Sparkling Points of Tianjin

Compiled by Tianjin Municipal Information Office

Foreword

Tianjin, a famous city of history and culture, is one of the four municipalities of China and the biggest coastal opening-up and port city in North China. Situated in the north-east of North China Plain, it occupies the lower reach of the Haihe River and is located at the center of the Bohai Bay, covering an area of 11,919.7 square kilometers and enjoying a coastline of 153.3 kilometers, from which it has derived the names of "Lower Tip of Nine Rivers" and "Communications Center of Rivers and the Sea". Six hundred years of history has nurtured a rich culture of the city and its special geographic situation has created a unique natural environment. The city is located east to the Bohai Sea and north to the Yanshan Mountain. The 72-kilometer Haihe River flows across the city like a jade belt. In the new century, Tianjin, blessed by its vantage spirit, is right on track to modernization.

At the new stage of the new century, based on the holistic socio-economical developing blueprint of China, the Central Government of China and the State Council have made important strategic planning to push forward the development and opening-up of Tianjin Binhai New Area. The area is also entrusted with important tasks of being a growth engine to drive up the economical development of the area of Beijing, Tianjin and Hebei Province and the circum-Bohai Sea region, promoting the interaction between China and the West and the balanced economical development of the whole country. Tianjin has become crucial in the economy of China and is emerging as a sparkling point in the global economy.

The Tianjin people are greatly motivated by the sense of responsibility generated by the era. With the Binhai New Area serving as the growth engine, the downtown area of the city is developing fast and the surrounding districts and counties are following suit. These three tiers of development are well coordinated and connected. United and full of energy, Tianjin residents are aiming for the best, and they are determined to have better performance. Tianjin is emerging as a rising star along the Bohai Sea Coast.

Developing Binhai Hot Area

In the 1980s, Shenzhen City was the focus of attention. In the 1990s, Pudong Area was in the spotlight. It is Tianjin's show time in the 21 Century.

Proposals of the Central Committee of the Communist Party of China have changed from "further exerting the force of special economic zones and Shanghai Pudong New Area, pushing forward the development and opening-up of advantageous areas such as Tianjin Binhai New Area" to "…better exerting the important force of special economic zones, Shanghai Pudong New Area and Tianjin Binhai New Area in the Reform and Open-up and the independent innovation campaign"; and from "…expediting the development and opening-up of Tianjin Binhai New Area has become a crucial step in the development of areas around Bohai Sea and the whole country" to "…should correctly define its function, perfect the systems, highlight the developing direction and make full use of Binhai New Area in leading the fast and healthy socio-economic development of the (Tianjin) city, making it the pioneer in implementing scientific development perspective". These proposals, reflecting the forward-thinking and long-sightedness of the Government and the State Council, have set a high expectation and made clear orientation for the New Area. Since then, the Area has become the focus of people's attention.

A number of high-end projects are now in full swing, including the Airbus A320 project, the ethylene cracker with one-million-ton capacity, the oil refinery of 10-million-ton capacity, the new generation carrier rocket, the Sino-Singapore eco-city, so on and so forth. Apart from these, the Bohai Bank was put into operation as the first national joint-equity commercial bank in the past decade. The Bohai Industrial Fund has been established in Tianjin, taking the lead in the nation's development campaign of private equity. The integrated and comprehensive reform and experimental plan of the Area has been approved by the State, which includes pioneering moves such as venture capital, international factoring business, financial lease, foreign exchange reform and comprehensive operating pilot points. The system and mechanism innovation has become a powerful tool in the development of this area.

The Area has shown its strength in the project-concentrating zones, the development of industry clusters, the efficient use of resources and integrated function development. Besides, modern manufacturing industries are driving forward fast, including electronic information, space flight and aviation, petrol chemistry, equipment manufacturing and so on so forth. Furthermore, modern service industries, including finance, logistics, convention and exhibition and outsourcing, are growing rapidly. At present, the Binhai New Area embodies the best development area of China, the biggest international logistics center in North China, the largest bonded area with the most favorable preferential policies and a comprehensive port. The Tianjin harbor is a comprehensive port with a capacity ranking the sixth in the world. The Binhai New Area has many advantageous resources, adopting a clear developing structure of "one axis, one zone, three urban areas and eight functional areas".

Gradually step by step, the Binhai New Area has entered a stage of full development and opening-up. Tianjin residents are seizing the second in building the New Area into a window of North China to the world, a high-end hub for modern manufacturing industry and a base for research and development, and the international shipping and logistics center of North China. The Area will gradually develop into an economically prosperous, socially harmonious and environmentally friendly new eco-city suitable for human habitation.

Building a Leading Industrial Position with Innovation

In the spirit of high-end orientation, high-quality orientation and high-technology orientation, Tianjin energetically develops high and new technology industry and consolidates the advantages of its electronic information industry, expanding scales of modern pharmacy industry and the like, accelerating the industrialization of new energy sources and materials as well as environmental protection industry, re-invigorating traditional industries such as equipment manufacturing industry and light industry and textile industry, promoting newly emerging industries like spaceflight and aviation, pushing up the industrial chains to an high-end position. "Made by Tianjin" is expected to change into "Created by Tianjin".

Unmanned aircraft, spacecrafts manufacturing, digital video motoring chip, optical communication, film photovoltaic cell and wind farm transmission and other new projects are forming new sources of economic growth. With high-quality projects backing up its scientific development, Tianjin's industrial structure has been successfully optimized. The city boasts top mobile phone output capacity of the nation; it owns the industry base of national modern Chinese medicine technology; it

has the biggest sea-water desalinization factory in Asia; it also has the State-level new energy industry base, Dawning High-Performance computer industry base, wind-generating facility manufacture base, civil aviation technology industry base and last but not least hollow membrane industry base.

Bio-Pharmaceutical International Innovation Park and other State-level scientific and technological innovation platforms, metallurgy, chemical technology, automobile as well as a lot of industrial technology development centers speed up their construction. With privileges of knowledge- and intellect-intensive Beijing and Tianjin technology cycle, the city is making the best use of the venture-capital-investment-fund leverage, gathering dynamic innovative elements, and translating frontline science and research findings into practice and injecting innovative essentials to enterprises. This place is not only a linking site and distributing center to introduce, digest and absorb the advanced technology, but also an original place and industry base of undergoing high-technology, and a spot that solidifies the groundwork of an innovation-oriented city.

An Open Window to the World

Tianjin is the joint of the economic zone around Bohai Sea and the City Cluster of Beijing, Tianjin and Hebei Province. It is connected to areas of North-east China, North China and North-west China, and North-east Asia, communicating different areas both domestically and internationally. It is also the nearest east starting point of Eurasia Continental Bridge, an important port for adjacent inland countries. Generally speaking, it is an important window of China to take part in the global and regional economic integration.

Beijing-Tianjin Inter-city Express Railway has shortened the trip between the two cities to only half of one hour, making them a closer economic zone. The 250,000-ton deep channel sea-route has been finished at Tianjin Port, being the biggest man-made deep port in the world. Furthermore, electronic port and logistic information platform have been put into operation, and "water-free ports" are established in cities such as Shijiazhuang and Baotou by Tianjin International Trading and Shipping Service Center. The water transport center in the past has become a city connected to rivers, seas and roads, integrating highways, railways, airlines and river transport, all of which add to the city's great appeal.

As one of the earliest coastal cities of China open to the world, Tianjin has had trades with more than 180 countries and regions, established friendly-city relation with 23 cities and friendship-and-cooperation-city relation with 44 cities. The annual China International Private Equity Forum is said to be the feast for international financing. Many of the world Top 500 businesses have attended the fair and gained great returns. All results of human civilization, such as top ideas, advanced technologies and equipment, shall thrive in this open city and become the driving force for its development.

A Livable City with Cultural and Historical Essence

It is said that place of natural beauty brings talent. The favorable geographic location at the joint point of rives and the sea and the long history of the city have made it a livable and habitation-friendly place.

This is a city enriched by long history and diversified cultures. During the Ming Dynasty, after fording the river at Tianjin (then named Zhigu) and wresting the throne, the Emperor Yongle (Zhu Di) renamed it "Tianjin", literally "Heavenly Ford" to indicate that the Emperor (Son of Heaven) forded the river at that point. During the Qing Dynasty, the Emperor Qianlong had visited Panshan Mountain twenty-eight times, leaving the praise "if I had known about Panshan Mountain, why should I have ever visited Jiangnan (South of the Yangtze River)?" A lot of famous politicians also gathered here and observed some of the most important events of the country in the past century. Many places of historical interests and former residences of famous people have given rise to its fame as "Tianjin-stories in the past century". If a tourist wants to know more about the last century of Chinese history, he or she can't afford to miss the chance of touring Tianjin. Thirty-seven national and municipal protected units of cultural relics show the richness of its cultural heritage, which include the western-style building cluster famous as "International Architecture Museum", Tianhou Temple, Temple of Culture, Dabei Buddhist Temple and Dagukou Ford, just to name a few.

This is a city where people uphold art and culture. Tianjin is said to be the big wharf of Peking Opera, town of Northern folk art forms, cradle of singers and birthplace of China's drama. Famous local folk handicrafts include Yangliuqing Spring Festival Paintings, Zhang's clay figurines and so on so forth. The first higher education institution in modern China was founded here and so was the vocational education reform trial area. This is a city of great educational appeal and academic charm.

This is a city advocating harmony. Leading a harmonious life has become the most popular concept among the people. The social security system has created a good service network to benefit low-income groups, with housing system gradually sophisticated, medical insurance reaching full coverage and the security of society well protected.

This is also a city which respects ecology. The city's environment is improving every single day with more green grass land spreading and flowers blossoming around. It sets the pace for the country in energy-efficiency as a water-efficient city, a model city in environmental-protection and in all, a habitation-friendly and livable city.

People are expecting that Tianjin, standing on a new starting point and having a grandeur blueprint, will make further achievements.

At the new development stage, in the light of the important requirement of "two national front ranks" and "one pioneer", Tianjin will focus on transforming the developing pattern and perfecting socialist market economic system, forging ahead the economic, political, cultural and social development and sparing no effort in promoting the scientific development and harmonious development as the priority, building the society into a prosperous, civilized international port city, economical center of North China and eco-city with advanced technology and education, good facility and beautiful environment.

Tianjin, a coastal city with open mind, an international metropolis with versatile elements, is opening a new page of its history and building a bright future.

Contents

Tianjin is pinpointed to grow into the economic center of North China

Ever since the Binhai New Area was embodied into national development strategy, the expected image of Tianjin in people's mindset as the future economic center of North China has gradually come out of horizon.

The State Council endorsed "Tianjin City Overall Planning (2005 to 2020)" on July 27, 2006, giving a clear definition to Tianjin's identification and future position as an international harbor city, North China's economic center and last but not least, an eco-friendly city suitable for human habitation in 15 years. Tianjin should be the center of circum-Bohai Sea region, and the city should give priority to the development of its Binhai New Area.

Functional identification and positioning of Tianjin eventually orient the city's future development. Together with the capital city Beijing, Tianjin is to lead the high-profiled development campaign of the Beijing, Tianjin and Hebei Province economic circle and the overall circum-Bohai Sea area.

As a matter of fact, Tianjin was the second largest commercial metropolis in the history of China's contemporary economic development. The city was almost as developed as Shanghai, in terms of commerce, trade, finance and shipping industry. When the People's Republic of China was founded, Tianjin ranked the fifth in the overall economic size nationwide.

The nation decided to build Tianjin into China's "key economic center of North China" in 1999. Seven years later in 2006, the country announced clearly that Tianjin is expected to the "economic center of North China." The city's development orientation has been lifted.

After the Binhai New Area was written into national development strategy, it was the first time for Tianjin to be earmarked as the economic center of North China. It is an important message conveyed from the Chinese Government.

From the perspective of regional economic development, Shanghai, Shenzhen and Guangzhou are engine cities, driving up the development of the Yangtze River Delta and Pearl River Delta regions. North China also needs an economically robust city, which can play similar roles as Shanghai, Shenzhen or Guangzhou within their economic circles.

The long-term development goal of China is to quadruple its Gross Domestic Product (GDP) of 2000 by 2020, with the per capita GDP reaching US$ 3,000. This target requires high-speed growth of the nation's economy during the next decade. To fully drive up China's economy, it is absolutely necessary to have a new growth engine, which is more powerful and influential.

Positioning Tianjin as the future economic center of North China is a key strategy to balance the economic gap between the North and South China, promoting balanced economic development and enhancing regional economic coordination.

Tianjin has been fully prepared to play such a role, equipped with sound economic and social fundamental and conditions. It has become the largest coastal city adopting the market-oriented opening-up policy. Since the launch of the market-oriented economic reform, the municipality has achieved great progress, in terms of both social and economic development. The municipality's per capita GDP hit US$ 6,000 in 2007. More than 20,000 foreign enterprises have invested in Tianjin. Among the World Top 500 enterprises, 128 have set up their branches in Tianjin. With electronics, automotive, petrochemical, metallurgy, bio-technology, pharmacy, new energy and environmental protection as its pillar industries, Tianjin has become the most important modern manufacturing hub of North China.

Tianjin enjoys the advantages of good geological location, developed industrial layout and strong research and development (R&D) capability. After years' construction and development, Tianjin has established its own comparative advantage, being a key logistics and air cargo transport hub of North China. Tianjin has grown into the most potentially robust economy nationwide, attracting investment from both home and abroad. It is expected for the circum-Bohai Sea area, led by Tianjin, to squeeze into the top three national economic engines, with the other two being the Yangtze and Pearl River Delta regions.

Tianjin Binhai New Area is expediting the development and opening-up as the pioneer with perspective of scientific development

2

Developing and opening up the "Binhai New Area" was included in the general national development strategy in recent years, and the city of Tianjin has undoubtedly become the most shiny star in the China's regional economic development. Thanks to the Binhai New Area, Tianjin is gradually establishing itself and become more clearly with its development orientation. Along with the rise of the Binhai New Area, Tianjin is to embrace the biggest historical opportunity for self-development.

The Binhai New Area covers a planned area of 2,270 square kilometers. After several years' development and construction, the Area's major economic indexes have been growing at annual rate of more than 20 percent. In 2007, the local GDP of the Binhai New Area totaled at RMB 236.408 billion yuan, with the accumulative overseas investment in place amounting to US$ 23.1 billion. Eighty-nine corporations from the World Top 500 list have invested and set up 219 local companies in the Binhai New Area.

Tianjin Municipal Government have given top priority to pushing forward the development and opening-up of the Binhai New Area. In 2007, a leading team aiming at expediting the development and opening-up of the Area was established to conciliate and solve major problems occurring in the course of developing the Area. Since last year, a citywide meeting and five leading-group seminars have been held to study and map out plans for several major issues, including the overall planning of the Binhai New Area, the construction of key projects and infrastructure, ecology and environment protection and the enhancement of independent innovation.

In the first half of 2008, the New Area achieved a GDP of 146.745 billion yuan, with an increase of 23 percent year-on-year. Key projects have been going on well. By the end of June, the Binhai New Area had witnessed the completion of land filling project in the 3-square-kilometer starting zone of the Sino-Singapore Eco-city and a 20-million-cubic-metre land reclamation project in Dongjiang Bonded Port Area. The construction of passenger liner port and tourism sights in the east part of the Area have been going well. The one-million-ton ethylene cracker project and the Airbus A320 general assembly line are also in full swing.

Being a part of the national development strategy, the impacts of Binhai New Area's development and opening-up have emerged and the Area is making substantial progress in terms of cooperation with adjacent provinces and cities. The Binhai New Area is expediting the construction of international shipping center of North China and international logistics hub to revitalize regional economy. The move will also exert obvious influence on strengthening comprehensive function and stimulate growth of related industries. The number of the inland customs, with which Tianjin has customs declaration cooperation increases to 17 including Lhasa and Chongqing. In this way, the speed of goods flow between the inland and the port city has improved a lot. Furthermore, electronic port and logistic information platform have been put into operation, and five inland water-free ports are established in places including Beijing, Shijiazhuang, Henan Province, Ningxia Autonomous Region and Baotou. Tianjin takes the lead in adopting the monitoring system for inland water-free ports.

As the pilot zone for China's comprehensive reforms and experimental development, the Binhai New Area has pinpointed six areas as the priority in the financial reform and innovation, and has made initial progress in areas such as direct financing.

To give full play to the role of the Binhai New Area as the driving force for regional economy, Tianjin plays its due role to strengthen "four capacities" in its development and opening-up, namely comprehensive strength, innovation capacity, service capacity and international competitiveness. Therefore, the New Area will be able to make the transformation from "Made in Binhai" to "Created in Binhai". The Binhai New Area has formed a multi-layer technology-innovation system with the establishment of 33 national, provincial and ministerial engineering centers, 80 company-owned R&D centers, and 41 foreign-invested R&D centers in the area.

The report to the 17th National Congress of the CPC presents higher and clearer requirements for the Binhai New Area. Therefore, the New Area has to put the enhancement of innovative ability in the strategic core position. Attaching great importance to independent innovation, using quality talented people with innovation spirit and carrying out system reform of science and technology, the Area in determined to gradually establish a well-developed innovation system concerning science and technology and pursue a path of independent innovation with its own characteristics.

The Binhai New Area enlarges input in science and technology and creates a better innovation environment, while expediting the construction and import of major projects and forming high-level industry structure. Started with establishing and perfecting scientific and technological innovation system, the Binhai New Area is formulating and perfecting policies and regulations encouraging companies to invest in science and technology innovation and to share science and technology resources. Meanwhile, the new area will enlarge inputs in science and technology and optimize the environment for innovation and starting new business.

The New Area initiated 56 national, ministerial and provincial major science and technology projects, including the International Bio-Pharmaceutical Innovation Park and Civil Aviation Science & Technology Industrialization Base. The R&D and experiment investment accounts for 2.2 percent of the New Area's GDP and the output value from high-end technology industry takes 47 percent of the total output. A high- and new-technology industry cluster takes shape preliminarily, involving electronic information, bio-pharmaceutical, OME and new material. This cluster boasts a certain ability to conduct R&D projects and achieve development in the areas of biochip, membrane technology, electric vehicle, stem cells and nano.

The development and opening-up of the Binhai New Area is related to the development of the whole country. The New Area, strictly abiding by the requirement issued by the Central Government, intends to conduct regional development through scientific outlook, striving for a GDP exceeding RMB 350 billion yuan and a high-and-new-tech-industry output constituting more than 50 percent of the GDP by 2010.

Tianjin is moving toward a new setup with three layers of coordinated development

Tianjin has issued a comprehensive coordinated development plan for the three layers, namely the Binhai New Area, the urban area and surrounding districts and counties, to maintain comprehensive, balanced and sustainable social and economical development and configure new advantages for development. Through joint efforts of the whole city, Tianjin is moving towards a new structure featuring unique developments of these three layers, positive interaction, multi-dimensional development and multi-polar support.

In the past few years, while the development in the Binhai New Area has remained fast, the potential of Tianjin's urban area and surrounding districts and counties are far from being fully explored. Under the negative influence of the current administration system, the development of the Binhai New Area and urban area tend to be homogenized. During the Tenth Five-Year Plan, GDP and fiscal revenue of the central districts grew by 182 percent and 279 percent respectively; while those of the Binhai New Area by 243 percent and 694 percent.

Taking the development of the whole city into consideration, it is not realistic to only count on the Binhai New Area for Tianjin's overall growth. Therefore, it is critical to maintain coordination of the industrial layout between urban areas and the Binhai New Area. A development strategy was proposed at the Tianjin's Ninth Party Congress held in May 2007, declaring that the "Binhai New Area is to function as the growth engine, with major urban areas to develop rapidly and other districts and counties to follow the lead".

The Binhai New Area has proposed to strengthen cooperation with urban areas and the surrounding districts and counties in several aspects to promote the coordinated development of the three layers. Consequently the balanced development of the entire city could be possible.

Firstly, the Binhai New Area will exert industrial advantages and conduct an overall planning for industrial layout and development policy, encouraging the industrial chain extending from Binhai to the surrounding districts and counties and forming an effective industrial structure of mutual support. Secondly, the Binhai New Area will exert policy advantages to further apply the policies adopted by Binhai to the whole city so as to drive development of other areas. Thirdly, the New Area will exert the advantage of opening-up to push forward the linkage between the urban area and Binhai in sharing the science & education resources and attracting investment, enabling Tianjin to strengthen its overall competitiveness.

Tianjin now enjoys a comprehensive, well coordinated and connected development of three layers and the Binhai New Area is playing its due part as the growth engine. The construction of eight functional zones in Binhai New Area is gearing up, with major projects right on track to be completed. The service center of the Sino-Singapore eco-town finished construction. Projects such as the one-million-ton ethylene cracker and the Airbus A320 general assembly line are under construction. Infrastructure construction is in full swing. Forty-five projects were launched in the first half of 2008 with the investment in place totaling RMB 20.5 billion yuan.

GDP of the Binhai New Area in the first half of 2008 reaches RMB 146.745 billion yuan, up 23 percent year-on-year. The growth rate is 6.7 percentage points higher than that of the whole city. It is the fastest growth speed in the past decade. Total industrial output value stemming from the Binhai New Area reached RMB 378.242 billion yuan from January to June, 2008, increased by 32 percent year-on-year. During the period, the New Area witnessed RMB 68.721 billion yuan of fixed-assets investment, increasing by 40.3 percent year-on-year.

Tianjin urban area strives to develop modern service and metropolitan industry, improving the city's due functions in a comprehensive way. The twenty city-improving projects benefit city residents' living and working condition. Regarding the introduction of investments, actual foreign investment in place in Tianjin's six urban districts is US$ 443 million, with a growth rate of 30 percent in the first half of 2008. Actual utilization of domestic capital in urban areas is RMB 15.664 billion yuan, growing by 34.2 percent year-on-year.

The increasing development of districts and counties of Tianjin leads to the enhancement of their economic strength. In the first half of 2008, GDP, fiscal revenue, investment in fixed assets and utilization of foreign capital in the districts and counties are all higher than the average level of the city. In the first half of 2008, total industrial output value hit RMB 163.054 billion yuan, increasing by 40.6 percent, which is 10.1 percentage points higher than the city's average. Agricultural infrastructure construction finished on a total of 60,000 mu of land, which equals to the total construction scale in the last decade. Pilot projects, in which farmers can switch their residential land for houses, went well, with accumulative investment over RMB 12 billion yuan.

Tianjin's per capita GDP surpasses US$ 6,000

According to the latest statistical data published by Tianjin Bureau of Statistics, the 2007 per-capita GDP of Tianjin was US$ 6,065, with an increase of 11.5 percent year-on-year. The figure was calculated on permanent population of Tianjin, the biggest coastal and opening-up city in North China. That makes Tianjin residents' living standard reach the level of medium developed countries and regions. Among the 31 provinces, municipalities and autonomous regions, Tianjin ranks the third after Shanghai and Beijing to step in the club of per capita GDP of US$ 6000.

During recent years, Tianjin thoroughly applies the scientific outlook for development, sparing no efforts to promote scientific, harmonious and leading development. The city further accelerates the development and opening up of its Binhai New Area. As a result, its overall economic strength has been upgraded to a new level.

In the year of 2007, Tianjin's GDP hit RMB 505.04 billion yuan, with its overall economic size increasing by RMB 300 billion yuan in five consecutive years. Per capita GDP in Tianjin reached US$ 6,065 in 2007, with an increase of US$ 2,939, or 13.1 percent higher, over 2003's US$ 3,126 based on comparable price.

A new round of development and opening up in the Binhai New Area has injected great momentum for Tianjin's economic growth. The comprehensive reform and experimental development is put into practice in Tianjin, fueling a new development and opening-up boom. In 2007, the New Area's GDP totaled at RMB 236.408 billion yuan, accounting for 46.8 percent of the economic size of the city.

Tianjin's industry is a major driving force for its economic growth, while the city's service sector speeds up remarkably. In 2007, added value from the city's industry hit RMB 266.187 billion yuan, accounting for 52.7 percent in the city's economy, and contributing 58.8 percent to the city's economic growth. The added value obtained from the service sector reached RMB 204.768 billion yuan, up 14.3 percent year-on-year. It is the best performance for Tianjin's service segment in the past decade.

With accelerated economic development in three layers and deepening opening-up both externally and internally, Tianjin has attracted abundant investments. Total investment in Tianjin is growing, with investment structure optimized. Major projects have been going forward step by step. Consequently, consuming demand is picking up. The total retailing of consumer goods has risen to RMB 160.374 billion yuan last year, up by 18.2 percent year-on-year, which is the highest in the past decade.

The residents' consumption structures and styles are transforming towards entertainment- and improvement-oriented. Consumers care more about the brands and personality display, when shopping for clothes. The standard is higher. The upgrading of household appliances such as flat televisions, digital products, refrigerators and washing machines is speeding up. Tourism and sightseeing have become a fashion. Modern transport and telecommunication devices are more popular now. By the end of 2007, every 100 families have owned 5.6 private cars and 162.3 cell phones.

Tianjin Economic and Development Area (TEDA) accelerates the construction of a new economic growth platform for China

After 24 years' development, TEDA, one of the first State-level economic and technological development areas in the country, has grown into a beautiful modern area from a barren saline-alkali land. TEDA has innumerable workshops and is covered by parks and greenbelts now. It has become an important window for Tianjin's reform and opening-up campaign and a major drive force for economic development.

As an important part of China's opening up policy and step-by-step opening-up strategy, TEDA was established in December of 1984 with a total planned area of 33 square kilometers. Since 2003, TEDA initiated the development in western part with a planned area of 48 square kilometers. In addition, there are also three satellite development areas in the neighborhood, namely Micro-electronics Industrial Area, Yixian Scientific and Industrial Zone and a chemical industrial area.

TEDA has been striving to break the system obstacle from the very beginning. TEDA attaches great importance to the building of soft investment environment and brings forward new philosophies for improving investment environment. TEDA also optimizes infrastructures in the whole area and tries to attract new blood to the area.

Foreign-funded companies are now gathering in TEDA. There are 4,450 foreign-funded companies approved in TEDA now, with a total investment of US$ 44.3 billion. In total, 64 multinational corporations listed in the Fortune 500, have invested and set up 139 companies.

At present, foreign investment in TEDA concentrates in four leading industries, including electronics and communications industry represented by Motorola and Samsung, automobile and machinery manufacturing industry represented by FAW-Toyota and SEW, pharmaceutical industry represented by GlaxoSmithKline and Novonordisk, and food & beverage industry represented by Ting Hsin and Coca Cola.

Furthermore, the development potential of some emerging industries are coming out of horizon, such as energy conservation and environmental protection segment represented by Vestas and Dongqi Wind & Electricity Power, and space industry represented by the carrier manufacturing base. Modern service industries including finance, logistics, exhibition, consultation and service contracting, are also growing.

The booming modern manufacturing industries in TEDA stimulate the development of relevant industries located in surrounding areas. There are more than 200 supporting enterprises for Motorola and Samsung in surrounding areas of TEDA with annual output value totaling RMB 20 billion yuan. This phenomenon proves the radiating effect of the TEDA.

Adjusting and optimizing the industrial structure during recent years, TEDA begins to create a specialized environment suitable for modern service industry and transformation of R&D achievements. TEDA made great headway on the ability of technology introduction and innovation. By the end of 2007, there had been 11 incubators, 27 R&D institutes for technological transformation, 35 corporation technological centers, 45 multinational R&D centers and 7 venture capitalists. The high-tech product output in TEDA accounted for 59 percent of total industrial output. The Pharmaceutical Valley with Intellectual Property Rights that was established in the first half of 2008 is the first model industrialization base with intellectual property rights in the country.

TEDA, which is one of the first three national eco-industrial demonstration parks, highly values ecological environment construction. TEDA has been the champion for investment environment for ten years in succession, according to the Ministry of Commerce. TEDA leads the country in terms of the quality of economic development, basically maintaining the land input-output proportion of 1 : 2 : 3 (i.e. one-yuan input will attract two-US-dollar foreign investment and generate three-US-dollar output). Energy and water consumption for per 10,000 yuan GDP are 187 kilogram standard coal and 7.26 cubic meters of water. The resource efficiency tops the country.

To better promote the development and opening-up of the Binhai New Area, TEDA has officially put forward the strategic proposition to build a new platform for China's economy development.

Tianjin Port Free Trade Zone plays a positive role serving the economic development of North China

After a 17-year development, the Tianjin Port Free Trade Zone, a highly open and special economic zone, boasts an annual average economic growth rate of 30 percent, playing an important role of serving the economic development in circum-Bohai Bay area and even in North China at large.

The Tianjin Port Free Trade Zone was established in May of 1991 covering a development area of 5 square kilometers. Integrated with four major sectors of international trade, logistics, near-harbor processing and manufacturing and exhibition, the bonded zone is an important economic zone and the biggest of its kind in North China that enjoys preferential customs, taxation and foreign exchange policies.

Supported by Beijing and Tianjin, the Tianjin Port Free Trade Zone has influences on the hinder land of the areas of North-east China, North China and North-west China, offering services to the 13 provinces, municipalities and autonomous regions in the three areas. It also has commercial intercourses with more than 100 countries and regions. Seventeen years after its establishment, the bonded zone is on top of all the opening areas in terms of regional economic growth with foreign contract investment totaling US$ 17.7 billion and foreign investment in place of US$ 7.4 billion. There are approximately 7,000 companies registered and 82 enterprises among the World Top 500 investing in the zone.

To meet the development and opening-up demand in the Binhai New Area, the Tianjin Port Free Trade Zone set up one by one the airport and harbor logistics manufacturing center, airport and harbor international logistics park, bonded logistics park, airport and harbor bonded area and comprehensive bonded zone. The bonded zone develops to be a zone with the most complete functions among all the opening-up zones in China.

The airport and harbor logistics processing manufacturing center places emphasis on such industries as civil aviation, electronic information, R&D, headquarter economy and commercial culture. The first-stage infrastructure construction of the center has been completed. About 1,000 companies have registered in this center, including the general assembly line of Airbus A320, Magna of Canada, Loupes Corporation of America, Zanussi of Italy, Caterpillar of America, and Toyota of Japan. Major projects such as National Civil Aviation Science & Technology Industrial Base, CAS industrial biotechnology R&D Transformation Base and ZTE Base in North China are under construction.

It is planned that the Tianjin Port Free Trade Zone and the airport and harbor logistics processing manufacturing center are going to be built into a bonded international logistic hub and a R&D achievement transformation base, serving the North China region and the aerospace industry. It will be a first-class opening-up area with distinct industrial characteristics, prominent priority zone and high internationalization level.

Throughput at Tianjin Port exceeded 300 million tons in 2007, ranking the sixth in the world

Located at the entrance to the Bohai Sea from the Haihe River, Tianjin Port is a top-class artificial harbor in the world. In year 2007, the port had a throughput of more than 300 million tons, ranking the sixth among the major ports in the world. The container throughput reached 7.1 million equivalent units, making the port one of the top twenty container ports in the world.

Tianjin Port is situated on the intersection point of Jingjin (Beijing and Tianjin) city zone and economic rim around Bohai Bay. It is the nearest port to the inland areas such as North China and North-west China among all ports around the Bohai Bay. It is the international port of Beijing and Tianjin and an important one for foreign trade of the North China. It is also the link connecting North-east Asia and Middle-west Asia, and the east starting point of Eurasia Continental Bridge.

According to sources, the present size of Tianjin Port's water and land area is approximately 200 square kilometers. The present size of the land area is 60 square kilometers and it is planned to occupy an area of 100 square kilometers by 2010. Presently, the major sea-route at Tianjin Port is 35 kilometers in length, 19.5 meters in depth, capable of handling 250,000-ton ships easily and 300,000-ton ships at tides.

Tianjin Port also has a strong connection with inland areas, reaching directly 14 inland provinces, cities and autonomous regions including Beijing, Tianjin and Hebei Province, covering 5 million square kilometers, which accounts for 52 percent of the total area of the country. Approximately 70 percent of the port's throughput and over 50 percent of its import and export value come from provinces and regions other than Tianjin. The port has extensive contacts with the world, establishing sister-port relationship with twelve ports including those of Japan, South Korea, America and Holland and having trades with more than 400 ports of more than 180 countries and regions.

Tianjin Port is one of the most functional costal ports in China, in possession of container terminal, iron ore terminal, charcoal terminal, petrochemicals terminal, general cargo terminal, roll-on roll-off terminal, general grain terminal, general chemical fertilizer terminal, international passenger terminal and a variety of other specialized terminals.

According to sources, till the year of 2010, Tianjin Port's cargo throughput will have surpassed 400 million tons, with the container throughput of 12 million equivalent units, more than 700 container shipments monthly and 300,000-tonnage dock. It will become a modernized international deepwater port with advanced facilities, comprehensive functions, scientific management, high efficiency, and harmonious, ecological and livable environment. It will also become a hinge container port connected to North-east and Middle-west Asia, the biggest major general cargo port in North China, the largest-scaled bonded-port area with the highest degree of openness and the biggest comprehensive port in circum-Bohai Sea area.

During the period of the "Eleventh Five-Year Plan", RMB 45 billion yuan will be invested to further upgrade the scale, level and function of the port and to improve its core competitiveness.

On January 1, 1981, China's first specialized container terminal was put into production at Tianjin Port. On December 5, 1997, the passenger and cargo service quality system of Tianjin Port Bureau was granted the British UKAS accreditation certificate. Tianjin Port Bureau therefore became the first port enterprise granted ISO 9000 Accreditation both internationally and domestically. A good number of industrial or national records have been created at Tianjin port.

In 1984, Tianjin Port initiated management system reform among coastal ports in China; on May 22, 1989, the first Commercial Bonded Ware Co., Ltd. (CBW) in China was brought into operation, co-established by Tianjin Port and Royal Nedlloyd Group of Holland; on April 25, 1997, Tianjin Port observed the opening of EDI Center, hence becoming the first port in China which is in line with international standards in its information exchange methods for international container transportation.

Tianjin Port is the only continental-bridge port with three transport lines

The operation of the first transit container train from Tianjin Port to Manzhouli since June 27, 2008 indicates that a new Eurasia Continental Bridge transport line was successfully put into service, which makes Tianjin Port the only continental bridge port with three transport lines in China.

Yu Rumin, chairman of Tianjin Port (Group) Co., Ltd., said that the Tianjin Port section of Eurasia Continental Bridge would play the role as "the economical development link connected to areas alongside the continental bridge" and "the bridge that pushes ahead the regional economic cooperation alongside the continental bridge". It shall spare no effort in developing itself into a strategic transport passage that ensures China's energy supply and transport safety for economic development, relying on its location-specific advantages, economic advantages, advantages as an urban and port area, and policy-specific and functional advantages.

The Tianjin Port section of the Eurasia Continental Bridge is one of the major passages of China's new Eurasia Continental Bridge with Tianjin Port as the east bridgehead. Cargo containers are disembarked at Tianjin New Harbor, and shipped to Mongolia via Tianjin, Beijing, Datong of Shanxi Province, Erenhot of Inner-Mongolia. From there, they will go further north to Russia through Ulan Bator and be taken over by Siberia Grand Railway. In Brest, the cargo is distributed to the west bridgeheads such as Rotterdam of Holland and Antwerp of Belgium. The passage connects regions including East Asia, Middle Asia, West Asia, Middle East, East Europe, Middle Europe, South Europe and West Europe, stretching approximately 10,000 kilometers across Asia and Europe, making itself the transport course which was put into operation earliest in Chinese Mainland with the largest volume, shortest distance and most choices of transport lines.

On September 11, 1989, the first batch of eight containers loaded with carpets and natural rubber products were shipped from Tianjin Port to Mongolia, which opened a new page of the transportation via Tianjin Port section of Eurasia Continental Bridge.

The transportation via Tianjin Port section of Eurasia Continental Bridge has achieved great development since its opening. Presently, the transportation adopts a structure of "two bridges, three exits and three lines". The two bridges refer to Neo-Eurasia Continental Bridge and Siberia Continental Bridge; three exits refer to the three border cities of Manzhouli, Erenhot and Aleshankou via which the cargoes are shipped abroad; the three lines include: the first one which starts from Tianjin Port to Manzhouli via Jingshan Line, Shenshan Line, Jinqi Line and Binzhou Line; the second one which starts from Tianjin Port to Erenhot via Jinjingzhang Line, Jizhang Line and Ji'er Line; the third one which starts from Tianjin Port to Aleshankou via Jinjingzhang Line, Jizhang Line, Linha Line and Lanxin Line.

