of mutual benefit and win-win cooperation.



41 Punjab Tianjin University of Technology starts operation in Pakistan as scheduled

Punjab Tianjin University of Technology is an overseas undergraduate education program jointly organized by Tianjin Vocational and Technical Normal University, Tianjin Polytechnic University, Tianjin Chengjian University. It aims to serve the "Belt and Road" and the "China-Pakistan Economic Corridor" construction and cultivate technical personnel for Pakistan to meet the needs of local economic development.

Punjab Tianjin University of Technology project is named after the locations of both parties. This is a pragmatic move for Tianjin universities to participate in the construction of the "Belt and Road" and the "China-Pakistan Economic Corridor". Taking Punjab Tianjin University of Technology as a platform, Tianjin universities will give full play to their professional advantages, share education experiences and teaching resources, and cultivate application-oriented technicians for Pakistan.

Punjab Tianjin University of Technology opened in March 2018. At the invitation of the Palestinian side, delegations from the three Tianjin universities attended the opening ceremony.

In the university, the three Tianjin universities have set up Engineering Technology College, Textile Engineering Technology College and Architecture Engineering College, with seven majors, such as mechanical engineering technology, textile engineering technology and civil engineering, so as to cultivate applied technical personnel in Pakistan in the form of joint education. Up till now, the Chinese parties have completed the development of training programs and laboratory construction programs and sent

teachers and management personnel to Pakistan to fulfill educational management and teaching tasks. In addition, the Chinese parties will continue to carry out exchanges and training for teachers and students and education for international students, create more opportunities for Pakistani students to study in China, promote the in-depth cooperation between Tianjin and Punjab, and contribute to the construction of the "Belt and Road" and the "China-Pakistan Economic Corridor".



Opening ceremony of Punjab Tianjin University of Technology in Pakistan



Pakistani students at Punjab Tianjin University of Technology in Pakistan

42 A good business environment to help foreign companies to take root in Tianjin

At the beginning of 2018, Tianjin Municipal Market Supervision Committee introduced "Measures on Creating a Good Business Environment to Serve the Entrepreneurs", which deepened the commercial system reform, delegated more power to the market and enterprises, and created a satisfying market access environment for the entrepreneurs. The "Measures" improved its chain-type supervision system of information disclosure, risk classification, random joint investigation, results notification, and joint punishment, creating a fair, honest, open and inclusive market competition environment for entrepreneurial development. The "Measures" will effectively solve the entrepreneurial problems, and provide a "quality-prioritized" environment for entrepreneurship.

COFCO Food Marketing (Tianjin) Co., Ltd., a Fortune 500 company, is the first foreign-invested enterprise in Tianjin to go through the "one window, one form" simplified procedures. For the online processing, submission at the window, and background data sharing, the applicant needs to visit the authority only once to submit applications to two departments at the same time.

Metso Minerals (Tianjin) International Trading Co., Ltd. ("Metso") was established by Metso Minerals Holding Co., Ltd. in Tianjin Airport Economic Zone. It has a history of 150 years and is mainly engaged in the procurement, sales and installation of mining equipment and the spare parts. It is a well-known manufacturing and service company of Finland.

Tianjin National Taxation Department has assisted to deal with its tax-related difficulties, which provided a powerful support for its subsequent development. The headquarters of this company plans to establish an overseas R&D center in Tianjin and expand its scale of investment here.

So far, Tianjin has introduced 383 projects from 168 Fortune 500 enterprises (foreign-funded).



Central Business District, Binhai New Area

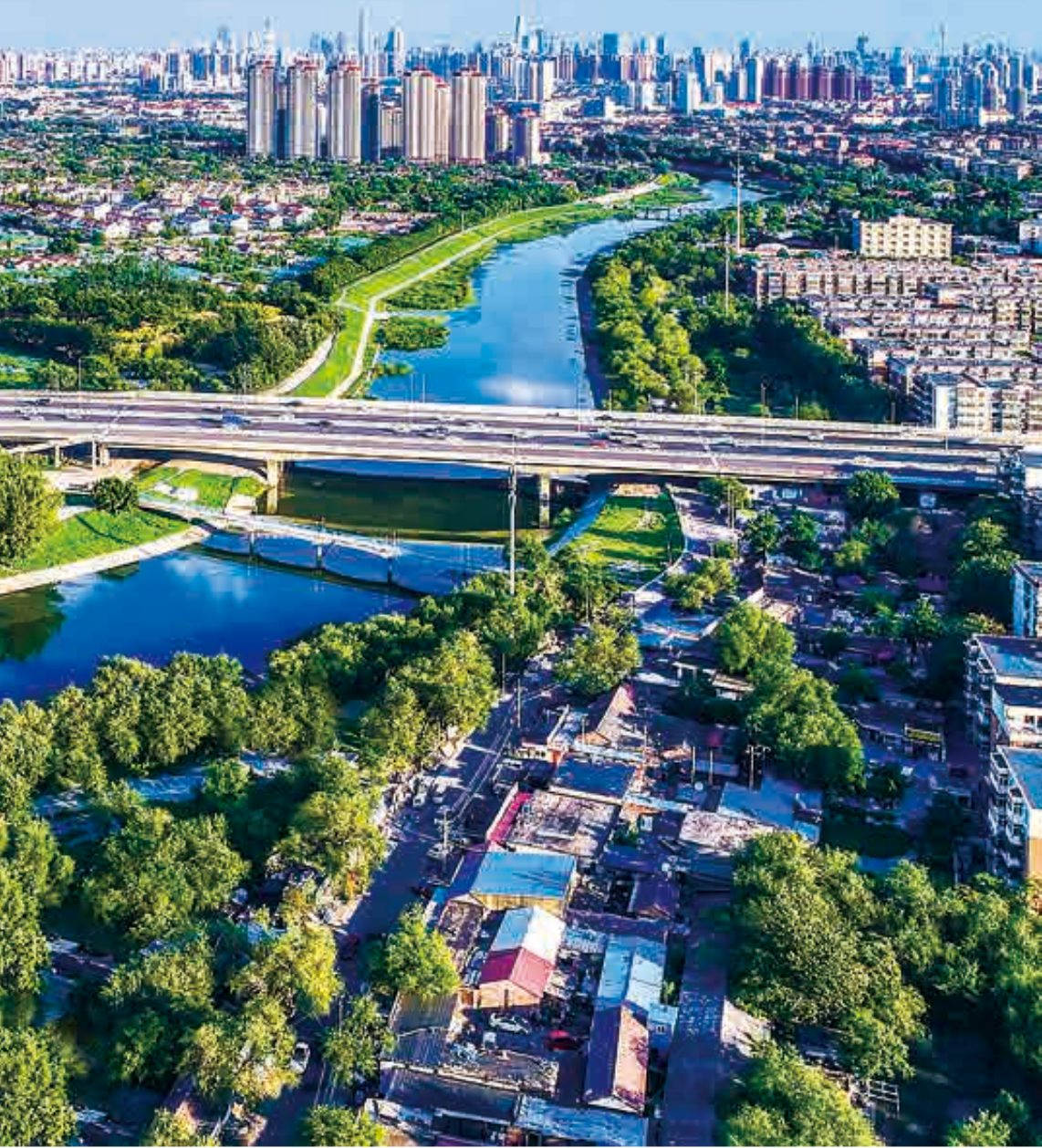


Xiangluowan Business District

City of Innovation and Entrepreneurship



43-57



43 Tianjin is the first in the country to implement the new enterprise registration system

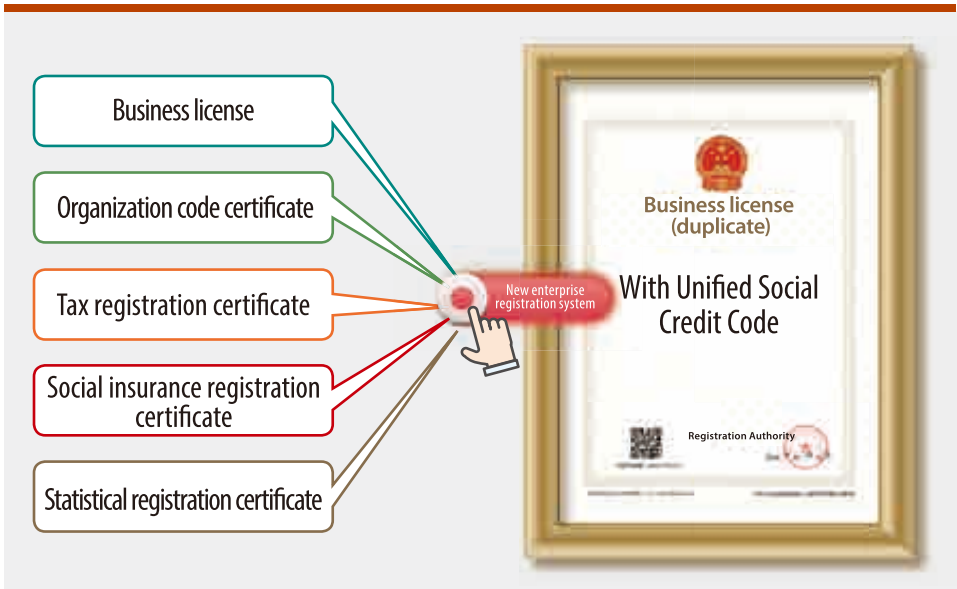
The new enterprise registration system is an improvement over the former one, integrating social insurance registration and statistical registration in the examination and approval process. At the time of registration of the enterprise, the registration department issues a business license bearing the legal person and other organizations' unified social credit code, and passes the registration information to the social insurance registration and statistical registration departments through the joint approval information sharing platform. The social insurance registration certificates will not be issued separately.

After the reform, when enterprises apply for registration, the registration authority will issue a business license and then transmit the relevant data to the code, tax, social security, and statistics departments, thus avoiding the repetitive examination and approval procedures. It realizes "one-table application, one-entry acceptance, one-time review, and information sharing". The enterprise organization code certificate, tax registration certificate and social security registration certificate are no longer issued. The business license is the only legal certificate of the identity of the enterprise, and all departments should recognize, accept and promote the use of it. For the procedures which used to require organization code certificates, tax registration certificates and social security registration certificates, the enterprises need to provide their business licenses only.

The new registration system will further simplify the examination and approval procedures, minimize repetitive audits, and significantly enhance market access facilitation. Through the reform, it requires only one department to handle the examination and approval, and the information is mutually recognized by various departments. This not only frees the applicants from repetitive submissions of documents and applications for various certificates, but also relieves

the examination and approval departments from redundant work. It not only reduces the burden on enterprises, but also lowers administrative costs and improves administrative efficiency, which is of great significance to stimulate the vitality of the market and encourage public innovation.

On the basis of the reform of the "three-in-one" registration system, the "one license, one code" registration mode was implemented. Since May 1 this year, social insurance registration has been included in the "three-in-one" registration process to facilitate enterprises in handling social insurance. At the same time, a mechanism has been established for the regular sharing of registration information with the municipal statistical departments. A new registration mode of "five certificates, one license, one code" has been basically established. The improvement this time further optimized the registration process and improved the data sharing mechanism.



Five certificates in one, business license and unified social credit code



Improve the efficiency of examination and approval

44 Tianjin completely cancels urban supporting infrastructure fees



In January 2019, Tianjin put forward “Several Opinions on Further Promoting the Development of Private Economy”, with 19 policies to tackle the difficulties of private enterprises, crack down on the prominent problems of financing and transformation that restrict the development of private economy, and stimulate the vitality of private economy.

As part of the 19 policies on private economy, Tianjin issued the “Working Opinions on the Reform of Urban Supporting Infrastructure Fees and Construction System” with specific implementation measures.

According to the “Work Opinions”, Tianjin will promote the implementation in four aspects: canceling the supporting fees, establishing a land requisition system, including supporting construction into land consolidation, and promoting the marketization of heating supply.

For the industrial and social housing projects, as is stipulated in the former policy, urban infrastructure fees are not charged; the supporting infrastructure is to be constructed by themselves, and the relevant expenses are included in the project construction cost. All the other projects are exempted from urban infrastructure fees.

For the land for municipal infrastructure, a requisition system and an overall coordination mechanism are adopted. First, for the land for municipal infrastructure of Tianjin, a collection system is adopted. Second, before the preparation of the annual land reserve plan, the Municipal Planning and Natural Resources Bureau, and the relevant departments and the people’s government of the project location will jointly determine the planning scope and indicators for the land reserve project, the range of land for requisition for the municipal infrastructure and the construction standards, economic feasibility calculations, and project deadline. The feasible projects are then included in the land reserve plan of the year. Third, the land consolidation units strictly follow the land reserve plan, complete the storage and consolidation of the relevant land for municipal infrastructure before the land transfer or allotment, and finish the work of land ownership cancellation.

Improve the system of municipal supporting infrastructure construction. Before the transfer of commercial land, preliminary construction is necessary and the engineering cost shall be included in the cost of consolidation. Power, communication, heating pipelines and facilities are invested and implemented simultaneously by professional pipeline units.

The central heating projects are market-oriented. For new heating projects, the construction unit and the heating unit jointly formulate the heating plan and relevant expenses through negotiation.



Preferential Policies of “Tianjin 19 Articles”

The administrative fees for enterprises should be greatly reduced or exempted



The administrative fees with standards established by the local authority
Government funds with standards established by the local authority
Government funds shared by the central and local governments—the part for local retention

Abolish urban supporting infrastructure fees



Adopt requisition system for supporting infrastructure land
Marketize central heating projects

Taxes and fees within local jurisdiction shall be implemented at the lowest level



Reduction of stamp duty by 30%
Free stamps are given out to newly established enterprises

Effectively reduce the burden of social insurance premiums for enterprises



Troubled enterprises 50% of the unemployment insurance premium refunded
Troubled enterprises 50% of the five social insurance premiums refunded periodically

Continue to substantially reduce VAT and exempt taxes for small and micro enterprises



State-level and city-level private enterprises are exempted from VAT, real estate tax and urban land use tax, or apply for tax deferral when encountering difficulties.

Regularize intermediary-related fees and deposits



The deposit may be waived or reduced in proportion to the credit record.

Implement preferential policies for enterprise land use



The proportion of production and living facilities in the industrial park in the total construction area will be increased to 16%.