It is estimated that in 1998 the shipping volume on the continental bridge surpassed 10,000 equivalent units. Since then, in year 2002 and 2004, cross-border lines, the Wuding trains, which go through Erenhot and Aleshankou respectively were brought into operation. In year 2006, the shipping volume via the continental bridge topped 50,000 equivalent units. Till the first half of 2008, the total volume via the continental bridge had surpassed 400,000 equivalent units. There is one train per day going through Erenhot and one train every other day going through Aleshankou. It is quite likely that the annual shipping volume in 2008 will surpass 100,000 equivalent units, making the total shipping volume and the annual shipping volume ranking first among the ports of its kind in China.

According to sources, as the best meeting point that connects Neo-Eurasia Continental Bridge and Siberia Continental Bridge, Eurasia Continental Bridge from Tianjin Port will become an important logistic passage and a bridge that promotes regional economic cooperation for Eurasia international trade in the future. It will endow Tianjin Port more influential market impact and stronger competitiveness in the world.

Construction on Tianjin's industry structure is accelerated in the spirit of high-end, high-quality and high-technology orientation

Tianjin, an industry hub with a long history, has accelerated its transformation of the mode of economic development, by relying on its advantages and advanced technologies, integrating industries, cooperating with other regions and developing in an intensive way. It focuses on constructing high-end-, high-quality- and high-technology-oriented industry structure, and accelerates the process of shifting its industry chain from mid- and low-end towards high-end with products "made in Tianjin" changing to products "created in Tianjin". It is to nurture a number of newly emerging industries, accelerate the industrial agglomeration and achieve a sustainable development.

Tianjin's industry structure has been optimized consistently with a higher degree of industrial agglomeration and with the development of a number of competitive pillar industries and major enterprise groups. In 2007, six major competitive industries, including electronic information, car-manufacturing, petrochemicals, metallurgy, bio-technology and modern medicine, and new energy and environmental protection, achieved an industry value totaling 729.3 billion yuan, which accounted for 72.4 percent of the value of large-scale industries of the city, and whose contribution rate to industrial growth reached 62.8 percent. The output value of Tianjin's high and new technology totaled 282.45 billion yuan, accounting for 28 percent of the city's industries. Tianjin is one of the six national comprehensive high and new technology industrial bases, which are under construction.

Tianjin's industrial structure has become further optimized. The structure of three integrated industrial layers has taken shape. Tianjin is accelerating the construction of electronic information industry, car-manufacturing industry, metallurgy, space flight and aviation industry, equipment-manufacturing industry-cluster regions in the Binhai New area. Tianjin is also making full use of the industrial resources in central urban areas, and exerts more effort in constructing twenty technological, original and urban industrial areas (buildings) such as Seagull Watch and Tongguang Technology via industrial integration and intensive development. Tianjin is making full use of the resource advantages of its districts and counties. There are a number of leading industry bases including the micro-electronics industry in Xiqing District and white goods industry in Beichen District. There are also highly-specialized specific industry bases such as fashion industry in Baodi District and bicycle-manufacturing industry in Wuqing District. These resources play an important role in creating more industrial opportunities, accepting industrial transferring and constructing industrial chains.

Tianjin maintains adhering to the pivotal point of enhancing its capacity for independent innovation and developing advanced technology in creating its new industrial advantages. When it is further accelerating the major construction of the three levels of enterprise technological center, it attaches more importance to constructing industrial innovative platform, developing generic technology for industrial development, key technology and future technology. It will push forward the innovation in industry, product and techniques. Independent innovation is making more and more contribution to the local industrial growth.

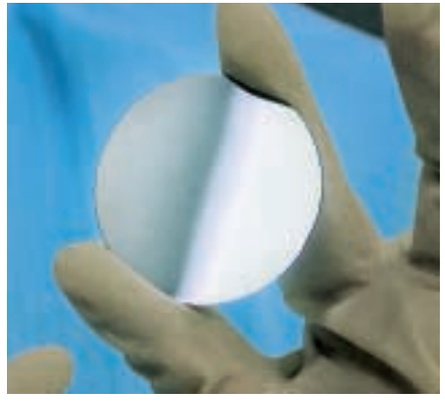
Till the end of 2007, Tianjin had put in totally RMB 3.07 billion yuan, establishing seven industrial R&D platforms including iron pipes, cars, Jinyao, electromechanical equipment, textile, medicine and Tiantie. It is estimated that there are 16

State-level enterprise technological centers, 236 municipal-level enterprise technological centers and 3,320 enterprise-level technological centers.

At the same time, Tianjin has been regarding projects as a most important way to apply the scientific outlook on development and unswervingly embarking on the track of modern industrialization. In the past five years, the city has invested up to RMB 326.4 billion yuan to support more than 2,800 transforming projects. A number of major projects of significant economies of scale and influential projects have been established. Since 2007, another three batches of 60 major industrial projects totaling RMB 365.4 billion yuan have been developed. The average investment for each project amounts to RMB 6.09 billion yuan. Among them, there are 29 high and new technological projects with the investment totaling RMB 175.9 billion yuan, which accounts for 48.1 percent of the total investment. It is estimated that these projects will generate RMB 803.6 billion yuan once completed, becoming the pillar for future industrial growth.

According to experts in this field, these projects are of high technical level and have favorable cost benefit. They will have far-reaching influence on other projects and play an important role in increasing the industrial volume, optimizing industrial structure, promoting technological standard and transforming developing mode.

According to the "Eleventh Five-Year Plan", the investment scale in Tianjin's industry will surpass 600 billion yuan, making Tianjin an international modern industrial base with top products, leading technologies and significant economies of scale.



One hundred and twenty-eight of World Top 500 multi-national companies have invested in Tianjin

Till now, there have been 128 of the World Top 500 multi-national companies settling in Tianjin, the biggest coastal open city in North China. These companies, accounting for one quarter of the World Top 500, have invested in totally 359 projects, the amount of investment totaling US$ 15.8 billion.

In 1984, Tianjin was chosen as one of the 14 coastal opening-up cities in China. OTIS, one of the World Top 500, took the lead to establish the first joint venture in Tianjin. Ever since then, more and more of the World Top 500 have entered Tianjin.

Companies including OTIS, P & G, Toyota, Samsung, Shell, Siemens, Nestle, GlaxoSmith-Kline and Carrefour have entered Tianjin successively, allowing Tianjin people to get in real touch with some of the often-mentioned top 500 companies.

OTIS, the first visitor, has now owned a group holding company, eight joint-ventures, four manufacturing bases, three R & D centers with more than 7,000 staff. It has become the biggest lift- and escalator-manufacturer and service provider in China.

The unique location-specific advantage, favorable investment environment and market development prospect in Tianjin have endowed many of the World Top 500 the opportunity to create miracles with their investment. They have created trend-leading brand names, for which the city has become famous.

In 1992, after choice testing, comparative studies and a tough negotiation, Motorola decided to make its investment in Tianjin. This is the first and the biggest investment that Motorola has ever made in China. From the US$ 120 million at the first stage to the total investment of US$ 3.8 billion sixteen years later, the company now has more than 10,000 staff and an annual sale record of US$ 80.7 billion.

Motorola has taken an active part in accelerating China's undertaking of mobile communication, with its producing techniques and solutions becoming milestones in China's mobile communication history.

In 2006, Tianjin Binhai New Area was included in the national development strategy and was endorsed as national comprehensive reform and experimental development testing zone, offering important opportunities for Tianjin's development and creating vast potential for its future development.

Many of the World Top 500 companies seize the opportunity and invest in Tianjin. In the year of 2006 alone, there were already 26 of these companies investing in the city. In 2007, there were another 30 enterprises following suit.

Many investments by the World Top 500 concentrate on manufacturing, accounting for 60 percent of the recently endorsed projects. Other projects include wholesale and retailing, finance and properties. Investments in the third industry have been increasing greatly every year.

World Top 500 companies have made their ways into Tianjin, sharing the development of China. Meanwhile, Tianjin is forcefully pushing forward the adjustment of its industry structure, the advancement in techniques and the upgrading of its industries, resorting to the rich capitals provided by these multi-national companies, sophisticated techniques and modern management expertise. World Top 500 firms have become an important driving force for Tianjin to be integrated in the world's economy.

Since the reform and opening-up of China, a lot has been achieved in the socio-economic development in Tianjin. In 2007, Tianjin's annual per capita GDP surpassed US$ 6,000. Presently, there are more than 20,000 foreign-invested enterprises in Tianjin, with the overseas capital in place of US$ 37.6 billion.

Tianjin Pipe (Group) Corporation will develop into the world-class steel pipe production base

With the 10 years' development, Tianjin Pipe (Group) Corporation (TPCO) has become the largest oil casing production base in China. They are speeding up to establish a world-class steel pipe production base.

Being known by the local people as Tianjin Big Seamless, TPCO was listed as the national key project with strategic significance in the Eighth Five-Year Plan. It was established for speeding up domestication on oil casing production in order to meet the demand from the energy industries in China, especially the oil industry. Thus it can provide solid foundation for the energy industry to get further development in a stable way.

TPCO started to put into production in 1996. At the early stage when TPCO was established, they imported the latest facilities and techniques for steelmaking, rolled pipe production, pipe processing and reduced iron production, which made them become the professional provider for oil pipe and the related products with the most advanced technology in 1990s.

The secrets for their success in such a short time lie in the effective integration of creation, importation, digestive absorption for the new technology, and recreation. The very first PQF high-precision 3-roll mill in the world was jointly developed by TPCO and SMS Meer, Germany, which reflects the top level of seamless steel pipe production technology. Working with Belarus, TPCO sets up the BMZ Seamless steel pipe project, which is the historic leap from technique importation to exportation.

In order to realize the goal of establishing the world-class steel pipe production base, TPCO has been taking the scientific outlook on development as the principle, continuously enhancing the ability of self-innovation to increase the overall competitive power for the enterprise, and actively participating in international competition and cooperation. TPCO has the high-level pipe R&D center, and pilot test lines with full flow and size.

At present, "Big Seamless" has already been equipped with the TP serial products, which is the independent intellectual property right of TPCO. It developed originally from 3 grades, a dozen types into 25 grades, 70 types, 235 series, and thousands of specifications. Among them, more than 80 innovation projects are the first of their kind in China, and TPCO enjoys 116 pieces of national patents.

With the growing up of "Big Seamless", the number of imported oil casing pipes has declined from 90 percent in 1993 to less than 20 percent at present. Seamless steel pipe thus became the famous brand among Chinese exported products, which is acknowledged by 28 international oil corporations. The products have been exported to 90 countries and regions. TPCO was entitled as the Chinese famous trademark.

TPCO incessantly undergoes the energy-saving reconstruction with the principle of sustainable development, which ensures a reliable environment management system. Thus, TPCO is certified as the credible enterprise in ISO 14001 Environmental Management System.

Working hard on improving its major steal products, TPCO is also concentrating on developing the enterprise from moderate multi-level, which comes into an integrated structure covering multiple fields, including pipe, steel sheets, copper materials, equipment manufacturing, international trade and logistics. TPCO is developing into a giant enterprise, whose main economic index has increased over 30 percent for 8 consecutive years.

Tianjin is the production base for bicycle industry

As the traditional bicycle-manufacturing base, Tianjin aims to build a modern bicycle manufacturing and service center in China encouraged by the opening-up policies and development in the Binhai New Area. Tianjin takes the dominated position in North China in bicycle industry. In this light, this industry can get full development and innovation both in Tianjin and the rest of China.

China is the kingdom of bicycle, with the annual production of 85 million as well as 56 million exports, which takes up 70 percent of the world's bicycle trade. Nowadays, over 50 percent of the bicycles in China are produced in Tianjin. However, this industry is not as powerful as its large scale in Tianjin. The problems lie in the low level of producing and designing, and its brands and industry culture are in desperate need to be promoted.

In order to improve the overall development of the bicycle industry, Tianjin put up the strategic plan for building the China Bicycle Industry Park in 2006. After being seriously discussed, this park was finally chosen to establish in Wuqing District.

Wuqing District, a golden aisle that connects Beijing and Tianjin, has the regional advantage, i.e. convenient transportation and solid industrial foundation. Wuqing District is the vital distributing center for bicycle production in North China. There are over 350 bicycle enterprises with annual production of 13 million, that is 40 percent of the whole production in Tianjin, and 20 percent of the national production. It contains 3 distributing areas, i.e. Chagu Harbor, Wangqing Tuo, and Nancai Village.

Tianjin Municipal Government has listed China Bicycle Industry Park as the key construction project. The plan area of this industry park is 20 square kilometers. Based on the idea of establishing three bases and one center, this park has Manufacturing and Processing Base for High-end Bicycles and Spare parts, R&D and Manufacturing Base of New Materials for Modern Manufacturing Industry, and Manufacturing Base for Related Industry, as well as the industry culture center for bicycle exhibition, sports, education and leisure activities.

Since this project started in March 2007, the general plan, design and layout model table for the 20 square kilometers park have been finished, as well as a 4,000 square meters exhibition center. The infrastructure construction has started. The first phase of 3.6 square kilometers infrastructure construction and the 190,000 square meters standard workshops will be finished within the year.

So far 18 enterprises have been attracted to this park, with the registered capital of RMB 2.59 billion yuan, and total investment of RMB 4.28 billion yuan. The famous enterprises of new materials, high-end bicycles and spare parts, and gym facilities have been settled down in this park, which reflects the increasing strength of this distributing center.

According to the development plan, it is estimated that there will have been 200 enterprises moving into this industry park by 2011, with the investment of RMB 20 billion yuan, and the total value of their trade will reach RMB 60 billion yuan, and tax revenue of RMB 2 billion yuan.

Tianjin dedicates to building the car manufacturing base of national level

Being the birthplace of China modern industry, Tianjin is dedicated to establish a complete system for car manufacturing, developing and sales. The car production capability in Tianjin will have reached 1.5 million by 2010, and Tianjin will be a key base for car manufacturing in China.

Tianjin is one of the key bases in China's car industry. Since the mid 1980s, the car industry in Tianjin had already imported advanced manufacturing technologies from abroad. The release of first Xiali in 1986 turned a new page in the car manufacturing history in China, which is an independent brand for Tianjin.

Tianjin persists in the principle of independent development in the open competition environment. Xiali had experienced 5 major upgrading, and hundreds of improvements. It has 3 generations products, which are all developed with their own independent intellectual property rights. State Administration for Industry & Commerce entitled Xiali as the China Famous Trademark in January 1999.

As the major type of family car that is first put into the domestic market, Xiali has produced 1.5 million cars since its first release in 1980s. The ownership of Xiali automobiles available in the society reached 1.2 million. As for the average ownership of private car, there is one Xiali in every 11 private cars in the market.

Attached to Tianjin Automotive Industrial (Group) Co., Ltd, Tianjin Xiali Automobile Co. Ltd set up the joint venture—Tianjin Toyota Motor Co. Ltd in 2000. It is Toyata's first car-manufacturing base in China.

In line with the national strategic structural adjustment, Tianjin Automotive Industrial (Group) Co., Ltd and China First Automobile Works restructured Xiali with their joint efforts in June 2006, and expanded the corporation between Tianjin Automobile and Toyota.

Nowadays, Tianjin FAW Toyota Motor Co. Ltd has built 3 factories in Tianjin, with products ranging from economical-type vehicles to up-middle class sedans. Particularly, the Toyota Crown represents the world-advanced technology. It signifies that Tianjin has the ability of producing automobiles with the advanced technology. It is a milestone for Tianjin as its production capacity has developed from producing the low-level products like mini vehicle, economical type, and middle class type to a higher international level.

With the development of the automobile industry, the car parts industry has improved a lot. The enterprises like Denso, Tokai Rika, Aisin, Fujitsu Ten, Stanley, Yazaki, Hynix, and Peace-Lon, etc., have set up their local offices in Tianjin.

Besides, Tianjin has the advanced technology in terms of developing the clean energy-powered vehicles, such as electric, hybrid-electric vehicles and their spare parts. Tianjin Qingyuan Electric Vehicle Research Center, the only research institute in China at the moment, is listed in "863 Program". Their technology for XL electric vehicles has reached the advanced level in the world.

At present, Tianjin automobile is undertaking a series of projects, such as Toyota RAV4 production, upgrading Xiali production, and truck production in Shaanxi Automobile Group Co., Ltd.. The production capacity for Tianjin automobile industry will reach 1.5 million by 2010, ranging extensively from A-class to C-class vehicles.

The current project undertaken in Tianjin is building two car-manufacturing bases, each covering 20 square kilometers in Xiqing District and the Tianjin Economic Development Area. This will promote the brand image of Toyota, Xiali, and Irizar. It will also form the four series of automobiles including limousine, economical type, passenger cars, and luxurious coach. Besides, 5 industrial chains will be developed covering engine, chassis, electrical appliances, and the spare parts for general purpose. Tianjin will be a major car manufacturing base in China.

At present, there are 195 automobile enterprises in Tianjin, among which, 9 enterprises are for vehicle production, 7 enterprises for car refitting, and more than 170 car part factories. They can provide limousine, economical type, passenger cars, and luxurious coach ranging quite a few brands and designs with the production capacity of 700,000 vehicles and 600,000 engines.

Tianjin will be a key base for high-performance computer production in China

One of the 20 major projects for independent innovation industrialization in Tianjin — Dawning High-Performance Computer and its industrialization are in progress smoothly. Based on independent research and manufacturing and jointly developed by the Institute of Computing Technology of Chinese Academy of Science (CAS) and Dawning Information Industry Co., Ltd., the Dawning 5000 has come out of horizon and been put into the batch production in September, 2008. Dawning 5000 operates at a speed of 100 trillion every second.

The research success and batch production of Dawning 5000 further accelerate the process for Tianjin to drive the industrialization of high-performance computers. The city has become the most important manufacturing base hub high-performance computer R&D and production.

The Dawning Industrial Base that covers 60 mu was set up and put into production in July 2006. It is a professional manufacturing base with advanced technology, whose annual production capacity of 100,000 computers. It is a milestone in the process of high-performance computer industrialization in China.

Apart from production, the Dawning Industrial Base in Tianjin also plays a key role as the R&D center. Together with Beijing Dawning R&D Center, Institute of Computing Technology of Chinese Academy of Science (CAS), the three institutes come up with a powerful R&D system.

Tianjin Dawning Information Industry Co., Ltd is funded by the Institute of Computing Technology of Chinese Academy of Science (CAS), Tianjin Hi-tech Investment & Guaranty Co., Ltd., and Beijing Dawning Computer Co., Ltd. It relies on the technology support from the Institute of Computing Technology of CAS and works on the design, development, manufacturing and sales of high-performance computer and related software to meet the needs from overseas market. This base has already applied for 15 patents in total, including 3 patents for invention, and 2 occupation standards.

The successful production of Dawning 4000A, a top 10 supercomputer in the world with the operating speed of 11 trillion floating-points per second, squeezed China into the top three countries being able to develop 10 trillion floating-point high-performance computer after the US and Japan.

Dawning 5000 broke this record in June 2008 with a capability of more than 100 trillions of computing operations per second. It made its stable and distinctive contribution for the data computation when exploiting the one-billion-ton Caofeidian oilfield. Dawning high-performance computer played a key role in this process, which made Dawning be awarded as the "Oil Pioneer".

Dawning 5000 makes China become the second country after the US, being able to manufacture high-performance commercial computer with operating speed of 100 trillion per second. This fact proves China's world-class leading capability in producing, maintaining and applying high-performance commercial computers.

Dawning high-performance computer has been dominating the domestic market for 11 consecutive years. It takes over 70 percent of marketing shares for domestic production of high-performance computer, and exceeds imported products in the field of high-performance computing cluster. Based on independent intellectual property rights, Dawning high-performance computer products of different categories have been widely applied in many fields and segments, such as governments, education, finance, telecommunication, biology, weather forecast and oil exploration.

Since Chinese Academy of Science and Tianjin Municipal Government signed the agreement for comprehensive technology corporation in July 2005, an effective communication and corporation mechanism has been established. With their joint efforts, there come into great achievements in terms of building up R&D center and industrial base, transformation of technology, and talent exchange, etc..

Tianjin produces the famous Tourbillon in the world, with 90 percent of the watches having their independent intellectual property rights

After being unnoticed for a long time, Tianjin Seagull Watch (Group) Co. has been successfully taken their research into the techniques of producing the Three Classics, i.e. Tourbillon, Repeater Watch, and Moon-phase Perpetual Calendar Watch. Tianjin Seagull Watch (Group) Co. has developed the Double Tourbillon, Minute Repeater, and Perpetual Calendar watch.

Tianjin Seagull Watch (Group) Co. is the first watch-manufacturing base in China, where the first watch in China was born. The Seagull watch was entitled the top class watch in China. Their products had been sold to dozens of countries and regions.

Tianjin is the biggest coastal city of open economy in North China, and one of the birthplaces of China's modern industry. It plays a leading role during the history of Chinese modern industrial development. Tianjin had created numerous "firsts" in China, such as the first trolley bus, the first TV set, the first telephone, the first camera, and the first sewing machine, etc..

However, during the transition period from planned economy to market economy, The Seagull Watch (Group) Co. had also experienced the hard time like other famous trademarks.

After the serious thinking, The Seagull Watch (Group) Co. therefore decided to revive from strengthening the independent innovation, and creating international brand. From 2002 to present, they have put over RMB 100 million into their production, and imported the advanced equipment, such as Swiss processing center, Japanese digital control lathe, and projector, etc.. They also built the flexible production line for new products, and enhanced their ability of self innovation based on the absorption of the new technology, which enables them to keep the higher level in developing the key technology nationwide, and keep in pace with their counterparts throughout the world.

After taking the in-depth research, and seizing the core technique of tourbillon, the Seagull Watch (Group) Co. produced the delicate mechanical tourbillon watch, which has the flyback function, and calendar, etc.. It created a new record in the history of Tianjin watch production: the highest level of technology, the shortest period of design and production, and the highest added value. Being tested by the foreign experts, it concluded that Tianjin Seagull Watch (Group) Co. had the advanced technology of designing and producing the clock movements, watches, and the accessory products, which nearly can be compared to the Swiss technology.

At present, the annual production capacity in Tianjin Seagull Watch (Group) Co. reaches 6 million clock movements and 200,000 watches. It produces 50 percent of the clock movements for mechanical watches in China. Not only taking the strongest position in terms of development and producing ability, product quality, and exportation in China, they also have over 90 percent independent intellectual property right.

Tianjin Seagull Watch (Group) Co. also aims to build an international brand for their products. They have already opened 9 shops to sell their products in Switzerland, where the world's watch center locates. After opening the Seagull Watch Art Saloon, and Seagull Watch shop in Hangzhou, they also established a shop called "Seagull Tourbillon" in Hong Kong. Besides, the plan of opening Seagull shops in 5 developed countries including Germany is in the progress.

The Seagull Watch (Group) Co. indicates that they are building a Seagull Industrial Park in the Binhai New Area to promote their products into an international brand. That will be an international manufacturing center with output value of RMB 4 billion yuan, which can produce 10 million clock movements and 1 million mechanical watches with top grades. This industrial park will not only be a top manufacturing center, but also an international exhibition center for famous watches. They will try their best to enter the No.1 pavilion in Basel, Switzerland within 3 to 5 years, which is the mark for international brands.

Tianjin will be the largest manufacturing center for mobile phone in China with the production capacity of 200 million units

Tianjin is dubbed the "city of mobile phone". Its industrial scale will be further enhanced within 2 years. It will establish a 200-million-unit capacity every year, which may be China's largest mobile phone manufacturing base.

Tianjin is one of the first batch of national-level of electronic information industrial base. Electronic information industry is the first pillar industry in Tianjin. Its industrial output value takes up 23 percent of the whole city, which is the 5th largest one in China.

Since in 1992 Motorola established the first mobile phone factory in TEDA, Tianjin has attracted lots of domestic and overseas enterprises to set up their factories, such as Samsung, Kyocera, Jabil, and ZTE Corporation, etc..

Tianjin has already established a 150 million units per year mobile phone manufacturing base with USA's Motorola (the second largest manufacturer in the world), South Korea's Samsung (the third largest manufacturer in the world), and Japan's Sanyo as the core brands. Tianjin keeps in pace with the advanced technology of mobile communication terminals, which can drive the development of the whole industry in Tianjin and the areas nearby.

Tianjin has an improved environment for industries related to mobile phone, and establishes an extensive industrial cluster with the complete function. There are almost 200 supporting production enterprises in Tianjin, which comes into 5 manufacturing bases for supporting products.

There is the manufacturing center for chip resistor in Tianjin, represented by Samsung Electro-Mechanics, Panasonic, and Rohm. Represented by Freescale, and Semiconductor Manufacturing International Corporation ("SMIC"), Tianjin is also a manufacturing center for integrated circuit. Besides, Tianjin has the battery-manufacturing center, which mainly represented by Tianjin Lishen Battery Joint-Stock Co. Ltd., Samsung SDI, J Power, and Tianjin Lantian Sanyo Battery Co., Ltd. Represented by CTS (Tianjin) Electronics Company, Ltd, and GE, Tianjin establishes the manufacturing center for electronic elements.

Tianjin established an international communication platform, and successfully organized 6 International Mobile Phone Industry Exhibition and Forum (IMIE), which is the largest event in this industry with the most international participants in China. It has become the most attractive trade platform for mobile phone industry, which created lots of opportunities for the domestic mobile phone and supporting production enterprises.

With such a powerful background, Tianjin has attracted more and more enterprises to invest their business here, which is the driving factor for the industrial development.

Jabil increased their investment to the factories in Tianjin. They further added facilities like LCD to the existed molds and injection-molded parts. Jabil undertakes the apparatus assembling, and sets up 4 OEM production lines mainly for Nokia. The products of top three mobile phone manufacturers will be entirely form their factories in Tianjin.

Following the operation of ZTE Corporation's 3G mobile phone R&D center and the projects of Jabil Green Point (JGP) and Leimone Group in the next two years, Tianjin's mobile phone manufacturing capacity will reach the 200-million-unit level. Tianjin will keep the advanced level in terms of mobile communication production, and become the largest manufacturing center.

According to the statistics from Ministry of Industry and Information Technology, China has produced 242 million mobile phone units for the first five months in 2008. The total amount of mobile phone production in China was 548 million units in 2007, which took up around 40 percent of the global output. Tianjin produced 97.7877 million units in 2007, which is 17.8 percent of the whole country level.

Tianjin will put large investment into Tianjin Lin'gang Industrial Park, and build it into a new industrial city

Based on the function identification, Tianjin Lin'gang Industrial Park (THIP) has been constantly improving their industrial structure to strive for further development. There are over RMB 10 billion yuan invested into this industrial park, undertaking 36 investment projects with the contract value over RMB 130 billion yuan. This provides a solid foundation for the new industrial township's development.

TLIP was first built in June 2003. The construction of this park is based on land reclaimed from the sea. It is a national-level petrochemical base planned by the National Development and Reform Commission and one of the key development areas of Tianjin and Tianjin Binhai New Area.

The offshore construction area under the overall planning of TLIP is about 80 square kilometers, which consists of 3 phases. Its development target is to become a significant national chemical base in North China, a ship building & maintenance base and an equipment manufacturing base. Meanwhile, it will become a port logistics base, a R&D transformation base, and industrial tourism area and finally develops into an offshore industrial new city.

TLIP has the superior transportation network. It is located at the opposite bank facing the Tianjin Port, which is the largest harbor in North China. As one of the five largest areas of Tianjin Port, this industrial park has established 30,000 DWT channel, 2 berths for liquid chemical wharf with ten thousand DWT and above, and 5 berths for general wharf, whose annual throughput can reach 10 million tons. TLIP is only 38 km from Tianjin Binhai International Airport—the largest air freight center of China. The main road network in this park has been built up, which is connected to the expressway and railway.

Its convenient location and superior environment have attracted lots of enterprises to invest in this hot land. At present, there are 10 World Top 500 enterprises invested in TLIP, and 5 projects valued at over RMB 10 billion yuan. Among the first two batches of 40 key projects in Tianjin, there are 8 projects in TLIP, which takes up the 20 percent of the whole program. TLIP will try their best to make sure the investment in place can reach RMB 23 billion in 2008.

TLIP adopts strict methods of environmental protection in order to build the TLIP into a safe and green-designed zone. With the principle of being technology, economical, environmental protection and urban safety oriented, TLIP puts their efforts to escape the traditional concept of pollution first and treatment afterwards. Based on the overall layout, TLIP carries out the ISO 14001 Environment Management System, and composes the guidelines for environmental protection plan.

According to TLIP's development plan and long-term schedule, their investment contracts fund will reach RMB 140 billion yuan in 2008. They will have investment contract valued at RMB 500 billion yuan with the total industrial value of over RMB 800 billion yuan by 2020. What they are dedicated to building is a significant national chemical base, a ship building & repairing base and an equipment manufacturing base in China.

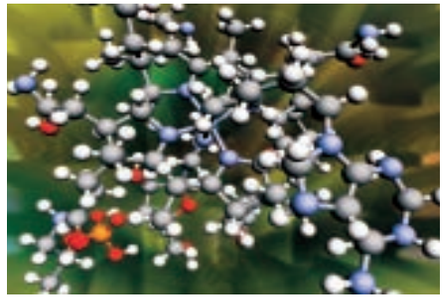
Tianjin will invest RMB 65 billion yuan to build a high-level Bohai Chemical Park

In order to carry out plan for establishing the a national-level petrochemical base, Tianjin will invest RMB 65 billion yuan to build up a high-level Bohai Chemical Park, which will be the first modern chemical industrial base in China, integrated with marine chemical, petrochemical and coal chemical industries. At present, the overall construction has been in progress.

This current project is locating in Tianjin Lin'gang Industrial Park, an area in the south of Tianjin Port. The overall planning of Bohai Chemical Park is 10 square kilometers. Based on the plan of constructing national-level petrochemical base in the Binhai New Area, Tianjin Bohai Chemical Industry (Group) Co. will work on this chemical industrial park during the "Eleventh Five-Year Plan", which is one of the 60 key industrial projects in Tianjin.

There are 41 projects in the overall construction plan of Tianjin Bohai Chemical Park, which will take 8 years and 3 phases to finish. It is estimated that after the completion of the construction, the production sales will reach RMB 105.8 billion yuan, and RMB 15.6 billion yuan of tax.

Phase-1 construction mainly deals with 16 projects with total investment of RMB 22.6 billion yuan, including the remove and reconstruction of Tianjin Soda Plant, projects connected to the ethylene project, supporting public utility construction, and logistic projects, etc.. All of these projects will have been on stream by 2009. Phase-2 construction is mainly for the 12 projects with total investment of RMB 11.9 billion which are integrated with petrochemical program, including constructing the Vinyl acetate with production capacity of 300,000 tons per year. All of the projects in Phase 2 will be completed by 2011. Phase-3 construction is for 13 projects with total investment of RMB 30.5 billion, including the downstream derivative production and supporting projects for integration of refining and marine chemical industry. All of the projects in Phase 3 will be completed by 2015.



Upon the completion of Bohai Chemical Park, it will be first chemical industrial manufacturing base with advanced technology, which is well-facilitated, and integrated by upstream and downstream products. Based on the idea of establishing a modern industrial manufacturing base, Bohai Chemical Park undertakes the scientific management, economical resource division, and environment friendly measures. It will be a bright spot in the Binhai New Area.

Tianjin Bohai Chemical Industry (Group) Co. is the largest marine chemical industrial enterprise in China. Their principal products play a leading role in terms of technology in China. They can provide over 2,000 kinds of products in 11 categories, ranging from alkaline production, sodium hydroxide, and chlorine products, crude salt, rubber, high molecular polymer products, and chemical building materials, etc.. They have established the long-term corporation partnership with the world famous enterprises like Akzo Nobel, Clariant, LG, Air Liquid, Veolia, and Vopak, etc..

The new landmark of Binhai New Area — Xiangluo Wan Commercial area

Not long ago, the commencement of constructing the 358-meter tall building "Tianjin Bee Comb" signifies the progress of establishing the most remarkable area in Binhai New Area---Xiangluo Wan Commercial Area. This project is in the process of overall construction. Tianjin has started to build the 16 projects from 33 investment projects within the Xiangluo Wan area. There will be over 20 projects undertaking construction within this year.

As the starting point of the central commercial area in the Binhai New Area, Xiangluo Wan is 3.2 square kilometers in size, opposite to the Haihe Bund Park to the north. It is next to the Yujia Pu Commercial Area to the east. Alongside, there is 1.5 km coastal line in this area.

This commercial area is mainly used for building the provincial representative offices and R&D centers or commercial facilities for the State-owned enterprises in the Binhai New Area. There involves 38 projects in the overall planning, among which there is the tallest building 380-meter Fuli Plaza.

There have been 33 provinces and enterprises signing the contract with Tianjin, including Inner Mongolia, Hebei, Shanxi, China Minmetals Co., Sino Steel Co., etc.. The construction area will be 3.67 million square meters with the total investment of RMB 27.5 billion yuan.

Along with the initial program, Xiangluo Wan Commercial Area also puts their efforts on the infrastructure construction. They have completed the construction of main roads including Binhe West Rd, and other supporting facilities like street lamps, landscape green and drainage system have been installed in this area. The remedy construction of Haimen Bridge is in the progress. The west bridge approach of Haihe Bridge has almost completed, while the east part is in the progress of underwater stake installing. Haihe Bridge will be available in 2009 for transportation.

The 400,000 square meters Xiangluo Wan Phase-1 project commenced in September 2007. It is estimated that the whole project will be completed in 2011. By that time, this area will be the new landmark in the Binhai New Area. There will be 38 skyscrapers in this commercial area, which looks like the new horizon line near the sea. It will be the commercial circle with the function of business, finance, and tourism, which will strengthen the power of the Binhai New Area.

Approved by the State Council, this central commercial area is one of the eight functional areas in Binhai New Area. It consists of six regions, including Yujia Pu Financial Area, Xiangluo Wan Commercial Area, Jiefang Rd Commercial Area, Dagu Ecological New Area, International Shipping Center, and Blue Whale International Community. The overall area involved is 20 square kilometers.

Tianjin will spend 10 years to develop Yujia Pu into a financial innovation base

In order to improve the finance innovation, and meet the requirements of the modern financial service system, Tianjin is planning to spend 5 to 10 years to develop Yujia Pu area into a leading finance innovation center at international level.

Yujia Pu is an important part in the central commercial area of the Binhai New Area. Covering the area of 3.46 square kilometers, Yujia Pu locates in the north shore of Haihe in Tanggu District, and the rest parts are surrounded by the sea.

It is a crucial step for Tianjin Municipal Government to implement the central government's decision of developing the Binhai New Area. It has the great significance for Tianjin to improve their financial service capacity, thus become the finance center in North China.

In order to learn more about township planning experience from domestic and overseas, Tianjin organized the urban design competition worldwide for Yujia Pu township design with the help of International union of Architects. This worldwide competition took 7 months. According to the adjusted function identification, Yujia Pu has its initial plan for their township design, which is based on the competition and international consultancy.

The idea for the township design is to build a central street with the clusters urban structure around. It is further divided into different areas by the nature of regional functions, including exhibition sector, modern finance, traditional finance, education and training sector, commercial buildings, etc.. The overall construction area for these buildings is 7.22 million square meters.

According to the requirements of the overall plan, Yujia Pu takes the initial construction area as priority, and makes further development step by step. They adopt the method of constructing while making use of the completed buildings. The overall plan is as follows: one year for initial development, three years for overall construction, five years to establish the general scale, and ten years to finish the project.

Yujia Pu has finished 99.9 percent of the residence movement and resettling in the phase 1. The relevant authority has approved the overall and detailed regulations, urban guidance, and township design by the end of August. The infrastructure construction, roads, and transportation have been finished by September.

By the end of the year, Yujia Pu will have commenced the construction of the 200,000-square-meter finance exhibition sector, and 300,000 finance marketing sector, 10 finance buildings, training center and the supporting facilities.

Yujia Pu will be connected to Beijing-Tianjin Intercity Express Railway to provide the best environment for the global investors. After connected to the high-speed railway, it will only take only 50 minutes from Yongding Men Station, Beijing to Tianjin.

From "the world factory" to "the world office", Tianjin Economic and Development Area (TEDA) is built into a outsourcing service base

As the strongest comprehensive economic development, TEDA has been dedicating to establish the outsourcing service base, which is the driving force to improve the outsourcing service industry. In the first half of 2008, the outsourcing service industry has made RMB1.38 billion revenues, which increased 90.2 percent compared to the same period last year. Besides, the added value and tax amount increases 330 percent and 210 percent respectively compared to the same period last year.

The development trend of TEDA is to build an outsourcing service base with extensive function and outstanding features, providing software, integrated circuits, IT outsourcing service, and information security service, etc.. It attracted over 50 international outsourcing service enterprises with the total investment of RMB 4.66 billion yuan. Most of these investments are from the domestic and private funds. These are the most distinctive enterprises in the outsourcing service industry.

In the field of IT Outsourcing Managed Service, they have the multinational corporations listed in World Top 500, such as CSC, ACS, and IBM, etc.. In the field of integrated circuit design, this area has Freescale, and Tianjin Nanda-Qiangxin IC Design Co., Ltd. In the software field, many enterprises have opened their business in this area, such as Neusoft, CS&S Cyber Resources Software Technology Co., Ltd., Newpalm, Palm Commerce Information Technology (China) Co., Ltd., and Eteda, etc..

As for the information security industry, National Computer Virus Emergence Response Center, Fortinet, and Kaspersky have played the key role in this area. In the medicine research and development field, the outstanding enterprises like Wuxi Pharma Tech in domestic CRO industry have joined this outsourcing service base. Standard Chartered Bank, China Everbright Bank, and Tencent have set up their background service centers in TEDA.

TEDA also has the only web portal and e-commerce platform for outsourcing service—a website called Outsourcing China.

Outsourcing service is an intelligence-intensive industry without any pollution. It is also an industry with low energy consumption and high added value. It is a promising industry for the talents, which is also the key modern service department encouraged by the country.

In 2006, the Chinese authorities awarded Tianjin as one of the 11 Base Cities of Service Outsourcing in China. TEDA becomes the first batch of outsourcing service pilot area in Tianjin.

TEDA started the overall plan and construction of the outsourcing service industrial park in the last piece of land available in 2008. It is established to provide information, policy and resource sharing platform for the outsourcing enterprises. This park can also make full use of convenient location, and attract lots of domestic and overseas enterprises to create an office for the world in Bohai Rim.

The overall plan for this industrial park is 890,000 square meters with the total construction area of 1.52 million square meters. The construction started in March 2008, and its main body will be completed in December. The whole project will be finished in July 2009. The enterprises which have already confirmed to set up their office in the industrial park are Dalian Software Park, Vimicro, Dalian Hi-Think Computer Technology Corporation, Standard Chartered Bank, Tencent, and China Everbright Bank, etc..

According to the overall plan of TEDA, the sales income of outsourcing service industry, which is mostly encouraged by TEDA, will reach RMB 5 to 6 billion yuan by 2010. The offshore outsourcing service will reach US$ 300 to US$ 400 million. Six to eight enterprises with sales income over RMB 500 million yuan will be encouraged to set up their offices in the park. There will be 50,000 to 60,000 employees involved in this industrial park.

TEDA is the first batch of national-level development area, whose major economic index has been in the first place for the 10 consecutive years among the national-level development areas.

Aviation city helps form the complete aviation industrial chain in Tianjin

In July 2008, core parts of the first airplane to be made in Tianjin Airbus A320 General Assembly Line were transported to Binhai New Area, indicating that General Assembly Project is taking a remarkable leap. Encouraged by the arrival of A320 project, a good number of aeronautical enterprises have decided to set their feet in Tianjin. In addition, the improvement of civil aviation industry technology platform accelerates the formation of aviation industrial chain.

Tianjin Binhai New Area Aviation Industry Park (also referred to as the Aviation City) is one of the key functional areas in the Binhai New Area. The Aviation City is adjacent to Tianjin Outer-Ring Road with a planned area of 102 square kilometers. According to planning, the Aviation City will be build into a modern ecological industry park focusing on aviation logistics, civil aviation industry, aeronautical fair and science education of civil aviation.

The Aviation city will be divided into six functional areas, including airport operation and guarantee area, aeronautic training and research area, China civil aviation technology industrialization base, Airport Process Park, Airport Logistics Park and airplane maintenance area. Besides airport and aeronautical enterprises, the only comprehensive aviation university in China, Civil Aviation University of China also provides technical support to the Aviation City.

The planning of the Aviation City could be traced back to 2005. In October 2006, Tianjin Free Trade Zone together with China Aviation Industry Corporation Ⅰ and Ⅱ signed a framework agreement with Airbus to set up A320 General Assembly Line in Tianjin.

Tianjin A320 Assemble Line is the first one to set up outside European continent by Airbus.

As the largest and most advanced aircraft manufacture in the world, Airbus' rallying power is strong enough to attract a complete network of industries around.

Under the influence of A320 project, 11 aeronautical enterprises have gained their foothold in Tianjin and 30 more aviation industry projects are in discussion, 10 of which are complementary with the A320 project. At present, the Aviation Industry Park is driven by aircraft assembly, with parts manufacturing and airplane maintenance supporting with each other.

In April 2008, under the support of Civil Aviation Administration of China, civil aviation technology industrialization based-Aviation Industry Park broke ground at Tianjin Airport Industrial Park. Its first-stage construction will include a R&D center of 40,000 square meters and an industrial factory of 100,000 square meters.

Spokesperson for Aviation City indicates that more and more airline companies are pouring into Tianjin with the stimulation of aviation industry. The air traffic capacity of Tianjin is on a rising level: in 2003, 1 million people; in 2008, an estimated 5 million; in 2015, 10 million can be expected.

Nowadays, functions of aviation city cover R&D, science education, air transportation, free-tax logistics, commercial exhibition and aviation repair & maintenance.

With A320 Assembly Line Project as the locomotive, Tianjin aviation industrial chain is taking the form; more and more enterprises

dealing with products relevant to aeronautical industry are keeping an eye on development in this field. A complete aviation industrial chain in Tianjin comes into being, with aircraft manufacturing as core industry, aviation leasing and air transportation as back bone, which are also combined with aeronautical R&D, manufacturing, logistics and financing.

Tianjin Airbus General Assembly Line is going on smoothly. The first aircraft is expected to be delivered in 2009

In August 2008, Tianjin Airbus A320 General Assembly Line was put into operation. Everything goes well for the moment. It is expected that Sichuan Airlines will take delivery of the first aircraft in 2009. By 2011, the productivity of the Assembly Line will have reached 4 aircrafts per month and more than 600 employees will be working at the line.

Tianjin Airbus A320 General Assembly Line Project was approved by State Council to set up in Tianjin Binhai New Area in May 2006. It is an example of successful cooperation between China and Europe. The project includes general assembly, spray painting, adjustment process and test flight. The area is 600,000 square meters, covering 7 sub-projects such as general assembly factory, spray painting workshop, power station, aircraft storehouse, assembly equipment, outdoor facility and infrastructure. There are 19 entity architectures and other constructions as well.

Since the end of 2005, Airbus has joined hands with the National Development and Reform Commission, conducting field surveys in Tianjin, Shanghai, Xi'an and Zhuhai for site selection. Finally, Airbus selected Tianjin Binhai New Area.

On October 26, 2006, Presidents of China and France witnessed a cooperative framework agreement signed between the two parties in Beijing. Tianjin Airbus A320 General Assembly Line is the first one of its kind to locate outside European continent.

The reason why Tianjin could win the site-selection competition is that it has unique geographical advantage: the Binhai New Area is located in the center of Bohai Bay linking North, Northeast and Northwest China. At the early start of the Eleventh Five-Year Plan, the State brought forward the notion of "promoting the development of the Binhai New Area", indicating the importance of raising international competing power of Jing-Jin-Ji (Beijing-Tianjin-Hebei) and balancing the current economic situation of "rich in South, poor in North".

The orientation of Binhai New Area is to become a R&D and technology transformation hub. The establishment of Airbus A320 General Assembly Line here is the best recognition of its orientation.

On May 15, 2007, the assembly line factory started construction. Tianjin became the fourth city in the world to own a trunk-line aircraft assembly line after Seattle (US), Toulouse (France) and Hamburg (Germany). At the opening ceremony, Airbus CEO pointed out that the standard of aircrafts to be made and delivered in China is the same as that of Europe; there is no difference at all, compared with aircrafts manufactured in other countries.

Everything goes well for the moment. Preparation for the assembly of first aircraft is going on smoothly.

By the end of 2015, the quantity of aircrafts manufactured by Airbus in China will have reached about 247, all of which will be sold domestically. Aircrafts made after 2015 may be sold in nearby regions or countries.

Airbus, a leading civil aircraft manufacturer in the world, was established in Toulouse, France in 1970.

The new-generation launch vehicle base enters a substantive construction phase in Tianjin

As one of the country's key projects, the new-generation launch vehicle industrialization base is supposed to be a high-tech-oriented hub, centering on the new-generation carrier rocket research and production and combining military and civil usages. It will focus on R&D and assembly of new-generation 5-meter-diameter carrier rocket. At present, the storage tank welding assembly factory in the first-phase project is being piled. It will be finished in 2009.

As one of the 2008 key industrial projects in Tianjin, the new-generation launch vehicle industrialization base is located in the west part of TEDA.

The project has been going on smoothly since it was launched on October 30, 2007. The scale of first-phase construction is about 200,000 square meters, meeting various requirements of test manufacturing, general assembly and test launch of the new-generation vehicle. The second phase may cover an area of 300,000 square meters, which will be put under construction in accordance with the demand of national aviation industry.

Recently, Tianjin Municipal Government, joining hands with State Administration of Science, Technology and Industry for National Defense, signed an agreement of "establishing an overall strategic cooperation framework", enabling China Academy of Launch Vehicle Technology (CALT) to carry out a series of civil projects in the Binhai New Area.

Experts analyze that new-generation launch vehicle industrialization base project is one of the important measures to help TEDA carry out the agreement of "establishing an overall strategic cooperation framework" signed by Tianjin Municipal Government and State Administration of Science, Technology and Industry for National Defense. It will also further raise the level of industry structure and modern manufacturing in TEDA.

The finish of the project will accelerate the development of Binhai New Area, promote the advancement of high-tech industry and raise the level of industry structure in Tianjin. Meanwhile, it will help push forward China aviation technology industrialization and participation in international cooperation and aviation undertakings.

Compared with common rockets, the new-generation launch vehicle has made improvement in the following three aspects: first, encouraging the use of environment-friendly engine technology so as to be non-toxic and non-polluting; second, model design, complying with launch conditions of loads of different weights and giving more choices and increasing flexibility; third, enhancing reliability and rate of successful launch.

The construction of the new-generation launch vehicle industrialization base is one of the national key projects. It is expected to lay the basis for new-generation launch vehicle research, which will be built into an important hub for aviation technology of military and civil products. To some extent, the project will represent the highest level of aviation equipment manufacturing in China.

It is said that a corridor will be built for guests to visit the base. With necessary precaution measurement taken, visitors can enjoy the assembling process of "huge rocket". To visit big rocket in the Binhai New Area will become a selling point of tourism industry.

One-million-ton ethylene project yields more than 100 billion yuan of industrial output value and promotes the development of chemical industry in Tianjin

The ethylene refining and chemical project of one-million-ton capacity is the first of this kind designed and constructed by Sinopec in China, in line with domestic- and international-leading standard. It meets international first-class standard, taking the lead in domestic market. The project can be divided into three parts: the newly built ethylene cracker of annual capacity of one million tons, the 12.5-million-ton-per-year refinery reconstruction project and the auxiliary heat and electricity project.

Total investment of one-million-ton ethylene project is RMB 26.8 billion yuan, covering an area of 294 hectare. Newly drafted land takes up 230 hectare, all of which is desolated land. The project will help implement scientific development pattern and circulative economy concept, stimulate regional economic development and enhance the competence of Sinopec from a global perspective.

As the first project combining refinery and ethylene cracker, the one-million-ton ethylene project will come up with several comprehensive effects: unifying auxiliary equipments, closely knitting the layout, shortening the industrial process, securing material supply, high efficiency, utilizing land efficiently, saving investment and reducing cost. All those features will improve profitability and enhance competence of Sinopec.

Once completed, the project will become the production base of 10-million-ton refinery and one-million-ton ethylene. The yearly output of high-quality and wide-range petroleum, chemical and fiber products can reach 12 million tons, which may accelerate the development of Chinese chemical industry.

The one-million-ton ethylene refining and chemical project is considered as the demonstration project at low cost, being ecological- and environmental-friendly. It makes full use of alkaline land, maintaining optimal allocation and utilization of land resources. The project gives priority to desalinized seawater, implements sewage treatment thoroughly and increases the reuse rate of gray water. It reduces emission of waste gas, waste water and industrial residue by strengthening classification treatment and comprehensive utilization of pollutants.

As an important effort to enhance self-innovation of China's petrochemical equipment, up to 91.5 percent of the refining equipments will be locally produced, while 60 percent of the gears for the ethylene cracker is China-made. It will facilitate the self-renovation of large-scale refinery and ethylene equipments in China and facilitate the equipment manufacturing segment.

Once completed, it will supply nearly 2 million tons of various petrochemical materials to enterprises in Tianjin. These local enterprises will engage in a dozen of projects involving ethylene, such as ABS resin, SBS, styrene, butyl & octyl alcohol and epichlorohydrin. It is believed that the project will help adjust the entire industrial layout of Tianjin, upgrade traditional chemical industry with chlorine and alkali as typical representative and combining the salt-based chemical industry and petrochemical industry.

The project will also accelerate the development of local middle-and-down stream petrochemical industry and stimulate related businesses involving harbor, logistics, storage and so on and so forth. Related investment of about 50 billion can be expected, involving the three million tons/year LNG Project and North China Pipeline & Storage Engineering project invested by Sinopec. It is estimated that those projects can stimulate more than RMB 100 billion yuan in term of industrial output value every year, exerting accumulative effects on industries in Tianjin and its neighborhood.

The one-million-ton ethylene refining and chemical project is the first extra-large project approved by State Council after Tianjin Binhai New Area was written into the national development strategy. This landmark project is a specific step to fulfill the special policy granted by the Central Government to the Binhai New Area, taking the lead in the construction of Binhai Industry Park at a national level.

Tianjin becomes a hot place for foreign investment, with more than 20,000 foreign-invested enterprises

Tianjin has become a hot spot for foreign investment. According to statistics by the end of 2007, investors from 131 countries and regions have invested in Tianjin with the number of foreign-invested enterprises approved being 20,357 and the value of contracts signed with foreign enterprises reaching US$ 77.843 billion. Foreign investment in place amounts to US$ 39.75 billion.

In history, Tianjin is one of the port cities opened up for foreign trade. A lot of well-known entrepreneurs and financiers came here to start business at early days. As one of the origins of modern industry in China, Tianjin always highlights a nature of ancient commercial city. Nowadays, it is the largest coastal city in North China. Its improving investment environment, appealing market and abundant return for investment have attracted a great number of foreign-invested enterprises to set foot in Tianjin.

In 1987, "Foreign Investment Office of Tianjin Municipal Government" (also referred to as Tianjin Foreign Investment Service Center) was set up in order to encourage foreign investment. Since 2004, a city-wide event called Service Month has been held in early June or July every year. The event covers activities such as Public Reception Day, Commending Conference of Foreign-invested Enterprises, Lecture on Investment Environment and Policy Update.

With the ever-growing foreign investment to Tianjin, foreign-invested enterprises have been active in increasing their investment. In 2007, average investment for individual foreign-invested project was US$ 21.36 million, while value of contract signed with foreign enterprises was US$ 12.71 million, increasing by 55.3 percent and 64.5 percent respectively year-on-year.

Industrial structure of Tianjin has been keeping optimized all the time. In particular, the city's secondary industry is undergoing optimization, while tertiary industry is taking a great leap. Rising continuously is the proportion of high-tech projects featuring intense investment, advanced technology, less resource used and better structured. In 2007, foreign direct investment (FDI) absorbed by the tertiary industry in Tianjin outnumbered that by the secondary industry in terms of percentage. Value of contract signed with foreign enterprises within the tertiary industry took up 58 percent of the total foreign investment in Tianjin, with a significant increase of 56.9 percent year-on-year. Foreign investment in place for the tertiary industry was US$ 2.651 billion in 2007, with a rise of 85.3 percent year-on-year.

In addition, three kinds of foreign-funded ventures (joint, cooperative and foreign-owned) have achieved decent economic results. In 2007, these enterprises registered a total industrial output of RMB 497.772 billion, taking up 49.4 percent of total volume and maintaining an increase of 11 percent year-on-year. Total profits scored RMB35.513 billion, up 18.6 percent year-on-year. Per capita sales reached RMB 943,200 yuan.

After China joined the WTO, Tianjin began to expand its scope of trade and investment promotion. Multinationals like Carrefour and Wal-Mat rushed to explore markets here in Tianjin.

As the development of Binhai New Area was written into the national strategy, the historical mission and development target of Tianjin have arose to a new record height. The city's trade and investment promotion campaigns are expanding, widening their scope and reaching a new level. In 2007, contracted foreign capital directly utilized by the Binhai New Area was US$ 7.668 billion, US$ 3.924 billion of which was actually in place, up 24.1 percent and 17.3 percent year-on-year respectively, accounting for 66.6 percent and 74.4 percent of total volume in Tianjin.

Headed by Airbus, a great number of market leaders of global manufacturing settle in the prospering Binhai New Area; The innovatively cooperative projects, such as the Dongjiang Bonded Port Area and Sino-Singapore Eco-City, were put into operation. Top 10 logistics giants have invested huge into the construction of Tianjin harbor and airport. The scale of outbound cooperation in high-end business area has been enlarged 10 times.

Tianjin has become an important destination in North China to attract investment from Taiwan Province. About 2,000 Taiwan enterprises have invested in Tianjin

As the largest coastal city and the economic center of North China, Tianjin plays an essentially crucial role in economic exchange and cooperation between the two sides of Taiwan Straits. With the opening up of the Binhai New Area, economic cooperation and personnel exchange between Taiwan and Tianjin have kept increasing. Tianjin is considered by Taiwan enterprises as one of the most important destinations for their investments in North China.

By the end of June 2008, 1,996 Taiwan-funded enterprises have been approved by Tianjin Municipal Government. Value of contracts signed with Taiwan enterprises reaches US$ 5.538 billion. About 5,000 Taiwan businessmen are living in Tianjin.

Tianjin Municipal Government always attaches great importance to Taiwan residents living in Tianjin, focusing on providing excellent services to Taiwan enterprises, protecting legitimate rights of Taiwan businessmen according to law and promoting common economic prosperity in both Tianjin and Taiwan. In 1996, the Tianjin government promulgated Implementation Measures for the Law of the People's Republic of China on Protection of Investment by Compatriots from Taiwan. Besides, it also worked out relevant measures convenient for Taiwan compatriots to receive satisfactory medical care service and education in Tianjin.

Ting Hsin International Group, famous for its Master Kong instant noodles, has grown up in Tianjin TEDA. During the period of 1988 to 2005, total investment in the mainland from the Group has accrued to RMB 18 billion yuan. In 2007, sales of Ting Hsin reached 35.1 billion yuan.

As the opening-up of the Binhai New Area was admitted into national development strategy, Tianjin is facing a precious developing chance, which occurs only once in a thousand years and enables the city to become a hot spot for overseas investment.

Exchanges in different fields between Tianjin and Taiwan are on a rapid increase, and economic cooperation is deepening all the time. In 2007, delegations leaded by Lien Chan and Chiang Pin-kung paid a visit to Tianjin. In August, 2008, Wu Po-hsiung came to Tianjin for a visit. All of them had made constructive suggestions on economic cooperation between Tianjin and Taiwan. Headed by Taiwan Business Association, more than 100 chairmen from various Taiwan organizations visited the Binhai New Area. Directors of Taiwan Federation of Industries, Federation of Commerce, Taiwan Electrical & Electronic Manufacturers' Association and Taipei Computer Association headed delegations to Tianjin one after another. A new round of economic and trade exchanges in Tianjin and Taiwan will be expected in the near future.

In 2007, 75 more Taiwan-invested enterprises were approved by Tianjin Municipal Government and 43 more increased their investment. Value of contracts signed with Taiwan enterprises in the period reached US$ 522 million. From January to June 2008, the Tianjin government approved 14 more Taiwan-funded enterprises and confirmed 10 more increasing their investment in Tianjin. Value of contracts signed with new Taiwan enterprises or those increasing investment amounts to US$ 229.1847 million, up 19.04 percent year-on-year.

The lion-share of Taiwan investment in Tianjin goes to the manufacturing industry, the number of which takes up 60 percent of Taiwan enterprises in Tianjin. Representative enterprises such as Foxconn, SMIC and MasterKong have made remarkable achievement in the Tianjin market.

With the admission of development of Binhai New Area into national strategy, Tianjin Municipal Government makes full advantage of the national policy to carry out comprehensive and experimental reforms first and foremost so as to further economic exchange and cooperation across Taiwan Straits. The Binhai New Area has become a region with intensive Taiwan investment. At present, there are more than 900 Taiwan enterprises located in the Binhai New Area, taking up 50 percent of all enterprises of this kind in Tianjin. Value of contracts signed with Taiwan enterprises within the Binhai New Area takes up 70 percent of the total Taiwan investment in Tianjin.

Taiwan enterprises have made a great contribution to the economic development of Tianjin. Since 1994, taxes paid by these enterprises have exceeded RMB 5 billion yuan. On the other hand, 170,000 job opportunities have been created by them.

The largest bonded port area will become a new engine for the development of Binhai New Area

In December 2007, the largest bonded port area in China—the first phase of Tianjin Dongjiang Bonded Port Area was completed successfully and put into operation. Dongjiang Bonded Port Area is not only the result of the comprehensive and experimental reforms implemented in the Binhai New Area, but also a "seed" for the pilot field of Binhai New Area reforms. It will become a new engine for the development of Binhai New Area.

The Dongjiang Bonded Port Area is 10 square kilometers in size, being the largest one in China. The first-phase bonded port area occupied a space of four square kilometers. It will draw experience from development mode adopted by international free trade zone, extending the five functions of international transfer, global distribution, international procurement, international trade transit and export processing. Priorities will go for modern logistics, import-export processing, manufacturing industry and various service industries.

On May 26, 2006, it is pointed out in State Council's Opinions on Issues Concerning Opening-up and Development of Tianjin Binhai New Area that the nation will promote the opening-up of Tianjin Binhai New Area and establish Tianjin Dongjiang Bonded Port Area.

The State Council states in Ratification Concerning the Establishment of Tianjin Dongjiang Bonded Port Area that: basing on related requirements of pilot area construction with comprehensive and experimental reform, the Port Area can have a try on some essential reform measures with regard to mechanism and system innovation. Moreover, it should draw on international practices, actively researching the innovative management system of special areas supervised by Customs, studying selected sites to promote overall work, and pushing forward integration of special areas supervised by Customs.

Dongjiang Bonded Port Area combines functions of bonded area, export-processing area and bonded logistics area. It is entitled to enjoy all policies for development area, bonded area and high-tech industrial park. Meanwhile, it can also fully enjoy national preferential policies on tax, port supervision and foreign exchange management.

For the time being, the Dongjiang Bonded Port Area has entered a period of rapid development. Accumulative investment in infrastructure has exceeded RMB 12 billion yuan, creating land as large as 20 square kilometers. Asia-Pacific international harbor with a designed yearly handling capacity of 4 million containers has been completed. It is expected that the handling capacity will reach 1 million standard containers by 2008.

By the end of June 2008, there have been 26 domestic and international enterprises registered in Dongjiang Bonded Port Area, with investment exceeding 10 billion yuan. Enterprises like Schneider Logistic from the US, Mapletree from Singapore and China Merchants Group have completed registration and started operation. A great number of large-scale logistics and import-export value-added processing projects are under negotiation.

It is planned that RMB 6 billion yuan will be invested in Dongjiang Bonded Port Area in 2008, facilitating the construction of passenger liner harbor, five-star hotel, low-population residence and man-made beach. By the end of 2008, 25-square-kilometer land will have been created and main road opened to traffic. A mature transportation system will be set up in the area, and passenger liner harbor, five-star hotel and relevant facilities will also begin to take shape.

Dongjiang Bonded Port Area is a significant part of the opening-up campaign in the Binhai New Area, an important component of the comprehensive and experimental reform and also an indispensable part of the Tianjin Port, the sixth largest port in the world. Dongjiang Bonded Port Area carries the historical mission of reforming and opening-up and innovative development. Aiming to become a real free trade zone, Dongjiang Bonded Port Area is actively exploring a road of free trade zone construction with Chinese characteristics.

Tianjin builds inland water-free ports to support regional economic development

On June 19, 2008, the Ningxia Huinong Inland Water-free Port was opened, which is the first waterless port that Tianjin has built in Ningxia Autonomous Region. Until now, Tianjin has built five waterless ports, cooperating with several inland provinces. To extend the functions of port to inland provinces and to share its own advantages with those provinces, Tianjin aims to serve the whole country and promote the economic development of different regions.

Tianjin Port is located at the most western point of the Bohai Sea. Serving Tianjin, Northern, Northwest and Northeast China, the harbor possesses its unique regional advantage and typical regional cooperative opportunities. Tianjin Port has established sound cooperation with inland provinces. Over 70 percent of goods and more than 50 percent of trade volume of Tianjin Port stem from central and western areas.

The Binhai New Area has been included into the national overall development strategy, which provides a new opportunity for the regional cooperation of Tianjin Port. Tianjin Municipal Government issued the order of "building water-free ports and implementing simplified customs formalities" in response to the actual market situation.

In October 2004, Tianjin signed Memorandum of Quick Transfer the Pass in Tianjin-Hebei Port with Hebei province, which undrawn the prelude of building waterless ports. In November 2005, Tianjin Municipal Government reached agreements to strengthen cooperation with the General Administration of Customs. The parties had reached a common recognition in terms of improving cooperation mechanism and promoting the building of inland "water-free port". In July 2007, Tianjin signed Memorandum of Building Simplified Customs Formalities in Northern Area and Letter of Intent for Building Inland Waterless Ports with different provinces, cities and areas, which lay the foundation for promoting the construction of waterless ports.

Until now, Tianjin has built with the inland provinces five inland water-free ports, namely Beijing Chaoyang Inland Port, Shijiazhuang Inland Port, Henan Road Port, Baotou Waterless Port and Ningxia Huinong Inland Port.

Through building water-free ports, inland areas truly possess their own passages to the sea. The customs clearance mode at waterless ports has altered the traditional mode that inland goods have to be declared at the port or declare twice because of the transferring of the pass. Realizing "declare one time, inspect one time and check in one time" at the waterless ports simplifies the steps, improves efficiency and also costs less. The operation data from waterless port shows that logistics running time in waterless port is reduced by 1 to 2 days in central area and 3 to 4 days in western area; the overall logistic cost has also been cut by 20 percent.

The construction of waterless ports has helped extend the functions of ports, which further extends the area covered by its service and improves its impact as a model. These measures help the port serve and support the development of regional economy effectively.

Entering 2008, Tianjin further speeds up the pace of building water-free ports with inland areas. It aims to build six water-free ports in 2008 and plans to build waterless ports in inland logistic center cities within two years.

With the construction of waterless ports and perfection of the network, the completion of port function, information-oriented e-port function and bonded zone function, Tianjin Port will soon witness the expansion and extension of its operation.

Tianjin Port implements simplified customs formalities to create a new management mechanism

The development of the Binhai New Area has been included into national development strategy, which implants new vitality and vigor to simplification of customs formalities. All units in Tianjin Port explore and innovate to create a favorable service environment for customs clearance. They improve the efficiency and reduce the cost of customs clearance, which makes Tianjin Port become an efficient and convenient gateway.

In order to receive good results in the work of simplified customs formalities, Tianjin Port further intensifies the port regulation mechanism and implements simplified customs formalities. Based on the current situation of openness in Tianjin Binhai New Area, Tianjin Port establishes the leadership and working mechanism of improving simplified customs formalities step by step, creating "four mechanisms and five institutions" that are of Tianjin characteristics.

In the aspect of mechanism, four mechanisms, including Tianjin Port working coordination mechanism, supervision system, service quick response mechanism and customs clearance supervision mechanism, are to be established. While in the aspect of institution formulating, five institutions, including Tianjin Port Joint Committee institution (including goods customs clearance joint committee, ship inspection joint committee and anti-stowaway joint committee etc.), Tianjin Port key enterprises communication institution, institution of overtime work in the long holiday in Tianjin Port, information communicating institution and the institution of monthly report on quantization goal of customs clearance, are to be formulated.

At the same time, Tianjin Port intensifies the reform of customs clearance inspection mode and put "24-hour customs clearance institution" and "green customs clearance institution" into work, which improves the efficiency of customs clearance. These measures enrich and perfect the steps of customs clearance, which makes the regional customs clearance reform obtain remarkable results.

In the reform of regional customs clearance, over 70 percent of goods and over 50 percent of trade volumes stem from central and western areas or transit transportation. On the basis of traditional cooperation, seizing the rare historical opportunity of Development of the West, the uprising of the central areas of China, Northeast revitalization and promoting the development of Tianjin Binhai New Area, Tianjin Port implements the model of "declare at the original place and check in at the port", and establishes a mechanism of business cooperation—"inspect at producing area and check in at the port" and installs allopatry electronic declare system of dangerous goods. By doing so, Tianjin Port not only brings the advantages of port and inland supply of goods into full play, but also accelerates the supplementary extension between the functions of coast ports and inland ports so as to form the joint advantage brought by "simplified customs formalities", better serve the regional economic development, strengthen the relationship with inland provinces, cities and areas with the aim of achieving favorable results of win-win and multi-win.

Ports are the gateway of foreign oriented economy, international trade and international communication. The environment of the ports directly affects the development of port economy. Therefore, strengthening the comprehensive regulation of simplified customs formalities and creating a favorable simplified customs formalities service environment are vitally important.

Tianjin International Shipping Service Center helps Binhai New Area perform the service function of regional economy

Since it was put into use three years ago, Tianjin International Shipping Service Center not only improves the image of Tianjin Port and services but also elevates the influence of Tianjin in circum-Bohai Bay region and the areas of Northwest, Northeast and West of China. It also plays an active role in accelerating the pace of the Binhai New Area to become North China international shipping centre and international logistics enter and provide service for regional economy.

According to the Report on the Research of Tianjin International Trade and the Operation Efficiency of Shipping Center released by an international famous research organization, the operation of service center shortens the cycle of goods turnover evidently and increases the turnover frequency of funds. The research report points out that although the service center has only been put into use for one year, it has already directly saved economic cost for RMB 61.56 million yuan for enterprises, including the cost of manpower, transportation and storage. In 2007, the value of import and export goods handled by the service center was about US$ 97.7 billion, of which each US$ 125 million of interests can be saved with each one day reduced in total time for customs clearance.

In 2005, Tianjin International Shipping Service Center, which is one of the key projects of the comprehensive complementary reform in the Binhai New Area, was put into use. It's not only the preliminary project and landmark building of Tianjin International Trade and Shipping Service Zone but also a "one-stop" international trade and shipping service center of the largest scale, most functions and most advanced facilities in China so far. Designed according to the standard of "grand, vogue and modern", the construction was finished with high standard in only 8 months. The operation of the center plays a major role in accelerating the development of the Binhai New Area.

The design of the appearance of the service center pursues elegance, solemnity and concise, instead of grandeur or luxury. The design gives prominence to spatial variation of different using functions. From law enforcement to flexible business, the center presents various spaces for various-purposed communication. The unique design creates a comfortable and elegant working environment.

The service center integrates six functions, which are government services, international trade, market operation, information distribution, social supervision and talent exchange. It's a place that provides services for import and export of goods, exit-entry of ships and related staff in Tianjin Port. It's also a key platform for business activities like international trade and shipping exchange.

The service center holds the concept of "administrating by law, optimizing the environment, promoting economy and coordinating the development". It unswervingly serves the public and provides the platform of international trade and "simplified customs formalities" for inland import and export enterprises, which plays an essential role in reducing the trade cost, improving the efficiency of customs clearance and realizing the transformation of Tianjin Port from a traditional, management type into a modern and service-oriented type.

The center tries its best to create a better environment for customs clearance.

The service center has 13 government departments and over 50 offices, involving enterprises of port, shipping, logistics, customs clearance, forwarder, vessel-agency, finance, insurance and mail and departments of e-port and information center of quarantine inspection. The "one-stop" service mechanism sets over 400 service windows, which forms a new system of customs clearance service that includes changing document, applying to customs, surveying and customs clearance and also transacting procedures for picking up goods.

By effectively improving the work efficiency of port, the working efficiency of enterprises has been improved greatly, which directly or indirectly saves great amount of time for shippers. Now the time to transact comprehensive customs clearance is two to three hours, 58 hours less than that in the past.

At the same time, the cost of customs clearance is reduced and the economic benefits of enterprises are increased. By providing "one-stop" service, the service center reduces the time that goods stayed at the port, accelerates the logistics at the port, lowers down the cost of logistics for enterprises and shippers and also effectively controls the cost of traffic and human power.

Tianjin creates modern financial service system suitable for the North China economic center

In March 2008, Tianjin was authorized to establish the Over-the-Counter (OTC) market. In July, First Futures Brokerage headquarter was moved to Tianjin. Tianjin will put the development of futures as the important content of financial reform. As the financial agglomeration effect in Tianjin appears and a series of reform innovation have been put into action in the Binhai New Area, a modern financial service system is being established with high speed in Tianjin.

As early as in December 2005, when China had no clear laws about industrial fund, the State Council approved the Binhai New Area to run pilot projects of industrial investment fund. In December 2006, the first Chinese-funded private equity fund—Bohai Industrial Investment Fund was founded in Tianjin.

In March 2008, State Council approved the general scheme of comprehensive reform and experimental development in Tianjin, the Binhai New Area to be more specific. The OTC market of nationwide non-listed public companies is to settle in Tianjin Binhai New Area, which is a significant exploration of Chinese multi-level capital markets and the OTC market.

In June 2008, the second China International Private Equity Forum was held in Tianjin where nearly 2,000 excellent enterprises from China and more than 500 private equity investment funds from all over the world sought the combination of industry and capital. This forum will be a routine annual meeting to be held in Tianjin ever since.

In addition to all these efforts, Tianjin still has lots of projects to be completed to achieve the overall aim of financial reform and innovation. The city is to perform well in the pilot reform of foreign exchange management, intensifying the foreign exchange management reform in special economy regions like Tianjin bonded zone and Dongjiang Bonded Port Area; establishing TEDA International Financial Holding Group, developing comprehensive pilot business and planning the building of a financial town and a financial service area of international level in Tianjin etc.. A series of measures shows that a modern financial service system is being built in Tianjin with acceleration.

In June 2006, the State Council's Opinions on Questions Concerning the Promotion of Development and Opening of Tianjin Binhai New Area clearly points out that the financial reform and innovation in Tianjin Binhai New area is encouraged. The significant reform in financial enterprises, financial business, financial market and financial opening can be first launched and tested in Tianjin Binhai New Area.

In March 2008, the State Council officially approved the general scheme of comprehensive reform and experimental development in Tianjin Binhai New Area and required that "using five to ten years to basically finish establishing a sound socialist market economy system in the Binhai New Area, to boost the new area to improve its comprehensive strength, creative ability, service ability and international competitiveness, by which the New Area can play a more vital role in promoting the development of Tianjin, the economic revitalization of Beijing-Tianjin-Hebei area and Bohai region, the interaction of eastern, central and western China, and the coordination of the national economic development, and provide the experience and demonstration for the development and reform of the whole nation as well."