Differentiate charges for expressways



A 6.5 percent discount will be offered to all legally loaded trucks traveling along the Tianjin section of Beijing-Tianjin Expressway

Give full play to the role of government procurement in offering targeted support



In the total annual government procurement budget, the proportion dedicated to small and medium-sized enterprises shall not be less than 30%, among which the proportion reserved for small and micro enterprises shall not be less than 60%.

Strengthen financial policy support



Stabilize and increase loans provide strong guarantee set up special funds

Award enterprises for their independent research and development



Up to a maximum of 5 million CNY

Support the development of headquarters economy of private enterprises



Enterprises with new headquarters in Tianjin will receive subsidies of up to 30 million CNY according to paid-in capital

Give support to private enterprises to explore the overseas market



Give support to private enterprises to use cross-border e-commerce to cultivate their own Internet brands and establish “overseas warehouses”

Implement the principle of “no ban equals allowance” in the field of market access



Implement the new negative list for market access

Effectively protect the personal and property safety of private entrepreneurs



Fair justice will escort the development of private enterprises



Prevent the use of criminal means to interfere in economic disputes

Strengthen protection of intellectual property rights



Subsidize enterprises that obtain invention patents at home and abroad

Unimpeded communication channels between government and enterprises



“government-enterprise” through train favorable policies for enterprises administrative licensing matters public services matters

Continue to improve the business environment



committed, standardized, intelligent, and convenient “Haihe talents”

45 **“Tianjin Eight Articles” — optimizing the business environment**

On November 16, 2017, Tianjin issued the “Regulations on Creating a Good Environment for Entrepreneurship Development”, namely “Tianjin Eight Articles”, which aims to condense the wisdom of the vast number of entrepreneurs, and build a fertile ground for entrepreneurs to develop in Tianjin by protecting entrepreneurs’ property rights according to law, protecting entrepreneurs’ self-management power according to law, promoting entrepreneurs’ fair competition and integrity management, stimulating entrepreneurs’ innovation and entrepreneurial vitality, improving entrepreneurs’ incentive mechanism, promoting outstanding entrepreneurship, optimizing service to entrepreneurs, and cultivating an excellent entrepreneurial team.

The “Regulations” requires that the requirements for the various types of administrative licensing matters to be issued by the intermediary agencies should be cleaned up and regulated in accordance with the law, and the standardized management and evaluation of the administrative licensing requirements of the intermediary agencies should be strengthened. Fully implement the list management of the list of enterprises involved in charging, and all charges outside the list of catalogues shall not be enforced. The administrative fees and charges for enterprises involved in the state are implemented at the lower limit of the relevant standards, and the local administrative enterprises enjoy “no fees”.

“Tianjin Eight Articles” stipulates that for the enterprises whose R&D platforms are upgraded to a national level, a special fund subsidy of 500,000 CNY to 1 million CNY will be granted; For the leading science and technology enterprises and leading incubators that implement major innovation projects and innovation platform construction, a maximum of 5 million CNY and 3 million CNY of science and technology funds will be granted respectively; for the entrepreneurs

of the leading science and technology enterprises and leading incubators, rewards will be given according to their all-round contribution of the year. Nobel Prize winners and academicians at home and abroad who established a technology-based enterprise with independent intellectual property rights in Tianjin and served as the chairman or general manager will be given a one-off grant of up to 10 million CNY for scientific and technological achievements. High-end scientific and technological talents such as Changjiang Scholars, National “Thousand Talents Plan” experts and National Science Fund for Distinguished Young Scholars winners who established a technology-based enterprise with independent intellectual property rights in Tianjin and served as the chairman or general manager will be given a one-off grant of up to 2 million CNY for scientific and technological achievements.

In order to promote the implementation of “Tianjin Eight Articles”, Tianjin Binhai New Area, Ninghe District, Wuqing District, Jinghai District, Baodi District and Jizhou District have issued policies and measures to smooth the information channels for enterprises and serve as “waiters” with high quality and efficient services.

Since the implementation of “Tianjin Eight Articles”, the city has formed a strong atmosphere of emphasizing business, loving business and pleasing business, and built a “golden age” for the innovation and development of enterprises, which has stimulated the enthusiasm of entrepreneurs to invest and start businesses in Tianjin.



“Tianjin Eight Articles” makes Tianjin home to entrepreneurs

In order to build a good environment for entrepreneurial development, carry forward the outstanding entrepreneurship, set up the concept of “giving priority to the industry and entrepreneurs”, and give play to the role of entrepreneurs, Tianjin issued the “Regulations on Creating a Good Environment for Entrepreneurial Development”, namely “Tianjin Eight Articles”, which contains a large number of specific measures. With these favorable policies, Tianjin will strive to create a good environment for entrepreneurs to start their own businesses and become their real “home”.

"Tianjin Eight Articles" stipulates that

- 1** Protect entrepreneurs' property rights according to law
- 2** Protect entrepreneurs' self-management power according to law
- 3** Promote entrepreneurs' fair competition and integrity management
- 4** Stimulate entrepreneurs' innovation and entrepreneurial vitality
- 5** Improve entrepreneurs' incentive mechanism
- 6** Promote outstanding entrepreneurship
- 7** Optimize services to entrepreneurs
- 8** Cultivate an excellent entrepreneurial team

46 Government Services Campaign for Enterprises



Build a service platform, optimize policy services, promote the rapid growth of enterprises

Tianjin organized a government services campaign to promote development of enterprises. Giving priority to the industry and entrepreneurs, following the guideline of “Tianjin Eight Articles”, the campaign aims at solving practical problems and difficulties for enterprises, so as to promote the construction of key projects, enhance the business environment and promote high-quality economic development.

In 2018, more than 1,000 cadres from municipal departments, 3,000 cadres from district-level departments, and 6000 cadres from towns or townships went to the production and project sites. Focusing on the implementation of “Tianjin Eight Articles”, they solved the practical difficulties faced by enterprises, removed the constraints for project implementa-

tion, and promoted the high-quality development of the real economy. At the municipal level, 16 working groups were set up to be responsible for the comprehensive coordination and promotion of relevant areas. The municipal government functional departments set up 45 service groups, which are responsible for coordinating and solving the problems with the enterprises and projects submitted by the District Campaign Leading Group Office. 35 financial institution service groups were established in the banks of Tianjin, to solve corporate financing and project funding problems.

By arranging 10,000 cadres to support 10,000 enterprises, this campaign aims at serving enterprises and development by solving their practical difficulties on



TEDA implements the government public welfare agency service mechanism



Intelligent administrative examination and approval service platform

the spot. In 2019, the campaign will be improved in five aspects: First, expand the scope of services, and coordinate the implementation of “Tianjin Eight Articles” and its supporting implementation rules. Second, improve the service mode by resolutely putting an end to lip services and create a close relationship between government and business. Third, optimize the service platform and include all the relevant policies of “Tianjin Eight Articles”. Fourth, improve the service mechanism and establish a work ledger for enterprise services. Fifth, emphasize effect and efficiency in services.

With concrete and specific measures, the campaign is an outcome of system innovation, and it contributes to a keen atmosphere to promote sustained and

sound economic growth and accomplish the major objectives of economic and social development of the year. The enterprises will benefit from this campaign, which in turn will increase the competitiveness of the city.

47 Approval system reform contributes to continuous improvement of the business environment

"Business environment" is a hot word now because of its nonnegligible influence: a good business environment attracts both talents and funds. It has been mentioned repeatedly in the government work reports of the National People's Congress, along with major measures to improve business environment such as streamlining administration, tax exemption and fee reduction.

As an important area of the Beijing-Tianjin-Hebei coordinated development strategy, in recent years, Tianjin has made a lot of efforts to narrow the gap between the business environment and the expectations of the market players. In 2017, it put forward a series of policies to optimize the business environment, including "Tianjin Eight Articles". In 2018, a deepened reform was launched to upgrade the business environment to ensure continuous release of dividends.

The special questionnaire survey on "Evaluation of the Business Environment by 10,000 Private Enterprises in 2018" was launched nationwide. According to the subjective data of the questionnaire and the objective official statistics, Tianjin ranked the fourth among the top 20 provinces with good business environment in the country.

To improve the efficiency of administrative examination and approval, Tianjin has cancelled 343 items, merged 557 items into 165, decentralized power on 94 items; cancelled 3,842 application materials, 188 processing links, and 106 certificates; shortened the legal average time limit from 21.2 days to 5.4 days.

In examination and approval, the start-up time of an enterprise was reduced to 3 days; for general social investment projects, the time from land acquisition to obtainment of construction permit was shortened to within 80 days; the efficiency of intermediary ser-

vice agencies was increased by more than 40%; new measures of credit commitments have become new normal in the work.

To improve levels of standardization, intelligence and facilitation, "Tianjin Online Service Hall" and 50 government service "unmanned supermarkets" have been established, and more than 90% of the examination and approval items can be handled online or require at most one visit; 1,089 items can be handled immediately, 1,332 items can be handled nearby, 2,143 items can be handled online, 2,104 items can be handled at one time; 1,308 unnecessary certificates have been cancelled, and 327 new items can be handled with ID card only.

Tianjin has made great efforts to improve the business environment, so that enterprises can have a sense of achievement and belonging in Tianjin. In view of the competition of business environment that has spread from the coast to the inland, there is still a long way to go for Tianjin despite its good start.



48 Tianjin launched the pilot reform to separate operating permits from business licenses



In 2017, Tianjin issued the “Reform Pilot Work Program on Separating Operating Permits from Business Licenses”. China (Tianjin) Pilot Free Trade Zone and Tianjin Binhai New Area piloted the reform, and the pilot period was from the date of issuance to December 21, 2018.

The pilot reform is an important measure to promote decentralization of administration, integration of management, and optimization of services. It mainly solves the difficulties the market players had while applying for certificates.

According to the plan, the administrative approval is cancelled and replaced by a record. For the management of specific activities where regulatory responsibilities are greater than responsibilities for examination and approval, the measures of “easy access and strict management” shall be adopted, and the approval shall be cancelled and replaced by a record.

Simplify the administrative approval procedures and implement the notification commitment system. For

the administrative licensing items where administrative examination can not be cancelled, but the behaviors that do not meet the conditions for approval can be corrected through supervision and will not have serious consequences, simplify the administrative approval process and implement the notification commitment system.

According to the program, Tianjin will vigorously cultivate and develop industry organizations, strengthen market access management for specific activities, improve transparency and predictability of administrative examination and approval, speed up the establishment of approval and supervision credit linkage mechanism, effectively strengthen supervision during and after handling matters, and accelerate the sharing of government information.

In August 2018, “Tianjin City Further ‘Separating Operating Permits From Business Licenses’ Reform Pilot Program” was issued, marking the start of the second round of work on separating permits from licenses. Meanwhile, a list of 56 administrative licensing and administrative services of the pilot reform was released. The announced plan covers reforms in 13 fields including industry and information technology, investment and construction projects, quality and technology supervision, pharmaceutical and medical equipment, business, medicine and health, agriculture, transportation, and safety production supervision.

The reform of “separating operating permits from business licenses” is a major decision of the CPC Central Committee and the State Council. It is an important part of deepening the management reform and an important measure to improve the business environment and promote entrepreneurship and innovation.



Tianjin launched the second batch of pilot reform on "separation of certificates and licenses"



Tianjin Pilot Free Trade Zone carried out pilot reform on "separation of certificates and licenses"

49 Fee reduction and efficiency improvement at Tianjin Port



Tianjin Dongjiang Bonded Port Area

Improving the business environment means liberating productivity and enhancing competitiveness. In 2018, Tianjin launched a special campaign to improve the environment, and implemented a series of measures to reduce customs clearance time, reduce the compliance cost of container import and export, and promote cross-border trade facilitation measures. Tianjin took the lead in China in publicizing port fee list with clearly indicated prices, which promoted the comprehensive optimization reform of the port logistics and customs clearance process, and achieved remarkable results in port fee reduction.

On April 1, 2018, Tianjin Port began to offer “one-stop sunshine price lists” featuring “capped ceiling, controllable total amount, clearly indicated prices, openness and transparency”. The information also includes the charging items, charging standards, services and telephone numbers for business handling. Through the simplified procedures, Tianjin Port offers a full range of convenient services.

Based on the practice in Singapore and Shanghai, Tianjin Port Group Corporation took the

measures of fee reduction and efficiency improvement. Charges for some services were reduced or exempted, so as to reduce the burden on foreign trade import and export enterprises and promote the high-quality development of the real economy. At the same time, through process reengineering and optimization of services, its improved cross-border trade facilitation will help Tianjin Port to develop a first-class business environment with standard operations, fair competition, and high efficiency. More and more companies and routes were attracted to Tianjin. From April to December 2018, Tianjin Port Group's "sunshine price" practice benefitted more than 1.38 million TEUs. Through fee reduction measures, Tianjin Port Group reduced and exempted related expenses by more than 290 million CNY.



50 Eight new measures for “reduction of costs”



CNY of main business income of state-owned holding companies was 80.28 CNY, 2.64 CNY lower than in 2017. Industrial capacity utilization rate was 78.5%, an increase of 1.4 percentage points over 2017. Industrial profits increased by 11.1%, 0.8 percentage points higher than the national average.

Cost reduction was regarded as an important part of supply-side structural reform in 2018. Through “cost reduction” reforms, Tianjin reduced the cost of enterprises to transform and upgrade, and achieved good results in practice.

On May 17, 2018, at the Second World Intelligence Conference, “Tianjin Municipality Measures on further promoting supply-side structural reforms to reduce the cost for real economy enterprises” was introduced. The policy mainly focuses on reducing enterprises’ taxes, labor costs, financing costs, energy resource costs, logistics costs, institutional transaction costs, innovation and entrepreneurship costs, production and operation costs, and management costs.

All the 38 policy measures have been implemented. It is estimated that from 2017 to 2018, the cost reduction policy measures (excluding replacing business tax with VAT and export tax rebates) reduced the burden of enterprises by approximately 74.5 billion CNY.

In 2018, the cost per 100 CNY of main business income of industrial enterprises in Tianjin was 84.01 CNY, 0.91 CNY lower than in 2017. The cost per 100



Taiyuan (Tianjin) Binhai Heavy Machinery Co., Ltd.



Tianjin "cost reduction" policy reduced the burden of enterprises

51 From “Tianjin Eight Articles” to “Nineteen Articles on Private Economy”

In order to fully implement the “Tianjin Eight Articles” and implement the idea of “giving priority to industry and entrepreneurs”, in 2019, Tianjin issued “Several Opinions on Further Promoting the Development of Private Economy”, putting forward 19 measures in six aspects including reducing the operating costs of enterprises and legally protecting the rights and interests of private enterprises, so as to solve the prominent problems that restrict the development of private economy.