A grand financing feast — China International Private Equity Forum will be held in Tianjin annually

Being regarded as a grand financing feast, the 2nd China International Private Equity Forum (CIPEF) was held on June, 2008 in Tianjin. About 2,000 domestic outstanding enterprises and 500 international private equity fund companies attended the forum, seeking together the combination of industry and capital.

CIPEF is Approved by State Council and sponsored by Tianjin Municipal People's Government, All China Federation of Industry & Commerce, and Association for Corporate Growth (ACG). It has borrowed ACG's pattern, "Capital Connection" and "Speed Dating", to set up a financing bridge for the attended.

According to finance insiders, CIPEF is a beneficial trial in the construction of China's multi-layer capital market system.

Generally a multi-layer capital market consists of the main board, the second-board and the third-board market so as to provide enterprises of different layers different security transacting platforms. At present China's main board market is being gradually perfected, and the growth enterprise market is stepping to the stage of planning and proposals-seeking. Then the third-board market has become obviously "duck-legged" in the capital market system.

Accounting for about 99 percent of current China's enterprises, small and medium-sized enterprises (SMEs) generate 60 percent of the country's gross industrial output value and undertake 40 percent of the taxes. They also provide employment opportunities for 75 percent of the entire labor force. But despite the important role they are playing, SMEs are facing more and more difficult financing situations under the environment of credit crunch and unsound multi-layer capital market system.

As the financing difficulties of SMEs are partly caused by the lack of financing channels, private equity funds bring to these enterprises an opportunity to raise capitals directly. Private equity funds fill the gap of market demand and bank loans, bringing a new idea of financing.

Moreover, there are only less than 2,000 listed companies among hundreds of thousands of Chinese enterprises. Large quantities of non-listed companies which have no formal off-board transacting platforms have to transfer stocks by auction or restructuring. As a result, the transaction of shares and property rights becomes inactive.

For the above reasons, to develop private equity fund is significant to the construction of China's multi-layer capital market system. Not like the traditional securities fund, private equity fund pays more attention to the cultivation of resources to be listed. And it can effectively relieve the current problem of excess liquidity in Chinese financial market.

One of the features of the second CIPEF is the attendance of some newly-formed RMB private equity funds from Beijing, Shanghai and Tianjin. Over 40 of them are from Tianjin.

In over one year's time, the exposure rate of RMB private equity funds and industry investment funds is increasing. Beginning with the constitution of Bohai Industrial Investment Fund, a boom of setting up industry investment funds, represented by the planning and building of regional industry funds in Guangdong and Suzhou, has begun around China.

Private equity fund refers to the equity investment for non-listed companies by way of private placements. In accordance with their share of the contribution investors share the profit and bear the risk. But there are also a few of these private equity funds which are now investing listed companies by way of debit financing.

The first CIPEF was held successfully in June, 2007 in Tianjin. It has become the biggest and highest-level international meeting of global financing. In order to speed up the financing innovation in the Binhai New Area of Tianjin and expand direct financing the organizers decided to settle down CIPEF in Tianjin as a permanent annual meeting.

Tianjin spares no efforts building up China's fund centre

From establishing the first private equity fund to getting the approval to set up a shipping industrial fund, Tianjin has become the pilot city winning most fund approvals from the State.

In April, 2008, the first overseas Chinese invested fund was set up in the Binhai New Area of Tianjin. In June, 2008, more than 500 private equity fund companies from all over the world gathered in Tianjin and made a "speedy dating" with more than 2,000 domestic enterprises. In August, the National Development and Reform Commission nodded Tianjin's application to prepare for a shipping industrial fund.

In experts' eyes, the 20-billion-yuan shipping industrial fund will strengthen Tianjin's shipbuilding capability and capacity to transport cargoes for Chinese companies. The fund will fuel the financing system for China's ship-constructing industry, and facilitate the formation of international shipping and logistic centers of the country.

Tianjin has been pinpointed to develop a private equity fund center of China. The city is taking actions and perfecting policies and measures to attract fund enterprises. So far, there are more than 100 equity and venture capital funds landing in Tianjin. Tianjin is now advancing to China's fund centre with the financial innovation advantages entrusted by the Chinese Government.

In 2006, the State Council approved Tianjin Binhai New Area to lead the national comprehensive reform and experimental development and encouraged it to carry out the financing reform and innovation. Therefore in principle any significant reform of financial enterprises, businesses and markets can be first tested in Tianjin Binhai New Area.

In May of 2008, the National Development and Reform Commission issued a policy to support Tianjin's efforts to develop equity investment funds.

In developed countries, due to the relatively mature fund market and capital market, the proportion of direct financing can reach 50 percent or even higher. But in China the ratio is only 10 percent. The constructional problem arising affects the healthy development of the economy — enterprises, especially SMEs having difficulties in financing, so that they can not obtain capitals effectively. The high proportion of bank loans in financing leads to the concentration of risks. Social funds are hard to be transformed into capitals due to its excess liquidity.

Therefore to expand direct financing channels is extremely urgent, and it has become a priority for the Binhai New Area to make innovation in financing reform.

At the end of 2006, the first Chinese-invested industry investment fund—the Bohai Industrial Investment Fund was set up in Tianjin. A year later, this Fund that aroused wide concerns signed its first deal—to invest in Tianjin Pipe Group Corporation with about RMB 1.5 billion yuan to fuel the development of national backbone industry.

At the end of 2007, the largest domestic government's venture investment guiding fund—Binhai New Area Venture Investment Fund was set up. With the investment size of RMB 2 billion yuan, the fund adopts the pattern of "parent fund". It focuses on attracting domestic and foreign venture capital organizations which have outstanding achievements and mature management experiences to the Binhai New Area, hoping to stimulate RMB 50 billion yuan of direct investment.

According to the data provided by Tianjin finance service office, there are dozens of private equity funds in Tianjin now in addition to the industry investment fund approved by the State Council.

The Tianjin Municipal Government is promoting the exchange and cooperation between funds and enterprise. The first China International Private Equity Forum (CIPEF) was held in Tianjin successfully. The second CIPEF was in June of 2008, attracting 500 fund companies and 2,000 enterprises for potential cooperation.

The gradually perfected supporting measures also reflect the speeding approaching of Tianjin to the "fund center". The first self-regulatory organization of Chinese equity investment fund—the Association of Tianjin Private Equity Fund was established in 2007. Its main functions include the development of self-discipline regulations, supervision and inspection of members, to stop improper completion, to hold investors education and so on.

According to Experts' analysis, the emergence of the fund center will gather the capitals from at home and abroad, attract a large number of enterprises to settle in Tianjin, and bring the Binhai New Area to a financing innovation road through the interaction between capital and industry.

Bohai Industrial Investment Fund provides a useful attempt to RMB industry investment fund

During recent years, RMB industry investment fund's exposure is increasing. Starting from the Bohai Industry Investment Fund, a boom of constitution of industry investment fund, represented by the planning and building of regional industry funds in Guangdong and Suzhou, has begun around China.

From being built up to signing the first investment item, Bohai Industrial Investment Fund is providing a precious experiment for the development of local industry funds.

As an important exploration for Tianjin Binhai New Area in expanding direct financing channels, the first Chinese-invested industry investment fund, Bohai Industrial Investment Fund, was set up in Tianjin on December 30, 2006. It was RMB 20 billion yuan in size and had raised RMB 6.08 billion yuan with its initial placement. Investors include National Social Security Fund Council, National Development Bank, Postal Savings and Remittances institution of the State Post Bureau Post, Tianjin Jinneng Investment Company etc..

Analysts comment that the constitution of Bohai Industrial Investment Fund is the achievement from carrying out the comprehensive reform and experimental development in the Binhai New Area and is a result of accelerating the financial reform and innovation. It is a major breakthrough for the reform and innovation of China's direct financing system. It starts a new era in the development of RMB industry investment fund.

Bohai Industrial Investment Fund can be called No 1 in four areas: it is China's first large-scale RMB industry investment fund, China's first contract industry investment fund, China's first industry investment fund for specific investors, and China's first fully market-oriented industry investment fund.

As investing mode is concerned, the Bohai Industrial Investment Fund takes the mature international experience as a reference. It selects the high-quality enterprises within a certain range of risks. Through its participation in the management of the target companies, it optimizes their governance structure, improves their operational and financial situations, helps them to create value, and at last takes benefit from the sale of shares it held.

At the end of 2007, the Bohai Industrial Investment Fund inked the first investment agreement with Tianjin Pipe Group Corporation Limited, marking that China's first Chinese-invested industry fund was officially launched. According to the agreement, the fund invested about RMB 1.5 billion yuan, and the stock of Tianjin Pipe Group Corporation held by Tianjin Pipe Group Corporation Limited is partly transferred to the strategic investor.

Industry investment fund, which is often referred to as private equity fund in foreign countries, is a funding mode that opposite to securities investment funds. It refers to the equity or quasi-equity investment to the unlisted but with high growth potential companies. The fund company may be involved in the operation and management of the invested enterprises, and after the development and maturation of the enterprises, the fund may achieve capital appreciation through share transfer.

Following the Pudong New Area of Shanghai, the Binhai New Area is China's second comprehensive reform and experimental development pilot area. As part of China's regional coordinative development program, the Binhai New Area has been incorporated into national development strategies and given the priority to act and experiment in financial reform and many other areas.

The whole process of constitution and investment of the Bohai Industrial Investment Fund has set a precedent in exploring the developing path for Chinese industry investment fund and expanding direct financing channels.

Tianjin Property Rights Exchange: actively constructing globalized platform for property rights exchange

In the 2nd China International Private Equity Forum, Xinhua08 financial trading system signed a cooperative agreement with Tianjin Property Rights Exchange (TPRE), announcing that TPRE's information would be released real-time 24 hours a day and information of the major global capital markets will be conveyed to TPRE precisely.

The property rights market of China is a result of marketing economy with Chinese characteristics. It has been an important market place for the trading of corporate property rights. Over the past 20 years, the property rights market has been following the practices of China's reform, while making innovative development. The transaction has been consistently increased, with the market resources diversified and the information network and operational situation gradually improved during the period. It has been a significant part of China's multi-layer capital market system.

Approved by Tianjin Municipal Government, TPRE was established in April 1994 to be a comprehensive, multi-functional, open and regulated service organization for property rights transaction. Four submarkets were set up under TPRE, including Tianjin Trust of Shares Exchange, Tianjin Technology Property Exchange, Tianjin Commodities Transfer Adjusting Exchange and the Binhai New Area Property Rights Exchange.

As a State-level property rights market, TPRE has witnessed rapid progress in the transaction of all the four aspects of real right, stock equity, creditor's equity and intellectual property rights. TPRE had completed 6,275 property rights transactions from 2001 to the first half of 2008 with an accumulative volume of RMB 155.5 billion yuan. The transaction hit RMB 34 billion yuan in 2007 and the value of the State-owned assets had been increased by 69.2 percent.

According to the agreement with Xinhua08, the module of "TPRE information and transaction" will be set up, including the real-time market of TPRE, property rights transaction index, dynamic model of property rights transaction, transaction tendency and analysis, theoretical discussion, policy and regulations and typical case study.

Seven property rights trading institutions in Tianjin founded the North China Common Market for Property Rights Trading in 2002. TPRE was selected as the president and the general secretary unit of the new organization. Currently, the common market, which has covered 21 provinces, municipalities and autonomous regions, has been a most important regional market for property rights transaction of China and a capital platform for merger and acquisition.

Stimulated by the development of the property rights institutions across the nation, China's property rights markets have transformed into an essential platform for adjusting State-owned economic layout and structure and a vital bridge to connect the high technologies with the traditional industries. They have played a more and more important role in building China's multi-layer market system and promoting balance development of economy.

In June 2008, Tianjin Binhai Academic Institute of Property Rights, the nation's first research body on property rights, was established by TPRE. The institute is dedicated to providing theoretic knowledge about property rights trading and markets and policy consultancy services to the community. It will also provide professional services, including the systematic transformation strategies for all types of companies, management consultancy, organizing academic exchanges domestically and internationally and trainings concerning property rights.

Currently, TPRE has been equipped with a transaction hall with an area of 12,000 square meters comprehensive software and hardware and network security system, which has been developed into one of the largest-scale and most powerful property rights transaction markets in China.

The Spirit of innovation has prompted China Bohai Bank to showcase its strong potentials

The Tianjin and Taiyuan branches of China Bohai Bank were open one after another in the first half of 2008 and the Chengdu branch got nods to be set up. So far Bohai Bank has made significant progress in domestic outlet arrangement with the operation of five branches and 13 sub-branches. Its development is really amazing. Fuelled by the spirit of innovation, the bank will demonstrate greater strength in future growth.

Bohai Bank has been the only national share-holding joint venture commercial bank approved by the State Council since 1996. It has also been the first lender that has brought in overseas strategic investors from the very beginning and the first national share-holding commercial bank with headquarters in Tianjin.

The bank was founded on December 30, 2005 and started its business on February 16, 2006. It was established at a time that the development of Tianjin Binhai New District was included as a part of national overall strategic development plan, which foretold that that bank could have a good development environment and a brighter future.

It has been a development philosophy of Bohai Bank to take bold reform and experiments and highlight innovation. Since its establishment, the bank has taken the advantage of a historical opportunity of building the Binhai New District into a "national pilot zone for comprehensive reform and experimental development" to launch a series of financial innovations, including the stock equity, corporate governance, operational mode, business and products and financial services. The efforts have paved a way for its fast and stable growth.

The shareholders of Bohai Bank include State-owned or State-controlled enterprises, private companies, domestic companies and oversee strategic investors. It has been the first of its kind in Chinese mainland that the bank introduced in overseas strategic investors from the very beginning and allowed the capital inflow of natural persons in a way of assembled funds trust.

In April 2007, Bohai Bank set up its investment bank department, which has been an important step of the bank to explore the way of comprehensive operation. Relying on the investment bank arm, Bohai Bank is busy exploring the possibility to conduct comprehensive business, with the identification of full-functional bank.

In September 2007, the Beijing branch of Bohai Bank started operation, which was the first branch outside Tianjin. Given Beijing's excellent and large-scale financial markets and a favorable location in the core area of Bohai Rim economic circle, the establishment of Beijing branch allowed the bank to better serve the regional economy and promote the financial reform and innovation.

Based on the practices, the bank provides tailor-made products and personalized services to the clients. In terms of retail banking, it has developed new products for housing mortgage to cope with the rising demands for personal investment in real estate. It also developed different types of corporate loans for SMEs.

Dated to June 30, 2008, the assets of Bohai Bank amounted for RMB 46.25 billion yuan. The deposit balance reached RMB 35.49 billion yuan and the loan balance, including bill financing, totaled RMB 27.34 billion yuan. They increased by 108 percent, 144 percent and 77 percent, respectively, year-on-year.

The growth and expansion of Bohai Bank will serve as an impetus to the reform and development of Binhai New District and the economic development of circum-Bohai Sea economic rim. Although it is still in the early stage, the bank has demonstrated its considerable growth rate. The innovation will further push forward the bank, which has gradually gained international competitive edge to be a modern share-holding commercial bank with its own characteristics.

Fixed-rate low-interest loan: China's first house saving bank provides new service to home buyers

Mr. Shen, who is working in Tianjin, plans to buy a commercial apartment recently. After comparing the mortgage business of several banks, he found the solution of Sino-German Bausparkass (SGB) the most attractive: the fixed rate low-interest loan could allow him to raise and arrange his fund easily and save money at the same time.

When the real estate market has been on the rise over the past few year, the housing prices in many Chinese cities are growing much faster than the residents' pay raise. At the same time, the housing loan interests keep rising and the home buyers have been placed under greater pressure to pay back the mortgage to the bank. Under the circumstances, the housing saving products, with characteristics of loan after saving, fixed rate and closed operation, must have a potential market.

SGB was co-established by China Construction Bank (CCB) and Germany Bausparkasse Schwabisch Hall AG Bank, the largest house saving bank in Europe. The joint venture now has been the first and only house saving bank in China.

At present, residents can apply housing mortgage by three means, or personal housing common reserve fund loan, personal housing mortgage and personal housing combined loan with common reserve fund loan. Of the three types, the interest rate of personal housing common reserve fund loan is comparatively low and that of personal housing mortgage is relatively high with 7.38 percent annual loan interests for five-year mortgage or longer.

As a brand-new personal housing financing option, housing saving has arrested the attraction of the home buyers with its super low loan interest, which can be as low as 3.3 percent yearly. What the clients can benefit directly from the scheme is to pay less loan interests.

The housing saving is a deposit with special purpose. The clients taking part in the scheme aim to obtain low-rate housing loans. It requires that the clients deposit fund firstly, which will make contribution for the whole group before they could enjoy the low-interest housing loan in the future. The fund that will be used for housing loans is accumulated by the depositors, which is mainly composed of the saving and mortgage payment of the depositors.

The SGB acquired the license from State Administration for Industry & Commerce in February 2004. The bank launched a series of new products on fixed rate housing mortgage in November 2006. In June 2008, the bank again introduced a new product to shorten the waiting time of the clients to get home mortgage.

The industrial analysts said the mode of housing saving bank would help depress the inflation. Its requirement of "saving firstly for loan" will transfer the capital for short-term deposit or consumption to long-term housing saving fund. Meanwhile, that deposit will be specially used for home mortgage, which could transform the short-term fund to long-term investment, which could also reduce the impact of short-term money market to the inflation.

Germany Bausparkasse Schwabisch Hall AG Bank is the largest and most successful professional bank on house saving in Europe. Its joint ventures in other European countries outside Germany have all taken leading positions in the housing financial markets. The SGB will spread its business to other Chinese cities from Tianjin in near future.

The founding of the bank was a great effort of Chinese and German governments and executives of the two investing partners. Differentiating it from other economic projects, the bank could mirror the cooperation of Chinese and German governments in the fields of national economy and social security system, which will help the fulfillment of the target of "harmonious society" advocated by Chinese government.

Huaming Town makes a breakthrough in the urbanization of villages and is selected as the Urban Best Practices Area of World Expo 2010

Modern residential houses have been well designed and planned in Huaming Town, Dongli District of Tianjin. Farmers can live in these houses without paying even a penny. As a forerunner for the construction of new countryside, Huaming Town has been selected as the Urban Best Practices Area of World Expo 2010 to showcase its achievements to the World.

Huaming Town can be selected because it invented the idea of "exchanging rural residence land with houses" in the process of building new countryside in China. Under the program, the farmers of Huaming Town can exchange their housing land with an apartment in the town following set criteria and move to the town. The rural land for construction will be used for farmland while part of the lands saved from the program will be used for commercial development.

Located in the central area of Dongli District and adjacent to the Binhai New Area, Huaming Town is 13 kilometers away from the downtown of Tianjin. It has planned to build residential areas and supporting facilities with an area of nearly 1.425 million square meters to settle the farmers from about 13,000 families, or 45,000 people, in 12 villages involved. The pilot town has been divided into four parts, including settlement area for the farmers, commercial residential area and business center, industrial zone and agricultural zone.

The mode of "exchanging rural residence land with houses" has been proved an innovative way to urbanized villages. A big amount of rural housing lands that had scattered everywhere with low efficiency have been centralized for farming again, which could allow more efficient use of land. Statistics show that the settlement area for the farmers in Huaming Town just takes up an area of 3,476 mu, which saved lands of nearly 8,595 mu.

The family assets of the farmers in Huaming Town have been increased through the program. Previously the farmers' homes, which were mainly built with bricks, were evaluated at RMB 20,000 to 50,000 yuan. Now their apartments in the town, with an area of more than 80 square meters, could be valued at more than RMB 400,000 yuan. The real estate assets of the farmers increase about 10 times.

Meanwhile, the local government uses the value-added gains from the land to buy social insurance for the farmers, who could enjoy social insurance allowance of RMB 400 to 500 yuan a month when they meet the statutory age.

The pilot town is located opposite to the Airport logistic processing area. Land has been reserved in the town for the development of second and tertiary industries, which could provide 280,000 jobs upon completion. According to the local government, about 16,000 farmers have received skill trainings, and they can work or become self-employed by starting their own business.

The ecologic environment has been obviously improved in the town. Besides the existing marsh, the Township Government built parks, dig lakes and reserved thousands of willows and fruit trees along the previous ridge of farmlands. It also constructed infrastructures such as the sewage treatment system, reuse of the wastewater and the system to separate raindrops from sewage, which aims to build an ecologic circle with positive cycling.

Currently, the residents in Huaming Town can enjoy complete facilitates for education, health, culture and sports and convenient lives with excellent supply of water, power, gas and centralized heat. The farmers' life standard has been greatly improved who could also enjoy the achievements of the reform and opening up.

The Best Urban Practices Area has been a key innovative project of World Expo 2010 Shanghai, which will display the recognized, innovative and valuable cases that have dedicated to improving the urban life quality. The pilot town of Huaming has been selected from 106 projects in 87 cities around the world.

Through better tuning government functions, the Tianjin Administrative Permission Service Center enhances its examination and approval efficiency and wins praise from the public

At present, when applicants intend to register a company, or companies plans to invest a project, instead of going to many related government departments to gain approvals, they can just take a one-stop trip to the center and get everything done at one time.

As many businessmen said, it used to take them at least several days to get all the certificates they need since they had to go to many related departments one by one. With the centralization of approval agencies and simplification of examination process, it is now convenient for the businessmen who intend to invest in Tianjin to go through all the procedures.

In 2004, with the implementation of the country's Administrative Permission Law, Tianjin decided to set up administrative permission center in the city and county (district) level. It aims to establish a unified body that can provide "one-stop" administrative permission service, a move that is well received by the public.

The Tianjin Administrative Permission Service Center now has a unified platform to deal with various administrative approvals at one time. The platform consists of four large halls, which are divided into 16 zones in accordance with their different functions. There are 160 windows and 66 examination approval rooms altogether. 85 city-level government departments as well as their auxiliary service units are stationed in the center now. They all adopt a rule to examine applications on the spot and give feedback within a time limit.

The adjustment of the government functions has greatly improved the examination and approval efficiency. At present, among all the 852 items that need approval from government departments, 90 items that need approval from auxiliary units and 22 certifications that need annual check-up, 95 percent of the applications can be dealt with in one place and 90 percent are approved on the spot. As a result, the overall examination and approval efficiency is raised by 55.6 percent.

For Tianjin residents who need service at home, they can dial 24-hour hotline 88908890 or log on the website of the service center to get access to the service they need. It is also a part of the function of the service center.

If applicants are not satisfied with the efficiency of the administrative examination and approval process, they can lodge complaints on the spot, via telephone, letter or Internet. The Tianjin Administrative Efficiency Complaint Center can provide surveillance for government administrative efficiency. It has an online system that combines administrative examination and approval management and surveillance of the administrative efficiency together, which can ensure a fair and transparent environment for administrative examination and approval.

At the beginning of this year, Tianjin launched a unified examination and approval system. Some city-level departments granted the approval rights of some administrative items to some county (district) level departments. Companies and units can get approvals they need at the service center at one time, which save them a lot of trouble.

The streamlining and rectification of administrative examination and approval process also contribute to the adjustment of government functions and enhance administrative efficiency. Thus, the one-stop service earned praise from the public and is on the course of steady improvement. The Tianjin Administrative Permission Service Center also gained fame nationwide. So far, 560 inspection groups from the other provinces have come to Tianjin and visited the center.

As a national vocational technical education reform experimental zone, Tianjin pioneers a characteristic route to the combination of work and study

"The 2008 Vocational Skills Competition of National Technical Vocational Colleges" was held in June in Tianjin. More than 3,000 contestants participated in the competition. All of them were from 37 provinces, autonomous regions, municipalities directly under the Central Government, cities directly under state planning and Xingjiang Production & Construction Corps.

The business arena kept a close eye on the competition. Nearly 1000 enterprises came to the competition, 20 of which were among World Top 500 companies. Tianjin has taken vocational education reform experiment as an important task and decided to hold annual Vocational Skills Competition among all the technical vocational colleges in China since 2008.

Vocational Skills Competition can help create a situation, in which "the College entrance examination is for general education, while vocational skills competition is for vocational education". This answers to the need that vocational education should adapt to the new trend of economic and social development. Vocational Skills Competition is also an essential innovation of Chinese education system.

In 2007, secondary vocational colleges enrolled 8.1 million students, resembling the enrollment scale of senior high schools. The number of students of higher vocational education reached 8.61 million, half that of general higher education. The employment rate of graduates from higher vocational colleges is over 96 percent.

As the origin of Chinese vocational education, Tianjin has pioneered a route to the combination of work and study with Tianjin characteristics. In 2005, the Ministry of Education joined hands with Tianjin Municipal Government, signing an agreement of Establishing a Reform Experimental Region of National Vocational Education, and confirming five experiments such as deepening the reform of vocational education system.

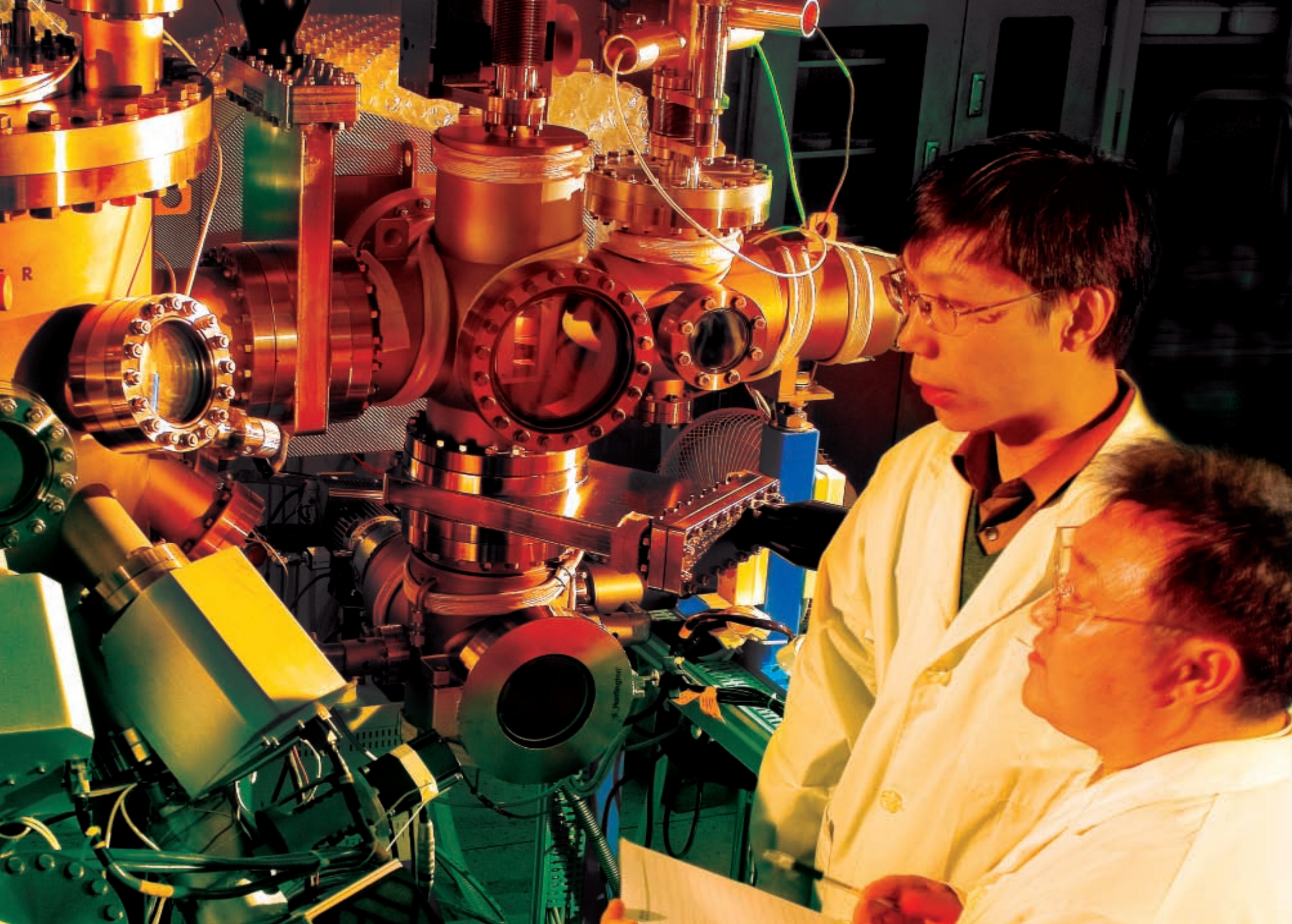
In August 2007, the two parties came to terms on eight issues such as the establishment of Binhai New Area Training Bases for Technically Demanded Learners, annual Vocational Skills Competition of National Technical Vocational Colleges and promoting the system of obtaining employment admittance.

At present, in Tianjin, there have been 25 vocational colleges recognized as Key Municipal Demonstrative Vocational, 33 training bases awarded Key Construction Projects and 2 higher vocational colleges admitted into National Demonstrative Schools. In addition, 93 enterprises including Tianjin Pipe Corporation have been selected as the First External Training Bases for vocational colleges in Tianjin.

Moreover, Tianjin furthers the reform of vocational education system by establishing 10 different vocational educational groups in industrial organizations, urban communities and rural counties, which ensures close combination of vocational education and economic development. Nowadays, 50 percent of secondary vocational colleges and 85 percent of higher vocational colleges are set up by industrial enterprises. More than 94 percent of newly employed workers graduate from vocational colleges.

In Tianjin, vocational education is considered as an important pillar of economic & social development and a main approach of improving the quality of workers. The Government will put great efforts in creating innovative ways of talent cultivation and exploring the development path of vocational education with Tianjin characteristics.

As far back as Westernization Movement, "Promoting the simultaneous development of work and study" had become an indispensable theory to start business or set up schools. After the founding of People's Republic of China, "work-study" program carried out in Tianjin by the State had exerted great influence on national vocational education. In the wake of Chinese reform and opening up, Tianjin had pioneered a route to the combination of work and study with local characteristics.



The innovative and fast-developing Tianjin Hi-tech Industry Park has been a hot land for investment

In July 2008, Futong Group signed an agreement with Tianjin Hi-tech Industry Park (THIP) to settle its R&D center and manufacturing facility in Binhai Hi-tech Zone. One month later, Xiamen San An Optoelectronics Co. also signed an agreement with THIP to locate its LED project here after winning a series of preferential and incentive policies. The growing THIP has attracted the interests of investors of the industry.

In order to foster sound environment for innovation and private companies, THIP issued simulative measures in May 2008, announcing that the high-tech project leaders could get one-off start-up fund subsidy of RMB 3 to 5 million yuan. Meanwhile, the park administration will provide offices for R&D with an area of 100 to 500 square meters to these elites without charging rents for three years.

The growth of high-tech companies needs the fund support. Hi-tech Development, one of the listed companies in THIP, is mainly engaged in building and operating hatches for industrial real estate companies and high-tech companies. It could provide three-level hatching mode, or basic, improved and developed services to companies at different stages of their development, including the seed stage, growth stage and maturity stage.

Approved by the State Council, THIP was officially established in March 1991 and was among the first batch of State-level high-tech industry parks. With a planned area of 85.74 square kilometers, THIP is composed of Huayuan Industry Park, Binhai High-tech Zone, Nankai Scientific Park, Wuqing Development District, Beichen High-tech Industry Park and Tanggu Oceanic and High-tech Industry Park. The Huayuan Industry Park and Binhai High-tech Zone are the core areas of THIP.

As the first "coal-free" district and a national environmental protection demonstration area with the certificate of ISO 14000, Huayuan Industry Park has attracted the investments from a big number of world-renowned companies. Of the total 3,600 companies in the park, 34 are among the World Top 500, including Siemens, Toyota, Samsung, Microsoft, Sanyo and NEC.

As an expansion zone of THIP, Binhai High-tech Zone has been the first State-level high-tech park approved by the State Council to be build with the joint efforts of the ministry and municipality government. The Ministry of Science and Technology has put Binhai High-tech Zone on the list of China's pilot high-tech parks with world first-rate performance. The Ministry of Science and Technology has also granted all kinds of incentive policies to support the development of Binhai High-tech Zone, including the application of key national scientific projects.

Innovation has been the soul for the development of THIP, which also created excellent environment for the SMEs. In the first half of this year, THIP recorded RMB 22.1 billion yuan of GDP, which represented an increase of 32 percent from the corresponding period of last year. The sales of THIP surge 33.4 percent year-on-year to 80.2 billion yuan, up 7.5 percentage points from a year before.

So far, many high-tech projects, including the manufacturing and application industrial base for space probe of China Aerospace Science and Technology Corporation, the wind power project of Guangdong Mingyang Electric Co., the R&D center of Tianjin Institute of Pharmaceutical Research, Air Liquide China and Dalian Hi-Think Computer Technology have settled down in Binhai High-tech Zone, which laid a sound foundation for the development of THIP.

After several years' development, five major industrial clusters, including software and high-end information manufacturing industry, green power industry, advanced manufacturing industry, bio-medicine industry and modern services industry, have taken shape in THIP, which has been the most powerful drive to the economic growth of THIP.

Tianjin is actively creating a new base for the technology innovation of China civil aviation

In April 2008, China Civil Aviation Science & Technology Industrialization Base — Aviation Industrial Park went into construction in Tianjin Airport Industrial Park. An aviation industrial chain is taking the form in Tianjin with Airbus A320 Aircraft General Assembly Line Project leading the way.

The first-phase construction of the Aviation Industrial Park will build a 40,000-square-meter R&D center and a 100,000-square-meter factory, including civil aviation product design center, technical center, engineering center, support center, test pilot approval center, technical authorization center, training center, aeronautical technology exhibition center and a comprehensive research institute.

On October 16, 2005, Civil Aviation Administration of China, together with Tianjin Municipal Government, signed Cooperative Agreement on the Establishment of Civil Aviation Science & Technology Industrialization Base, confirming the set up of civil aviation science & technology industrialization base in Tianjin Airport Industrial Park in the Binhai New Area.

The base covers an area of 11 square kilometers. It is based on excellent investment environment, preferential investment policy, convenient transportation system, abundant resources in civil aviation science & education and high-efficiency service system, which enables the base to become the best location for the development of civil aviation industry and airport economy.

At the moment, the Airbus A320 General Assembly Line Project has settled in the base. It is expected that the first aircraft will be delivered in 2009. After 2011, four aircrafts will be built every month.

Both parties state that the purpose of base construction is to promote the development of civil aviation science & technology industry in China, strengthen global competitiveness of civil aviation of China and maintain the transformation from "big power of civil aviation" to "great power of civil aviation". What's more, Tianjin should be built into a high-level base of modern manufacturing, R&D and technology commercialization so as to accelerate the opening up of the Binhai New Area.

China Civil Aviation Science & Technology Industrialization Base is the only one of this kind in China. At present, first-phase construction of Aviation Industrial Park has kicked off.

The base has begun to see its accumulative effects increasing: Introduction of aircraft repair & modification project by Memphis Group Inc (US), Lifesaving equipment production agreement with Thornton (US). China Aviation Supplies Import & Export Group brings in projects concerning aircraft leasing, composite material, aerospace coating, aviation spare parts allocation and manufacturing of seats.

In addition, more than 30 enterprises have shown interests in investing or signing contract. Among them are Honeywell (US), nacelles by Goodrich Corporation (US), PPG Aerospace

Coating, engine repair by Saifeng, THALES (France) and EBS (Canada).

The person in charge of the project indicates that China Civil Aviation Science & Technology Industrialization Base will be market-oriented. It will help create a first-class platform for civil aviation science & technology innovation and industrialization and achieve scale operation gradually. In the end, the base will grow into a high-tech industrial park with intensive industry clusters and complete industrial chain.

Bio-Pharmaceutical International Innovation Park is driving ahead the rapid development of Binhai New Area's bio-industry

In July of 2008, the Ministry of Science and Technology and Tianjin Municipal Government started the construction of Jingjinji (Beijing-Tianjin-Hebei) Bio-Pharmaceutical Industrialization Demonstration Area in joint effort. The area highlights the Bio-Pharmaceutical International Innovation Park, and develops the infrastructure and industry incubation platforms that are up to international standards.

With the start of the park's construction, the bio-industry of Binhai New Area is embracing an era of rapid development.

In the period of "Eleventh Five-Year Plan", China's bio-industry has maintained rapid development. The 2007 output value of China's bio-pharmaceutical industry totaled RMB 634 billion yuan with an increase of 25 percent year-on-year. The planting area in agriculture and forestry has further increased and a number of newly-emerging industries such as bio-energy, bio-manufacturing and bio-service are taking shape.

Nevertheless, there is still a lot to be desired for China's bio-industry, compared to that of developed countries. The local bio-enterprises are more often of smaller scales and are in a comparatively stronger need to develop their capacity for independent innovation. In terms of the proportion of the R&D input in the sales revenue in this industry, China only achieves one-tenth of that in developed countries.

In 2006, the Ministry of Science and Technology, the Ministry of Commerce, the Ministry of Health, the State Food and Drug Administration and Tianjin Municipal Government decided to establish Bio-Pharmaceutical International Innovation Park in joint effort, making it an important bio-technological and pharmaceutical R&D transformation base to further drive the development and breakthrough in these two industries in China.

State-level Bio-Pharmaceutical International Innovation Park has a planned area of six square kilometers, including R&D Zone, Incubation Zone and Manufacturing and Commercial Zone. The core of R&D Zone is Tianjin International Bio-Pharmaceutical Joint Institute, which is also the symbol of the international innovation park.

Since 2006, the construction work on Tianjin International Bio-Pharmaceutical Joint Research Institute has been in full swing. A major building of 70,000 square meters, part of the first-stage construction, is supposed to be completed at the end of this year. Other first-stage shared technological platform projects include Clinical Test Platform, Drug Analysis and Test Center and GLP Drug Safety Evaluation Center, all of which will be put into service in early 2009.

The research institute promotes cooperation on a world-wide scale. It is establishing Sino-Italian Traditional Chinese Medicine Joint Laboratory with Italian National Institute of Health, and it has reached an agreement with Sweden's Karolinska Institute to co-establish a R&D center.

The Ministry of Science and Technology and Tianjin municipal government also started in joint effort the construction of Jingjinji (Beijing-Tianjin-Hebei) Bio-Pharmaceutical Industrialization Demonstration Area in the Binhai New Area with a planned area of 10 square kilometers. In five years, 100 major projects that push forward the transformation of pharmaceutical research and development are supposed to be established, generating an industry scale totaling RMB 50 billion yuan and making the Binhai New Area a pharmaceutical R&D base with China's own intellectual property rights.

Presently, in order to expedite the development of the demonstration area, Tianjin has unveiled a series of preferential policies to encourage people, institutes and enterprises to make innovation and start business. For instance, Fund Devoted to Talent Pooling, which totals RMB 200 million yuan annually, has been established. Those nominated entrepreneurs with their own intellectual property rights and projects of industrialization prospect will be sponsored with specialized fund of RMB 3 million yuan.

China's Eleventh Five-Year Plan on Bio-Industry proposes that bio-industry should become a newly-emerging industry that develops fast, has a good quality efficiency and far-reaching and influential impact on other industries. According to the plan, till the year of 2010, the output value of bio-industry in China will have reached more than RMB 500 billion yuan, accounting for two percent of the year's GDP.

Tianjin: China's industry base for the modernization of traditional Chinese medicine

If people boil several herbs with water in a ceramic-like casserole and then sift the ingredients with a piece of gauze, they will get a dark tea, which is called decoction of medicinal ingredients by the Chinese and is a cure to illness very familiar to ordinary Chinese people. Now, China's technologists are applying modern methods to transform the ancient-old techniques. They extract active ingredients from herbs, process them and make them into traditional Chinese-medicinal drop pills, tablets and injections, which are not only easy to take, but also more effective in some cases.

As the biggest and veteran industrial city in North China, Tianjin takes the lead in this field in the country. Presently, Tianjin has had 880 traditional Chinese-medicinal drugs which have been proved by State Food and Drug Administration, competent to make 26 types of Chinese medicaments including drop pills, tablets and injections. It also owns 50 types of protected traditional Chinese medicines. There are 218 types of Chinese medicines registered for overseas sales, 118 types of which are registered as drugs.

What is worth mentioning is that one listed company in Tianjin is going through a tough application procedure. It is very likely that the drop pill produced by the company would get the accreditation of the FDA of America. This millet-like little drop pill is able to offer emergency treatment and provide health care, which celebrates an annual turnover of several billion yuan in China.

The Chinese Government has nominated Tianjin as the National Technological Industrial Base for the Modernization of Traditional Chinese Medicine. So far, a number of institutes have been established successively, including State-level Drug Metabolism Major Laboratory, Tianjin Research Center of Newly-Developed Drugs, Tianjin Research Center for Traditional Chinese Medicine, Tianjin Technological Engineering Center for the Modernization of Chinese Medicine, Quality Management Center for Modern Chinese Medicine and two state-level enterprise technological centers, whose research centers on the safety evaluation of newly-developed drugs has been granted GLP accreditation. A technological innovation system of the modernization of Chinese medicine is taking shape.

So far achievement has been made in the research and development of some important techniques concerning the modernization of Chinese medicine. More than 20 important techniques are now widely applied in Chinese medicine enterprises, including three-phase fluidized bed, supercritical fluid extraction, embrane technology, film coating, nano and molecular distillation. Moreover, research work has been carried out concerning the technique optimization and quality standard of 80 Chinese medicine fluid and tablet drugs. There is also a data base for the chemical reference standards of 200 Chinese-medicinal drugs, and more than ten GAP Chinese-medicinal herbs bases.

Tianjin also established two modern Chinese-medicinal industry parks of Tasly and Tianjin Zhong Xin Pharmaceutical Group Corp., and carried out systemic exploitation of twenty major Chinese-medicinal categories successively. Besides, the city promotes the second exploitation of major Chinese-medicinal products based on the principle of modernization and internationalization. The number of single drug items, which have a sale volume of more than RMB 100 million yuan, has now increased to five.

However, the modernization of Chinese-medicinal drugs is just taking off. Japan and South Korea took the lead in the exploitation of this area and China only occupies less than ten percent of the market.

According to the Tianjin Municipal Economic Committee, the goal of the base is to improve the modern logistics of Chinese-medicinal drugs, information, variety, industry and technological R&D, to expedite the modernization and internationalization of Chinese-medicinal drugs, to develop a number of modern Chinese-medicinal categories, and to cultivate modern Chinese-medicinal industry groups with strong innovative competence and high industrial intensiveness.

Till the year of 2010, Tianjin will have established a sophisticated Chinese-medicinal innovative system, constructed 50 standard Chinese-medicinal plantations, completed the exploitation and the second exploitation of 20 modern Chinese-medicinal drugs and there will be two types of modern Chinese-medicinal drugs entering the main-stream international pharmaceutical market. Two groups with more than 10-billion-yuan assets will be created, with a modern Chinese-medicinal zone covering the functions of modern Chinese-medicinal logistics, modern Chinese-medicinal production and technique exchange, modern Chinese-medicinal export, Chinese-medicinal information exchange and Chinese-medicinal culture exchange.

Tianjin is forging ahead towards the international advanced level in the field of animal cloning

From the first embryo-cloned Boer goat to the start-up of the project on soma-cloned productive cow, Tianjin is forging ahead towards the international advanced technology level in the field of animal cloning.

In 2002, Tianjin started the Project on Embryo-Cloned Boer Goat. Jinsheng, the first embryo-cloned Boer goat in the world, was born on November 2, 2005 in Tianjin. Jinsheng gave birth to a mixed twin, Jinbao and Jinhua, in March of 2006. Jinhua has survived and remained in good condition. On April 9, 2007, the first soma-cloned Boer goat in China was born, named Jinying.

On June 26, 2008, Jinying, who was more than one year old, and a pure-breed Boer bill goat got "happily married".

Meanwhile, the project on cloned productive cows was started. On July 3, 2008, the experts of Tianjin Cloned Productive Cow Project Team extracted the skin cells from the ears of five Holstein cows and carried out embryo culture. On July 26, all of the extracted cells survived.

"Next step is to extract the cell nucleus from the survived cells to substitute the nucleus of an oocyte from an ordinary cow and transplant the new cell to another cow, thus realizing the cloning," said Ding Boliang, Head of Tianjin Institute of Zootechnics and Veterinary Science, "any ordinary cow can be the receptor of transplanted cells."

According to sources, in the international research arena, the success rate of cloning cows using somatic cells could only reach two to three percent. "We do hope we are able to succeed in one try. But objectively speaking, it takes at least two to three years to fully understand and master the technique of cow cloning," said Ding Boliang.

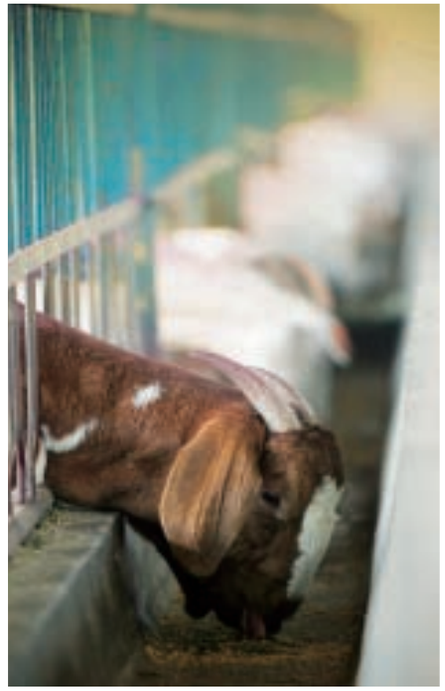
Presently, Tianjin soma-cloned cow project is in the charge of Dr. Liu Haijun, an animal-cloning expert, and is supported technologically by Dr. Liu Ling, an American scientist of Chinese origin from the University of Texas. These two experts both took part in the laboratory work on Tianjin embryo-cloned goat and soma-cloned goat, and are very experienced in scientific researches.

"So far, Tianjin has achieved the international level in the field of Boer goat soma-cloning technology. It is believed that through the joint effort of the research team, we would succeed in the experiment on cloning productive cows," said Dr. Liu Ling.

Ding Boliang said that the research carried out in Tianjin on animal-cloning technology was mainly to produce "cloned food". Further tests on the feasibility of using cloned animals for food will be conducted in future experiments. The ultimate aim of the research and development work on the technology is to keep the best species and genes to ensure the mass reproduction of high quality species. Therefore, the prospect of cloned food production should be possible.

According to Ding Boliang, when Tianjin is starting up the project on soma-cloned productive cow, a new project on soma-cloned Boer goat is also underway without inviting much attention.

"We shall accumulate more experience in our new project on Boer goat cloning experiment. It is planned that eight to ten goats will be successfully cloned and efforts will be made in cloning bill goats to fill in the research gap," Liu Haijun said.



The world's biggest LED illumination demonstration project is shaping the future of Tianjin's industrialization base for semiconductor illumination

In the new campus of Tianjin Polytechnic University, there are approximately 5,000 60-watt or 80-watt semiconductor lamps dotted all around the roads, lawns and dormitories. The university is enjoying its own achievements in scientific research. In the past one year and more, these energy-efficient lamps have saved up to RMB 1.8 million yuan and they are also the world's biggest-scale semiconductor illumination demonstration project.

These lamps are the research achievement by the joint effort of the university and Physics Institute of Chinese Academy of Sciences. For China, a country inflicted by an ever-increasing threat of energy shortage, seeking and promoting new energy-efficient technology are very promising in terms of market prospect. The situation also foretells the emergence of a new technology.

As a matter of fact, Tianjin has established Development Center for Semi-conductor Illumination Project which combines manufacturing, studying and researching. It has preliminarily completed the R&D at all levels and the industrial layout, improving the R&D of major materials for LED and final products, making possible the industrialization of the major materials for semi-conductor illumination with an output of 10,000 pieces per month.

Supported by Tianjin Polytechnic University, Tianjin has established Tianjin Development Center for Semi-conductor Illumination Project, which combines manufacturing, studying and researching, in association with 11 institutes including the Physics Institute of Chinese Academy of Sciences, Tianjin University and Tianjin Haibo Electro Optical Technology Co., Ltd.

Presently, Tianjin Haibo Electro Optical Technology Co., Ltd. is cooperating with Tianjin Polytechnic University to industrialize general semi-conductor lamps. Now they are capable of manufacturing 10,000 street lamps and 100,000 down lights every year. The sale of 2007 totaled RMB 26 million yuan and the products are used in many demonstration projects in China.

This company also successfully developed the first LED car headlight independently, supported by the State. The headlight consists of the high-beam light, parking light and steering light adopting high-brightness LED illumination. The high-beam light has passed the state-standard test of China Automotive Technology & Research Center.

American technological research teams are also coming to Tianjin to set up a company to develop and industrialize sapphire substrate. The technological indexes of the product not only reach the international standards of products of its kind, but also surpass those of world renowned high-quality products in main areas of planeness, high precision in directioning and so on so forth. Presently an assembly line has been finished with monthly productivity of 5,000 pieces. It is the only enterprise in China which adopts independently-developed technology to produce gallium nitride substrate.

Another research institute, China Electronics Technology Corporation Research Institute No. 46, has realized the industrialization of the preparative technique for production of gallium arsenide materials. In the second half of 2008, the manufacturing scale for gallium arsenide polished pads reaches 30,000 per month and makes the company the biggest manufacturer of gallium arsenide substrate domestically.

According to Tianjin Science Committee, through the combination of manufacturing, studying and researching, Tianjin will have semi-conductor illumination industrial cluster in the Binhai New Area and ultimately establish State-level R&D transformation center for semi-conductor illumination. There will be five to ten competitive key enterprises with annual sale totaling RMB 1.5 to 2 billion yuan.

Tianjin Membrane: new technology makes the biggest hollow fiber membrane producing center in Asia

After four-month test in France, the world's biggest water-cycles managing company Veolia Water finally decided to cooperate with Tianjin Motimo Membrane Technology Ltd two years ago. The France-based company also planned to purchase Motimo's products since then.

Two years later, the largest hollow fiber membrane producing center in Asia was successfully launched in the Binhai New Area of Tianjin. The center boosts its own intellectual properties and core techniques, making it the research center of China's membrane technology. It reached a sales volume of RMB 500 million yuan.

At present, Motorola and McDonald's have officially appointed Motimo's MF equipment as their sole pure water filtering products.

The company has also left its noticeable marks on multi-heating separation method, one of the most advanced technologies of separation membrane. Its research has entered the second phase, making it another milestone China's technology in this field.

Separation membrane technique is mainly adopted in recycling water, purifying the polluted water, making the pure water, and extracting medicines from other elements. It reaches various fields including energy, environmental protection, and biology.

However, it becomes more useful for China if the technology can help improving the chances of re-using the water. "China's average water recourse is only one sixth of the world's average level. It is an urgent task to solve this problem," Zhang Hongwei, secretary of the Party Committee of Tianjin Polytechnic University and chairman of the board of Motimo.

Zhang also mentioned that the center is aimed at researching and developing the hollow fiber MF membrane and hollow fiber ultrafiltration membranes with big market potentials. It will focus on environmental protection, desalination, modern biology, and medicine and food, building a series of model projects of membranes.

The company now has three core techniques with international level: CMF, MBR, and TWF. It has spinning 10 producing lines, 68 products with China's patents and 3 international patents. The company also has completed more than 100 researching tasks for the country and some provinces. It also has become a high-level research center in the world. Its anti-pollution membrane has attracts world's attention.

Motimo also takes response to build a one-million-square-meter membrane producing center for China because of its advanced technology and good performance in the market.

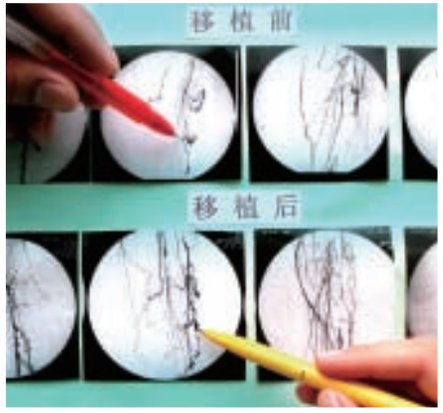
Motimo now is building another national membrane research center in the Binhai New Area of Tianjin, and it now targets intelligent membranes at present.

Tianjin: China's R&D and Industrialization Base for stem cell

The Economic PhD Ji Xingwang became the nation's first person who deposited her new-born baby girl's umbilical cord blood into Tianjin Cord-Blood Stem Cells Bank, which is also dubbed as Life Bank, on April 18, 2001. The umbilical cord blood could not only be used to cure leukaemia but also other diseases.

Today, the Life Bank has received wider recognition in China. Tianjin Cord-Blood Stem Cells Bank has been one of the largest stem cell banks in the world. It has kept more than 80,000 samples of Cord-blood stem cells and is capable of handling 100 samples of cord blood every day. The total storage has reached 300,000. It was also among the first batch of cord blood banks that have passed the evaluation of the Asian cord blood bank organization.

The bank firstly introduced in the storage method of cord blood for own use while invented a combined mode for public storage and personal storage. According to incomplete statistics, it has set up more than 70 branches and working stations around the country, where keeps more than 30,000 samples of new-born babies' cord blood. They have accepted the inquiries of 615 patients without kin relationship with the donators from domestic organ transplantation organizations and Asian cord blood organization. With a success rate of 97 percent for the matching, the bank and its subsidiaries have saved dozens of patients.



The industrial insiders believe that, compared with other cord blood banks in the world, the Tianjin bank has been in a leading position in terms of the storage amount, handling capacity, cleanness, telecommunication and Internet, security and indoor environment control, which also sets an example and standards for domestic or even the global cord blood banks.

The large-scale cord blood bank has laid a sound foundation for the research and industrialization of stem cells in Tianjin. Currently one State-level research institute, Institute of Hematology under Chinese Academy of Medical Sciences, and three R&D companies have jointly developed a State-level R&D and transformation base for stem cells.

Apart from this, it has also set up a national key lab for hematology, national engineering and technology center for stem cells, national industrial base for stem cells products and national research center for cells products. All these institutes have made Tianjin a national leader in the research and industrialization of stem cells.

The national industrial base for stem cells products is located in THIP, which is mainly engaged in the storage and clinical application of cord-blood stem cells. The project passed the checks in May 2005. With a total investment of RMB 118 million yuan, the base takes up a land area of 40,000 square meters and a construction area of 19,000 square meters, which is composed of Xiehe Stem Cells Gene Engineering Co., National Research Center on Engineering Technology of Stem Cells and a transplantation hospital.

In a populous country with 10 to 15 million newborn babies a year, the market for cord blood storage has an excellent prospect given the rising payable capability and improving sense for health of Chinese citizens.

Faster development of the economy with less energy consumed. The ecology-friendly transformation of the extra large and old industrial city makes the progress

Issues like the energy conservation and emissions reduction, the seawater desalination, the green energy and the circulative economy are becoming the most popular economic topics of Tianjin. Behind them are the difficult problems confronting the Chinese economy. On the one hand, the country must maintain double-digit stable economic growth; while on the other hand, China has encountered the problem of resource restraint. Since Tianjin is an extra large and old industrial city of China, this conundrum turns out to be even more prominent for Tianjin.

During recent years, through transforming the economic growth pattern, Tianjin government has been giving top priority to energy conservation, energy efficiency enhancement, emission control, pollution reduction, eliminating backward production capacity, in order to crack the hard nut. And Tianjin has squeezed into the top level of new industrialization nationwide.

From 2003 to 2007, the gross value of industrial output of Tianjin has increased by 23.9 percent every year. The industrial added value has grown 18.6 percent on annual average, 6.1 percentage points higher than the national average. The accumulative total of energy consumption per 10,000-yuan industrial-added value during the same period decreased by 37.1 percent, and for the yearly average it dropped 8.9 percent, which amounted to 1.23 tons of standard coal per 10,000 yuan of industrial value. This was only one second of the national average. What's more, the volume of water consumption for every 10,000-yuan industrial added value was only 20 cubic meters, being 13 percent of the national average and ranked the least nationwide. The re-use ratio of industrial waste water reached 90.95 percent. The comprehensive usage ratio of industry solid waste soared to 98.4 percent, and that for the alkali dregs, the steel slag, the pulverized coal ash increased to 100 percent. Besides, the extent of seawater desalination and waste water re-use has reached the advanced standard of the nation.

According to the report of Tianjin Development and Reform Commission, starting from establishing and developing the coordinated mechanism of the circulative economy, Tianjin has set up the incentive mechanism, which can promote the circulative economic development. The city has also expanded the campaign of saving the energy and water, and enhancing the comprehensive utilization of all categories of resources. Meanwhile, Tianjin has established a bunch of circulative economic experimental demonstration projects, campuses, enterprises and small cities in the key industrial segments, built certain circulative economic industrial chains, and created the social circulation system, which binds various industries together.

The emission-reduction campaign is in full swing. In July, 2008, Tianjin worked out the work program for reducing the chemical oxygen demand (COD). It was clear about the annual objective, which regulates that the total COD emissions must decrease by 1,400 tons, with a year-on-year drop of 1 percent.

In order to meet the above goals of energy conservation and emission reduction, Tianjin has released a series of measures. Within this year, there will be 11 sewage treatment plants of city or township level to be either newly built or expanded; 16 projects concerning centralized sewage processing facilities will be either newly built or expanded in industrial parks; 26 industrial projects need to be optimized; 24 projects need to be reshuffled and adjusted in terms of structure, 16 of which have to be closed down within 2008. As for the water recycling projects, it will involve the construction of 5 sewage treatment plants.

At the same time, in order to smoothly achieve the goal of emission reduction in 2009, Tianjin proposed to expand the capacity of 14 waste water treatment plants, such as the Eastern Suburb Sewage Treatment Plant, the Yingcheng Sewage Treatment Plant, the Lutai Sewage Treatment Plant, so on and so forth. The construction must be completed in 2008.

These measures work. At the end of 2007, six ministries including the National Development and Reform Commission took Tianjin as the national circulative economy demonstration city. In 2007, energy consumption for 10,000-yuan GDP of the whole city dropped to 1.016 tons of standard coal. For two consecutive years, the dropping margin of per unit GDP energy consumption has ranked the second across the whole nation. The energy consumption per 10,000 yuan added value for scale industrial segments has dropped to 1.23 tons of standard coal, which is listed the third across the country. Emissions of sulphur dioxide and the chemical oxygen demand dropped by 4.03 percent and 4 percent respectively. The consumption of water for every 10,000 yuan GDP dropped to 47 cubic meters, among which the water consumption for every 10,000 yuan industrial added value dropped to 16.15 cubic meters. The comprehensive usage ratio of industry solid waste soared to 98 percent, or above. The processing ratio of the city life trash detoxification increased to 85.5 percent, leading other cities nationwide.

Tianjin has built five recurrent economic demonstration plots

Facing ever depleting natural resources and the deteriorating environment, the Chinese Government is trying its utmost to develop circulative economy and to work out some model projects to crack the hard nut of resource restraint and environmental pollution. In Tianjin, such pilot projects spread across the city, and they do work, to some extent.

Five of these pilot projects stand out, namely, TEDA, Tianjin Ziya Industrial Park, Lin'gang (near-harbor) Industrial Park, Hangu Electricity-Water-Salt Circulative Economy Demo Project and Huayuan Industrial Park.

There are four circulative industrial chains established within TEDA. They are about electronic communication, machine manufacturing, pharmaceutical chemistry, food and drinking industries. The four industrial chains create a network, in which enterprises involved can benefit from the diversity of products, the close relationship between each chain, the free flow of resources and the efficient application of resources. The district is almost zero discharging. In 2007, the energy consumption per 10,000-yuan GDP was only 0.187 ton of standard coal, with water consumption per 10,000-yuan GDP being just 7.26 cubic meters. The small per-unit GDP energy and water consumption won TEDA the fame of "TEDA model".

Tianjin Ziya Industrial Park is the state-level demonstration hub for waste electronic products recycling and disposing. It is also a disposal garden for imported waste products. Now the garden mainly disposes seventh category of imported worn-out mechanical and electrical products. Every year the park is able to disassemble 1 million tons of waste electronics. Meanwhile, 400,000 tons of copper, 200,000 tons of iron and 300,000 plastic can be produced here, winning the park a nick name as "mine in the city".

Lin'gang (near-harbor) Industrial Park is based on marine reclamation land. It is also a conservation-minded, eco-friendly, sustainable development zone. The Park gives development priority to four systems, namely the green petro and marine chemical zone, the circulative petrochemical industry driven by the ethylene cracker project, the public project recycling system, and the environment protecting system. Finally they can come to the effects of changing waste into resource, decreasing liquid emission, pollution-free gas emission and zero-draining of the waste water.

Hangu Power-Water-Salt Circulative Economic Demo District takes Tianjin Northern border Power plant, one of the first circulative economic experimental sites of the country, as the core, trying hard to construct the green circulative economic industrial chain of "electricity generation, seawater desalination, salt-making, salty chemical industry, and waste comprehensive utilization". This chain link takes electricity generation as the drive force, and desalinates seawater by using the afterheat of the power. The desalinated thick seawater can be made into salt. The salt liquid can be produced into some chemical products like bromide, potassium chloride, magnesium chloride, magnesium sulfate, etc.. At the same time, the wastes like pulverized coal ash made by generating

electricity will be produced as the building materials, so that it forms a mode of "resource-product-waste-renewable resources". In this way, seawater and the energy can be fully utilized, with "zero emissions" of waste water, waste gas, waste residue and waste heat.

Huayuan Industrial Park has the area of 11.58 square kilometer. After ten years of development, the Huayuan Industrial Park has become the base of new ideas, new technology and new talents. It has formed five big industry clusters, which include the green energy, the information and the software, the integration of machinery, the biological medicine and the new material.

Relying on the development of the industrial clusters and the restructuring of enterprises' material, energy, and communication network, as well as the extension of the existing network, the Park has maintained reasonable and specialized labor division among the producer, the consumer, the disintegrator within the industrial cluster. Through implementing clean production and efficient purchase among enterprises in the region, the Park has achieved the goal of making the entire network energy efficient and environmental friendly.

Ziya Circulative Economic Park, the city mine of Tianjin

Green trees, clear sky, limpid river, white duck. People will never believe that such scene is coming from a processing center for the waste electric products. People prefer to call it: city mine.

Located in Jinghai County, this center provides 400,000 tons of copper, 150,000 tons of aluminum, 200,000 tons of rubber and plastics materials, 200,000 tons of iron and 50,000 tons of other materials each year. It originates a quite big non-ferrous metal material market, with business connections all over the country.

Tianjin Ziya Circulative Economic Park (the Park for short) covers an area as large as 2.5 square kilometers, with infrastructures such as water, electricity, road, and communication meeting due standards. At present, there are 105 factories in the Park. The annual capacity of disassembling and processing reaches 1 to 1.5 million tons.

The Park is built under the overall requirements of the Ministry of Environmental Protection and the Tianjin Municipal Government. It is now one of the biggest specialized centers of North China for importing, disassembling and processing the abandons.

In 2007, authorized by the State Council, the Park was named as the national circulative economic pilot site by the six ministries leading by the National Development and Reform Commission. Simultaneously it won the title of "state-level recycling and processing demonstration base for the waste electronic products" from the Ministry of Industry and Information Technology. Also it was designated as the "enclosed area management" for imported wastes by the Ministry of Environmental Protection.

On May 7, 2008, testified by the Chinese President Hu Jintao and the then Japanese Prime Minister Fukuda Yasuo, Huang Xingguo, mayor of Tianjin and Kenji Kitahashi, mayor of Kitakyushu, signed the memorandum for the cooperation between the two cities, on the development of Ziya Circulative Economic Park.

The park boasts of superior geographical location and regional position. It borders on Hebei Province, and is 150 kilometers from Beijing, 60 kilometers from Tianjin, 60 kilometers from the Binhai International Airport, and 90 kilometers from Tianjin New Harbor. The park intersects with Jinghu (Beijing to Shanghai), Jingjiu (Beijing to Jiujiang), Jingguang (Beijing to Guangzhou) railways, as well as Tianjin Airport and Tianjin New Harbor, forming a solid integrated modern network for transportation and communication.

The park adopts an enclosed management mechanism. It has a full-time supervisory system for waste machines and electric products to be disassembled and processed. There is a

customs supervision zone set up in the park, applying the electronic weighing bridge system, electronic recognition system, container recognition system and radioactivity detection system, etc.. Those formed a united supervisory organization, which contains customs, quarantine and environmental protection.

The park has established a modern information center, a portal known as the China Ziya Recycling Economic Web and a renewable resources R&D center. The park preliminarily maintains information-oriented business management and combines producing, learning and researching in a scientific way. A professional research group takes shape in the park.

At present, the forest belt of the Park is as large as 143,000 square meters. The planned area of the park in long run is 100 square kilometers, with that for the medium-term planned area being 50 square kilometers, and that for the short-term one 30 square kilometers. The Park will progressively build a 'four-area' system, which includes combined service area, research and development area, storage and logistics area, and dismantling area.

With limpid rivers, clear sky and green trees, Tianjin is turning into a eco-city from an originally environmental-friendly city

As an extra large city on the coastline of North China, Tianjin has spent a lot of efforts protecting and improving the environment during recent years. After becoming the national environmental-friendly model city, Tianjin is now striding to a new target. Till 2015, Tianjin will basically grow into an ecology-friendly city, achieving the coordinated development between the social and economic development and the ecological environment.

In 2002, the Tianjin Municipal Government explicitly proposed the target of building a national-level environmental-friendly model city. Since then, the city has spent great effort improving its environment. It has implemented some projects one after another, such as "Clear Sky Project", "Pure Water Project", "Peaceful Life Project", "Ecological-Friendly Project", so on and so forth. The city's 27 indexes about the assessment have met the national inspection requirements. Besides, Tianjin second-level river renovation has obtained the "Chinese living environment model prize" awarded by the Ministry of Housing and Urban-Rural Development, which has laid a solid foundation for the city's ecological development.

In 2005, Tianjin was named by the State as a water-conservation and environment-friendly model city. After that, Tianjin proposed another plan, aiming at building a national hygienic and garden city, an eco-city eventually.

Clear about the development orientation of its own, Tianjin has been required to implement the sustainable development strategy steadfastly in order to build an international port city, where the economy is booming, the society is civilized, the technology and education are developed, the facilities are consummate, and the surroundings are excellent. The eco-city will become the economic center of North China. Apart from developing the economy, Tianjin also emphasizes that every part of the society should meet requirements of the sustainable development.

Therefore, Tianjin insists that the economic development should get along with human benefit, resource efficiency and environmental protection. Development speed, structure, quality as well as returns should be unified. On one hand, the city comprehensively optimizes the industrial structure and regional economic layouts, making efforts to solve structural environmental problems.

On the other hand, Tianjin speeds up the construction of environmental infrastructures so that the project for comprehensive environmental improvement can work. Before the 2008 Olympic Games raised its curtain, 20 projects aiming to benefit citizens' life have been basically completed. Tianjin Municipal Government started the 20 projects as early as 2007. The city environment has changed remarkably. The functions of its infrastructures have improved greatly, with 59.43 million square meters of the major roads outside the ring road afforested and 20.61 million square meters of the urban districts afforested. Altogether 183 roads of 333 kilometers in length have been renovated comprehensively. All these form a civic landscape where the tones are coordinated and the surroundings are neat.

Through hard and effective work, Tianjin's air quality is improving, with air quality of 320 days in 2007 reaching the standard of "good". All the city's drinking water has met due standard for five consecutive years. Besides, the processing ratio of city living sewage has reached 80 percent, while the detoxification ratio of home trash has increased to 85 percent. Moreover, 37 percent of the city's construction area has been afforested. At the end of this year, the city would reach the standard of being a national garden city.

Tianjin has drafted the "Summary of the Ecological City Construction", which clarifies the index system of building an eco-city. The system is altogether made up of 33 indexes, which go into 3 categories, including economic development, environmental protection and social progress. Last year, the summary has been authorized to take effect by the 39th conference of the 14th Standing Committee of Tianjin People's Congress.

In the process of building an eco-city, Tianjin has strengthened environmental protection on nature and ecology, aiming to promote the harmonious relationship between human and nature. Up to now, natural protection areas of Tianjin have occupied 13.66 percent of the whole city land, reaching advanced national level. There are altogether 8 towns entitled as "national towns with excellent surroundings". And there are 779 ecological villages and civilized-ecological villages in Tianjin. In 2007 the forest coverage proportion of the city has increased to 18.4 percent from 15 percent in 2000.

Through participating the campaigns of establishing the environmental-friendly model city, hygienic city, garden city and eco-city, Tianjin is expected to streamline all strength to consistently promote the environment and to perfect the city's function so that the ultimate objective of building an eco-city can be met and citizens can get benefit from it.

Before 2015 when the ecological city has been built, Tianjin will focus on five eco-system projects, which are: the safeguarding system of reasonable disposition and efficient usage of resources; the environmental-governing system;

the eco-industry system based on high and new technology, clean production and circulative economy; the ecological living system focusing on human beings and the harmonious relationship between human and nature, as well as between human and society; the ecological culture based on civilization.

Therefore, Tianjin would enlarge the investment for the construction of eco-friendly environment. In addition to the special fund, Tianjin has created the multifaceted mechanism of investment and finance through measures of taxation and loan.

In addition to investment in term of money, Tianjin also fuels the eco-city construction through legislation. The city strengthens the environmental legislation and works out local regulations and laws regarding ecological protection, ecological compensation, circulative economy, clean production, and resource conservation, etc..

Tianjin: the new model of water conservation in China

After years of exploration and research, Tianjin has become the model city for water conservation. In 2005, Tianjin was named as "the water-efficient city" by the Ministry of Housing and Urban-Rural Development (the former Ministry of Construction). Tianjin has become the role model for other cities, in terms of water saving.

The total volume of water resource in Tianjin is 1.569 billion cubic meters. With the imported and transferred water counted in, the water ownership per capita of the city is only 370 cubic meters. Tianjin's water supply depends on the transferred water from rivers outside the city, namely the Luanhe River and the Yellow river. The gap between supply and demand is prominent.

It is obvious that the water-conservation effort in Tianjin has worked. In 2007, water consumed for every 10,000-yuan GDP is 47 cubic meters, and that for every 10,000-yuan industrial value-added stands at 16.15 cubic meters. And the re-use ratio of industrial water has increased to 90.95 percent, which has reached the domestic advanced standard. According to the Ministry of Water Resources, Tianjin has been listed as the first provincial water-conservation pilot city on the east-middle line of South-North water transfer project.

Firstly, the Tianjin government promotes the water-saving campaign through legislation. Tianjin has promulgated and implemented 21 relevant local regulations and laws, which have effectively safeguarded and supervised water-saving work.

With the power and function to adjust the economic structure, the Tianjin government has eliminated industrial techniques, which are water intensified, inefficient in water usage, water polluting and energy intensified. The city also controls the planting of water-consuming crops. In Tianjin 60 percent of the effective irrigated areas adopt water-saving measures and technologies. Water-saving priorities go to the segments, such as electronic, metallurgy and petrochemical industries. Tianjin has upgraded the techniques of the water-cooling circulative system for 200 enterprises so that the concentration rate is raised to 3.5 times than the original 2 times.

The research on water-saving technologies has also effectively promoted the development of a water-efficient city. Series of state-level projects have been settled in Tianjin. All of them are based on the independent innovation, focusing on the key technologies about seawater usage, sewage resource transformation, industrial waste water treatment, membrane material, domestic water, and agricultural water-saving system. Tianjin has also proposed the trans-departmental, trans-regional, trans-field subject research on water conservation.

The development of recycling water has also made the progress. At present, 170,000 tons of recycling water can be treated in depth every day. The city has laid 238 kilometers of pipes for recycling water in down town area, with about 27 million square meters of inhabited areas equipped with two pipes in their houses. One pipe is for common water, while the other for recycling water. Preliminarily, the system for recycling water supply has taken shape.

Retaining rain and flood water has also attracted great attention in Tianjin. With engineering and non-engineering measures, Tianjin has established the flood management system. In 2007, the volume of the retained rain and flood approximately accounted for 8 percent of total water supply in the city, effectively replacing the water resource which should be transferred from the Luanhe River.