The “Opinions” proposes that the administrative fees for enterprises should be greatly reduced or exempted. On the basis of the total cancellation of administrative and institutional fees for local enterprises in Tianjin, except for projects of public security and ecological resources, all the administrative fees with standards established by the local authority will be exempted; government funds where local authority determined standards will be exempted; for the government funds shared by the central and local governments, the part for local retention shall be exempted.

Tianjin will abolish urban supporting infrastructure fees; adopt requisition system for the municipal infrastructure land; marketize central heating projects; substantially reduce VAT and exempt taxes for small and micro enterprises; regularize intermediary-related fees and deposits; implement preferential policies for enterprise land use; differentiate charges for expressways, and give full play to the role of government procurement in offering targeted support.

According to the “Opinions”, for the prospective and competitive private enterprises with temporary difficulties, their loans should not be withdrawn, cut off or limited blindly. Refinancing and rediscounting funds of not less than 10 billion CNY will be prepared specifically for the use of local financial institutions to

increase the credit for private enterprises and small and micro enterprises. Standing loan convenience funds of not less than 10 billion CNY will be prepared to increase liquidity of the financial institutions that support private enterprises and small and micro enterprises.

The “Opinions” proposes to support independent innovation of enterprises, implement the pre-tax deduction policy for national R&D expenditures, and provide after-tax subsidies for R&D expenditures of enterprises, up to a maximum of 5 million CNY. Subsidies of up to 5 million CNY and 3 million CNY for major innovation projects (including innovation platform construction) will be granted to private technology leading enterprises and leading incubators respectively. The companies that will set headquarters in Tianjin will receive a subsidy of up to 30 million CNY, which can be used to reward senior management. Support will be given to private enterprises to explore the overseas market. The proportion of financial support for enterprises participating in exhibitions, trademark registration and patent applications in emerging markets and “Belt and Road” countries will be increased to 70%.



Tianjin Tiandy Digital Technology Co., Ltd.



52 **Tianjin Pilot Free Trade Zone launched the first batch of new electronic business licenses**

On April 9, 2018, the Tianjin Municipal Market Supervision Committee issued the first batch of electronic business licenses of the State Administration of Markets (mobile phone version) in Dongjiang Port Area of the China (Tianjin) Pilot Free Trade Zone. The license application was significantly simplified in the processes of online submission, registration and approval, license issuance and bank account opening.

Tianjin is the first place designated by the State Administration of Markets to issue the mobile phone version of the electronic business licenses, and Dongjiang Port Area of the Tianjin Pilot Free Trade Zone is the first pilot area in Tianjin for the application of these licenses. The electronic licenses were developed by the State Administration of Markets, and can be downloaded through WeChat or Alipay. The electronic licenses bear the same information as the paper licenses, and have the same force of law.

The Dongjiang area of Tianjin Pilot Free Trade Zone will take the electronic registration of business matters as an opportunity to thoroughly implement the requirements of Tianjin to create a good environment for entrepreneurial development, and vigorously carry out a government services campaign and promote the reform and innovation of the Pilot Free Trade Zone, maximize the facilitation for investment and trade, offer more convenient, faster and more efficient services to enterprises and the people, and stimulate the enterprises' vitality for innovation and entrepreneurship.

On the day before the issuance of the electronic business license, Tianjin Municipal Market Supervision Committee and Bank of China Tianjin Branch signed an information sharing strategic cooperation framework agreement. As long as the enterprise receives the electronic business license, it can enjoy the data sharing between the Market Supervision Com-

mittee and Bank of China. The legal representative can confirm the identity of the enterprise with the electronic business license and go through the account opening procedure. From the date of submitting the application to the opening of the account, it only takes two days. Since it requires at most one visit to the bank to open accounts, the enterprises can significantly save their time for the procedure.



China (Tianjin) Pilot Free Trade Zone



Mobile phone version of electronic business licenses were first issued and applied in Tianjin Dongjiang Bonded Port Area

53 Tianjin has established 50 “unmanned supermarkets” of government services



TEDA investment service center

In 2018, the business environment improvement policies of Tianjin brought impressive achievements: Tianjin ranked among the top five in the list of China Business Environment Award; in the Chinese Cities Business Environment Report 2018 released by China Central Radio and Television Station, Tianjin ranked the third in government services and the fourth in financial services, and was among the top ten in the overall evaluation of business environment.

In September 2018, Tianjin launched a comprehensive reform to upgrade its business environment. The objectives of the reform mainly consist of three aspects: innovation system and mechanism, reaching world standards, and breaking down information silos.

To break down information silos and promote online services, Tianjin has developed and built the Government Administration platform, Tianjin Online Service Hall and Acceptance Integrated System, which, as the integrated “Internet + Government Services” top platform and system hub, offer easy access to and strong support for online government services.

To create “smart government, convenient Tianjin”, effort was made to promote online services and simplify procedures for the enterprises and the people, ensure that the unified codes and standards apply to the same item of government services, extend the online service chain, and expand online services to the all the areas from online consultation to online settlement and feedback.



most one visit in person; at least 100 items could be approved in an unmanned manner, and the required documents were reduced by more than 30%; intelligent and convenient application scenarios were developed for various items, and 50 unmanned supermarkets of government services were opened; after the submission of application, the computer software system would automatically issue certificates, approvals, and other relevant documents.

Tianjin has strengthened the system transformation and interconnection. All the 95 professional business systems and social credit information platforms, supervision information platforms, public resource trading platforms, convenience hotline service platforms and administrative law enforcement supervision platforms are connected with the government service platform, so as to ensure interconnection, data sharing, business collaboration, and optimization of administration and services.

Data and information sharing has sped up the realization of intelligent, self-assisted, unmanned, remote services of examination and approval. At the end of 2018, more than 90% of the government services were available online; 90% of the services require at



Intelligent terminal of Tianjin government services

54 Night economy gathering areas are built in Tianjin

Night economy is an important part of urban economy. It is an important way to stimulate the vitality and promote consumption upgrading, economic prosperity, and high-quality development. In November 2018, "Implementation Opinions of the General Office of Tianjin Municipal People's Government on Accelerating the Development of Night Economy" was released. Tianjin plans to build six city-level night economy demonstration blocks: (1) With the Haihe River landscape belt as the axis, create three night economy demonstration blocks: Italian-style Tourist Street, Jinwan Plaza, and Canal Xintiandi, with respectively European theme, entertainment theme and canal culture theme. (2) Focusing on the theme of historical heritage, build Wudadao (five-avenue) night economy demonstration block, highlighting the historical elements and entertainment with both Chinese and Western features. (3) Around Shidai Aocheng and the People's Park, create two night economy demonstration blocks that reflect the vitality of the city.

At least one district-level night economy demonstration block will be built in each district of Tianjin, including: (1) Building restaurant-concentrated night economy clusters based on specialty dining streets and food courts. (2) Building culture consumption night economy clusters around sports venues, museums, and cinemas. (3) Constructing convenient service night economy clusters around universities and other areas with innovation and entrepreneurial staff. (4) Building living-type night economy clusters for the citizens in the lanes and idle workshops with night consumption customs.

To cultivate a night consumption pattern with diversified regular, popular and characteristic night activities, Tianjin plans to develop four types of experiencing activities. (1) Night Tour on Haihe River. Develop tourist attractions and cultural landscapes along the

river, and improve the lighting arrangement of the Haihe River at night. (2) Night Art and Entertainment. Organize entertainment cultural activities such as opera and cross-talk, drawing on the humanistic history of Tianjin. (3) Night Taste of Tianjin Foods. Organize food festivals, food carnivals and other activities, and encourage brand catering enterprises to extend their business hours. (4) Night Shopping in Tianjin. Foster diversified night consumption patterns by encouraging shopping malls to extend their business hours and linking night economy blocks.



55 Tianjin ranks among China's "Top Ten" in urban business environment

On December 12, 2018, China Central Radio and Television Station held the launching ceremony of the "China Urban Business Environment Report 2018" in Beijing. Tianjin ranked third in the government environment evaluation, fourth in the financial service evaluation, and was selected among the top ten Chinese cities in terms of business environment in 2018.

The top ten Chinese cities on the list are: Beijing, Shanghai, Shenzhen, Guangzhou, Chongqing, Chengdu, Tianjin, Hangzhou, Nanjing and Xi'an. The Report offers a seven-dimensional business environment evaluation index system based on the principle of international comparability, global reality, and Chinese characteristics, in accordance with the "element + environment" theoretical framework. The seven dimensions include: infrastructure, human resources, financial services, government environment, legal

environment, innovation environment and social environment.

A clean and efficient government environment is an important part of a good investment environment. The assessment of government environment focuses on the efficiency, transparency, and supervision of the administration. It is intended to examine the reduction of market access restrictions, construction of a credible government, removing local protection, simplifying corporate investment approval, streamlining administrative licensing, and standardization of government services. In this dimension, Tianjin ranks third, which is an embodiment of continuous effort to improve public services and administrative efficiency over the years.

Financial services, the lifeblood of urban development, are the economic boosting force with piloting





functions. They play an important role in attracting investment and industrial transformation. This dimension evaluates the efficiency and channels of capital use, the difficulty of financing SMEs, and the overall development momentum of the financial industry. In the financial service dimension, Tianjin ranks the fourth due to its excellent performance.

China Urban Business Environment Report 2018, the first evaluation report on the Chinese urban business environment released by the national media, is independently prepared by a third party and authoritative. The report data are collected from statistical yearbooks issued by the National Bureau of Statistics and the city statistics bureaus, the statistical bulletins on the national economic and social development, and the work report of relevant departments.



56 Tianjin implements five major projects to revitalize time-honored brands



Zhang Yu, the sixth generation successor of "Clay Figurine Zhang", came to Nankai University to show the unique charm of traditional Chinese culture to the students

By the end of 2018, 149 time-honored brands of Tianjin have been identified, of which 66 were identified as Chinese Time-honored Brands by Ministry of Commerce. Tianjin's time-honored brands cover the fields of commerce, industry, medicine, tourism and culture. The largest proportion is in industry, accounting for 26%; followed by commerce, accounting for 16%. More than 25% of Tianjin's time-honored brands have existed for over a century, the longest boasting a history of more than 750 years.

In order to make the time-honored brands renew their vitality in the new era, in November 2018, Tianjin issued the "Work Plan to Revitalize Time-honored Brands (2018-2020)". Through the projects of rescue protection, inheritance and development, reform and innovation, carrier construction,

publicity and promotion, it is planned that by 2020, Tianjin will foster 1 enterprise with main business income above 10 billion CNY, 5 enterprises with over 1 billion CNY, and 40 enterprises with over 100 million CNY.

Tianjin has decided to establish an information base to clarify the ownership and management rights of the enterprises of time-honored brands. Through trademark transfer, licensed use, and conversion into shares, the dormant time-honored brands will be revitalized, and by 2020, a public service platform for Tianjin time-honored brands will be established. Intensified efforts will be made to register and protect the intellectual property rights and establish a directory of Tianjin's time-honored brands under protection.



To solve the shortage of talents, Tianjin guided the universities to cooperate with time-honored enterprises to build innovative studios and teaching practice bases. Meanwhile, Tianjin supported the time-honored enterprises and the inheritors of the traditional techniques to participate in the vocational skills competition and establish studios of master crafts. It is hoped that by 2020, at least three qualified enterprises will apply for intangible cultural heritage projects, and two demonstration bases for traditional Chinese medicine will be established.

Tianjin supports state-owned time-honored enterprises to restructure their assets, optimize their shareholding structure, enhance the ability of enterprises to liquidize state-owned assets through mixed ownership reform. It also encourages competitive time-honored brands to establish

time-honored enterprise groups through market operations, such as shareholding, acquisitions, and mergers.



Tianjin Seagull Watch Group relies on independent innovation to form the core technology

57 Attracting entrepreneurs from home and abroad to Tianjin

Continuous improvement of political and business relations and business environment; continuous optimization of industrial layout; excellent services, favorable policies, and realistic corporate support policies... In recent years, taking the strategic opportunities of the coordinated development of Beijing-Tianjin-Hebei, the construction of Xiong'an New Area, and the upgrading of Pilot Free Trade Zone, Tianjin has striven to promote two-way opening and form a new opening pattern. As a result, a large number of entrepreneurs have been attracted to Tianjin from home and abroad.

Tianjin implemented "Tianjin Haihe Talents Action Plan" and other support policies, and then issued the implementation rules for Tianjin High-level Talents Entrepreneurship Support Project and Tianjin Venture Talent Growth Project. Loan discounts and tax incentives were provided for the first time to the entrepreneurs, which improved the operability of the policies.

Proactive measures have been taken to organize applications for High-Level Talents Support of the Ministry of Human Resources and Social Security, and Entrepreneurship Support of High-Level Talents in Tianjin, and process the applications for rent subsidies for overseas students, with a total funding of more than 20 million CNY.

Tianjin has actively implemented key tasks to broaden the channels for attracting talents and build platforms for talents, laying a solid foundation for overseas talents to start their businesses in Tianjin. On the one hand, Tianjin strongly supports the construction of overseas talent innovation and entrepreneurship incubation platforms and bases. Platform funding of 15 million CNY has been allocated, and more than 2.6 million CNY was earmarked for the special incentives for enterprises. On the other hand, Tianjin has

made full use of the overseas talent workstations and talent attraction channels. The implementation of talents recruiting activities helped employing units to employ 1022 high-end overseas talents, recommended 286 innovative projects to relevant regions, and helped to establish 68 connections between key employing units in relevant regions and overseas institutions and research institutes.

In the innovation of service mechanism, Tianjin has optimized the window services, strengthened the construction of the integrated talent service centers, and offered one-stop services from acceptance of applications to comprehensive handling, discretionary entrustment, online pre-audit, on-demand services, proportional sampling, and regular evaluation. It also decentralized the entrusted service matters, simplified the workflow of window services, and served nearly 50,000 talents from home and abroad throughout the year.