Meanwhile, this year, Tianjin has already set the new target of establishing a water-efficient society. The primary task is to facilitate the construction of 10 systems, which involve the water ownership system, resource management, water-efficient industry, economic adjustment, public participation, multi-source water assignment, water saving within each industrial segment, the ecological and environmental protection of water, water-saving laws and water-saving technologies. Tianjin would try to reach the assessment criteria of the water-conservation city, and accomplish the task of constructing a national water-conservation pilot society.

Those goals have already gone into a series of detailed data: The proportion of people who can drink safe water in the countryside is to increase to 70 percent; the water scarcity rate in the normal year to be controlled below 10 percent; all waste water drained from industrial enterprises meet relevant discharge standard; the processing ratio of city sewage stands at least 80 percent, while the utilization ratio of the recycling water is higher than 20 percent; people no longer over explore in-depth underground water, and the volume of underground water extracted decreases to 20 million cubic meters; the ecological environment of water to be improved, and the basic need of water for the essential water eco-system can be ensured.

South-to-North Water Diversion Project will solve the water shortage problem of Tianjin completely

The Tianjin trunk line of the phase I project of the middle-route construction of South-to-North Water Diversion Project will officially start construction in September of 2008. According to Bureau of Water Resources of Tianjin, the designing job of the project has been finished. At present, preparations for the construction, including land-acquisition, resident resettlement and bidding and tendering, are in full swing in accordance with the law.

According to General Layout of South-to-North Water Diversion Project, the project includes three water-transferring routes, namely the east, middle and west. The middle route, involving 13 billion cubic meters of water to be transferred, had kicked off construction in 2003. Construction of the middle route has been split into two phases.

The middle route project will draw water from Danjiangkou Reservoir at the middle area of Hanjiang River, which is a branch of the Yangtze River. The backbone canal starts from the Taocha hinge of Danjiangkou Reservoir, crossing the Yellow River at the west of Zhengzhou, and then basically going up along the eastern foot of Taihang Mountain and Jingguang (Beijing to Guangzhou) railway line. The canal splits into two branches at North-west of Heishan village, Xushui county, Baoding city of Hebei Province, where is 1,120 kilometers away from the starting point of the backbone line. From that point, one branch goes north to feed water for Beijing, and the other goes east to Tianjin, which is the Tianjin trunk line. The water will flow to Beijing and Tianjin naturally, passing Hebei and Henan provinces. The total length is 1,432 kilometers, with the Tianjin trunk line being 155 kilometers.

The trunk line project of Tianjin is responsible for providing water for some water-short counties or cities of Baoding and Langfang of Hebei Province and Tianjin as well.

According to departments of water resources, the backbone canal in Henan and Hebei Provinces will take the form of enclosed, lined and flyover surface channel. The Beijing part will use buried transferring pipeline and box culvert. The trunk line in Tianjin will adopt buried transferring box culvert.

According to Bureau of Water Resources of Tianjin, the Tianjin trunk line and its supporting pipeline networks will be completed in 5 years. Eventually, Tianjin will construct an urban water supplying system, which draws water from the Yangtze River, the Luanhe River and also the Yellow River in an emergency. The system will be connected to each other to better allocate water resources, guaranteeing safe water supply to residents' everyday life, the city's industries and the environment. It will contribute to sustainable development of the Tianjin society as a whole.

The South-to-North Water Diversion Project is an extraordinary strategic infrastructure of China, which aims to perfect water resource allocation across river basins and different areas. This project will alleviate water shortage in Tianjin, pushing forward the development of the Binhai New Area and promoting sustainable development of the city.

Tianjin Ecological City: a new try for transplanting Singapore's experience in China

A place with salinized soil, few vegetation, fragile ecology and water shortage will only remind common people of poor environmental condition. However, these are just the crucial factors for the joint project of ecological city between China and Singapore.

This ecological city is situated in the Binhai New Area of Tianjin. According to the plan, it will cover 30 square kilometers totally, 20 square kilometers from Hangu District and 10 square kilometers for Tanggu District. Its location is 15 kilometers away from the central area of the Binhai New Area, 45 kilometers away from downtown of Tianjin, and 150 kilometers away from Beijing.

Premier Wen Jiabao and Singapore Prime Minister Goh Chok Tong proposed commonly in April of 2007 to build an ecological city in North China, which should be in water-short area and does not occupy arable land. This city could be duplicated and promoted, serving as a model project. In this way, it could set an example for other areas. In November, the two countries signed a cooperation framework agreement.

In the third meeting of China and Singapore Joint Working Committee on July 1 of 2008, the initial work plan for ecological city had been passed. The two countries signed an agreement to set up joint companies, which symbolized that the development and construction of the ecological city would soon enter the stage of actual construction.

At present, planning for energy, transportation, water environment, forestation and detailed planning for the starting area are all under way. Construction for highway system, pipeline network, and telecommunication facilities has started. Three square kilometers earth has been filled in the starting area. The Investment Service Center has been completed. It is estimated that the preparation area will be set up by 2011.

According to the latest development, China and Singapore Ecological City Investment and Development Corporation Limited and Keppel Group have signed joint investment agreement and declared the founding of China and Singapore Joint Investment Company. The registered capital of the joint company is RMB4 billion yuan, with China and Singapore accounting for 50 percent each. At the same time, four specialized companies of ecological city energy, construction, municipal administration and environment protection are set up by investment companies from China and some outstanding companies from Singapore.

Compared to Suzhou Industrial Park also built up by China and Singapore, this project will generate more profound influence to China, who is seeking sustainable development. Facing increasingly severe environmental restrictions, China hopes that this project will set a good example for sustainable development.

It is by chance that the ecological city will be situated the in Binhai New Area of Tianjin. The Binhai New Area was initiated and set up by the Chinese Government two years ago, which is a similar open economic zone with Pudong District in Shanghai. Chinese Government hopes that it will explore a new development mode, which pays more attention to the balancing between development and environment.

According to the planning, the ecological city will occupy a ground space about 30 square kilometers, accommodating a population of 350,000. It will take approximately 10 to 15 years for the city to be completed. The population of permanent residents of the city will be controlled within 350,000 by 2020.

Cui Guangzhi, deputy director of administrative committee of the ecological city, claimed that detailed initial planning of the starting area fully studied and referred to successful experience and technology from Singapore in areas of Garden City construction, environment protection, transportation, landscape engineering and public health.

According to the planning, the starting area is situated at the south of the ecological city, with the ground space of 3 square kilometers, residence area about 2.8 million square meters, and population about 80,000. This planning is a result of joint designing by China and Singapore. It continues to taking ecological concern as the top priority and sticks to people-oriented principle. It also establishes a structure of ecological cells, ecological neighborhoods, and ecological communities.

The two countries show great confidence to the future of this project, which is also reflected in the planning. The ecological city will build up 5 grades of commercial service centers — the main center, secondary center, comprehensive area center, resident community center and the primary-level community center. An ecological valley from south to north will also be built to connect four ecological comprehensive areas with the ecological main center and to link transportation stations. Eventually city will realize the space layout as following — one axis, three centers and four areas; one island, three rivers and six corridors.

New energy and energy-saving technology will be widely adopted in the eco-city. Clean energy and renewable energy resources, such as wind power, solar energy, underground heat pump and air source heat pump, will reduce carbon emission to the largest extent. All the buildings in the ecological city should conform to the green architectural design standards. What's more, they also test and explore zero energy consumption house.

Experts believe that this new joint project is the highlight of the cooperation between China and Singapore. It shows the determination of the two countries to cope with global warming problem, strengthen environment protection efforts and save energy and resources. The two countries also form Sino-Singapore Coordination Committee at vice-premier level and Sino-Singapore Joint Working Committee at ministerial level to promote this project.

Tianjin: National New Energy Industrialization Base

Tianjin, although being an old industrial city in China, has made great progress in new energy-related industrial development. It is also a big contribution to the transformation of the city's industrial structure. Tianjin is leading in terms of new energy technology, manufacturing scale and main products' market share.

According to Economic and Trade Commission of Tianjin, the city has been speeding up the transformation of R&D results, promoting the integration of researching, studying and producing, and supporting science- and technology-oriented small and medium-sized enterprises. Tianjin has established a green energy industrial cluster of Li-ion and Ni-MH battery, solar panel, and wind power generators.

The almost completed production base of lithium ion battery is one of the representatives, which is the biggest in China. Tianjin Lishen Battery Joint-Stock Cooperation Ltd has formed an annual production capacity of 100 million of all kinds of Li-ion batteries with its own innovation-oriented technology. At present, Phase V expanding construction is under way, which will help Lishen become the biggest Li-ion battery production base in China with an estimated annual production of 570 million.

With the development of Li-ion battery as core industry, research, development and industrialization of supporting key materials have also started, among which, Tianjin B&M Science and Technology Joint-Stock Co Ltd has become China's largest positive-pole material producer for Li-ion battery. The company's output value of 2007 reached RMB 300 million yuan. Tianjin Jinniu Battery Material Co. Ltd has built a Li-ion battery electrolyte industrialization base with annual production capacity of 1,000 tons. The company has become the only one to produce electrolyte with self-made Lithium Hexafluoroarsenate and the quality of product has been ratified by more than 10 battery companies in China. Therefore, it could supply for Lishen sufficiently. The output of Tianjin Jiuniu Battery reached RMB80 million yuan in 2007.

Extraordinary progress has also been achieved in the field of solar panels. Researchers here have intensified the research of thin-film solar cells technology and made breakthrough in single and integrated technology. One is about the new generation of a-si and poly-si tandem solar cells' technology, with which transformation rate of small proportion battery has reached 11.8 percent in the laboratory environment. This rate is close to world-leading level.

Through the integration of researching, teaching and producing, transformation from solar panels' R&D achievements to industrialization has also made great progress. With technical support of Nankai University, Tianjin Jinneng Battery Company has set up 5-megawatt production line of a-si thin-film solar cells. It is estimated that it will have expanded to 100 megawatts' scale of glass substrate solar cells by 2010.

Supported by specialized capital of science and technology innovation, Nankai University and investment companies of Tianjin Bonded Zone set up Tanyang Photo Electricity Technology Company, which implements medium test research of copper-indium- selenium film solar cells. The first 0.3-megawatt medium test line of China is under construction.

Wind power industry dominated by foreign investment has basically taken shape. Due to the advantages of geological position and logistics, Tianjin has attracted many well-known enterprises from both home and abroad, such as Vestas and LM Glasfiber of Denmark, GAMESA of Spain, Suzlon of India, Vaillant and Siemens of Germany, Dongfang Steam Turbine and Mingyang Electric of China. The increase installing machines and accumulated installing machines have accounted for 40 percent of the total in China. Tianjin thus has become a world-known city for manufacturing wind power equipment.

Sales of wind power products reached approximately RMB 10 billion yuan in 2007. According to experts' estimation, Tianjin will occupy 50 percent market share of winder power by 2010.

Tianjin builds up the biggest production base of electric vehicles in the world

The biggest production base of electric vehicles in the world was established in the western part of the TEDA and put into production in July, 2008. The first batch of 456 electric vehicles was exported to the USA, used in the National Aeronautics and Space Administration (NASA), California Institute of Technology and elsewhere.

Covering an area of 60,000 square meters, and constructed by Tianjin Qingyuan Electric Vehicle Co., Ltd, this base is fully capable of developing and manufacturing electric vehicles, hybrid electric vehicles and fuel-cell hybrid vehicles, among which the production capacity of electric vehicles has amounted to 20,000 annually and engine sets 30,000 per year. Citroen in France used to own the biggest production line of electric vehicles, with an annual capacity of 3,000.

Another 252 electric vehicles have been delivered to American car dealers in early August. It is estimated that over 2,000 electric vehicles produced in Tianjin will be exported to the US and Europe before the end of 2008.

Tianjin has grown into the most important R&D center of electric vehicles in China after eight years' hard efforts in this regard. It has independently developed a series of electric vehicles, such as electric sedans, high-speed electric vehicles, electric buses, electric tourist cars, as well as sedans, buses and coaches with hybrid powers.

Modeling "Hafei Saibao" and powered by lithium battery, the high-speed electric car can drive as fast as 125 kilometers per hour and as far as 250 kilometers continuously, almost matching the quality of a petrol-powered vehicle. Besides, it consumes 15 kilowatts/hour (kwh) of electricity per 100 kilometers, costing as low as one sixth of petrol-powered vehicles of the same type.

According to Tianjin Municipal Science & Technology Commission, Tianjin has created a complete industrial chain, developing electric vehicles, including whole-vehicle production, key spare parts manufacturing and standards setting. The industry draws solid support from Tianjin FAW Xiali Automobile Co., Ltd., Tianjin Qingyuan Electric Vehicle Co., Ltd., Tianjin Lishen Co., Ltd., Tianjin University, China Automotive Technology and Research Center, the No. 18 Research Institute of China Electronics Corporation and many other R&D institutes for electric vehicles.

As of 2001, Tianjin has successfully invited the China Automotive Technology and Research Center and Tianjin Lishen Battery Joint Stock Co., Ltd to jointly establish Tianjin Qingyuan Electric Vehicles Co., Ltd and Tianjin Electric Vehicles Research Center, promoting the development of electric vehicles and power battery used on vehicles and other key technologies and products. Upon to now, the center has applied for 36 patents, of which 9 are patents for invention.

Apart from this, the No 18 Research Institute of China Electronics Corporation has established one of the two testing bases of power battery used on electric vehicles in China, which enjoy full technology support from the Ministry of Science and Technology. Besides, a whole-car testing base of electric vehicles, the only one in China, is established by the China Automotive Technology and Research Center. Moreover, 20 state standards for electric vehicles, 6 for hybrid electric vehicles and another 2 for testing methods of hybrid electric vehicles and experiment procedures are formulated and issued.

Since Tianjin was authorized in August, 2002 as one of pilot cities in China for the use of electric vehicles, the city has successfully put electric vehicles into use as taxi, police cars and cars for official business, with the total driving distance exceeding 100,000 kilometers. Three routes with electric vehicles in operation exclusively have been launched before the 2008 Beijing Olympics.

The biggest sea water desalination plant in Asia is near completion — Tianjin's sea water desalination industry is emerging

Construction of the biggest sea water desalination plant in Asia, developed by the Tianjin Dagang Xinquan Seawater Desalination Co., Ltd, is in full swing. The daily water desalination capacity of the first phase of the project is 100,000 tons, which is eventually to be increased to 150,000 tons upon completion in July, 2009.

Situated in Marine Petrochemical Park of Dagang District of Tianjin, the project is invested by Hyflux Group from Singapore, with the total investment amounting to RMB 750 million yuan. The project is aimed to guarantee the water supply for various industry projects in the park, especially an under-construction project of producing 1 million tons of ethylene.

As an early bird to desalt sea water, Tianjin boasts an advanced technology in sea water desalination. In as early as 1980s, Tianjin constructed the first sea water desalinating equipment in China. Now, the annual sea water desalinating capacity of Tianjin has reached 5 million tons, with the desalting capacity of projects under construction amounting to 60 million tons. The equipments will directly utilize 1.4 billion tons of sea water.

With 153.3-kilometer-long coastal line and being the biggest industrial city in North China, Tianjin boasts a strong market demand for sea water desalination and comprehensive utilization of sea water. Being short of fresh water supply, the average water resources per capita in Tianjin is only 160 cubic meters. The shortage of water resources has become a bottleneck for social and economic development of Tianjin.

As the Municipal Government of Tianjin regards sea water desalination as an important supplement for city water supply, Tianjin has become a model city for water desalination in China. By 2010, the daily capacity of water desalting will have reached 500,000 cubic meters, with the annual water desalting capacity exceeding 150 million tons and the annual amount of direct utilization of sea water being over 4 billion cubic meters. By that time, the daily water desalination capacity of China will hit 800,000 to one million cubic meters, with the annual direct utilization of sea water being 55 billion cubic meters.

The industrialization of seawater desalination is paced up with the improvement of the technology.

The end of 2006 witnessed a successful launch of single-set equipment capable of producing 10,000 tons of fresh water every day from sea water in the Binhai New Area of Tianjin. This is China's first patent 10,000-ton per day seawater desalination equipment.

A group of model projects of sea water desalination will have finished construction by 2010. In addition to the Dagang Xinquan seawater desalination project, the sea water desalination project of producing 200,000 tons of fresh water per day in Tanggu, projects of producing 200,000 tons of fresh water respectively in Beijiang Power Plant and Dagang Power Plant are under preparation.

According to officials in Tianjin Municipal Science & Technology Commission, the technology of sea water desalination and utilization in Tianjin tops China. "The industrial cluster of sea water desalination is forming, which brings the congregation of many enterprises in geographical sense and improvement of inner system of the industrial chain as well."

As scheduled, the year 2010 will witness the establishment of a R&D center of key technologies of China's sea water desalination in Tianjin, which will then make Tianjin a model city of sea water desalination and a processing base of set equipments with independent intellectual property rights.

Statistics show that there are currently 125 countries in the world using sea water desalination technology, producing fresh water of about 37.75 million tons per day, 80 percent of which is for drinking. The total capacity of sea water desalination per day of China is about 30,000 tons, taking up 1‰ of the general amount of the world.

The hazardous waste treat and disposal center of Tianjin safeguards people's health and the environment

In Tianjin, medical wastes and trash, such as once-off needles, injectors or pledget, will be collected by relevant departments and disposed in Tianjin Hazardous Waste Treatment and Disposal Center.

As one of the earliest hazardous waste treatment and disposal centers in China, this center pioneers in facility construction for poisonous and hazardous waste treatment and disposal.

Built in Jinnan District in 1999, the center covers an area of 87,600 square meters with total investment of RMB 135 million yuan. The center is composed of four segments: a poisonous and harmful waste incineration plant, which can dispose 13,500 tons of waste per year; a poisonous and harmful waste landfill site, which can bury 6,200 tons of waste per year; a poisonous and harmful waste recycling and reusing plant where 10,000 tons of waste metal liquid and waste solvents can be recycled and reused per year; a plant of medical waste recollection, transportation, treat and disposal, which can dispose 7,300 tons of waste per year.

Since September 1, 2003, this center has been disposing all the hazardous waste in Tianjin with yearly disposal capacity reaching 37,000 tons, ensuring the collection and safe disposal of medical waste and various kinds of chemical waste. It is in this center that 10 tons of highly toxic pesticide, prohibited by Tianjin government and later seized by relevant departments in charge, was properly disposed.

There are 47 categories and 600 kinds of hazardous waste. Currently, the hazardous waste in Tianjin mainly contains the useless and necrotic body parts after operation in hospitals, infectious goods, waste drugs, toxic industrial waste, harmful pesticide, waste battery, waste acid, waste alkali, waste solvents and poisonous and harmful chemicals.

Integrating the recycling and reusing, incineration and safe land-filling, this center has become a modern model base for poisonous, harmful, and hazardous waste treatment and disposal. It is thus positively commented as "Tianjin Model" by relevant national departments in China.

The acceleration of industrialization of China brings about a rapid increase of solid waste, which leads to increasingly serious damage to the environment without inefficient recycling and reusing of resources and advanced facilities for waste disposal. Therefore, how to dispose hazardous wastes in a safe and proper manner has become an important task for the sake of environmental protection.

Referring to the technology, standard, operational model adopted in "Tianjin Model", Chinese government invested 15 billion yuan in 2004 to build more than 300 hazardous waste disposal centers all over the country.

Audited by the Siemon Environment Audit Company of the US, the Tianjin center is fully qualified to handle businesses of waste disposal for transnational corporations across the world.

Tianjin will soon witness in the Binhai New Area the establishment of another hazardous waste decontamination plant, whose daily disposing capacity amounts to 100 tons.

Power generation by garbage: a new try for tackling energy and environment problem in the old industrial city

Following Tianjin Shuanggang and Qingguang garbage incineration and power-generation projects, Shuangkou garbage power-generation plant was put into operation recently, which symbolizes the realization of scientific disposal of urban household garbage in Tianjin.

Situated in Jinnan Economic Development Zone of Tianjin, Shuanggang garbage incineration power-generation plant is the first such plant in Tianjin and the biggest one in China.

What meet people's eyes when they step into this plant are the clean roads and neatly trimmed trees and mowed lawns. Nobody can believe such a beautiful and quiet place is a garbage disposal plant where hundreds of garbage transportation vehicles come in and out and 1,200 tons of garbage is disposed here every day.

By incinerating garbage, this plant powers homes and factories. It well solves the garbage pollution problem in Tianjin. Together with the urban garbage disposal facilities, it forms a garbage decontamination system which enables the decontamination rate of urban household garbage in Tianjin to reach 81 percent.

At present, the daily household garbage generated from Heping, Hexi and Jinnan Districts amounts to about 420,000 tons, accounting for up to one fourth of that from all 18 districts and counties of Tianjin. All the garbage now is sent to Shuanggang Garbage Incineration and Power-Generation Plant.

In 2007, the Shuanggang garbage incineration plant disposed 1,200 tons of garbage per day, with the yearly decontaminated, recycled and reused household garbage amounting to 400,000 tons. That capacity generated electricity as much as 101 million kwh. All the operation indicators reached historical record.

During recent years, guided by the principles of scientific development, Tianjin actively meets the call of resources conservation and construction of an energy-efficient and environmental-friendly society. Garbage power generation is a new try by Tianjin, an old industrial city, to solve the problem of energy restraint and environmental pollution. Presently, garbage power plants can only be found in some economically developed cities and provinces such as Beijing, Shanghai, Tianjin and Zhejiang.

Located near to Shuangkou garbage landfill site in Anguang Village, Shuangkou Town, Beichen District of Tianjin, Shuangkou Garbage Incineration and Power-Generation Plant has introduced from the USA four Caterpillar gas engine generators with 5,520 kw installed capacity. In the finished first phase of the project, one gas engine generator operates, with the annual power generation reaching 8 million kwh, connected to the North China power grid.

Situated in Beichen District of Tianjin, and invested by Tianjin Like Environmental Protection Co., Ltd, Qingguang Garbage Incineration and Power-Generation Plant incinerate garbage to generate power. With the installed capacity of two 6,000-kw power generators, the designed garbage disposal capacity per day reaches 600 tons.

Cities in China are now troubled by the garbage pollution across the city. Generating electricity from household garbage not only solves the problem of household garbage disposal, and benefits the environment. It also helps save energy.

According to Shuanggang Garbage Incineration and Power-Generation Plant, by adopting the advanced smoke purification technology in the process of power generation, the harmful gas produced by household garbage incineration in the plant is properly disposed, meeting EU emission standard of the European Union. The old ways of disposing garbage by land-filling and dumping in the open air, which severely damaged the air and environment, are replaced.

In addition, following the circulative economy principle of "reduce, recycle, and reuse", this plant burns garbage to generate power, with its remains to make bricks and waste heat to warm houses. The only emission is steam. In this way, a complete circulative economic chain takes shape.

Tianjin practices overall planning of urban and rural social security systems, establishing and improving social security system

With the development of its economy, Tianjin attaches great importance to ensuring and improving people's life and gives top priority to ensuring the rights and interests of disadvantaged groups in social security and practice overall planning of urban and rural social security system. It is improving the construction of the system to solidly bolster the building of a harmonious society.

According to the statistics till the end of June, 2008, the population of pension coverage had reached 3.584 million; the population of medical insurance 3.883 million; the population of unemployment insurance 2.287 million; the population of work-injury insurance 2.609 million; the population of fertility insurance 1.899 million. These five insurance funds total at 17.05 billion yuan, with a year-on-year increase of 33.8 percent.

While it is attaching great importance to the construction of social security regulations and service systems, the Tianjin Municipal Government is also adhering to the people-oriented principle, planning and pushing ahead urban and rural social security system in a holistic and coordinated way. In the year of 2008, two regulations took effect, involving urban residents' fundamental medical insurance and rural residents' social pension coverage. The two systems will cover 45 percent of city's residents, totaling at 4.45 million. The city, therefore, turns out to be a pioneer in terms of establishing basic medical insurance and social pension coverage for rural and urban citizens.

The Tianjin Municipal Government pays special attention to tackling the problems in people's life when it is pushing ahead the wide-coverage, basic, multi-layer and sustainable social insurance system. It directs the security polices to benefiting disadvantaged groups through government subsidies.

According to the Tianjin Labor and Social Security Bureau, the local social security system network was extended from workers to all the residents, from urban areas to rural areas and from the easier parts to more complex issues. During the process, the government has adhered to one important principle that the system should be affordable and accessible to the people, especially those in disadvantaged position.

In 2008, the Tianjin Municipal Government endorsed and put into practice Proposals on Further Improving the Social Insurance System of the City, making a comprehensive plan of the social insurance system aiming to cover urban and rural workers, residents and all other social groups, extending the coverage of pension, medical, unemployment, work-injury and fertility insurance to rural enterprise staff to better secure their interests.

Tianjin's urban staff medical insurance system took effect in 2001 and at present, the overall urban and rural medical insurance system has been set up with security platforms, such as combining of individuals' accounts and society's planning as a whole, medical cost social pool for major diseases and medical assistance. A multi-layer, wide-coverage and basic system has come into shape.

Since 2005, Tianjin has taken the lead in practicing the system that connects unemployment insurance to urban subsistence allowance and re-employment. It is stipulated that people on subsistence allowance or the unemployed who have found a job by themselves will get six-month subsistence allowance and the unemployment insurance compensation for the remaining time period of the duration of validity of the insurance, respectively, and that people who were on unemployment insurance and have started their own business will receive employment subsidies. The population on unemployment insurance in Tianjin has dropped from the previous 120,000 to the recent 30,000.

When it began to bring into effect the work-injury insurance system, the Tianjin Municipal Government had covered the senior injured workers ever since the founding of the country. In order to meet the urgent demand of migrant rural workers, the city established a work-injury insurance policy to give the worker priority to take part in the insurance system in 2004. In 2008, it linked work-injury benefits including lump-sum compensation for death in work, medical subsidy for work-injury and living and care allowance to the average salary of the society, timely improving work-injury compensation amount.

At the end of 2007, the Tianjin Municipal Government innovatively carried out the policy of covering 260,000 migrant construction workers by calculating the insurance amount based on the total construction cost amount. In 2008, Tianjin again took the lead by flexibly covering workers from service industries of business and trading, food and accommodation by linking the insurance amount to the size of the business, which will directly benefit 400,000 workers in the service industry.

In the spirit of sharing development fruits with all the retired and providing universal benefits for the whole society, the Tianjin Municipal Government has spared no effort in improving the social security situation, with 60 percent of the new accessible financial resource employed in the construction of local social security system. Retired people receive an ever-increasing pension. There is an average increase of 325 yuan per capita by 42.5 percent in the past three years, 70 yuan higher than the national average.

Tianjin Municipal Government steps up the construction of housing security system, effectively solving the housing problem of low-income families

In recent years, based on the principle of "providing proper, multi-layer and multi-form security service" , Tianjin has tried to make up for the deficiency in the market mechanism through making policies and resourcing public finance to speed up the construction of housing security system. So far, four programs have been established, including low-rent housing, economically applicable housing, economical-rent housing and ceiling-priced commercial housing, in order to meet different demands of people at different income levels.

The housing security undertaking took off comparatively early in Tianjin. So far the low-rent housing program has been established, benefiting 29,000 households presently. According to the plan, in five years, the number of households benefiting from the low-rent housing program will reach 100,000, with the total investment to exceed RMB 2.8 billion yuan.

In order to meet different demands of low-income families, low-rent housing program will include three security forms: firstly, the government will provide house for rent, which claims a monthly rent of only RMB one yuan for per square meter. Secondly, the government will provide rent allowance to allow low-income families with monthly income lower than RMB 600 yuan and average living space per capita smaller than 7.5 square meters to rent other dwellings by themselves. Thirdly, the families, which rent public-owned dwellings and are on basic living allowance, will have their rent reduced. The reduced rent is half of that of the present public-owned dwellings.

Since 2003, Tianjin has invested 1.3 billion yuan and built more than 7,000 low-rent units with a total area of 480,000 square meters. In the future five years, another 1.35 billion yuan will be resourced to build 1,000 low-rent dwellings every year. It is estimated that there will be up to 7,000 households renting the low-rent units.

At the same time, Tianjin has so far provided subsidies totally up to RMB 20 million yuan. The city plans to subsidize another 1.4 billion yuan in the future five years to benefit a total of 70,000 families.

Economically applicable housing program for people in the lower and middle income brackets is also underway. Since 2005, Tianjin has invested RMB 8.5 billion yuan to provide the people with 140,000 economically applicable units, of a total area of 9 million square meters. The government plans to offer 62,300 units of 3.8 million square meters this year. In five years, it will spend RMB 17 billion yuan to build 276,800 economically applicable units of 17.9 million square meters.

The "sandwich" group faces an awkward situation, since they have an income level somewhere between the low-income families and the middle- and lower-income families and are not able to rent low-rent houses or afford economical applicable houses. For this group, the Tianjin government offers rent subsidy to help improve their living conditions. The amount of the subsidy is adjusted based on the market rent level and maintains approximately half of the market level. Since 2004, up to 4,000 families have benefited from this program. In the future five years, the government will spend RMB 170 million yuan to help up to 7,000 families.

At the same time, Tianjin is beginning to establish the ceiling-priced commercial housing program for middle- and lower-income families. The price of the ceiling-priced commercial dwellings is checked and ratified by the government. The basic principle is that the price will be lower by 20 percent than the price of similar dwellings in the same or neighboring areas three months before the assessment of the house. In 2008, Tianjin plans to offer 20,000 units of 1.5 million square meters.

In order to make sure the sustainability of the security-housing construction, Tianjin has also made estimation, concerning the security housing demand in the future and made five-year plan and annual plan for the period from 2008 to 2012, giving clear policy direction and making arrangement in a more scientific and holistic way. Till the year of 2012, the government will spend RMB 20 billion yuan to benefit another 450,000 households.

Urban and rural medical security system has been established with residents from both areas enjoying basic medical security service

As a result of hard work, medical security system covering urban and rural residents has been established in Tianjin, meeting the goal that every urban and rural resident should enjoy basic medical security.

The local urban worker's basic medical insurance system was put into effect in 2001. Three security platforms of combining of individuals' accounts and society's planning as a whole, medical cost social pool for major diseases and medical assistance have been set up, which are expected to better solve the medical insurance problems of different social groups. Till the end of June, 2008, the population covered by the medical insurance system had reached 3.88 million.

In 2003, Tianjin began to start a new rural cooperative medical system as a pilot program and widely promoted it in 2006. At present, the system has covered 12 districts and counties, 3,871 administrative villages, with 3.53 million people qualified for the insurance and the participating rate over 90 percent. The rural medical care situation has significantly improved with the farmers enjoying basic medical security.

While improving the medical security system, Tianjin has not only made a comprehensive plan on urban and rural medical insurance construction, but also adhered to one important principle that the system should be affordable and accessible to the people, especially to the disadvantaged.

In order to reduce the financial burden on individual patients, Tianjin improves medical its insurance benefits. Eight alleviating policies have taken effect, upgrading the refund percentage for the retired staff over 70 and working staff over 45 and lifting some of the pre-conditions. The population benefiting from these policies has reached 1.39 million and more than RMB 40 million yuan is saved for the insured annually.

It is a common issue that enterprises having financial difficulty are not able to participate in insurance. In 2004, Tianjin took the lead to carry out medical cost social pool for major diseases for staff working in these enterprises. Judging from actual situation, the government will offer according subsidies to establish the program for the retired staff of relevant enterprises.

The two programs have met the medical treatment requirements concerning major diseases for 53,000 working staff and 250,000 retired staff of enterprises in difficulty.

In 2005, staff retired before the establishment of medical security program, retired staff from bankrupt enterprises and retired people governed by civil administration began to be covered by the medical security system, solving the medical-care issue for 30,000 people.

During the establishment of the medical security system, Tianjin has taken the advantage of public finance to ensure the security of the disadvantaged groups. The government not only provides subsidies to retired staff from difficult enterprises, but also to the groups having difficulty participating in insurance, including senior unemployed people who are reemployed in positions of public service, unemployed people rejoining the work force, laid-off staff, the disabled, single mothers and other groups.

As stipulated by Tianjin's basic medical insurance policy for urban and rural residents, the government will offer full subsidies to severely disabled people, people from poverty-stricken families on subsistence allowance and people over 60 years old and from low-income families. Individuals don't need to pay any fees. Students and children who have participated in insurance program will be further covered by accident injury insurance.

On January 1, 2008, Tianjin's basic medical insurance system for urban residents began to take effect. Students, children, and unemployed residents from urban areas are covered by social medical cost pool for major diseases. So far, there are 623,000 people participating in this program and 31,000 people enjoying the refunding. The medical cost burden is effectively lifted from senior people, children and the disabled, who are not capable of working. This program is warmly welcome by Tianjin residents.

Millions of Tianjin residents have their own "family doctors"

Ms. Tang living in Yingshui Avenue of Nankai District only needs to walk ten minutes to the neighboring community healthcare service center to get her medication, and the fees is only less than half of that of major hospitals. The service is not only easily accessible, but also more affordable.

As an important component of the local medical system reform, it is hoped that the community healthcare service can be popularized so that local residents would have convenient and affordable service. The program in Tianjin has been highly appreciated by Ministry of Health of the People's Republic of China.

Community healthcare service is community-based, and public-oriented. It is composed of disease-prevention, health care, medical care, health education and family planning services.

At present, there are altogether 75 community healthcare service centers in urban areas of Tianjin, and 499 community healthcare service stations subordinating the centers. The residents can access one of them on foot in less than 15 minutes. There are service centers in every street, service stations in every neighborhood committee and doctors serving in every community. So far, six urban districts and three Binhai districts are enjoying the convenient services. Rural areas are to have the same service in due time.

Since 2008, the fund for the urban community public healthcare service has increased from RMB 50,000 yuan to not less than RMB 100,000 yuan for every 10,000 people served and the district-level government is responsible for most of the fund. Most of the community healthcare service institutions of Tianjin urban districts offer residents 18 public healthcare services free of charge. Among those districts, Heping and Tanggu Districts raised the fund for the urban community public healthcare service to the amount of RMB 300,000 to 350,000 yuan per 10,000 people. They also enriched the content of free services. From this year on, Heping District even funds and provides free medical examinations for more than 70,000 senior citizens over 60 every three years.

In 2008, the Tianjin Municipal Government began to practice service account management. Funds allocated for the municipal and district levels are both deposited in a special account of the municipal government to ensure that the community healthcare service is properly funded.

"Meanwhile, we have established a system to collect, allocate and monitor community public healthcare funds, and to assess the efficiency of the funds, so that we can maintain effective planning and monitoring," says Cheng Jinxin, Head of the Municipal Bureau of Public Health Care.

It is just the beginning. The Tianjin Municipal Government will resource more funds to improve community healthcare service facilities: future premises for the service will be offered by the government free of charge; the present rented premises will be either bought or paid in installment by the authority; other types of rents will be refunded by the local government.

Local Department of Social Security is orienting residents to treat minor diseases and seek healthcare and rehabilitation services within the community. It has brought all qualified community healthcare service institutions into designated medical insurance management and has been connected to the networks of medical insurance service organizations and hospitals. Through this approach, the insured patients are able to access their funds directly within their community. A number of frequently-occurring diseases and diagnosed chronic diseases can be treated inside the community. Apart from this, "family sickbed" provided by community healthcare service institutions is listed as one of the refund items.

The nation's first Help Center for Needy Workers have supported 370,000 workers during the past six years

The hotline of Tianjin Help Center for Needy Workers is always busy. A needy worker cries on the phone because there is a fire accident in his house. The Center's officers arrive within an hour with food and subsidies. They also organize a donation on the spot with the local resident's committee and talk to the worker's company about urgent assistance details such as repairing the house and providing monthly subsidies.

It is told that the Center has made public two hotlines. Both needy workers and their relatives and neighbors, who are qualified for the assistance, will be counted as the customer and timely assistance will be offered right after verification. During the past six years, there have been 36,000 calls received and 46,500 households assisted.

As the first center of its kind in China, it has offered prompt and direct assistance to needy workers since its establishment six years ago. It helps resolve practical problems for the workers through five programs, including Assistance for the Very Needy, Free Employment Service, Coordination by Post and Visit, Legal Aid and Help Supermarket.

Established by the Tianjin Labor's Union, the Center has offered assistance to 371,900 individuals, including service for living to 84,000 people, employment service to 88,200 people, schooling service to 50,000 people, medical-care service to 84,000 people, legal aid to 35,200 people and coordination to 30,500 people.

Wang Jinsheng, manager of the Center, says that the service is supposed to be offered with promptness and that the staff is supposed to provide timely assistance to those who have difficulty with their life. "What we require is 'to be quick'. We wish to react in the first place," Wang says.

Besides offering direct help, the Center also runs empowering programs, encouraging needy laid-off workers who are willing and able to work to re-enter the labor market. It offers one-package service of re-employment, technical training, information, recruitment and follow-up and there have been 87,600 previously laid-off workers and their children getting re-employed with the service.

Zhang Qiyong and his wife were both laid off previously. He contacted the Center by mail only wishing to have a try and the Center found him a position in a beer brewery within three days. Later, the Center also helped his wife be successfully re-employed.

In order to make sure it is able to consistently empower people, the Center has established a funding program supported by the society. It builds a long-term cooperative relationship with several enterprises including TEDA and The Second Darentang Pharmaceutical Factory of Tianjin, and manages the donation from all sections of the society.

8890: The most effective hotline in Tianjin helps local resident deal with nearly 3 million emergency cases in three years

"We have a power failure because of an induction cooker and we are hungry. Could you fix the problem?" "Please tell me the exact address of your house, and we will contact the nearest service company to your house to provide the repair service." Mr. Xu was still concerned if there will be anyone coming since it is so late, although he had got a positive answer.

Two minutes later, his phone rang and it was the repair company calling to inquire about the problem. Fifteen minutes after the call, the electrician knocked on his door. Almost at the same time, the phone rang again, which was from the 8890 operator to confirm the arrival of the electrician.

About ten minutes later, Mr. Xu's house was lit again. The electrician charged 10 yuan for the material after carefully examining the switches. The next morning, 8890 called again: "Are you satisfied with the service? Would you be kindly to give us some feedback?"

In the past, on one hand, the residents could not have proper household service; on the other hand, companies able to provide good services had difficulty accessing clients. This dilemma ended on May 12th, 2005 with a hotline 8890 opened by the Tianjin Municipal Government.

The 8890 hotline works through two approaches. One is through phone calls. Local residents in need of household service or help can ring 24-hour hotline "88908890 ("Ba ba jiu ling ba ba jiu ling" meaning "effective once called" in Chinese). The hotline operator will contact relevant contract service providers, who will offer timely service for those in need. The second approach is through surfing the "Tianjin 8890 family service website" (www.tj8890.gov.cn). Local resident can search the service they need through the searching engine on the website. They have to submit relevant information such as their location and demand, and get in touch with relevant service providers.

The 8890 hotline services involve housekeeping, maintenance, shopping, transportation, culture and so on. It promises to provide 25 major services, covering 316 sub-categories, ranging from fixing clothes rack and locks to maintaining houses, from copying keys to providing chartered tourist buses.

Since its opening, the 8890 hotline handles approximately 6,000 cases per day, and has dealt with 3 million cases in the past three years.

The 8890 hotline is described as an intersection, serving as an information bridge between local residents and service providers. The bridge is sponsored and set up by the government. Till now, there are more than 22,000 service-oriented enterprises joining the hotline, compared with over 10,000 before. The 8890 website has recorded a visiting volume of more than 5.4 million. The feedback from those who seek service through 8890 demonstrates that all customers are satisfied with 8890's service, and 99 percent of those investigated are content with service providers' job.

One appeal of the hotline is that there is no hotline service fee charged either for service receivers or service providers.

One would be amazed at countless seemingly impossible problems 8890 has solved.

"My colleague was gored by a potamotrygon motoro tropical fish when cleaning the fish tank. The wound is dark and he suffers numbness of the feet and dizziness. He has tried several hospitals but nothing works. Please, help him! "

Operator No. 026 immediately submitted the case to the Operations Home Office soon after he received the call. "We first contacted all major hospitals, but they could not deal with it. Next, we contacted medium- and small-sized hospitals and clinics and it still didn't work. And none of the quarantine stations could help," recalled the operations division staff responsible for rare illnesses.

"We extended our research range and surged the Internet. Finally, we found out that Beijing 304 Hospital able to deal with it. The patient was saved."

According to Mr. Pan Yunkang, director of Social Sciences Institute of Tianjin Academy of Social Sciences, 8890 Household Service Network is a good try of the Government to change its role to a service-oriented government. It solves the residents' problem while earning the Government reputations.

Tianjin women are bravely "knitting up" their own businesses

Ms. Yang Xiangyue was very down five years ago when she got laid off. She went to help the knitting in her community. Gradually, she became the manager of Riyue Hand-Knitting Center. Her sweaters were warmly welcome at a municipal-level exhibition in June, 2007, making her the Best Participant.

In Tianjin, hand-knitting has had its own brand name and has become a more sophisticated industry, pooling some 40,000 people. The Government hopes that in a period of three to five years, Tianjin will develop into a base of hand-knitted products in North China, attracting more women into the labor market.

Similar to Ms. Yang, Ms. Liu Shan established Jinguo Sunshine Hand-Knitting Ltd Company, employing 17 laid-off women living in Xincun Street. Her business is booming, recruiting a total of 157 staff and selling products to countries and regions, such as Japan, South Korea, Malaysia and Thailand.

"In Tianjin, disabled women, single mothers in serious financial difficulties and other groups with a heavy household burden always find it difficult to be re-employed. However, hand-knitting business requires small investment, low risk and comparatively simple skills and makes it possible for people to work at home, which allows these groups to earn the money without sacrificing their family life. It meets the very need of the particular working groups," said Ma, Secretary of Urban and Rural Division, Tianjin Women's Federation.

The operation pattern of these knitting stations includes centralized management, individual tutoring, individual processing, centralized product acceptance check and pay on piece-work basis. Women workers are able to take care of their daily household chores and they are welcome to get registered to work any time. Besides, their family members can be employed in the auxiliary business for knitting. For these reasons, it is a very popular job among mid-aged house wives.

The knitting stations also attract a number of disabled people and migrant workers. They can either go to the nearby stations to work with others or do the knitting at home. It is told that most of the workers there are able to earn several hundred yuan monthly, while skilled workers make more than 1,000 yuan per month.

Secretary Ma said, "Hand-knitted products have high added values, great market demand, low resource consumption and low pollution. On top of that, developing the industry requires small investment, but it has a high output and good returns, providing good employment opportunities."

In May, 2005, Tianjin Women's Hand-Knitting Industry Association was established and Tianjin Qiaoshou Knitting Ltd Company applied to be registered. The industry has developed from the original family-run, individual workshops to well managed, industrialized, commercial companies with stable staff.

According to the association, it has 95 major

hand-knitting bases, about 490 knitting stations extended to 18 districts and counties, employing over 40,000 people, most of whom are previously laid-off staff and surplus labors from the countryside.

Presently, orders taken by the association include products of folk craftworks, clothing and clothing accessories, home textiles and decorations, covering five major categories (knitting, weaving, crochet, sawing and embroidery) with over 1,000 varieties. Export destinations extend to over 20 countries and regions including South Korea, Italy, Japan, America and Germany, with an annual revenue close to 200 million yuan.

A soundless university classroom

This is an ordinary class in Tianjin University of Science and Technology. During the two hours of the fashion design course, the classroom has been soundless.

This is the first special higher education technology institute for deaf people in China, and the fourth of its kind in the world. Since its founding 11 years ago, over 400 students have graduated from here, working in a variety of industries such as networking, fashion design and so on so forth.

The institute now provides two bachelor's degree educations, which are Computer Science and Technology, and Art Design in Fashion, and one vocational diploma, which is Fashion Design and Craftwork. Presently, there are over 200 deaf students from some 20 provinces, municipalities and autonomous regions studying here.

Based on the study on deaf students' cognitive structure and thinking patterns, the institute has set up the goal of nurturing "competitive professional people who are well-balanced in their development of knowledge, competence and moral making and who are self-esteemed, self-confident, self-empowered and self-reliant and able to participate in social competitions" in the principle of equality, participation and sharing.

The institute has achieved a break-through in traditional conservative special education in China, attaching importance to an "integrating and involving" education environment, letting ordinary students and special students share same living environment and extra curriculum activities. Only during classroom environment are special teaching methods designed for students with hearing impairment. As a result, the deaf students are able to integrate and involve into the mainstream society emotionally and mentally.

Based on the psychological characteristics of this group, the institute has developed a comparatively standardized, systematic education system, which is that deaf students are supervised under School Roll Administration of Grade Credit System, the same as the ordinary students. Competent special students could study a second major and get relevant academic qualification. They should pass English tests as stipulated by the institute and they can also compete for scholarships like the other students.

At present, among the Computer students enrolled in 2004 and 2005, five are studying a second degree in management and quite a few wish to study for a master's degree. Some students enrolled in 2004 have taken the institute-organized tutoring classes for Mathematics Graduate School Examination. One students enrolled in 2006 has passed CET 4 Test.

The institute has established favorable inter-college relationship with internationally renowned institutes of special education such as National Technical Institute for the Deaf (NTID) of America and Tsukuba College of Technology (TCT) of Japan. Sponsored by Sasakawa Foundation, the institute has established PEN-International Project with the above institutes in joint efforts.

Supported by the PEN Project, multi-media classroom and long-distance convention system devoted to deaf students have been built up and put into use. The institute has also sent altogether over 20 teachers to run cooperative projects, receive training and have communication with NTID and TCT, and has received visiting deaf teachers and students from Japan and America. Both of its education and teaching are well connected with the rest of the world.

The cultivation of comprehensive competence has enabled the deaf students to develop in an all-around manner. They have won both domestic and international awards in dancing, sports and arts: the dance Willows won the third prize on the Fifth National Theatrical Competition; and the dance Happy Every Year won the first prize on the Sixth National Theatrical Competition.

The new Tianjin Binhai International Terminal is bringing along new development opportunities

At the zero hour on April 28th, 2008, a new terminal of Tianjin Airport was officially put into service. With the new terminal of Tianjin Binhai International Airport brought into use, Tianjin Airport has observed new development opportunities in the past few months. In July, 2008, the passenger volume increased by 19.4 percent compared with the same period of last year, reaching a monthly record-high of 413,000 person-times. At the same time, the cargo and mail volume increased by 80.7 percent year-on-year, exceeding 18,000 tons.

The new building, started construction on August 8th, 2005, is located on the east of the airstrips, with the main building area of 116,000 square meters, building height of 40.3 meters, width of 165 meters and the distance of 455 meters from the main entrance to the end of the central hallway. The exterior facades are made up of light green glasses and the interior is bright and well lit with mainly clean white.

The new terminal is a two-level structure with a partial third level. The fourth floor of the main building is for office and functional area. The first floor of the main building is the arrival hall, the second the departure hall, which is mainly composed of domestic and international departure, check-in hall, security, airport lounge, first-class lounge and other accessory facilities. It has 19 parking aprons, 60 ticket service counters and 17 security aisles. The passenger boarding bridge has a scissor-shape split-level design, which completely separates the arrival and departure flow. Besides, there is a transit counter on the interlayer to allow passengers to go through transition procedure.

With the new building being put into operation, the airport is divided into the East Area, the passenger terminal area, and West one, the cargo terminal area, by the existing airstrips. The new terminal is capable of handling a passenger flow of 10 million person-times annually.

Tianjin is one of the cities, which initiated civil air transportation in China. Tianjin Binhai International Airport was built in November, 1939. On August 1st, 1950, the first civil flight course of the People's Republic of China went into operation. The airport was also responsible for training professional pilots and aviation technical people and therefore it is famous as "Cradle for New China's Civil Aviation". In October 1995, Tianjin Zhangguizhuang Airport was approved as International Aerial Line Airport and in December of the same year, its name was changed into Tianjin Binhai International Airport, approved by the then General Administration of the Civil Aviation of China

It is estimated that by 2010, the airport will have more than 100 domestic and international air courses. The domestic air courses will cover all provincial capital cities, municipalities and major tourist cities. Domestic air course network radiating around Tianjin will be established and all middle- and small-sized airports less than 800 kilometers away from Tianjin will be open to air traffic. There will be fast international air courses to South Korea and Japan. In two years, tourist air courses to Singapore, Thailand, Malaysia and India will be launched, while courses to America and European countries are supposed to open as soon as possible.

It is estimated that by the year 2020, the passenger volume of Tianjin Airport will be sixteen-fold of that in 2000.

Beijing-Tianjin Expressway is in full operation, five major roads bringing two metropolises close to each other

Beijing-Tianjin Expressway was brought into operation on July 16, 2008, adding another expressway between Beijing and Tianjin.

This fast passage, known as Beijing-Tianjin Expressway, was constructed in joint effort from Beijing and Tianjin Municipal Governments. It is one of the major national express network projects laid out by Ministry of Transport and an important project for the Olympics. Its main trunk, with two ways and eight lanes, is one of very few of its kind among inter-city expresses.

Before the Beijing Olympics, Beijing-Tianjin Expressway, Beijing-Jixian Expressway extension, Beijing-Tianjin Inter-City Express Railway had been brought into service in succession. With the existing Beijing-Tianjin-Tanggu Expressway and Beijing-Shanghai Expressway Mainline, there are five major trunks bringing the two megalopolises, Beijing and Tianjin, closer to each other.

According to experts, this will accelerate the integration of Beijing and Tianjin, giving rise to the fast and coordinated economic development of the circum-Bohai Sea region.

The trunk line of Beijing-Tianjin Expressway extends 135 kilometers, starting from the fifth-ring road in south-east Beijing and ending at Beitang Town of Tanggu District, Tianjin. The section within Beijing is approximately 34 kilometers and the main section in Tianjin 101 kilometers.

The construction work on the section in Tianjin began in 2005 and the Beijing section started in October, 2006. The Beijing section of the Beijing-Tianjin Expressway went into operation in 2007.

The Tianjin section extends from Beitang, Tanggu District to Gaocun, Wuqing District, from where the road connects to the Beijing section. This section basically parallels the existing Beijing-Tianjin-Tanggu Expressway and is located to the north of it. In order to make it more efficient and allow vehicles from Tianjin to better access to Beijing-Tianjin Expressway, four link lines have been built to connect the section to Beijing-Shanghai Expressway, Beijing-Tianjin Highway, Tianjin-Hangu Highway and one developing district (Tianjin Dongjiang Bonded Port Area) respectively, spanning approximately 49.66 kilometers.

It is said that the sparkling point and exclusive strength of Beijing-Tianjin Expressway is its direct access to the container terminal of Tianjin Port.

It is estimated that the daily traffic flow on the expressway is more than 50,000 and it surpasses 120,000 at peak times, bringing along significant economic and social benefit.

Insiders believe that the operation of the expressway will greatly relieve the present traffic tension between Beijing and Tianjin, meeting the demand of strengthening the communication between the major developing economic areas of these two cities. It drives the economic development of the areas alongside and the opening-up of Tianjin Binhai New Area. Apart from that, it has significance in improving the main road network and comprehensive transport system in Tianjin.

At present, all expressways planned by the Tianjin municipal government have been under construction. The present construction section amounts to 327 kilometers. It is estimated that the construction will wrap up by 2011.

So far, the total span of the operating expressway in Tianjin has reached 840 kilometers, counting for 72 percent of the total under planning.

Beijing-Tianjin Inter-city Express Railway makes half-an-hour traffic possible from Beijing to Tianjin

Beijing-Tianjin Inter-city Express Railway, the fastest of its kind in service in the world, began its operation on August 1, 2008, making possible the urban agglomeration of Beijing and Tianjin, which are the only pair of megalopolises in the world with a straight-line distance of about 100 kilometers. The express railway shortens the time of city commuting to only half an hour.

The speed of the railway is designed at 300 kilometers per hour, with the peak speed reaching 350 kilometers per hour. It deserves the title of China's first express railway in the real sense.

As two big municipalities of North China, Beijing and Tianjin situate at the center of the circum-Bohai Bay area, one of the fastest developing and most dynamic regions of China. At present, there are more than 30 million people, among whom 25 million are permanent residents, living in these two cities. Since the two cities are the core of the circum-Bohai Bay economic rim, there is an urgent demand for the two cities to complement each other's strengths.

In the past, Beijing and Tianjin were mainly connected through one railway and one two-way expressway with four lanes. It is obvious that they were unable to meet the demand of social and economic development and therefore hampered the cooperation between the two cities. It was also not convenient for people to travel around. To solve the problem, Beijing and Tianjin reached an agreement several years ago, determined to build express railway, expressway and airport to tackle the traffic problem and enhance the connection between each other.

Beijing-Tianjin Inter-city Express Railway kicked off construction on July 4, 2005 and the construction was wrapped up on December 16, 2007, with the length of 120 kilometers and stations alongside including South Beijing, Yizhuang, Wuqing, Tianjin and Yongle. The last stop is a reserved one. The traffic time between Beijing and Tianjin is approximately 30 minutes, with the shortest running interval of three minutes.

The operation of the railway has created the most convenient "Half-An-Hour-Traffic Rim" connecting Beijing and Tianjin, two municipalities of China, making the trip shorter, faster and more comfortable. The railway will play an important role in enhancing exchange of human resources and accelerating the regional economic integration between the two cities, and promoting the favorable social and economic development around circum-Bohai Bay area.

In the year 2010, Beijing and Tianjin will have "seamless traffic link" with Tianjin subway line 2, 3 and 9, Beijing-Tianjin Inter-City Express Railway and Beijing subway line 4 and 14 functioning together. At that time, taking subway and railway will be the most speedy and convenient transport method for residents traveling between the two cities.

The railway not only accelerates the agglomeration and integration of the two municipalities, but also opens a new stage for China's express railway construction.

Beijing-Tianjin Inter-City Express Railway is the first inter-city express railway in operation in Medium- and Long-Term Railway Network Plan and an important component of inter-city track transportation network of circum-Bohai Bay area. According to the network plan, by 2010, China's railway in operation will surpass 90,000 kilometers; special railway lines for trains running over 200 kilometers per hour will reach 7,000 kilometers and fast passenger transport lines will total at 20,000 kilometers.

Upon the completion of Beijing-Tianjin, Beijing-Shanghai and Beijing-Guangzhou Express Railways, the circum-Bohai Bay economic rim, the Yangtze Delta economic circle and Pearl River economic circle will be connected, involving a population of approximately 800 million.

Main body of Tianjin Station Traffic Junction Project, the largest comprehensive traffic junction in China, is put into operation

With the operation of China's first passenger transport line running at 350 kilometers per hour since August 1, 2008, the reconstructed Tianjin Station is operating again with a brand-new appearance, indicating that the main body of Tianjin Station Traffic Junction Project, China's largest comprehensive traffic junction project under construction, is brought into service.

Tianjin Station Traffic Junction Project, a major component of Beijing-Tianjin Inter-City Express Railway, is a modern comprehensive traffic junction project composed of regular railway, express railway, urban subway, long-distance passenger transport coach, public bus and taxi service. The project consists of five project areas, including railway station, station grounds (both front and rear), rear-station-ground public transport center and its auxiliary city transport, and sight-seeing area, totaling an area of 750,000 square meters.

Originally built in 1888, Tianjin Station was then famous as the "veteran dragon head" station. In 1987, it had the first major reconstruction since the founding of the People's Republic of China. The next year, at the time of its 100-year construction anniversary, the new Tianjin Station was completed and put into operation.

In order to welcome the 2008 Beijing Olympics and to meet the demand of the ever-increasing population commuting between Beijing and Tianjin, Tianjin Station went through another reconstruction and expansion starting from January, 2007.

The original main building of the old station has been kept, reconstructed and expanded. The railway yard set-up has changed from the original six platforms and eleven lines to ten platforms and eighteen lines, with daily passenger flow soaring to 80,000 and 680,000 at peak times. Apart from this, a four-kilometer straight-line underground railway will be built between Tianjin Station and West Tianjin Station, effectively connecting Beijing-Tianjin Inter-City Railway and the in-progress Beijing-Shanghai Express Railway, creating a triangle of express railway network.

For passengers' convenience, there is an underground passage between the front station ground and the rear station ground at Tianjin Station, 246 meters in length and 14 meters in width. Through the passage, passengers are able to access the underground floor of the front station ground, the sight-seeing square on the ground, front-station-ground public transport center and the intersection at the underground level of the rear station ground. The passage also links to the station exits, providing easy access to the subway, buses and taxi.

Upon the completion of Tianjin Station Traffic Junction Project in the year of 2010, there will be zero-distance transition among urban subway, Beijing-Tianjin Inter-City Express, Tianjin-Qinhuangdao Passenger Transport Railway Line, regular railways, long-distance passenger transport coaches, urban public buses and taxis. Using the walkway and elevators in the intersection, passengers are able to transit among several transport systems without leaving the station to reach Beijing, Tianjin down town, Binhai New Area and Binhai International Airport. The intersection is also a convenient shortcut connecting Beijing, Shanghai and North-east China. It is so far the most advanced, secure, convenient and efficient intersection system in China.

Tianjin Station Traffic Junction Project is playing an important role in taking off the traffic pressure of the area around Tianjin Station, shaping the major traffic network and improving the multi-method transport system of the city. It is also significant in that it offers easy access between Beijing-Tianjin-Hebei City Cluster and the circum-Bohai Bay area, opens up economic communication with other areas and promotes the opening-up of Binhai New Area and regional economic development of the circum-Bohai Bay area.

Tianjin will have advanced underground traffic network

Presently, Tianjin subway line 2, 3 and 9 and Beijing subway line 4 and 14 are under construction. Upon their completion by 2010, they will link to Tianjin Station and South Beijing Station respectively, making possible "seamless link" between the two municipalities. At that time, inter-city railway plus underground will be the best travelling choice for people commuting between the two cities.

A lot of Tianjin people have special affection towards the old Tianjin subway. The old subway refers to the first-stage construction project of Tianjin subway line 1, which began construction in 1970 and went into service in December, 1984. It is the second underground (the first is Beijing Subway) built in China, with the length of 7.4 kilometers and eight stations of different architectural styles.

Since the operation of the old underground, it had been transporting 20,000 passengers daily on average and improved Tianjin's urban traffic to some extent. In November of 2002, the new Tianjin underground line 1 project and the reconstruction of the old underground started. In the year of 2007, Tianjin underground line 1 went into service, and taking the subway gradually became the major method for urban transportation. Subway line 1 and Tianjin-Binhai Lightrail are 71.6 kilometers in length, with a daily passenger flow of 130,000 people.

As an extension of the original underground, subway line 1 crosses through the central part of Tianjin, spanning 26.2 kilometers including the original 7.3-kilometer section and the newly

built 18.9-kilometer part.

In order to build the underground network as soon as possible to allow the track transportation network work efficiently, construction on subway line 2, 3 and 9 started in 2006. It is estimated that in 2009, construction on underground line 5 and 6 will start.

In 2006, while endorsing the Tianjin City General Plan, the State Council defined the future Tianjin as an international port city, economic center of North China and an eco-city as well. Since then, Tianjin's urban infrastructure has developed rapidly.

Tianjin proposes to push ahead the strategy of developing public transport as the priority, allowing the underground track transportation to better play its role in the city public transportation. The future city public transport

will be supported mainly by mass transit track system and regular bus, supplemented by taxi and other transport methods. The urban rapid rail transit network has been planned.

Presently, the central districts of Tianjin plan to build nine underground lines and there will be one light-rail line from the central district to the Binhai New Area, totaling 280 kilometers. Among them, subway line 1, 2 and 3 are the main ones penetrating the city center; line 4, 5 and 6 are the inner supplementing circle lines going through the down town area; line 7 and 8 are the outer supplementing lines while line 9 is the urban section of the Tianjin-Binhai Lightrail.

A bunch of advanced technologies are extensively adopted in constructing Tianjin subways, endowing it the characteristics of being energy efficient, environmentally friendly, secure and highly automatic. For example, platform shielded gate is adopted in all stations, ensuring the waiting passengers' personal safety, reducing noise and therefore improving the environment of the station.

By 2010, construction on line 2, 3 and 9 will be completed. The full length of track transportation will reach 130 kilometers and daytime passenger flow 1.6 million. The underground service will effectively relieve the ground traffic pressure, allowing passengers to reach their destinations rapidly and punctually. It will also better support the economic development and people's life.

"Beijing-Tianjin All-In-One Card" makes it convenient for people commuting frequently between the two cities

Beijing-Tianjin All-In-One Card valid both in Beijing and Tianjin has been in use since August, 2008. Card-holders from Tianjin enjoy the same price discount as the local passengers in Beijing. It is convenient for people to commute between the two cities with the card.

In order to accelerate the integration of Beijing and Tianjin and make it convenient for people to commute between the two cities, Beijing-Tianjin All-In-One Card is issued in the joint effort of Tianjin and Beijing. The card-holders are able to enjoy the card service and the same price discount in the card-valid services in both cities.

Xiao Liu, who works in Beijing while living in Tianjin, has to commute between the two cities frequently. It used to take him a long time to transit among public bus, underground and taxi. Beijing-Tianjin All-In-One Card makes it convenient and economical for him to pay: 60 percent discount for Beijing urban bus service, two yuan for any single trip by underground, 5 percent discount for Tianjin urban bus service, 5 percent discount for lightrail, just to name a few.

On August 7, Beijing-Tianjin All-In-One Card was launched. At eight o'clock in the morning, there was a long queue of more than twenty residents waiting outside a post office in Heping District to get one of the cards. Many of them are Tianjin residents who commute to Beijing on a regular basis.

Beijing and Tianjin, two neighboring metropolises, have always been the focus of attention in the aspect of economic development of North China. Beijing is defined to be capital of the country, an international city, a famous cultural city and a livable city; while in 2006, the State Council defined Tianjin as an international port city, economic center of North China and eco-city while endorsing Tianjin City General Plan.

On August 1, 2008, Beijing-Tianjin Inter-City Express Railway, the country's first world-class inter-city express railway with China's own intellectual property rights, was brought into operation. Connected by the express railway, the two metropolises of Beijing and Tianjin are developing towards agglomeration and integration with each other, making it possible for people to commute regularly between the two cities.

Tianjin Urban All-In-One Card Co., Ltd. and Beijing Urban Transport All-In-One Card Co., Ltd. have issued Beijing-Tianjin All-In-One card in joint efforts. As a result, residents of the two cities are able to enjoy each other's urban transport networks with the card. Card-holders can access recharge service at any recharge station established by either companies, and it is convenient for them to travel between the two cities to watch matches and tour the cities. This service will benefit regional economic development and economic integration.

According to sources, Tianjin will gradually further expand the scope of the card application to services of parking, toll, news stand, entrance ticket of tourism spots, small food and beverage business, fees for public undertakings and so on so forth. The move will quicken the pace of the services connecting to those of other areas.

The all-in-one card system of Tianjin urban area was brought into service in June, 2006. Till now, there have been more than two million cards issued and the number is estimated to reach four million at the end of 2008, which will effectively increase the efficiency of the public service industry. The cross-industry card service will offer great convenience to the residents.

Luanhe-River-to-Tianjin Diversion Project: the biggest across-basin diversion project at the beginning of China's Reform and Opening-up Campaign

On Sept. 11, 1983, Tianjin Municipal Government presented 50-gram tea leaves as a gift to each household in Tianjin in celebration of the completion of a diversion project. Till then, the residents had been jokingly commenting on the local salty drinking water by saying: "The tap water could be used to make pickles".

This project is called Luanhe-River-to-Tianjin Diversion Project, which consists of comprehensive water resource exploitation including across-basin diversion, water delivery, water storage, water purification and water distribution and urban water supply system. The water-diverting channel is 234 kilometers in length from its intake under the dam of Daheiting Reservoir in Hebei Province to the destination of Tianjin, with a designed annual diverted water capacity of 1 billion cubic meters.

"Luanhe-River-to-Tianjin Across-basin Diversion Project has become the lifeline of Tianjin," said an officer from Tianjin Administration of Water Resources. In the past 25 years, the project has safely delivered 18.192 billion cubic meters of water to the city, bringing along significant social, economic and ecological benefits.

This project has promoted the development of industry, improved investment environment and effectively controlled the risk of land subsidence. It is estimated that the project has delivered up to 1 billion cubic meters of water for urban environment improvement. The percentage of urban greenery coverage rose from the previous 8 percent to 37.5 percent in 2007.

"More importantly, the quality of the residents' drinking water has improved significantly, reaching up to State Standard Category III. Tianjin is now one of the cities in China that has quality drinking water," said the officer.

As the biggest water diversion project carried out at the beginning of China's Reform and Opening-up Campaign, it encountered difficulties beyond expectation. Its construction relied more on voluntary work and manual excavation. The project started on May 11, 1982 with 50,000 workers participating in the construction and it was completed and brought into operation on September 11, 1983.

Upon the completion of the project, in total there had been 27.3 million cubic meters of earthwork, 1.4 million cubic meters of stone, 800,000 cubic meters of concrete finished, over 3,000 pieces of equipment installed, 70,000 square meters of buildings constructed. All project quality indexes won gold medals of National Top Quality Project Award. A number of new technologies were adopted in areas of design, construction and capital construction management, which brought along the honor of five State Science and Technology Awards in 1987.

Importance was also attached to the project supervision. In order to supervise and safeguard the "lifeline", more than 1,000 staff from seven supervision divisions were assigned alongside to maintain the 234-kilometer-long water delivery channel day and night.

The government also put in huge amount of money to protect water resources. In 2002, Tianjin launched the Luanhe-River-to-Tianjin Diversion Water Resources Protection Project, with a total investment of RMB 2.3994 billion yuan.

The veteran industrial city accelerates forestation efforts and garden city dream

If you were a Tianjin resident, no matter from where you start, you would discover a street corner greenery space of more than 1,000 square meters within 500 meters, a large or medium-sized public greenery area of 5,000 to 10,000 square meters within 1 kilometer, a district-level park within 3 kilometers, and a municipal park or a large scenic area within 10 kilometers.

This scenario will become reality by the end of 2008. For Tianjin, the extra large veteran industrial city in North China, city beautification and improvement is a renewed dream along with the fast-developing economy.

As a city of 600-year history, the greenery coverage level of Tianjin is relatively low. Up to the end of 2002, the total area of urban greenery coverage had hit 101 million square meters, with park green space area reaching 34.66 million square meters. Forestation rate, greenery coverage rate and per capita park green space area were 27.30 percent, 19.22 percent and 5.63 square meters respectively, which ranked the medium or low level among capitals of provinces in China.

Since 2003, the pace of forestation was significantly accelerated. Up to 2005, 58.26 million square meters of trees had been planted in 3 years. After that, there have been more than 20 million square meters of greenery area built every year and the objective for 2008 is 26 million square meters. The indicators of city forestation basically achieve the national garden city assessment standards.

According to statistics of Tianjin gardens departments, in recent five years, the total area of new greenery space built in Tianjin has reached 130 million square meters, exceeding the total area of greenery construction in Tianjin in the previous 50 years.

By the end of 2007, the area of urban green space had reached 190 million square meters. Except the area for various constructions, the greenery area in gardens was 47.4 million square meters. Within completed areas, forestation coverage rate was 37.5 percent, with greenery coverage rate 29.5 percent, and per person park greenery space 7 square meters.

The city has started to improve its appearance in a large scale. In the past 5 years, Tianjin Gardens Bureau has implemented afforested landscape improvement and reconstruction on 11 level-2 rivers with the total length of more than 80 kilometers in the downtown of the city and newly added greenery space of more than 4 million square meters. It also organized and implemented forestation projects supporting 33 freeway, 6 entrances to the city and 6 large-scale intersections. Meanwhile the Bureau built forestation shelter belts of 32 meters on both sides of 6 railways in the city. The total length of these projects extends more than 70 kilometers, with new greenery space of more than 5 million square meters. In 2007, Tianjin afforested along another 8 city entrance roads, 12 city entrance streets, 47 Olympic streets, and 17 pieces of key areas, with newly added greenery areas reaching 13 million square meters.

According to Tianjin Gardens Bureau, Tianjin pays much attention on the construction of urban ecological greenery space and the conservation of ecological separation area. It had developed 8 large-scale scenic areas with a total area of more than 14 million square meters into urban nature reservations and ecological separation zones and gave them special protection to form ecological corridor of Tianjin together with green belt in outer ring road.

In addition, there are 8 districts and counties building up forest parks and ecological greenery space with a total area of 16 million square meters.

Tianjin combines old city reconstruction and improvement with forestation efforts. In the projects concerning the reconstruction of dangerous shabby cottages and re-development of city downtown area and the upgrading of ageing residential areas, Tianjin government focus on addition and improvement of former urban greenery spaces. In the past years, the greenery area in new residential areas has exceeded 6.55 million square meters, and subsidiary greenery space of newly built enterprises and institutions has reached 14.34 million square meters. Temporary greenery area was also added to the idle land parcels after relocation.

Nearly 90 percent of urban and rural residents hold positive attitudes towards public security of Tianjin

Since 1991, the National Bureau of Statistics released nine times to the public the comprehensive evaluation results of domestic regional social development level. The social security composite index of Tianjin has ranked the first among provinces, municipalities and autonomous regions of China, and Tianjin becomes the safest city in China.

In the "2007 selection activities of the most well-being cities in China (Chinese Mainland)" launched by Oriental Outlook Weekly and other media, Tianjin has also been rated as "the safest city felt by the residents". According to a public opinion survey held by Popular Feelings Research Department of Tianjin Social Science Institute, the rate of positive attitudes of urban and rural residents in Tianjin towards the social order reached 89 percent and the rate of satisfactions towards security departments and police reached 92 percent.

Public security departments in Tianjin organized and implemented a series of special actions, including "fighting robbery and theft", "tracking down homicide cases", "anti-gang campaign", "online manhunt", "prohibiting drug and gambling", so on and so forth. They also timely organized several large-scale, multi-facet, round-the-clock security patrols. More than 10,000 civilian police go to the streets and strengthen the security of busy places, dangerous areas and key areas. More than 700 armed plainclothes groups scatter in different places of the city all day long, which effectively deter the criminals and enjoy the reputation of "patron saint" of public security.

In 2007, all levels of public security departments in Tianjin cracked 36,000 criminal cases, and the case-solving rate increased by 6.3 percentage points, among which the solving rate of criminal cases that seriously affected the safety of the masses increased by 1.6 percentage points year-on-year. The solving rate of kidnapping cases was 100 percent, with the occurring rate of criminal cases decreasing by 0.7 percent. In addition, the public security departments at all levels also cracked cases of illegal and criminal activities in the economic arena. They cracked 5,084 various economic crime cases, retrieving a loss of nearly RMB 1.4 billion yuan. At the same time, they strengthened traffic, fire safety management and training, so that casualties and economic losses caused by traffic accidents and fires also decreased significantly compared with the same period last year.

Tianjin public security departments vigorously promote and develop the social security prevention and control system, with the backbone body of "Police Defense Network, the Civil Defense Network, and Technology Defense Network". Adhering to the principle of "sending police forces to the grass root level", they divide scientifically the patrol areas, as well as continuously adjust and enrich the frontline police forces. Along with strengthening police forces, Tianjin enriches the network of civil defense and governance. Reception rooms of more than 10,000 enterprises and institutions were transformed to security rooms, with total civil defense forces reaching more than 240,000 people. Regarding the establishment of technology defense facilities, Tianjin has installed 100,000 video surveillance probes and develops 15,000 users of "GSM + GPS vehicle alarm system". All these efforts and facilities have been playing an important role on preventing and combating crimes.

Tianjin has also encouraged righteous behaving and vigorously promotes social justice to make righteous behaving a shiny brand of Tianjin. In recent years, Tianjin government has commended and given awards to more than 2,000 righteous behaviors. There have been 62 individuals with righteous behavior awarded with the municipal honorary titles by Tianjin Municipal People's Government. Seven people with righteous behaviors were awarded the national honorary titles. Righteous behaviors resulted in more than 1,000 various criminals captured, more than 1,200 criminal cases cracked, and more than 600 people saved. Tianjin Righteous Behaving Association won the title of the national advanced work units of righteous behaving.

Tianjin, a window of modern China

A city with a history of 600 years is not an ancient city in China, but it is the gateway through which the western civilization of modern times first entered China. Thereby, Tianjin has won a unique status in the modern history. It was one of the first batch of cities where the Western material civilization had first landed and developed and also Tianjin was also one of the first places where the Western culture had been accepted.