North China Talent Market



Technology personnel starting up business in Tianjin

City of Wonderful Life



58-69



58 Tianjin City implements 20 popular projects every year

"Whatever people need will be granted." In July 2007, Tianjin Municipal Party Committee and Tianjin Municipal Government determined to focus on 20 key people-oriented projects on the basis of in-depth investigation and research and extensive listening to opinions. Since then, before the start of the people-oriented projects, the relevant departments of the city would issue notices for the establishment of the projects in advance, and solicit opinions and suggestions from the public, experts and scholars through government websites and news media. By 2018, 20 people-oriented projects have been implemented for 12 consecutive years.

"We will carry out every step to benefit the people." In 2018, Tianjin took the protection and improvement of people's livelihood as the starting point and the foothold of development, and implemented 20 people-oriented projects, addressed weak links,

ensured that poor people have something to fall back on, and provided strong service and high standards to effectively meet the basic security and basic needs of the people, so that the people can get real benefits.

In 2018, Tianjin continued to extend the community service function, deepen the family doctor contract service, and provide medical care services such as home medical care and family beds for disabled and semi-disabled people over 60 years old.

In 2018, Tianjin actively provided aid for the needy and distributed water and electricity subsidies to 59,533 disabled people, totaling 7.535 million CNY; for 542 poor families with cervical cancer and breast cancer, each received 10,000 CNY of medical assistance; 30,353 difficult workers and migrant workers conducted free health checkups and health guidance.



"People-oriented projects" make our home better



In 2018, the standard for the payment of unemployment insurance in Tianjin was raised from 1,150 CNY and 1,110 CNY to 1,240 CNY and 1,200 CNY respectively; the basic pensions for urban and rural residents and the living allowances for urban and rural residents were all raised.

In 2018, 112 kindergartens were newly built, renovated, expanded or upgraded in Tianjin, with 376 classes and 11,000 seats added.

Many measures were taken to ensure employment; dividends of medical care, culture, transportation and others continue to be released ... a series of solid measures that benefit the people greatly enhance the sense of acquisition and happiness of the people of Tianjin.

What is happiness? For you and me, happiness

means the young are educated, the learned are taught, the labors are rewarded, the sick are treated, the old are raised, the people are housed, and the weak are helped...

In 2018, happiness abounded; in 2019, happiness continues.



"People-oriented projects" realize low-income families' dream of living in peace

59 Tianjin became the first national demonstration city for public transport improvement



Take the bus by scanning the QR code

In 2012, Ministry of Transport launched the nationwide campaign to build cities of public transport. The creation of cities of public transport is an important way to achieve sustainable development of cities and urban transportation. It is of great significance to alleviate urban traffic congestion, reduce energy consumption and improve ecological environment.

Following Shanghai and Nanjing, in the "Notice of Ministry of Transport on 12 National Demonstration Cities of Public Transport" released on December 13, 2018, Tianjin, Beijing, Guangzhou, Shenzhen and other cities (12 in all) also passed the acceptance test and also won the title of "National Demonstration Cities of Public Transport".

According to the relevant person in charge of the Municipal Transportation Commission, after five years' construction, the capacity and level of public transportation services in Tianjin have significantly improved. In the past five years, Tianjin Municipality successively issued such documents as "Implementation Opinions of the Tianjin Municipal People's Government on the Priority Development of Urban Public Transportation", "Opinions on Implementing Eight Major Projects to Enhance Service Capabilities and Build a Modern Public Transport System", "Notice

on the Development of Public Transportation to Improve Transport Environment". These measures have further improved Tianjin's system of policies and regulations on public transport development.

In the past five years, the public transport network system of Tianjin has been continuously improved. More than 600 public transport lines have been opened, extended or adjusted, and the density of public transport stops is less than or equal to 500 meters. Following the first batch of 41-kilometer bus lanes, the second batch of bus lanes in Tianjin were completed in 2018, marking the formation of a bus lane network in Tianjin.

During its construction of "City of Public Transport", Tianjin successively opened the South Extension Section of Metro Line 3, the East Extension Section of Metro Line 2, Metro Line 5, and Metro Line 6, achieving the track connection of all external transportation hubs. At present, the length of urban rail transit lines in Tianjin has reached 217 kilometers and the number of operating stations has reached 138.

At the end of 2017, Tianjin has realized the full coverage of the Beijing-Tianjin-Hebei traffic cards for all bus lines and rail transit, achieving practical results in promoting the coordinated development of the Beijing-Tianjin-Hebei region.



Charging station for electric buses



500 electric buses have been put into operation

60 Keeping the warmth of the city — Tianjin began to prolong heating supply in the winter of 2016

Heating supply is closely related to the well-being of common citizens. The heating supply period in Tianjin used to be from November 15 to March 15 each year. In the heating season 2016-2017, the heating supply was prolonged by 26 days; in the heating season 2017-2018, it was prolonged by 25 days. In the past two years, the Tianjin citizens enjoyed 51 more days of warmth in winter.

In the 2017 government work report of Tianjin, it was clearly pointed out that the heating supply should be based on the actual conditions of climate and temperature, and a long-term management service mechanism should be improved. In "Tianjin Heating Supply Regulations", it is stipulated that in case of abnormally low temperature, Tianjin Municipal Government may decide to start heating supply ahead of schedule or postpone the termination of heating supply. The expenses for the prolonged heating supply due to weather conditions are borne by the Municipality.

The prolonged heating supply aroused warm response from the residents of Tianjin. They think that this move meets the needs of the citizens, and fully reflects the people-centered development concept. The residents feel the warmth not only physically, but

also in the heart.

"Starting heating supply ahead of schedule is undoubtedly very good news for the elderly and the frail. From this, the people felt the government's determination to improve people's livelihood," said Pang Shuling, representative of Tianjin Municipal People's Congress and head of Tianjin Modern Spleen and Stomach Hospital.

Prolonged heating supply is a practical measure to benefit the people. "As a community worker, I have contact with the most ordinary people and what I hear is their heartfelt praise for the decision," said Liu Qiuhua, representative of the Hongqiao District People's Congress and director of the Xiyuzhuang Neighborhood Committee.

Wang Wei, representative of Hongqiao District People's Congress and general manager of Duxing Mall, believes that Tianjin Municipality bases its work on the needs of the residents. The prolonged heat supply not only brought warmth to the citizens, but also consolidated the relations between the Party and the people.



Heating plant staff carefully inspect the heating equipment



61 Tianjin completed the first batch of ecological protection red line delineations in China

The ecological red line is the bottom line and lifeline of national ecological security. Delineating the red line of ecological protection is also a major innovation and important measure for the reform of the national ecological civilization. The CPC Central Committee and the State Council have explicitly requested the provinces and cities in the Beijing-Tianjin-Hebei region to take the lead in delineating the red line of ecological protection, expanding the control to all natural ecological spaces, resolutely preventing the irrational development and construction activities from destroying the ecological red line, and ensuring the effective implementation of the ecological protection red line system and significant improvement of the ecological functions.

The Tianjin Municipal Party Committee and the Municipal Government attached great importance to the red ecological line delineation, established a coordination mechanism for the red line delineation, and issued the "Tianjin Work Plan for Ecological Protection Red Line Delineation". Twelve municipal departments including the Municipal Ecological Environment Bureau and the Municipal Development and Reform Commission fully considered the relevant plans for land use and spatial layout, jointly delineated the red line of land ecological protection in the city, and by combining it with the ocean red line approved by the city in 2014, worked out "Tianjin Ecological Protection Red Line Delimitation Plan". In November 2017, the delineation plan passed the technical review of 12 ministries and commissions such as the former Ministry of Environmental Protection and the National Development and Reform Commission. In 2018, according to the requirements of the relevant state ministries and commissions, Tianjin organized additional revisions and improvements of the delineation plan, which was reviewed and approved by the municipal government executive meeting and the municipal party committee

leading group for comprehensively deepening reform.

The ecological red line in Tianjin includes a land area of 1,195 square kilometers, accounting for 10% of the land area of the city; a sea area of 219.79 square kilometers, accounting for 10.24% of the sea area under the jurisdiction of Tianjin. The total area within the ecological red line is 139.79 square kilometers (deducting the overlapping areas), 9.91% of the total land and sea area of the city. In terms of the spatial pattern, it covers the two major wetland areas in the north and south of Tianjin downtown area (Dahuangpu-Qilihai Wetland Area, Tuanbo-Beidagang Wetland Area), northern mountainous area, and major rivers and marine areas such as Yuqiao Reservoir and Haihe River. The protected ecosystems are complete in types, forming a systematic protection pattern of "mountains, water, forests, wetlands, and the sea". In terms of ecological functions, it covers the main distribution areas of rare animals and plants in our city, and the vital areas with ecological service functions such as water, soil, and biodiversity conservation.

The ecological protection red line is strictly managed in accordance with the areas where development is forbidden. It is conducive to maintaining Tianjin's ecosystem service functions, improving the quality and stability of the ecological environment, ensuring and maintaining ecological security, increasing Tianjin's ecological support for the city's high-quality development, green development and sustainable development.



62 Tianjin plans green ecological barriers for liveable city construction

At the beginning of 2018, in order to strengthen the green ecological barrier function between the downtown area and Binhai New Area, and optimize the urban spatial pattern, Tianjin City worked out the "Intermediate Region Management and Implementation Plan". The plan pointed out that the intermediate region of 736 square kilometers between the downtown area and Binhai New Area will be planned and managed with post-modern ideas of ecologic civilization to create an ecological barrier with extensive areas of water and forests.

It was pointed out in the Tianjin Municipal Government Work Report 2019 that Tianjin will construct a green ecological barrier of 736 square kilometers between the downtown area and Binhai New Area, and complete the greening of 4.9 square kilometers in the starting area. The ecological barrier in Jinnan District covers a total area of 330 square kilometers. The construction of the green ecological barrier requires adjustments in industrial layout and structure. To this end, Tianjin has developed a plan for first-level control area of the green ecological barrier, and determined the ecological spatial layout of "one core, three zones, seven corridors, nine nodes".

As a good natural environment is a source of wealth, an ecological liveable environment is competitive business environment. Tianjin will comprehensively upgrade its protection of the 875-square-kilometer wetland, which is known as "the kidney of North China". A green ecological barrier of 736 square kilometers will be built between the downtown area and Binhai New Area to create a beautiful landscape of green and vitality. By 2021, the first-level control area of 450 square kilometers will be basically completed, which will be another urban green lung in the Beijing-Tianjin-Hebei region. Ecological conservation will be carried out for the northern mountain forests of 1,000 square kilometers. Pollution in the Bohai Bay will be brought under stricter control, and the coastal belt protection and restoration project will be implemented. The water system of the rivers and wetlands will be connected more closely. The ecological construction is also improvement of business environment. In the past two years, the birds in Tianjin have increased not only in quantity, but also in variety – an indication of the harmonious coexistence of man and nature.



Urban greenway park



63 China-Singapore Tianjin Eco-City started the construction of 65 “Sponge City” pilot projects

A sponge city is a city which functions like sponge in adapting to environmental changes and coping with natural disasters. The rainwater is absorbed, accumulated, filtered, cleaned, and then released when needed.

China-Singapore Tianjin Eco-City is located in Tianjin Binhai New Area. Jointly built by the governments of China and Singapore, it is the world's first eco-city built by two countries and the first green development comprehensive demonstration zone in China.

On the evening of July 23, 2018, due to the impact of the typhoon “Ampil”, a heavy storm attacked most areas of Tianjin. The rainwater pumping stations in the Eco-City worked properly and the water remained low. There was not large-scale water accumulation on the roads. The effect of “sponge city” construction was well shown.

According to the relevant person in charge of the Eco-City, after the approval of the “Sponge City” pilot project in 2016, the Eco-City stipulated the overall principles of low-impact development and rainwater utilization, and established a “Sponge City” project library according to the planning requirements so as to accelerate the construction. Up till now, 65 pilot projects have been started and 18 projects have been completed.

The “Sponge City” construction plan is centered on the landscape water system, and the overall terrain is gradually reduced inward, so that the rainwater flows from the lawns, garden roads and squares into the center of the system. Sinking green space, permeable pavement, and intercepting rainwater outlets are adopted to purify the rainwater, and the rainwater runoff finally flows into the landscape water system. Through the regulation of rainwater storage and peak discharge, the rainwater discharge is reduced

and mitigated and the discharge pressure of the rainwater pipe network is reduced. For the past 10 years, waterlogging has never occurred in the Eco-City.

The construction of “Sponge City” follows the “ecology first” principle. On the premise of ensuring safety, natural means and artificial measures are combined to maximize the accumulation, penetration and purification of rainwater in the urban area and promote the utilization of rainwater resources and protection of ecological environment. In the process of sponge city construction, the natural precipitation, surface water and groundwater should be regarded as a system, and all links of water recycling, from water supply to drainage, should be coordinated, without neglecting its complexity and long-term nature.



64 Implementation of “Tianjin Ecological Environmental Protection Regulations”

The Second Session of the Seventeenth National People's Congress of Tianjin voted and passed "Tianjin Ecological Environmental Protection Regulations", which will take effect on March 1, 2019. The regulations stipulate that the municipal government shall establish an environmental supervision system and carry out regular supervision and special inspections on the implementation of the laws and regulations on ecological environmental protection and the implementation of environmental quality responsibility by the relevant departments of the municipal government and the district government.

To prevent legislation loopholes, it is made clear in the general provisions that the city has defined the ecological protection red line, the environmental quality bottom line, and the resource utilization ceiling in accordance with relevant national regulations, and formulated an ecological environment access list, which shall not be violated or bent to lower standards during local legislation, policy formulation, planning, project construction, law enforcement and supervision.

It is clarified in the regulations that if key pollutant emission control indicators are exceeded, or the environmental quality improvement targets are not completed, or other situations that require meetings occur, the municipal ecological environment department shall arrange a meeting with the main person in charge from the district government and make the meeting results known to the public. For the towns or townships with any of the above cases, the ecological environment department of the district shall interview the main person in charge from the town or township government and make the situation open to the public.

To protect and improve the ecological environment, a new clause in the regulations states that

planning and control will be strengthened for the intermediate zone between Binhai New Area and the downtown area and a green ecological barrier will be constructed. The eco-environment access list system will be implemented to ban the construction and expansion of high-pollution projects. In addition, fiscal, price, government procurement and other policy measures will be taken to encourage and support companies to conduct green transformations in product design, raw material procurement, manufacturing, packaging, sales, logistics, recycling and reuse.

The regulations not only greatly increased the cost of illegal activities based on the upper-level law, but also stipulated some provisions with local characteristics. For example, if the ecological environment monitoring agency or the maintenance operation organization falsifies or forges the monitoring data or issues a false test report, a fine between 100,000 CNY and 500,000 CNY will be imposed; if the circumstances are serious, its qualifications will be revoked. The types of day-based penalties have increased, and it is stipulated that the main person in charge of the sewage disposal unit who is continuously punished on a daily basis shall be interviewed.



The Olympic Park was completed and opened to the public



The People's Park Tianjin

65 The opening of Shuixi Park, the largest urban park in Tianjin

Shuixi Park is located in Xiqing District, Tianjin. Its construction started in the second half of 2016 and it was opened on October 1, 2018. The planned area of including a water area of 427,300 square meters and a land area of 978,400 square meters. It is the largest urban park in Tianjin.

The eastern part of Shuixi Park is decorated with beautiful garden elements to create an elegant venue for rest and relaxation, reflecting the interaction between people and landscape, culture and history. The central part, through a contrast between the dense green trees and the wide water surface, highlights the iconic pleasant landscape of the park. To the north of the main lake, there is a pavilion on a hill, which is the highest point of the park. It is a wonderful site for tourists to appreciate the beautiful landscape in the park. The western part is characterized by deep waterways with reeds growing along them.

The topographical changes in the park highlight the landscape levels and provide space for the growth of various plants, including trees, shrubs and grass. The changes of the forest edge line and the canopy line add to the attraction of the “urban forest” of the park.

The construction of Shuixi Park draws on the essence of Tianjin's garden culture. At the key points of the park, there are 21 gardens whose scenic spots are based on the new Chinese style, highlighting the elegant tones of black, white and gray, the architectural massing of lightness, elegance and beauty, and the garden conception of “love, charm and fun”. The park provides an excellent site for recreation, cultural exhibitions and science publicity activities.

In the park, there is a 2.5-kilometer footpath around the lake and a 35,000-square-meter sports park, equipped with four five-a-side football pitches, two





standard basketball courts, eight mini basketball courts, two standard gateball courts, two standard tennis courts, four cage tennis courts, and other sites for sports activities like roller skating and table tennis.

In Chinese, the present and past names of Tianjin all reflect its location by the water. This park is named “Shuixi”, literally “Water West”, because of its location in the west of Tianjin.



During the National Day period, the passenger flow of Shuixi Park was more than 100,000 per day

66 Tianjin implemented the three-year action plan for shantytown renovation

On the eve of the Spring Festival in 2019, Mr. Shen, a patient of uremia, returned to the site of his former residence to have a look. "The bungalows are shabby and the living conditions are poor. I have managed to live here for dozens of years." The shantytown of Dingzigu, Hongqiao District, where Shen's family used to live, is the last large-scale shantytown in downtown Tianjin, and its transformation started in December 2018.

Statistics from Tianjin Housing and Urban-Rural Development Committee show that in 2018, shantytowns of 571,000 square meters in the downtown area of Tianjin were transformed, 120,000 square meters more than the task set at the beginning of the year. Since 2017, the "three-year program" of shantytown renovation has completed a total of 1.081 million square meters, accounting for 74% of the total tasks. In Hongqiao District alone, more than 20,000 people have benefited from the program.

Due to historical reasons, there were some concentrated shantytowns in the downtown area of Tianjin. The bungalows in these shantytowns are generally old, narrow, low, and damp, without living facilities such as plumbing, gas and heating. The dense population, narrow lanes, and unauthorized wiring pose great security risks to the dwellers there.

The renovation of shantytowns has been listed as one of the 20 practical projects in Tianjin for two consecutive years. While implementing the three-year program of shantytown transformation, Tianjin takes the people's needs as the top concern and draws on the experience of various places. After extensive research and in-depth investigation, Tianjin worked out a plan for the requisition, compensation and resettlement in accordance with laws and regulations. The city and the districts focus on securing sources of apartments through multiple channels, and give

priority to supporting shantytown renovation. In combination with the regulation of the real estate market, on the one hand, special commercial apartments for relocation are built on the allocated land in the urban area; on the other hand, construction plots for resettlement apartments are demarcated, and subsistence support is offered to the families in difficulty.

In 2019, Tianjin will complete the renovation of 390,000-square-meter shantytown, putting an end to the three-year renovation plan. By then, more residents of the shantytown will move into their new apartments and enjoy a clean, comfortable, warm and convenient life.



Tianjin shantytown residents realized the dream of "going out of the shed and into the building"

67 Tianjin was selected as one of the “Top Ten Cities of Electronic Services”

In October 2018, Alipay released the "Life Accounts in a Decade", the first panoramic review of online payment for water, electricity and gas in the past 10 years. Tianjin was selected as the "Top Ten Cities of Online Services". The "Electronic Document Information Service" launched by Tianjin Public Security Bureau made its debut in Alipay. Five services were piloted, including Tianjin electronic ID card, electronic driver's license, electronic driving license, electronic residence permit and electronic household registration information. Tianjin has become the Chinese city with the widest application of electronic certificates.

Tianjin has launched 71 services in six categories, including public housing fund enquiries, bus e-tickets, progress check on entry and exit permits, and water, electricity and gas bills. The services have reached a total of over 7.5 million people, offering great convenience to the public.

Statistics show that in 2017, the mobile payment by Alipay users in Tianjin accounted for 86% of the total, much higher than the national average. Nowadays, in daily life, it is a habit of Tianjin people to go out without a wallet. It takes a mere mobile phone to pay bills, go shopping, and travel in Tianjin. More than 6,400 buses in Tianjin accept code-scan payment through Alipay, and public service departments have also opened their windows on Alipay, enabling the citizens to receive government services without going out of home. The most popular services are photo shooting, bus riding codes, and bill payment for daily life.

The "10th Anniversary of Online Service" report released by Alipay shows that from 2008 to 2018, the Chinese people handle more and more things online, from water, electricity and gas bills to social insurance, traffic fines, hospital registration, etc. Ali-



Tianjin Public Security Bureau launched "electronic certificate information service"



pay data show that more than 100 types of services are available online in more than 300 cities across the country. More than half of the popular services are available online. Online services have become the priority of ordinary people. Tianjin, along with Beijing, Guangzhou, Hangzhou, Hefei, Nanjing, Shanghai, Shenzhen, Wuhan, and Xi'an, were among the first batch of "top ten cities of online services", where more than 70% of the major businesses can be processed online.



Check in a hotel with electronic ID card in Tianjin

68 Tianjin accelerates the three-year operation of rural settlements improvement



New countryside in Tianjin

In November 2018, Tianjin City held a meeting to arrange for the “three-year action plan for the implementation of the rural revitalization strategy and the improvement of rural environment”. Seizing the important historical opportunity of the coordinated development of Beijing-Tianjin-Hebei, drawing on the favorable resources of cultivated land, Tianjin has laid a solid foundation for the implementation of the rural revitalization strategy. Departments at the city, district, township, and village levels are required to make strategies and plans which adapt to local conditions, highlight local characteristics and preserve the landscape and rural scenery, so as to make the countryside a beautiful home.

Aiming at constructing beautiful liveable villages and improving rural living conditions, the three-year program of rural environment improvement focuses on the disposal of rural garbage, toilet manure, sewage treatment, and village appearance enhancement. By mobilizing all forces and integrating various resources, efforts will be intensified to solve the imbalance of rural living environment, accelerate the improvement of rural living environment, increase farmers’ income and meet their

needs for public services and culture. Meanwhile, the government will also safeguard the interests of the people, and continue to promote the construction of beautiful countryside, so as to lay a solid foundation for the construction of a high-quality well-off society.

By 2020, the infrastructure, public service facilities, buildings and living environment in the countryside will be significantly improved. The villages will be clean and orderly, and the villagers’ awareness of environment and health will be significantly enhanced. The convenient, safe and reliable network of rural roads will be basically constructed, offering direct access to all the villages and households. 12 demonstration villages of rural settlement environment (characteristic residence demonstration villages) will be built, and the reconstruction task of rural dilapidated housing will be accomplished. The villages of Tianjin will become beautiful, ecological and liveable homes.



Manchu Village of Sungezhuang, Jizhou District enjoyed a bumper harvest of red grape



Jinghai District endeavours to build a low-carbon demonstration town

69 A new round of rural power grid upgrading is launched in Tianjin

In order to further improve the power supply capacity in the rural areas of Tianjin, on April 3, 2018, State Grid Tianjin Electric Power Company installed new distribution lines and distribution transformers at Lianhe Village of Guanzhuang Town, Jizhou District, indicating the start of the three-year action plan for rural power grid upgrade in Tianjin.

The "Three-Year Action Plan" includes eight key tasks: urban and rural power grid capacity improvement; power supply capacity improvement in villages with difficulties; grid structure optimization; power grid equipment upgrade; "coal to electricity" power grid transformation; intelligent power distribution construction; service new energy and diversified load access; and intelligent interactive service system construction.

Based on a survey of 3,681 administrative villages and 1,213,000 families in Tianjin, the current rural power grids in Tianjin are mainly bothered by the problems of unbalanced development, insufficient power supply capacity in some areas, and the need for the improvement of power supply.

Tianjin Company has fully played its leading role in the supply-side reform of power grid enterprises, closely focusing on the key areas of infrastructure construction such as "coal-to-electricity" shift and assistance for villages with difficulties. Through the re-electrification of rural power grids, Tianjin Company strives to build a safe, reliable, green and efficient modern rural power supply network, so as to meet the demand for green energy consumption. By improving the power supply capacity, service quality and management level of rural power grids, it aims at building a power service system that covers all the people and integrates urban and rural areas.

By 2020, a modern rural power grid will be built, which is characterized by safety and reliability, strong structure, advanced equipment, green and low carbon, friendliness and interactivity. By eliminating bottleneck problems such as low voltage, the power supply reliability will reach 99.954%. The average power outage time per year will be less than 4 hours, and that in the "coal to electricity" areas will be less than 2 hours. The comprehensive voltage qualification rate will rise to 99.967%, higher than the national average. The average capacity of distribution transformer per household will be 4 kVA, reaching the level of urban areas. The proportion of clean energy consumption will be 100%. The coverage ratio of automatic distribution, distribution communication network and smart meters will reach 100%, and the level of intelligence and information will be among the most advanced in the country.



City of Humanistic Landscapes



70-80



70 Haihe River Sightseeing Tour: a business card of Tianjin



Night scene along the Haihe River

At night, if you take a sightseeing ship that travels slowly along the Haihe River, you can appreciate the historic sites and modern buildings along the river. The Haihe River is the most beautiful place in Tianjin.

As the “mother river” of Tianjin, the Haihe River has nurtured generations of Tianjin people. It is the scenic axis of Tianjin. The cruise tour along the river is the most popular with tourists. The Haihe River, a beautiful river with historic significance, has become an identity card of Tianjin.

In 2009, Tianjin Tourism Group integrated the tourism resources of the Haihe River and established Haihe Cruise Company. Taking the opportunity of the development of the Haihe River, the company de-

signed the sightseeing tour along the river. In 2014, the tourism group added the airport industry zone to the original “Haihe River+Bohai Sea One-Day Tour”, allowing tourists to visit the remote control drones in the Airport Economic Industrial Zone, and experience the achievements of Tianjin modern industry and Binhai New Area.

Take a night cruise tour along the Haihe River and you will be impressed by the western-style buildings on the banks, known as “International Architecture Expo”, and the downtown area in its brilliance and splendor. The unique charm of the historical and cultural city Tianjin is perfectly integrated into the night view of the Haihe River. The commercial area of Jinwan Square and the large-scale public facilities of



Tianjin Railway Station bring a modern atmosphere to the tourists from home and abroad. The Ancient Culture Street and the New Culture Center show the active and innovative ideas of Tianjin people under the influence of multiple cultures. Through the coexistence of modern Chinese buildings such as Tianjin Kaide Hotel, “Jinmen”, and “Jinta” and European-style buildings like Continent Bank Building, Dorsett Hotel and Financial City 2, the “International Architecture Expo” reveals the ability and determination of Tianjin to pursue new development in the new era.



Jiefang Bridge

71 Italian Style Tourist Area becomes a cultural model by the Haihe River



Italian-style Tourist Area

In the Italian-style Tourist Area, which is located in the south of Hebei District, Tianjin, there are a number of Italian-style buildings of the early 20th century. This is the only area in Asia with Italian-style buildings and Italian cultural elements. The Italian-style Tourist Area has passed assessment and been rated as a national AAAA-level tourist attraction. During its construction and development, efforts were made to fully utilize the unique historical and cultural resources of the region, with the aim of highlighting its Italian elements and building it into a comprehensive international area which integrates tourism, commerce, recreation, entertainment and culture.

As the largest cultural cooperation project between China and Italy, the Italian-style Tourist Area was a key project in the “Eleventh Five-Year Plan” (2006-2010) of Tianjin, and an important attraction for the development of the Haihe River.

In the Italian-style Tourist Area, you can see different styles of Italian architecture of various periods. There are still more than 30 celebrities’ former residences. Almost every building and

every street is a witness of countless stories in the modern history of China.

Liang Qichao, a renowned politician and scholar in modern China, once lived here and wrote his masterpieces such as History Study Methodology. Cao Yu, a Chinese playwright who wrote the classic drama Thunderstorm, spent his childhood and youth here.

In 2010, the Italian-style Tourist Area, the “Eye of Tianjin” Yongle Bridge Ferris Wheel and Binhai New Area Aircraft Carrier Theme Park passed the assessment of the National Tourism Administration and became national AAAA-level tourist scenic spots.

In 2015, the National Tourism Administration announced the first batch of “National Tourism Areas with Trustworthy Prices”. 1,801 tourist attractions were on the list, including the Italian-style Tourist Area and 54 other tourist areas in Tianjin above A-level.

The Italian-style Tourist Area attracts more and more people of insight from home and abroad with its excellent location, rich cultural heritage and profitable returns. The Italian-style Tourist Area receives more than 5,000 domestic and foreign tourists every day, and has become an epitome of Tianjin tourism.



72 Tianjin Wudadao: International Architecture Expo

Wudadao (literally “Five Roads”) refers to the approximately rectangular area south of Chengdu Road, north of Machang Road, east of Xikang Road, west of Machang Road and Nanjing Road in Heping District, Tianjin. In this area of 1.28 square kilometers, there are 23 roads with a total length of 17 kilometers. Its name derives from the five latitudinal roads that go through the region: Machang Road, Munan Road, Dali Road, Chongqing Road and Chengdu Road. Once a pit-pond in the south of Tianjin, this area was constructed in 1919 by the Municipal Council in the former British Concession. Today, there are still more than 400 well-preserved historic buildings of various styles designed and built in the 1920s and 1930s.

Wudadao was built when the Western eclecticism

and classical renaissance were prevalent and the lifestyle was gradually westernized. The architectural style had various architectural features such as Western classics, Baroque, eclecticism, modern architecture, and a combination of Chinese and Western styles, hence the “International Architecture Expo”.

Two presidents and seven premiers or deputy premiers of the Republic of China once lived in this area. Other celebrities who lived here include the educator Zhang Boling, industrialists Zhou Xuexi, Li Zhuchen, Song Feiqing, the 31st American President Herbert Clark Hoover, and the British Olympic champion Eric Henry Liddell. The more than 200 former residences of celebrities in modern history are an important historical and cultural heritage of Tianjin. Therefore,



A bird's-eye view of Wudadao



Wudadao is a miniature of modern Chinese history.

Of the main roads in the region, Machang Road is the longest, with a total length of 3,216 meters. Named after the racecourse in the former British Concession, it was once a bustling road frequented by top officials and dignitaries, including the last emperor Pu Yi, former ministers of the Qing Dynasty, politicians and warlords of the Republic of China.

In 2014, the nine-episode documentary Wudadao, jointly produced by Tianjin Municipal Publicity Department, CCTV, and Tianjin Television Station, was broadcasted on CCTV and Tianjin Satellite TV. It aroused strong repercussions and evoked keen interest of tourists from home and abroad.



Western-style building in Wudadao



Prince Qing's mansion

73 Zhou Enlai & Deng Yingchao Memorial

Zhou Enlai and Deng Yingchao are great proletarian revolutionaries, politicians, resolute Marxists, and outstanding leaders of the Party and the country. Zhou Enlai and Deng Yingchao spent their youth in Tianjin. They met, knew each other, and fell in love in Tianjin. The couple always regarded Tianjin as their second hometown. In their will, they arranged to have their ashes scattered in the Haihe River in Tianjin.

To commemorate of the great achievements and noble virtues of Zhou Enlai and Deng Yingchao, Tianjin Municipal Party Committee and the Municipal Government decided to build a memorial and won approval from the Central Committee of the Communist Party of China. The memorial was opened on February 28, 1998 on the eve of the 100th anniversary of Zhou Enlai. In May 2008, the memorial was ranked as a national top-class museum by the State Administration of Cultural Heritage.

The collections in the memorial are plentiful and valuable. Now over 10,000 items of cultural relics, documents, photos, and other materials have been collected, more than 100 of which are especially precious, including their cremation caskets, Zhou Enlai's Il-14 aircraft and Jim car, and the correspondence between the couple.

The main hall consists of Tribute Hall, Life Hall, and Aircraft Hall, showing the great contributions and noble character of the two great figures.

In the Tribute Hall stand the white marble statues of Zhou Enlai and Deng Yingchao, under the title "Deep Affections for the Mother Land". The background of the main statue is a large tapestry entitled "A Broad Sea Under Scudding Clouds". On the walls on the flanks are reliefs of historical events such as the May Fourth Movement, the Nanchang Uprising, the Red Army's Long March, the Xi'an Incident, the Founding

Ceremony of the PRC, and the construction of the motherland.

The Life Hall demonstrates different historical periods and themes in nine parts: Great Figures, Pursuit of Truth, Saving China, Serving as Premier, Leader of Women's Movements, Turning the Tide, Passing on the Great Cause, Eternal Glory, Realization of Wishes. Through 463 pictures and over 700 relics and documents, visitors can have a thorough and systematic understanding of Zhou Enlai and Deng Yingchao's glorious life.

The "Il-14" Model 678 aircraft in the Aircraft Hall was presented to Premier Zhou Enlai as a gift from the Soviet Union government in August 1957. From 1957 to the middle 1960s, Premier Zhou flew all over China and visited many countries in this aircraft.

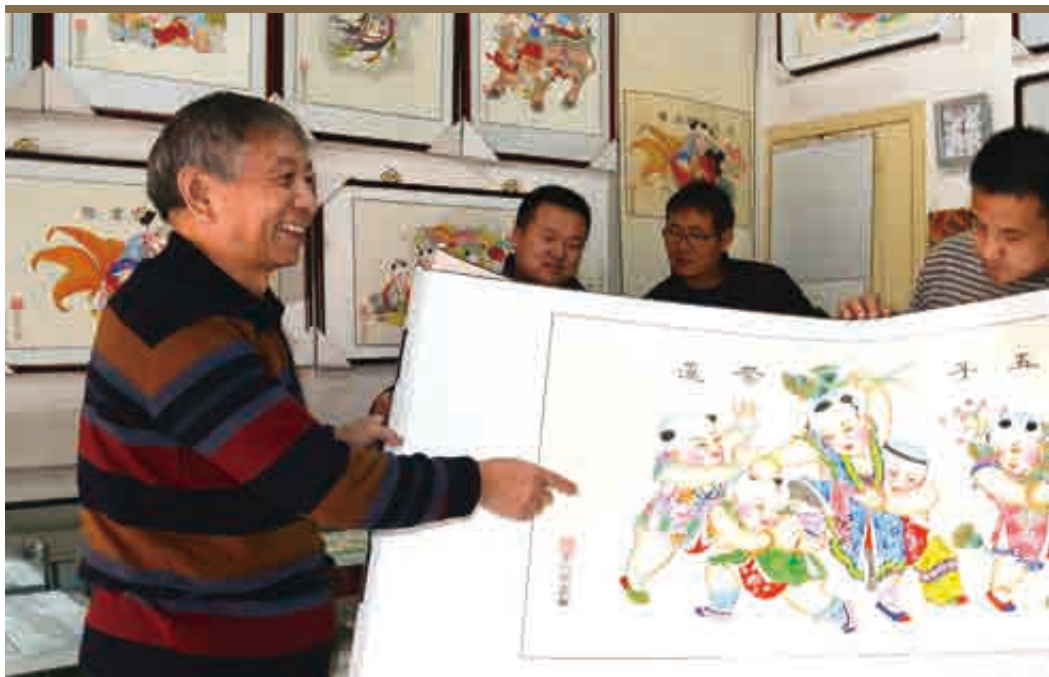


Zhou Enlai & Deng Yingchao Memorial, a national patriotism education demonstration base



Zhou Enlai & Deng Yingchao Memorial

74 Yangliuqing Woodblock New Year Paintings carry forward the heritage of four hundred years



Yangliuqing woodblock new year painting "Five Kids Scramble for The Lotus"

New Year paintings are a form of Chinese folk art. Before the Chinese New Year, the people buy New Year paintings and post them on walls indoors for an atmosphere of happiness and blessings.

Yangliuqing Woodblock New Year Paintings are produced through painting and printing: lines are carved on the woodblocks first; then monochromes are printed on paper for two or three times; finally color brushes are employed to apply paint. Requiring both engraving and painting techniques, Yangliuqing Woodblock New Year Paintings demonstrate distinctive artistic features from other paintings.

"Yangliuqing New Year Paintings, which developed out of the agricultural civilization, are living fossils of

Chinese culture and mirrors reflecting folk customs," says an expert of folk customs.

The history of Yangliuqing Woodblock New Year Paintings dates back to the Ming Dynasty 300 years ago. The heyday of the art of New Year paintings was in the Qing Dynasty before the reign of emperor Guangxu. At that time, New Year paintings were widely produced in workshops in Yangliuqing Town and nearby villages. At the end of the Qing Dynasty, due to the endless wars, the production of Yangliuqing Woodblock New Year Paintings suffered a disastrous decline.

Tianjin Yangliuqing Paintings Society, founded in 1958, contributed significantly to the protection of



heritage list”, ranking the first in the category of fine arts.

From the 1990s, Yangliuqing saw the revival of private workshops of New Year paintings. Wang Wenda, Feng Qingju, Huo Qingshun, and Huo Qingyou were acknowledged as inheritors of the technique of Yangliuqing Woodblock New Year Paintings. From then on, a number of workshops and stores of New Year paintings emerged.

Yangliuqing Woodblock New Year Painting has developed into an industry with ever-increasing influence. The paintings have been displayed as Chinese folk art in Japan, France, UK, Italy, Thailand and Singapore.

the art on verge of extinction. At present, Tianjin Yangliuqing Paintings Society has a collection of more than 10,000 New Year paintings after the Ming Dynasty and over 6,000 ancient blocks; it also fully retained the traditional techniques for the production of Yangliuqing Woodblock New Year Paintings.

In 2004, Yangliuqing Woodblock New Year Painting was approved by the Ministry of Culture as a pilot project for the protection of Chinese folk culture, thereby starting the historical tracing, sorting and research of Yangliuqing Woodblock New Year Paintings.

In 2006, Yangliuqing Woodblock New Year Painting was included in the first “national intangible cultural



Drawing process of Yangliuqing woodblock new year painting

75 “City Lounge”: Tianjin Cultural Center



Panorama of Tianjin Cultural Center

Since May 19, 2012, Tianjin Cultural Center was opened to the public. Covering an area of 90 hectares, the Cultural Center consists of several sub-projects, including Tianjin Museum, Tianjin Nature Museum, Tianjin Art Museum, Tianjin Library, Tianjin Grand Theatre, Sunshine Park, Civic Plaza, Underground Transportation Hub, infrastructure and auxiliary landscape facilities.

With a construction area of 57,000 square meters and an exhibition area of 14,000 square meters, Tianjin Museum consists of 13 exhibition halls, for ancient history, treasures, modern history, temporary exhibition, jade, calligraphy, paintings, and porcelain respectively. The museum boasts a collection of 200,000 cultural relics, 200,000 volumes of books, and nearly 1,000 national first-class cultural relics. With 5,000 cultural relics on display, the new mu-

seum is an ideal venue for the collection and display of cultural relics, as well as cultural communications and exchanges.

With a construction area of 32,000 square meters and a total exhibition area of 10,000 square meters, Tianjin Art Museum is the first comprehensive art museum in Tianjin to collect, research, promote and display works of modern and contemporary artists. It consists of contemporary art exhibition area, modern plastic art exhibition hall, multi-functional art exhibition hall and Chinese art exhibition area.

The building area of the Tianjin Library at the Cultural Center is 57,000 square meters. The main functions are borrowing, digital reading, collection, academic exchanges, social education, ancient books protection and restoration. It is a comprehensive large-scale public library integrating the functions of document



information collection, organization, storage, research and services.

Tianjin Grand Theatre has a construction area of 105,000 square meters. Designed to be an “urban stage”, the theatre is in a simple, elegant and harmonious architectural form. The Grand Theatre consists of three parts: the opera house, the concert hall and the small theater, with 3,200 seats. Staging more than 300 high-level cultural performances each year, it has become an excellent venue for the citizens to appreciate refined arts.

Embodying the functions of public cultural venue, urban park, civic leisure center, and site for youth activities, Tianjin Cultural Center has become a place for the exhibition of refined arts and the promotion of culture and art, as well as a beautiful urban lounge and a harmonious civic park. It plays an important

role in increasing Tianjin’s cultural soft power, enriching the people’s spiritual and cultural life, and improving the citizens’ cultural tastes.



A corner of Tianjin Cultural Center

76 Jiefangbei Road Financial Street: “Wall Street” in North China



Jiefangbei Road Financial Street

The past names of Jiefangbei Road reveal the history of Tianjin in a century. Named as the France Road by the French but Victorian Road by the English, it was also called the “Central Street” due to its location at the center of the former French and English concessions. For a hundred years, most people prefer the name “Finance Street,” which reveals its main function. Some even give it the appellation: “Wall Street in Northern China.”

The history of this finance street dates back to the middle of the 19th century. In 1860, the British and French successively built roads and houses in their concessions in Tianjin, including a main road going through the concessions which later became the political and economic center in that area.

Afterwards, many foreign banks, insurance companies, firms, and shipping companies came to establish their branches in Tianjin to engage in commercial trade. The first foreign bank in Tianjin was established by HSBC in 1880 and opened in 1882.

Around the turn of the 20th century, more than ten foreign banks were established on the “Central Street” in English and French concessions. The concentration of foreign banks attracted large firms and insurance companies to develop their business here. Around the end of the Qing Dynasty, new types of Chinese banks began to emerge and develop here. After the liberation of Tianjin in January 1949, following the withdrawal of foreign banks, the People’s Bank of China, Tianjin Branch was established on



tion, law, information, consulting and other modern financial services industries as the auxiliary. They will become centers for the management, business, pricing and information release of Tianjin's financial industry.

Jiefangbei Road. From the reform and opening up in 1978, Bank of China, Agricultural Bank of China, China Construction Bank, Industrial and Commercial Bank of China successively established their Tianjin branches here.

The new planned construction area is 1,300,000 square meters, and the existent building reconstruction area is about 800,000 square meters. In accordance with the function and composition requirements, Tianjin Financial Services Center and Financial Innovation Center will be established on the basis of exhibition, tourism, entertainment and other service facilities, with banking, insurance, securities, fund, and other traditional financial industries as the main part, and accounting, auditing, assessment, media-

77 Tianjin Finance Museum, a place of historical significance

June 2010 witnessed the opening of Chinese Finance Museum, a professional museum that offers comprehensive introduction to Chinese financial history, presents financial knowledge, and connects the present financial industry to future development. The museum is located at 29 Jiefangbei Road, Heping District, at the center of Tianjin Finance Town.

Chinese Finance Museum is the world's 8th state-level finance museum. The 2,400-square-meter museum has a collection of nearly 200 items of currency, financial instruments, and precious financial relics from China and abroad. The collections fall into five parts in eight themes. The first part is the financial history and status quo, including the origin and development of currency, financial institutions and financial instruments, financial markets, corporate restructuring, mergers and acquisitions, international financial institutions, etc. The second part is "We and Finance", including finance and entrepreneurs, finance and industry, finance and war, finance and politics, finance and science, finance and art, etc. The third part is Chinese monetary history, including the folk evolution of Chinese currency, financial history of Tianjin, celebrities in finance, financial milestones, etc. The fourth part is financial crisis and financial tsunami, including the subprime crisis, consumer credit, the Great Depression, the 1987 crash, economic cycle, the Asian financial crisis, hyperinflation, financial fraud and scandals. Special exhibitions are updated occasionally. The fifth part is thematic exhibitions, including gold exhibition, currency exhibition, Jiefangbei Road finance history exhibition, Binhai New Area Finance Core Zone planning exhibition, etc.

With brand-new design concepts and multiple means of presentation, the finance museum demonstrates a condensed history of financial develop-

ment across one hundred years. The museum has become a public platform for exhibitions, trainings, performances, forums and welfare activities, and a new cultural landmark in Tianjin Finance Town. The establishment of the Finance Museum plays a positive role in spreading financial knowledge, imparting financial concepts, interpreting financial innovations, focusing on financial problems, and promoting peer exchanges and cooperation in finance.

中國金融博物館
CHINESE MUSEUM OF FINANCE
李資賢



78 Beijiag Museum: the living fossil of modern Chinese museums

Beijiag Museum, formerly known as the Yellow-River White-River Museum, was founded in 1914. It is a typical museum in early modern China, with the functions of collection, research, display and education. It is the only early-stage museum whose structure, collections, showcases, and documents have been well preserved on the original site. The museum is a "living fossil" in the history of the early Chinese museums.

The biggest feature of Beijiag Museum is the findings of the French missionary Paul Émile Licent (1876-1952) in North China over years. If you want to have a look at the oldest stone tools known in China, Beijiag Museum is a place you shouldn't miss.

Beijiag Museum is one of the few comprehensive museums in China that involve diverse disciplines

such as zoology, botany, geology, ancient artifacts, and paleoanthropology. It has a collection of more than 200,000 items, which are mainly representative and typical natural science specimens from northwestern China, north China, northeastern China and the world, including four ancient animal groups discovered by Paul Émile Licent over 25 years: the three-toed horse fauna in Qingyang, Gansu; Pleistocene mammals and stone tools in Sarawusu, Inner Mongolia; various specimens of Pliocene mammals in Nihewan, Hebei and Yushe, Shanxi.

Beijiag Museum is located in Tianjin Foreign Studies University. The structure is in the shape of "I", with a corridor linking the South Building and the North Building. In the South Building, with a total construction area of 690 square meters, there are the library, laboratory and geological paleontol-



A specimen display at the Beijiag Museum



ogy warehouse of the museum. From the 1940s, the South Building first served as students dormitory and then remained closed for 78 years. In March 2018, the repair, functional restoration and display design of the South Building were officially launched.

The South Building is designed following the principles of “respecting history, excavating memory, inheriting the spirit, presenting refined works”. The North Building focuses on the display of collections, highlighting the complete range, huge quantity, and unique value of the collections of Beijiang Museum. In contrast, the South Building focuses more on displaying humanistic spirits and exploring the anecdotes related to the cultural relics. The functional areas such as the library, laboratory and paleontology warehouse have been restored. Highlighting the science spirit and artisan spirit

embodied by Paul Émile Licent and his team during scientific research, it enjoys a high reputation all over the world.



Tourists visiting the Beijing Museum

79 National Maritime Museum: The Forbidden City on the sea



In 2010, with approval from the State Council, the National Development and Reform Commission officially approved the founding of National Maritime Museum in Tianjin. This indicates a new achievement of Tianjin in the implementation of major cultural industry promotion strategy and the construction of a cultural city.

National Maritime Museum is located in China-Singapore Eco-City, adjacent to the South Bay under plan. With an investment of 2 billion CNY, the museum is built in the Maritime Culture Park, which covers 1 square kilometers. The planned area for the museum is 15 hectares, with a building area of 80,000 square meters.

The National Maritime Museum is located in Tianjin Binhai New Area because the special geographical

location of Tianjin by the sea has created a city temperament of multi-cultural harmony and symbiosis, which not only reflects the regional advantages, but also contributes to the cultural development of Tianjin. It is held by marine experts that the National Maritime Museum is comparable to the Palace Museum and deserves the title "Palace Museum on the Ocean", because its establishment reflects the national marine development strategy.

Constructed jointly by Tianjin Municipality and the State Oceanic Administration, the National Maritime Museum will operate under the management of Tianjin Municipality. The National Maritime Museum is the first state-level comprehensive non-profit maritime museum in China. Upon completion, it will display the natural and humanistic history of the ocean, and serve as a base for patriotic education, a platform



National Maritime Museum

for the exchanges of maritime technology, and an indicative facility of maritime culture. It will fulfill a wide range of functions: collection and protection, display and education, exchanges and dissemination, tourism and sightseeing. This project is a milestone in the maritime development of China, bringing an end to the history that there was no maritime museum up to China's international status.

As the first state-level museum in Tianjin, the National Maritime Museum will greatly enhance the cultural status of Tianjin, increase its fame in the world, and boost the accelerated development of culture, tourism, trade, commerce, transport and relevant services in Tianjin City and Binhai New Area.

80 Xiaozhan Military Training offers a glimpse of Tianjin in the modern history of China

Xiaozhan Military Training Base, opened to the public in 2008, offers a glimpse of the modern military history of China. Important historic buildings were restored in the base according to historical records. A scenic area and a military museum were also built to demonstrate the turbulent history with modern techniques, historic relics, images and multimedia technology.

A multimedia demonstration hall was built, where historical movies about military training were shown to visitors to give them a vivid impression of that period of history. More than 10,000 pictures constitute a distinctive feature of the base.

Xiaozhan Town in Jinnan District, Tianjin used to be a military base at the end of the Qing Dynasty. It witnessed the shift from cold weapons to hot weapons in Chinese army, as well as the establishment of the first modern army of China.

Xiaozhan Military Training Base played an important part in the history of modern China. The first modern army – the New Army was established here, setting a precedent of army modernization in army units, equipment, training, and education. The base was restored with its historic features by Jinnan District Party Committee and the District Government.

Xiaozhan Military Training Base has a solemn atmosphere. On a stately tower, there stands the majestic Military Academy, with a construction area of nearly 2,000 square meters and city walls of 7,900 square meters. Many important political and military figures in the early 20th century received or offered trainings here, including four presidents, one interrex, nine premiers, and over 30 warlords of the Beiyang government.



Barracks in Xiaozhan Military Training Base

Xiaozhan is the birthplace of China's first modern army, the New Army. It used to be a weedy coastal wasteland until the 1870s. In order to build a fortress and forts to consolidate the defense of Dagu, the Qing army built the first traffic station and organized soldiers to receive training and grow crops. The rice of Xiaozhan still enjoys extensive reputation now. Xiaozhan Military Training Base is the first step China took towards modernization. It demonstrates the indomitable character of the Chinese nation in the face of bullying and aggression.



Demonstration of military training in Xiaozhan

City of Cultural Attractions



81-91



81 Tianjin successfully hosted the 13th National Games

The 13th National Games of the People's Republic of China was opened in Tianjin on the evening of August 27, 2017. President Xi Jinping attended the opening ceremony and announced the opening of the Games.

8,000 athletes attended the National Games. After fierce competition over more than 10 match days, Tianjin delegation won 18 championships in 13 major events, awarded with a total of 62 medals. This is the best record of Tianjin delegation, which fully proves the major breakthrough in competitive sports of Tianjin.

On September 8, 2017, with the extinguishing of the National Games flame symbolizing "hope, enthusiasm, vitality and dreams", Li Keqiang announced the closing of the 13th National Games of the People's Republic of China.

On August 16, 2011, Tianjin won the right to host the 13th National Games. In the following six years, Tianjin achieved "full mobilization" and "full participation" for the National Games. During the National Games, people from far and near all keenly felt the significant changes of Tianjin.

During the National Games, more than 10,000 volunteers from 43 universities in Tianjin were distributed to various venues and bus stops. 600 people from all walks of life in Tianjin participated in the torch relay, and tens of thousands of ordinary people participated in key activities such as flame collection, fitness shows, and warm-up shows. In 126 competitions from 19 major events, millions of people across the country participated in the preliminary competitions, including hundreds of thousands of participants in Tianjin alone.





Tianjin is a pioneer city in the development of modern sports in China. It has created many national records: the first racecourse, the first physical education class, the first intercollegiate sports meeting, and the largest and most advanced comprehensive stadium in Asia nearly a hundred years ago.

The 13th National Games aroused Tianjin people's memory of their obsession with sports. Tianjin National Games were not only dedicated to the competition among athletes, but also promoted sports among the common citizens. All innovations and changes at Tianjin National Games are centered on the people, conveying the core concept of "people first".



The opening ceremony of the 13th National Games

82 Zhang Liming and Jiang Zilong won the title of “Reform Pioneer”

On December 18, 2018, at the celebration of the 40th anniversary of reform and opening up, the CPC Central Committee and the State Council awarded 100 reform pioneers with medals. Among them were Zhang Liming, an outstanding representative of innovative workers, and Jiang Zilong, a representative of the Reform Literature writers.

Zhang Liming, born in August 1969, is a worker of State Grid Tianjin Electric Power Company who grew up in an era of reform and opening up. Dedicated to his work at grassroots levels, he was awarded as “National Model Worker” and “National Excellent Communist Party Member”. A hero is a product of his time. “It takes effort and struggle to achieve ambitions. I am proud of my contributions to the great times.” Zhang Liming is grateful to the times. As an outstanding representative of innovative workers, he experienced the significant changes of the motherland during the reform and opening up, the tremendous changes in Tianjin and the rapid development of the power industry. Zhang Liming said that industrial workers in the new era must make sustained effort, be bold in innovations and creations, and pursue new breakthroughs. In the future, he will lead his workers to devote themselves to the construction of a world-class energy Internet, contributing their wisdom and responsibility to the realization of the Chinese Dream.

The “Reform Literature” writer Jiang Zilong, born in August 1941, is honorary chairman of Tianjin Writers Association, vice chairman of the fifth, sixth and seventh sessions of the Chinese Writers Association. He is the founder and representative writer of “Reform Literature”, dedicated to shaping the image of reformers. In 1979, he created the short story “Director Qiao Taking Office”, which was the first work of “reform literature.” He has published a series of short and medium-length novels such as Pioneer, All the Col-

ors of the Rainbow, Symphony of Pots, Bowls, Ladles and Basins, which have a major impact on leading the transformation of ideas and promoting reform practice. They stimulated the enthusiasm for reform throughout the country.



Zhang Liming



Jiang Zilong

83 The birthplace of the first community volunteer organization in China

Walking into Chaoyangli Community in Heping District, you will be greeted by a sculpture of a pair of hands holding roses, reminding one of the proverb "Fragrance lingers in the hand that gives roses". On the base is inscribed the golden characters: "Birthplace of the First Community Volunteer Organization in China".

The volunteer service in Chaoyangli Community has a history of 30 years. On the morning of January 17, 2019, General Secretary Xi Jinping visited the Community Volunteer Service Exhibition Hall and recognized the contribution of volunteers.

In 1988, 13 members and activists of the Party began to offer voluntary services to as many households in Chaoyangli Community. They are the first community volunteers in Heping District. In the reform and opening up, the voluntary help brought warmth among people.

Within a month, volunteer associations were established in 261 communities in 12 subdistricts of Heping District, and the number of volunteers rapidly increased to 5,000. All the Party members and cadres in the district became volunteers, offering services to thousands of households.

In 2009, Ministry of Civil Affairs officially recognized that Xinxing Street Community Service Volunteer Association was the "First Community Volunteer Organization in China" and Xinxing Street, Heping District was the birthplace of the first community volunteer organization in China.

Through 30 years' development, the number of registered volunteers in Heping District has increased to 110,000. Despite their different jobs and hometowns, they are all dedicated to the voluntary services here.

To carry forward the glorious tradition of volunteer

services, Heping District Party Committee, the District Government, the District Civilization Office and the District Civil Affairs Bureau clearly listed volunteer service as one of the comprehensive social service functions, and allocated special funds, offices and activity venues for the volunteer associations at various levels. The District Volunteers Association has continuously innovated and expanded the forms and fields of volunteer service activities, and explored new modes and new mechanisms of project management, party members' dedication, integration and coordination, service interaction, centralized training, and incentives.

Now, citizens in Heping District regard it as an honor to be volunteers. Voluntary services have become a distinctive characteristic of Heping District, Tianjin.



Tianjin volunteers serving the National Games



Community volunteers serving the National Games

84 The first city to issue cultural cards in the country

In March 2015, Tianjin took the lead in China to issue culture cards to the citizens. This measure enabled the citizens of Tianjin to enjoy performances with subsidies from the government.

Over the past 4 years, 450,000 audiences received subsidies, and 3.56 million audiences enjoyed a total of over 13,000 subsidized cultural performances.

On January 23, 2017, a contract was signed among 49 performance units in Tianjin to establish Tianjin Cultural Performance Alliance, the first of its kind in China.

The alliance is led by Tianjin North Performing Arts Group, and its members are mainly municipal-level state-owned art troupes and some private troupes and performing companies. On the basis of the culture card projects, they stage wonderful performances for the citizens.

The first batch of 49 performance units includes both state-owned troupes and private ones. After the establishment of the Alliance, the culture card holders can watch the performances by state-owned and private troupes and excellent programs introduced from outside Tianjin.

The Alliance has strengthened the influence of mainstream culture, enriched the cultural life of the citizens, and brought prosperity to the performance market of Tianjin. Zeng Zhaojuan, head of Tianjin Pingju Opera Troupe, said, "Culture cards have helped state-owned troupes to win respect from the audience and develop prosperously. With the joining of private troupes and non-native troupes, the state-owned troupes must strive to offer more excellent performances to our audiences, and play the leading role while exchanging with other troupes." Liu Tingting, general manager of the Westbank Crosstalk Theatre, said, "We will be stricter with ourselves in

taste, style and responsibility, and stage positive and healthy performances to warm, encourage and enlighten the audience."

The Tianjin Culture Cards of 2019 were officially launched on February 28th. This year, Tianjin Finance further increased the cultural subsidies, and planned to issue and subsidize 225,000 culture cards, an increase of 85,000 from last year.

"This year, the citizens who buy a culture card at 100 CNY will enjoy the government subsidy of 400 CNY. After the 500 CNY quota is consumed, they can continue to enjoy the discount of the performance with the card," said Guo Hongbin, deputy general manager of Tianjin Northern Performing Arts Group Ticketing Company.



Culture cards are widely welcomed by citizens



Symphony concert by Tianjin symphony orchestra in the Italian-style tourist area

85 A popular library of Tianjin attracts attention from home and abroad

Jorge Luis Borges once said, "I always imagined that Paradise would be some kind of library." With its "Mountain of Knowledge" and "Eye of Binhai" design, Tianjin Binhai New Area Library gives a strong futuristic sense and is highly popular. Since its opening, it has attracted numerous readers from home and abroad.

About its rise to fame overnight, Liu Xiufeng, deputy director of the library, said, "We were shocked at the first sight of the library renderings, but the feeling is far from comparable with the shock we have while standing in the real scene."

The library was jointly designed by MVRDV Architectural Design Office of the Netherlands and Architectural Branch of Tianjin Urban Planning and Design Institute. The design is based on the "Eye of Binhai" and the proverb "Diligence is the path up the mountain of knowledge". Between the first and third floors of a 6-floor building, Tianjin Binhai New Area Library is hollowed out in the shape of an "eye", which is known as the "Eye of Binhai".

The total construction area of the library is 33,700 square meters, the height of the main structure is about 29.6 meters, and its designed capacity is 1.2 million volumes of books. The open cultural space is covered with circular curves winding from the inside to the outside, signifying a boundless ocean of culture.

Tianjin Binhai New Area Library is also extraordinary in its functions. The atrium sphere is not a mere decoration. Inside the sphere is a small theater that can accommodate nearly 100 audiences. All the trapezoidal stands can be automatically moved and folded by electronic control equipment, which increases the utilization of space. Its unified internal and overall appearances give a strong sense of technology.

At the self-service terminals, the readers who visit for the first time can register with their ID cards, which also serve as library cards. In addition to the atrium, there are separate reading areas for children, the elderly and the visually impaired.

Such a futuristic library with both beauty and connotation is not only popular on electronic media like Microblogging and WeChat, but it has also been reported in CCTV news and won the praise from the netizens as "the most beautiful library in China."



天津滨海新区图书馆
TIANJIN PINHAI NEW AREA LIBRARY

86 An asteroid is named after Tianjin University

Among the countless stars, there is an asteroid named after Tianjin University. On August 5, 2018, it was learned from Tianjin University that the Asteroid Nomenclature Committee of the IAU officially announced to the international community that the asteroid No. 8917 was permanently named "Tianjindaxue".

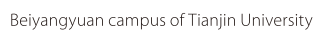
Asteroids are the only celestial bodies that can be nominated according to the will of the discoverers and approved by international organizations. Due to the uniqueness and permanent immutability of the asteroid's names, the world-recognized honor of naming asteroids is only granted to the units or individuals who have made significant contributions to the national economy, society, astronomy and other undertakings.

According to official announcements, the asteroid was discovered on March 9, 1996 by the Beijing Schmidt Asteroid Research Program. It is located in the main belt of asteroids between the Mars and Saturn in the solar system, and is numbered 8917 among the asteroids of the International Astronomical Union.

In 2017, to commemorate the 40th anniversary of their enrollment, and to promote the development of their alma mater in the field of aerospace science and engineering, a group of alumni from grades 1977 and 1978 discussed the asteroid naming plan, as a gift for their visit to their alma mater the next year. They spontaneously established "Tianjin University Aerospace Science and Engineering Club". With the efforts of the alumni and the support of the National Astronomical Observatory, the asteroid was officially named "Tianjindaxue".

In 2008, Tianjin University and the National Astronomical Observatory jointly established the first as-

tronomical information technology joint laboratory in China, relying on School of Computer Science and Software School of Tianjin University. Based on high-performance computing, image processing, scientific data storage and processing, artificial intelligence and other technologies, the laboratory is engaged in research and exploration in massive astronomical observation data management and retrieval, high-performance cross-validation calculation, multi-band astronomical data fusion, astronomical observation data storage performance and energy saving optimization and astronomical image processing. Relevant scientific research findings have been applied to the field of China Virtual Observatory Construction, real-time processing of observation data of AST3 Sky Telescope at Antarctic Kunlun Station, observation scheduling of FAST radio telescope and high-performance pretreatment of neutral hydrogen survey data.



87 Nankai University through a century: patriotic struggles and talent cultivation

On January 17, 2019, General Secretary Xi Jinping visited the 100-year history exhibition of Nankai University, inspected the School of Chemistry and the State Key Laboratory of Elemental Organic Chemistry, and made important instructions on the cultivation of morality, fostering of patriotism and construction of faculty team. He said that Nankai University has a glorious patriotic tradition, which is the soul of Nankai. Only by integrating into the society will individuals achieve the sublime of the mountains. Nankai University was founded in 1919 on the basis of Nankai School, which was established in 1904. During its centennial development, it has always shared the fate with the nation.

Founded by the patriotic educators Yan Xiu and Zhang Boling, Nankai University is the alma mater of Zhou Enlai, the first premier of the People's Republic of China. Nankai was a private school in its initial stage.

Following the educational philosophy of "Managing the country by the law, strengthening the country by science, and enriching the country by business", and the goal of "understanding China, serving China", it has cultivated numerous talents to meet the needs of the nation. After the bombardment of the Japanese invaders in 1937, Nankai University was forced to move south, and formed the National Southwestern United University together with Peking University and Tsinghua University. In 1946, it returned to Tianjin and was re-established as a national university. After the founding of the PRC, it underwent department adjustments in higher education institutions and became a national key university strong in both arts and sciences.

Since the reform and opening up, with joint support from the Ministry of Education and Tianjin Municipality, Nankai University developed into a compre-





hensive research university with key support of the national “211 Project” and “985 Project”. In September 2017, it was included on the list of 42 Chinese universities to be built into world-class universities.

In the past 100 years, Nankai University adhered to its motto of “dedication to public interests, acquisition of all-round capability, aspirations for progress with each passing day”, and carried forward its tradition of “patriotism, dedication, innovation, and responsibility”. It has cultivated a large number of outstanding talents such as Zhou Enlai, Chen Xingshen, Wu Dayou, and Cao Yu, and made significant contributions to the rejuvenation and prosperity of the nation.

Nankai University will follow the instructions of General Secretary Xi Jinping and integrate its own development with the grand goal of national rejuvenation. With efforts to cultivate talents, promote academic



Ring the school bell and remember the history

research, strengthen the motherland, and pass on civilization, Nankai will strive to develop into a world-class university.



Nankai University

88 Tianjin has launched the civilization city construction



Calligraphy cultural activities to benefit the people

Building a tidy community environment, providing heart-warming services, and creating multi-functional cultural space . . . Over the past five years, under the guidance of President Xi Jinping's "three emphases" principle proposed during his inspection, Tianjin has taken a series of measures of spiritual civilization construction in Tianjin to benefit the citizens.

To improve the civilization of Tianjin, the "Three-Year Action Plan for Civilized City Construction of Tianjin" (2018-2020) is implemented in depth throughout the city, with attention paid to the improvement of both software and hardware. Tianjin has carried out the work of spiritual civilization construction in accordance with the standards of civilized cities and civilized urban areas. Through three years' efforts, it has achieved the overall improvement of citizens' civility, urban civilization, cultural taste and people's

living standards. The three-year action plan mainly focuses on solving the problems of social concern in the "eight major projects", including the improvement of citizens' civility, urban appearance, traffic order, community functions, rural construction, service of window units, social security environment and the comprehensive improvement of key areas.

In the three-year operation, Tianjin will strive to improve the urban community functions, construct beautiful countryside, and ensure better services of window units, so as to ensure a better life of the citizens. For example, the city will accelerate the renovation of old residential blocks and old housings in the downtown area. By 2020, it will complete the renovation of 3,069 residential blocks involving 1,275,800 households, covering 83,017,900 square meters. Rural toilet renovation has been listed as an important part



Welcome the National Games with politeness

of the rural infrastructure construction. With greater financial support and improved subsidy mechanism for rural toilet renovation, the project of harmless toilet transformation will be completed by the end of 2020. Vigorous effort will be made to promote "Internet + government services". In 2018, the online government service platform of Tianjin was built, as well as 100 service demonstration windows and 100 model service posts.

89 Theatrical traditions of Tianjin



Pingju opera *Zhao Jintang* performed by Tianjin Pingju Opera Troupe

Tianjin is a city with theatrical heritage. For more than a hundred years, a wide variety of theatrical arts have been staged in Tianjin, including Peking Opera, Pingju opera, Hebei Bangzi, drama, etc., which reflect the joys and sorrows of the people, the ups and downs of the society.

The theatrical arts developed their own characteristics in the turbulent changes of the times. The inner quality of Tianjin theatrical arts is their adaptation to the times. For example, thanks to Cheng Zhaocai's innovation and transformation, Pingju opera developed on the basis of the more rudimentary Laozi. Nankai New Drama Group took bold measures to improve the early drama in China, which played a leading role in the liberation of people's minds.

Tianjin Peking Opera Troupe, established in 1995, has already cultivated 9 winners of the Plum Blossom Prize. It has also created a large number of works in recent years, such as "Hua Ziliang", "Xiang Lian Case" and "Emperor Kangxi". Gong Hede, a researcher at China Academy of Arts, commented that its achievements are rare in the field of Peking Opera, and even in the whole theatrical realm.

Founded in 1984, Tianjin Youth Peking Opera Troupe has become a highland of Peking Opera art through 30 years' development. Cui Wei, the secretary-general of the Chinese Dramatists Association, summed up the development of the troupe with "down-to-earth work and outstanding achievements". Artists such as Meng Guanglu respect the artistic rules of Peking Opera and have done solid work in inheriting the artistic characteristics of traditional Peking Opera genres. Absorbing the modern spirit, they have created new works such as "Zheng He" and adapted such works as "Hanyuniang", accumulating various experiences in the innovation of Peking Opera.

The artists of Tianjin Pingju Troupe, such as Zeng Zhaojuan, have not only opened up space for diverse genres, but also brought modernity to the traditional artistic form.



Pingju opera *Red Sorghum* performed by Tianjin Pingju Opera Troupe



Drama *Haihe Family*

90 Tianjin: hometown of northern Quyi arts



Ma Sanli, crosstalk artist

Tianjin is the hometown of northern Quyi (folk singing arts), whose formation, development and dissemination are closely related to Tianjin. Although some varieties of Quyi were not produced in Tianjin, they took root and prospered in Tianjin, thereby gaining new vitality.

It is safe to say that Tianjin is the hometown of Quyi, because there are a large number of performance venues, a rich variety of performing arts, excellent actors and audience with keen interest. The heyday of Quyi in Tianjin was about the 1920s and 1930s. At that time, there were more than 30 performance venues in Tianjin, such as Yanle Shengping and Changchunyuan Tea House in Nanshi; Fuxian Tea Garden and Daguanlou in the old city; Central Pains Amusement Park and Tianle Tea House in the mar-

kets in the former concessions; and some sporadic fixed performance venues, such as Tianbao Theatre, Dongyanle, Da Luotian, Taoyuan and so on.

There are about 40 kinds of northern Quyi; almost all of them have been performed in Tianjin and are welcomed by the Tianjin audience. Some types of Quyi were not native in Tianjin, but they also underwent significant development here.

Since the publication of the first batch of national intangible cultural heritage, six artistic forms of Tianjin have been acknowledged as national intangible cultural heritage, including Tianjin Shidiao, Jingyun Dagu, Meihua Dagu, Xihe Dagu, Jingdong Dagu and crosstalk. Of them, only Tianjin Shidiao is a local art form of Tianjin, while the other five were all formed outside of Tianjin.

These forms of art developed rapidly in Tianjin, and most of them produced genres.

Take crosstalk for example. Out of the three widely-recognized genres, two of them (the Chang and Ma genres) came into being in Tianjin, and one (the Hou genre) developed in the early stages here. With the emerging of numerous excellent crosstalk artists, the crosstalk art has been well inherited in Tianjin. During the decline of crosstalk art in the 1990s, some old crosstalk artists of Tianjin organized private crosstalk clubs and staged performances in small theatres, which led to the emergence of “teahouse crosstalk” performances and the prosperity of the art.

Meihua Dagu, originally called Meihua Diao, developed on the basis of Qingkou Dagu in the middle of the Qing Dynasty, and became popular after it was



improved by Jin Wanchang. Jingyun Dagū originated from Muban Dagū in Hebei, which developed four genres in Tianjin, represented by Zhang Xiaoxuan, Liu Baoquan, Bai Yunpeng and Luo Yusheng respectively. It is often the finale in performances of Quyi arts. The source of Xihe Dagū is also in Hebei. In 1870, representative performers of Xihe Dagū introduced this art form to Tianjin, which later on gave birth to different schools.



Luo Yusheng, Jingyun Dagū artist



Bajiao Drum performance at Tianjin Guangdong Guild Hall

91 The first overseas college of Juilliard School is established in Tianjin

To the west of Binhai Railway Station, there stands an eye-catching steel structure under construction — Tianjin Juilliard School. This cooperative education institution is jointly established by Juilliard School of New York and Tianjin Conservatory of Music, Tianjin New Financial Investment Co., Ltd. and Binhai New Area. It has attracted attention throughout its preparatory process, not only because it is the only overseas cooperative project of Juilliard School in the world, but it is expected to create an artistic atmosphere and attract top-class artists from Tianjin and even the whole China.

Since its founding in 1905, the New York Juilliard School has achieved outstanding educational achievements in cultivating the world's most influential artists in classical music, drama, and dancing. It is a world-class institution that many art students around the world yearn for.

Tianjin Juilliard School will offer a range of courses, including master degree programs in orchestral performances, chamber music performances, and piano art; pre-university courses; instrumental training courses; adult education; public performances and interactive exhibitions. Alexander Brose, Associate Dean of Juilliard School of the United States, will serve as the first executive president and CEO of Tianjin Juilliard School. The well-known American Chinese violinist He Wei will be the first artistic director of Tianjin Juilliard School.

"Tianjin Juilliard School will become an art center integrating public performances, art education, academic research and interactive exhibitions. Of course, we will offer adult education and make the campus open to the public so that more people can

enjoy art and love it." He said that as artists should embrace society, no effort would be spared to promote art development in the Beijing-Tianjin-Hebei region, and make Juilliard School the cultural and artistic center of the local region.

After the autumn of 2020, Tianjin Juilliard School will stage wonderful performances every week. Public performances and art education activities for the surrounding areas and urban communities will also be held regularly.



Tianjin Juilliard School (design sketch)