When people stroll in the busy streets or roam about the alleys and lanes or even ramble the downtown area, they will feel deep in their heart what strong affinity this city has for both Chinese and Western cultures and how subtly and harmoniously it has assembled the ancient and the modern, the Western and the Chinese.

Since Tianjin became one of the earliest coastal cities in North China that opened to the outside world in modern times, Western and Chinese cultures clashed here. Continuous debugging and conflicts result in the unique growth pattern of Tianjin and the extent and speed to and with which Tianjin integrates with the world.

Trains were first introduced to China after Tianjin opened its port to the outside world, which was half a century later compared with the rest of the world, then telegrams, which was thirty years later. Modern post services were more than twenty years later compared with the rest of the world, but it was just a gap of three years when Tianjin introduced telephone in. Not long after maroon powder was invented did Tianjin establish 'the biggest and best powder factory' in the world. When big cities in the world established successively the public traffic system of trolley car by the early 20th century, Tianjin was almost in line with the world's pace. What's more, trains, telegrams, post services, telephones, trolley car, etc, were all first to be used in Tianjin and then popularized throughout China.

It is the same with spiritual cultures. 'Peiyang Martial School ', which was the first military academy that trained the modern army talents, was set up in Tianjin in 1885. The earliest university of China 'Peiyang University of Western Studies' began running in Tianjin in 1895. Guowen Daily with Yan Fu as the chief editor started publication in 1897 in Tianjin. The earliest police system was set up in Tianjin in 1902. In the same year, Takung Pao Newspaper, the oldest newspaper of China, started publication in Tianjin and continues its publication in Hong Kong until today. In 1906, Peiyang University of Politics and Law, the earliest of its kind to nurture talents of politics and law, was set up in Tianjin. Tianjin County Council, the first city autonomous institution in modern China, was established through vote in 1907. In 1919, the most successful private university of Nankai University was set up.

Spurred by the 'window effect' after opening the port, various operating mechanism of traditional society of China, such as political, military, judicial, educational mechanisms began to take place in Tianjin. Chinese people have a chance to get access to and experience all kinds of world cultures.

In the political perspective, Tianjin was always in the leading position. Being close to the capital city, Tianjin has always been the port and window open to the outside world. After two Opium Wars, Tianjin began to be the station place of Chihli Viceroy and Peiyang ministers. Consequently, Tianjin's diplomatic and political status hovered zoomed. In the eyes of foreigners, Chihli Viceroy Yamun of Tianjin was almost the 'Second Government' of China.

Tianjin has evolved rapidly from a government office, county city to a famous northern city which drives the modernization for China. The harmonious coexistence of both traditional and modern elements constitutes the profound meaning and style unique to Tianjin.

Today, this modern economic center of North China is rising with accelerated speed so as to redisplay the mien of North China economic center.

Tianjin launches the core tourism brand "Look at Modern China in Tianjin"

"If people are curious about the history of Ming and Qing Dynasty, they should look at Beijing. If they want to know more about modern China, they could not afford to miss the chance of touring Tianjin.'" For Western tourists, they will gain a sense of closeness when they come to Tianjin. This city is one of the first cities that got in touch with Western civilizations, and there are numerous remains of architectures and cultural relics of that age.

In recent years, Tianjin Municipal Government has begun to launch the core tourism brand of "Look at Tianjin if you want to know about modern China". The city focus on establishing twelve tourism sections or projects, so as to establish a symbol landscape and tourism complex that can reflect the important historical events of Tianjin politics, economy, finance, culture, architecture and international intercourse, with Tianjin modern history and culture as venation.

According to the Tianjin Tourism Bureau, the twelve tourism projects have so far made great progress in terms of planning and designing, attracting investment, land management and project implementation. These projects have taken initial dimension, as following:

The Vicissitude of Dagu. The warships of British and French allied army invading China was once bombarded here in Dagu more than 100 years ago. It is the place where modern history and cultures intensely intersected. It is the place where the Dagu Emplacement lies, which enjoys the reputation of 'Sea Gate of Ancient Fortress'. It is the place where Tide Sound Temple was built in Yongle Reign of Ming Dynasty.

The Army Training Field of South Tianjin Way Station. It is the cradle of modern army and new armies are trained here. Yuan Shikai had trained his army here. It mainly includes Training Army Field Wall, Wude Palace, Barracks, Moat, Marketing Street, Jiu Dachu, etc..

Five-Avenue Area. Located in the Five-Avenue area in the downtown area, it boasts a large number of architectures with historical styles and features and former residences of famous people in modern history. According to incomplete statistics, two presidents of Republic of China and seven Premiers and acting Premiers of State affairs live here in 1920's and 1930's. It is a miniature of modern history of China.

The Italian-Style Area. Located in the Italian style district to the north bank of Haihe River, it was once the center of Italian concession district. It is the only biggest architecture complex of Italian historical style and feature in China as well as in Asia.

The Former Residence of Henry Pu Yi, the last emperor of Qing Dynasty. Quietness Garden's original name is Qian (Heaven) Garden and was built in 1921. Henry Pu Yi once lived here after he was dislodged from the Forbidden City and renamed it Quietness Garden. Now it has been spruced up.

Ancient City of Tianjin Style — ancient city's folk-customs area. The Ancient City of Tianjin Style Section has drum-tower business street and ancient culture street as its core, and it is the classical scenery area which displays the folk-customs of the ancient Tianjin City. There is still the Ancient Culture Street Tourism District (Jinmen Native Place), one of the first National Five Grade Tourist Scenic Spots.

Sight-Seeing Area of Three Mouths of River. It exhibits the historical style and features of the birthplace of Tianjin City and industrial history and water transportation culture.

Ancient-Style Town of Yangliuqing Area. Based on resources of the unique folks, architectures of Ming and Qing Dynasties and folk cultures of new-year-paintings of Yangliuqing, it has developed Yangliuqing Stone House Yard of Qing Dynasty residents, Yangliuqing Spring Festival Paint Gallery, Streets of Ming and Qing Dynasty style, Sight of Canal, Wenchang Pavilion, Chongwen College.

Zhigu Cultural Sight-Seeing Area. This place has been the early birthplace of Tianjin as well as the proving ground of Westernization Movement.

Fenghua Road Germany-Style Area. Located in the triangular area formed by South Liberation Road of Hexi District, Qiongzhou Road and Wenzhou Road, it abounds with architectures of Germany style.

Central Park French-Style Area. Features of Architectures of French styles and zone bit dominate this place. Its center is a garden of 1.4 acres, separated by ring roads and with architectures of French styles standing tall and upright around it. There are 79 buildings subject to cultural relics' protection of various levels.

North Liberation Road Financial Street. It is intended to be built into a historical leisure tourism district with modern, financial and architecture culture as features and architectures of financial features in North Liberation Road as background.

Italian-Style Area: model of historical and cultural inheritance on the bank of Haihe River in Tianjin

Tianjin, with the name of "Miniature of Chinese Modern History", has fully developed the economical, historical and cultural value of historical buildings in recent years. The Italian-Style Area is built as the model of historical and cultural inheritance on the bank of Haihe River as well as the bridge of communication for Chinese and foreign economy and culture.

Italian-Style Area is located at the Southern part of Hebei District in Tianjin downtown area. It is the only Italian style building resources and the biggest Italian cultural seedbed in Asia. This community is the biggest and most functional as well as the only Italian-Style Area in China. It wins the reputation of "World Building Exposition" together with other European style buildings.

At present, Italian-Style Area has been decided as the biggest cultural cooperation item between Chinese and Italian governments. What is more, it has also been listed in the key items of "the Eleventh Five-Year Plan" of Tianjin and the important links of the development and reformation of Haihe River.

People can see Italian-style buildings of different period, including more than 30 former residences of famous persons. Almost every house and every street here records the changes of Chinese modern history and implicates innumerable stories, such as the Italian Consulate, the Italian Barracks, Pelota Field, Former Residence of Tang Yulin, etc..

Liang Chichao, the outstanding figure in political stage and academic forum in Chinese modern time, once lived here and wrote down masterpieces like Methods of Historical Research. Chinese playwright Cao Yu, who wrote the classic modern drama Thunderstorms, spent his childhood and youth period here.

As the important links of the development and reformation of Haihe River in Tianjin, Italian-Style Area occupies about 28.45 hectares in its first period, and the whole construction space is about 400 thousand square meters and the investment of this item has reached to about RMB 2 billion yuan. Now, this project goes smoothly. In its first period, the reformation of 10 roads with the length of 6 kilometers, coal gas, water, electricity, communication and other environmental landscapes have completed. The Convention and Exhibition Center with the construction space of about 32 thousand square meters is built with a high speed and will be completed in the next year.

In Italian-Style Area, construction and reformation of 62 buildings have completed. At present, Italian Style Area has regained its old look in whole with integration of some modern elements. Scenic spots like Marco Polo Square, the Former Residence of Liang Chichao, and Italian Barrack have been completed and opened to the public. Other spots like the Former Residence of Cao Yu will be completed and opened in this year.

Italian-Style Area has attracted the attention of Chinese and foreign elites by its good location, abundant cultural implication and rich repayment from industrial investment. The then

Italian Premier Romano Prodi, together with a plenty of entrepreneurs, once visited Italian-Style Area. In recent years, many investment groups form Italian, Germany, America, England and other countries have visited this place and reached a lot of agreements or intentions of development cooperation.

"Wall Street"of North China: the revival of century-old street

This street records the vicissitudes of Tianjin in the past century, which can be seen from its name. French called it Grant France Road while English called it Victoria Road. It was also called the Middle Street just because it was located at the middle line of English and French settlements. Now, it is named as North Jiefang Road. But in the past years, people liked to call it Financial Street because of its unique function. What is more, some people even called it as the Wall Street in North China.

After all the changes of one century, this 2,300-meter-long financial street and most of the financial buildings here have maintained their former style. They recorded the magnificent history and witnessed the vicissitudes of this street. Today, there are still 26 permanent financial organizations, including Tianjin branches of seven Chinese-funded banks such as People's Bank of China, which made it a concentration area of financial organizations in Tianjin and well-known in China.

As the concentration area in Tianjin and even North China, the history of this street could date back to the mid-19th century.

In 1860, England and France successively built roads and houses in their Tianjin settlements, and extended a main line of communication from French Bridge (Now the Jiefang Bridge) in French settlement to south to go through the two settlements. Then, it became the heartland as well as the political and economic center of the settlements.

Afterward, banks, insurance companies, business firms and steamship companies of other countries came to Tianjin to set up organizations and engaged in commercial activities. In 1880, the first foreign bank, Hong Kong and Shanghai Bank of England, set up its branch in Tianjin and started doing business in 1882.

From the end of 19th century to the beginning of 20th century, more than 10 foreign-funded banks were set up in the middle street of England and France settlements. Because of the concentration of foreign-funded banks, some big business firms and insurance companies strived to develop their business here.

At the end of Qing dynasty, Chinese new-style banks emerged and developed on this street, which had became a famous financial center in north of China before 1937.

After the liberation of Tianjin in January, 1949, foreign-funded banks pulled out of Tianjin successively and Tianjin branch of People's Bank of China was set up on North Jiefang Road. After the Third Session of the Eleventh Central Committee of the CPC, Bank of China, Agriculture Bank of China, China Construction Bank and Industrial and Commercial Bank of China set up their Tianjin branches here.

The buildings in financial street are of special features. From the end of 19th century to the beginning of 20th century, most of the buildings here were made of reinforced concrete together with other materials like marble, granite and red brick. The building style was classical revival with huge porch pillars in front of the door. The modeling was magnificent and solemn; after the 1930s, most of the buildings were made of concretes and the shape was tall and straight with modern function; while after 1980s, high buildings of new-built bank reflect the style of big city and modern time with multifunctional settings. They symbolize the new development of modern financial industry.

In 2006, Tianjin government invested RMB 14.5 billion yuan and formulated a construction plan of Tianjin financial district with the North Jiefang Road as the axis. The financial district covers 113 hectares, in which the new building occupies 1.3 million square meters and old building reformation occupies 800,000 square meters. The necessary roads, pipelines and network will also be developed. The old financial street is reviving.

Tianjin "Five-Avenue Area": being worthy of the reputation of "World Building Exposition"

An old man with a tobacco pipe in his mouth, a big tall dark-brown horse, and a white carriage…Sightseeing in the "Five-Avenue Area" by a horse-drawn cart is really a unique landscape in the city of Tianjin. Today, the "Five-Avenue Area", with the reputation of "World Building Exposition", has become the most attractive humanities tourism destination which fully shows the city's charisma and historical situation.

The Five-Avenue Area refers to the rectangular region in the Heping District south of Chengdu Street, north of Machang Street, east of Xikang Road, and west of Machang Street and Nanjing Road. In this area, there are 22 roads with a total length of 17 kilometers and total area of 1.28 square meters. "Five-Avenue Area" gets its name from five main streets: Machang Street, Munan Street, Dali Street, Changde Street and Chongqing Street from east to west. There are nearly 2000 western buildings of various European styles designed and built in the early of last century that have been completely preserved.

It is introduced by the Tianjin Department of Historical Building Protection that there are more than 230 buildings of various styles like England, France, Italy, Germany and Spain in "Five-Avenue Area", among which there are 89 English-style buildings, 41 buildings of Italian style, 6 French-style ones, 4 German ones, 3 Espanola-style ones, 46 courtyard-style ones, 40 apartment-style ones, 5 western-style ones, and 3 buildings featuring Chinese-Western mixed style. Buildings of all kinds of styles could be seen in this block. Therefore, the area

really deserves the reputation of "World Building Exposition".

An important reason for the reputation of western buildings in Tianjin is that the persons who once lived in the western buildings were unusual. According to incomplete statistics, only in the "Five-Avenue Area", two presidents of the Republic of China and seven Premiers or acting Prime Ministers once resided here in the 1920s and 1930s. In addition, a large number of celebrities of different fields left their historical mark in the "Five-Avenue Area" of Tianjin, such as famous educators Yan Xiu and Zhang Boling, well-known industrialists Zhou Xuexi, Li Zhuchen and Song Peiqing.

According to incomplete statistics, there are more than 200 former residences of celebrities in the "Five-Avenue Area", which become an important historical and cultural heritage of Tianjin. Therefore, the "Five-Avenue Area" is "epitome of modern Chinese history" and a description of social and historical changes of China in the past century.

Within the main streets of the "Five-Avenue Area", Machang Street is the longest one with the length of 3,216 meters. It got the name because it was once the prosperous path to former racecourse of England settlement. Pu Yi, old people of Qing Dynasty, retiring politicians of the Republic of China and frustrated warlords all once left their footprints on this street.

On the both sides of Munan Street, there are row upon row of western buildings, mutual beautiful courtyards and gardens, which fully show the European style. Dali Street, formerly known as Singapore Street, is famous for the single western buildings of various European styles. In Chongqing Street, most of the buildings are high-class row apartment among which there are many former residences of celebrities, including the only palace of Tianjin—Qing Palace. Located at the most northern part, Chengdu Street has become a main welcome route of Tianjin.

As a national-level historical and cultural

city, Tianjin attaches great importance to the protection of historical buildings. Based on domestic and international experience of historical buildings protection and the actual situation in Tianjin, Tianjin has made comprehensive refurbishment on the "Five-Avenue" historical building area and makes it an important window of Tianjin.

Tianjin: the first city to use specialized legislation to protect historical buildings

In 2005, according to the Protection Regulations of Historical Building in Tianjin, 672 historical buildings of 1019.7 thousand square meters and 6 historical districts were identified as protected constructions. This regulation is the first regional special legislation in China to protect historical buildings.

As a State-level historical city, Tianjin is one of the cities that received Western culture and formed unique Chinese-Western city culture as well as preserved a lot of various kinds of buildings of unique geographical characteristics.

Through a census in Tianjin, there are 854 buildings (1330 thousand square meters) preliminarily listed in the range of protection for historical buildings. They all have history of more than 50 years with historical, cultural, scientific, artistic, and cultural values to reflect the characteristics of the era and geographical characteristics. Among them, many historical buildings were opened and operated as a tourist attraction and service facilities after refurbishing. They greatly enhanced the cultural quality of Tianjin city, and promoted the development of tourism in the city.

It is understood that, on the basis of reference from domestic and international experience as well as the actual situation in Tianjin, Tianjin has made intensified efforts on the comprehensive renovation of historical buildings like Five-Avenue Area to make them an important window of Tianjin. In urban construction and comprehensive development of the Haihe River, Tianjin has mined, protected and refurbished a large number of valuable historical buildings to enhance the cultural landscape on both sides of the Haihe River and the city's cultural charm.

Tianjin has also developed other documents like "Procedures of Determination Historical Buildings in Tianjin", "Methods of Use and Manage of Historical Buildings in Tianjin", which perfect the legal system on historical building protection and regulate effective protection on legal basis. At the same time, protection management system and technology management system of historical buildings were also established.

In addition, Tianjin has also carried out market-oriented operation to develop relocation and renovation of historical buildings. The relocation and renovation work could not only change the situation of group living and serious damage in the historical buildings, but also improve the living condition of residents. What is more, the historical buildings are given new functions, which reflect the economic as well as historical and cultural values.

Since October 2005, according to the legislation, the Historical Building Managing Ltd has completed relocation from 76 historical buildings of 65,900 square meters in accordance under the principle of "government guidance and market operation".

The protection and use of historical buildings is a concrete manifestation of urban construction and development. The protection of historical buildings in Tianjin comprehensively displays the characteristics of resources, and further promotes the sustainable economic development in Tianjin.

Zhang Boling: the First Advocator of Olympics in China

The 29th Summer Olympic Games opened in Beijing on August 8, 2008. Chinese Olympic dream of one century finally came true and people could not help recalling Mr. Zhang Boling, the first advocator of Olympics in China.

Zhang Boling was born in Tianjin in 1876. He was the founder and first president of Nankai School as well as the pioneer of Chinese Olympics. His most important contribution to education is sports. Among the educators in Chinese modern history, no body but Zhang Boling could love sports and know sports so well.

On education, he contended several times that the goal of education was to save the nation and education could transform the Chinese society. The key was: "Transform her morality, transform her intelligence and transform her physique". He said that: "Among morality, intelligence and physique, physique is the weakest in Chinese education", "If we want to strengthen our nation; firstly we must strengthen our body."

According to some materials, Zhang Boling took his students to participate in the sports games held by youth league in Nanshi. In his advocacy, Nankai School set up fitness class of 2 hours every Wednesday. On such school collections, students could learn sports knowledge and skills. And this class became the tool for Zhang Boling to spread the sports spirit.

In 1907, Zhang Boling made a speech which could be written into the Chinese Olympic Annals. His speech made Chinese people know what were Olympics and the Olympic Games which only started 10 years ago. He thus won the reputation of "the first advocator of Olympics in China."

In the same year, he said in the fifth Tianjin Inter-School sports games that: "The success of this sports games makes me full of hope to our athletes for the Olympic Games in the near future…Our nation should form a sports team to Olympic Games."

This sonorously powerful speech became the first summon for China to the Olympics. On October 9-13, 1909, Nankai Middle School and Tianjin Christianity Youth League held jointly an annual sports game. In the award ceremony, he introduced the details of London Olympic Games to the students. In order to spread the Olympic spirits, he initiated the first Sports Alliance Games with the aim of Olympic Games, which was also the first National Sports Games in China.

In order to promote the Olympic spirits in China, Zhang Boling and some international friends set up Far East Amateur Sports Association and held Far East Sports Games. All the work in this game was in line with the standards of Olympic committee. From the name "Far East Olympic Games", people could see his deep Olympic complex.

After 7 years, in 1920, Far East Sports Games became the first regionally international sports organization which was authorized by International Olympic Committee. In 1924, Chinese Amateur Sports Federation and Chinese Sports Association merged Chinese National Sports Association and Zhang Boling was selected as the honorary president.

Chinese National Sports Association promoted and completed the great plan of China to join in the Olympic family. In 1928, on the suggestion of Zhang Boling, Chinese National Sports Association sent out representatives to attend the 9th International Olympic Committee. In 1931, International Olympic Committee formally acknowledged it as Chinese Olympic Committee, which selected athletes to participate in 10th and 11th Olympic Games. Although the results were not so good, the significance was great. Chinese athletes presented in world top field and Chinese representatives stepped up the honorary seating stage for the first time. Under the Olympic flag, Chinese athletes competed with contestants from other countries for the first time also. Chinese Olympic history came into a new stage.

The president of International Olympic Committee Jacques Rogge spoke highly of Mr. Zhang Boling for his "unremitting efforts and outstanding contribution to realize and promote Olympic spirits in China".

Nankai High School: the Alma Mater of two Premiers of China

Since the Tianjin Nankai High School was founded more than one century ago, it has cultivated innumerable celebrities. Many graduates of Nankai High School have made important contribution to the development of civilization all around the world. Chinese former Premier Zhou Enlai and current Premier Wen Jiabao are outstanding representatives of Nankai alumnus.

Nankai High School is located at Nankai Forth Road, occupying 31,548 square meters with the construction area of 19,178 square meters. It is the original place of Nankai Schools (University, high school, elementary school, and women middle school). The school was established by famous educators Yan Fansun and Zhang Boling in October, 1904,with a history of more than one hundred years.

Zhou Enlai had been studying in Nankai High School from 1913 to 1917. He aspired to "study for the sake of China's growing up". In 1919, after the foundation of Nankai University, he was enrolled into arts major without examination and accredited by Zhang Boling to announce the Education Reformation Programs of Nankai University in December, 1919. Yan Fansun described Zhou Enlai as "Premier-like talent" and sent him to France for further study under the "Fansun Scholarship" of Nankai University.

On February 24, 1951, Premier Zhou Enlai went back to his alma mater Nankai High School and gave important speech in Ruiting auditorium to the teachers and students. He thought highly of the history of Nankai School and was full of confidence in Nankai's future.

This time, Premier Zhou wrote down a simple but popular sentence in Nankai Schools, that is, "I do love Nankai". It demonstrated Premier Zhou's emotion and concern to his Alma Mater.

Current Premier Wen Jiabao had been studying at Nankai High School from 1954 to 1960. After graduating from high school, he went back to his Alma Mater three times in all, showing his emotion to Nankai.

In 1994, when Nankai School celebrated its 90 anniversaries, Wen Jiabao imprinted that "Nankai is forever young" to express his deep love to

his hometown and Alma meter. On September 26, 2002, Wen Jiabao went back for the third time. It was already 10 o'clock in the evening. The moment he went through the school gate, he told the workers on duty that: "I just have a casual look. So do not disturb anybody." The school was quiet and peaceful at night. Looking at the bright Xiangyu Building, Wen Jiabao asked thoughtfully: "When do the students end their evening classes?" One teacher said: "At ten o'clock. It is the time for them to go back to dormitory." Wen Jiabao said happily: "Let's go to their dormitory and see the students." In the dormitory of Class 2, Grade 1, he talked casually with the students. He said that: "Talents from different places come to Nankai School, which makes the school develop better. You must work hard and repay our country." His honest character, profound knowledge and modest style reflect the humane spirit of Nankai School.

At the influence of the humane spirits of Nankai School, groups of students graduate from the school, practice in the society, and become the pillar of the nation. Besides the two Premiers, there are many other celebrities from Nankai School, including 9 vice chairmen of the NPC Standing Committee and of the CPPCC, more than 40 ministerial-level leaders and more than 60 renowned scientists.

Nankai High School is of great glory in Chinese education history and enjoys a high reputation all-around the world.

Globally renowned Shiing-Shen Chern Mathematics Research Institute in Nankai University

Shiing-Shen Chern Mathematics Research Institute, which was also named as Nankai Mathematics Research Institute, was founded in 1985 in Nankai University. It has cultivated many outstanding middle-aged and young mathematicians. Through various kinds of academic activities, it has promoted the development of pure and applied mathematics in China and improved China's position in the field of mathematics. It is well-known in China and overseas.

Shiing-Shen Chern Mathematics Research Institute was suggested and founded by the great mathematician Shiing-Shen Chern, who was also the first manager until 1992. Prof. Long Yiming, the academician of Chinese Academy of Sciences, is the incumbent manager of the institute. Nobel Prize winner Prof. Chen Ning Yang set up a Theoretical Physics Laboratory in this institute with academician Ge Molin the director.

Shiing-Shen Chern Mathematics Research Institute is open to Chinese and foreign mathematicians, in the hope of promoting the development of pure and applied mathematics and cultivated high-level mathematic talents in China. For 23 years, the principle of this institute is "Based on Nankai, Open to China and the world". Through holding large-scale academic activities and exchange programs, the institution has generated a bunch of young and middle-aged mathematicians. It has grown into a globally renowned research body and a hub focusing on independent research and talents training. The research institute enhances China's status in the global mathematics research arena.

At present, there is an international-level research group in the Institute, including three academicians from CAS, one academician from the Third World Academy of Sciences, four chair professors and three course professors from "Yangtze Scholars Program" of the Ministry of Education. This group has won plenty of international and domestic reputation, awards and grants because of its outstanding research achievements, such as two mathematic awards of the Third World Academy of Sciences, one UNESCO Hussein Youth Scientist Awards, two 45-minute-reporters in International Congress of Mathematicians, one second prize of National Natural Sciences Award, one first-prize of Chinese High School Natural Sciences Award, one first prize of National Natural Sciences Award nominated by the Ministry of Education, one first prize of "Yangtze Scholars Achievement Award", one first prize of the Ho Leung Ho Lee Scientific and Technological Progress Award, two prizes of Shiing-Shen Chern Mathematics Award, five winners of Hong Kong Seek Truth Fund Youth Scholar Award, six winners (4A+2B) of National Outstanding Youth Fund, two cross-century talents, one national-level talent of the first group of New Century Hundred, Thousand, Million Talents Project. Among these prize winners, there are many chargers and participants of 973 projects of National Science and Technology Committee as well as directors of key projects of National Natural Sciences Foundation.

Shiing-Shen Chern is great international mathematician, enjoying a good reputation around the world. His specialty is differential geometry. He laid a solid foundation for overall differential geometry and made significant influence to the development of mathematics and even theoretical physics. What is more, he is also a great educator. He engaged in mathematics teaching for a long time and educated many outstanding mathematicians like Wu Wenjun, Qiu Chengtong and Yan Zhida who made great contribution to the mathematics education all-round the world especially in China.

Shiing-Shen Chern was also a great patriot. He was always sincere to the nation and put forward "Shiing-Shen Chern Assumption" that is "China will become a powerful mathematic country in the 21st century." He made many suggestions on opening to the outside world, developing sciences industries, as well as raising and introducing the talented persons. He promoted Chinese-foreign academic communication and cooperation, suggested International Mathematicians Conference holding in China, as well as supported and instructed the construction and development of International Mathematics Research Center of Nankai University. He contributed his life to sciences and education in China as well at the world and won great achievements. He is worthy the reputation of great mathematic master all around the world.

Tianjin has established many Confucius Institutes in nine countries

As a city with deep historical and cultural background in China, Tianjin shoulders an important mission in the course of establishing Confucius Institutes overseas. Up to now, Tianjin has established 11 Confucius Institutes and 2 Confucius Classrooms which powerfully promotes the cooperation and communication between Tianjin and other countries.

In order to meet the rapid growth of the demand of Chinese language learning in other countries all around the world and help foreigners to understand Chinese language and culture better, China began to establish "Confucius Institute" overseas since 2004.

The Confucius Institutes and Confucius Classrooms that Tianjin established overseas scatter in 13 regions of 9 countries, including the US, Japan, South Korea, Poland, Colombia, Portugal, Slovakia, Thailand and Kenya.

It is introduced by Tianjin Education Committee that although the Confucius Institute, Confucius Classrooms contracted by Tianjin government spread in different countries, they have three common missions as a whole: a center base of international Chinese learning network; a communication stage to strengthen to cooperation of Chinese and foreign education; a bridge to promote the economic and cultural exchanges between China and the world.

Tianjin Normal University cooperated with Nairobi University (Kenya) to establish the first Confucius Institute in Africa—Confucius Institute of Nairobi University, which develops Chinese classes to the students of Nairobi University, people of Kenya and communities of various fields. In 2007, the courses in Confucius Institute of Nairobi University were designed gradually to the qualifications and degree courses, and its Chinese language teaching was also listed in the Kenyan national education system. The Confucius Institute of Nairobi University enjoyed the reputation of "the landmark of cooperation and communication between China and Kenya."

Since Nankai University cooperated with University of Maryland to establish a Confucius Institute in November, 2004, it has cooperated with other universities to establish Confucius Institutes, such as Aichi University in Japan, University of Andes in Colombia, University of Minho in Portugal and University of South Florida in the United States.

In 2007, Tianjin University established its first Confucius Institute in Slovak University of Technology, which symbolized the formal establishment of the first Confucius Institute in Slovakian Republic as well as in European engineering universities.

Tianjin Experimental High School undertakes the first Confucius Classroom in the world — Confucius Classroom of Daimi High School in Thailand. Since November 2006, the Experimental High Classroom has sent nearly 20 backbone teachers to Thailand to teach Chinese for short and long term and train Chinese teachers as well. They have trained nearly 3,000 students and 500 local Chinese teachers.

In order to meet the demand of international Chinese language education and the work requirement of Confucius Institutes and Confucius Classrooms overseas, Tianjin has sent more than 300 international Chinese teachers and Chinese education volunteers. They not only assume the task of international Chinese teaching, but also assume the important mission of spreading Chinese culture like envoys.

Although the average running time of overseas Confucius Institutes and Confucius Classrooms in Tianjin is less than two years, they have set up nearly 100 kinds of lessons of various levels and various forms with more than 10,000 participants. At the same time, they held a variety of activities like cultural seminars, exhibitions, and national culture performances. The overseas Confucius Institutes have become an important place to learn Chinese language and culture and know contemporary China. They are widely welcomed by the local community.

It is known that, there will be 500 Confucius Institutes and Confucius Classrooms all-around the world until 2010. These Confucius Institutes will make use of their advantages to develop various teaching and cultural activities as well as form their special schooling pattern.

Confucius is famous Chinese thinker, politician, educator and the founder of Confucianism. His ideology and doctrine have deep influence to later generations. Confucian doctrine began to spread to the West 400 years ago when Italian missionary translated a book called "The Analects of Confucius" which recorded the words and deeds of Confucius and brought it to Europe.

Tianjin Olympic Center: "Water drop"

On August 6, 2008, Chinese Women Football Team kicked off their first match of Beijing Olympic Games in Tianjin Olympic Center. This modern stadium witnessed the hard work and honor of Chinese team again.

Tianjin Olympic Center Stadium served as a field for 12 soccer games during Beijing Olympic Games in 2008. Its distinctive shape is like a beautiful bouncing water drop.

Tianjin Olympic Center is located in the southwest of the urban area of Tianjin. It consists of the sports ground and the comprehensive area. The sports ground consists of Tianjin Olympic Center Stadium, Tianjin Olympic Aquatic Sports Center, Tianjin Olympic International Sports Communication Center, and Tianjin Gymnasium. The comprehensive area consists of eco-business area, boutique business area and top residence.

The subject of sports area is water—the source of life. This area makes full use of the advantage of abundant water in the southwest of the urban area of Tianjin. It is built above the water and has a distinctive shape like a water drop. Tianjin Olympic Center Stadium, Tianjin Olympic Aquatic Sports Center, and Tianjin Gymnasium are like three water drops above water with different gestures.

The environment in Tianjin Olympic Center is advantaged, with large area of water forming a beautiful water-scene. Stadiums in sports area are connected by water, shining each other in water. It is really a poetic beautiful view.

Tianjin is the biggest open coastal city in north of China and a co-host city of 2008 Beijing Olympic Games. Tianjin Olympic Center Stadium is one of the soccer fields of Beijing Olympic Games.

The length from south to north of the stadium is 380 meters, while from east to west is 270 meters, and the height is 53 meters. It covers 7.8 hectares, with a construction area of 158 thousand square meters and a roof area of 77 thousand square meters. There are 60 thousand seats for the audience.

The stadium can not only meet the need of international soccer and track and field matches, but also have ancillary facilities like market, exhibition, meeting hall and fitness room to combine leisure, entertainment, fitness, and shopping together.

The skeleton of Tianjin Olympic Center Stadium is made of concrete with steel pipe in the roof, and the wall is made of sunshine board, metal and glass. The area of the wall reaches to more than 70 thousand square meters, which is rare in stadium. Seamless concrete design is used in the framework, without any seam in the round length of thousands meters.

The stadium makes use of terrestrial heat as the heating source, using three terrestrial heat wells and water-source heating pump. At the same time, the artificial lake could be used to refrigerate, which reflect the idea of energy conservation.

Tianjin Olympic center is in concert with the southern move of city development. It not only becomes the most important central area of finance, business and residence, but also creates a multi-functional business circle of international level.

Tianjin Dagu Bridge wins Eugene · Figo award

In 2006 International Bridge Conference held in Pennsylvania, America, Dagu Bridge, which is designed by Tianjin Urban Construction Design Institute and constructed by Urban Construction Group, won the famous award—Eugene · Figo Award.

This is the first time for Tianjin Bridge to win the top award after the Jiangyin Yangtze River Bridge of Jiangsu Province in 2002 and the Lupu Bridge of Shanghai in 2004. It was said in the award reasons that: "Tianjin Dagu Bridge becomes a landmark building because of its incredible image and innovation as well as the outstanding achievement in bridge field".

Eugene · Figo Award is the top award in international bridge design, which was named after famous bridge designer—Eugene · Figo. It is established by International Bridge Conference to commend those landmark bridges full of imagination which are built recently. The first Eugene · Figo Award was issued in June, 2002. It is very strict to assess the bridges. If there is no one bridge could meet the terms of award, the award would be left to the next year. On the other side, if there are more than one bridge meeting the terms of award, only one bridge could win the award.

On the base of design from famous bridge designer—Deng Wenzhong, Dagu Bridge was preliminarily designed by the joint effort of Tianjin Urban Construction Design Institute and T.Y.LIN INTERNATIONAL. Then, the construction design plan was completed by Tianjin Urban Construction Design Institute. The construction work was undertaken by the Third Company, the Fifth Company and Facility Company of Tianjin Urban Construction Group.

The design of Dagu Bridge is "Sun and Moon Arches" which was made up of two asymmetry arches. The height of the bigger arch is 39 meters. It faces east and means the sun. The height of the smaller arch is 19 meters. It faces west and means the moon. The length of the bridge is 154 meters, with three-span continuous beam system. The design is unique and full of modern elements. Dagu Bridge fully shows the trend of bridge, that is, safe application, beautiful landscape, technical innovation and economic saving.

The construction of Dagu Bridge began on July 6, 2003. The pavement of asphalt concrete was complete on October 6, 2004. The bridge surface is paved by epoxy asphalt concrete, which solved the joint problem of steel structure surface and asphalt concrete. This is the first use of this technology in North China.

Binhai International Exhibition Center: a landmark building in Binhai New Area

In September, 2008, the Summer DAVOS Forum will be held in Tianjin Binhai New Area, and International Exhibition Center will be the main venue.

On August 1, 2008, the starting ceremony of Olympic torch relay in the Binhai New Area was held in Tianjin Port. The torch went through Tianjin Port, Tianjin Port Free Trade Zone, and 12 main avenues of TEDA, and then reached the international exhibition center at last stop.

As the biggest and most functional modern exhibition in Tianjin, International Exhibition Center has become a landmark and tourist attraction in Binhai New Area.

Binhai International Exhibition Center covers a land area of 169,000 square meters, with construction area of 61,000 square meters. It is the most professional exhibition in Tianjin. Not only commodity exhibitions and trade negotiations, but also large-scale meetings, banquets, rallies, and celebrations could be held here.

In May, 2008, Tianjin International Finance and Investment Exposition were held in Binhai International Exhibition Center. The exposition made a platform of direct exchanges and financial communication for financial institutions, Business Corporation and members of the public.

In June, 2008, the fifth International Mobile Phone Industry Exposition was held in the Binhai International Exhibition Center, with exhibition area of 18,000 square meters. It has become a stage for business negotiation, technology exchange and effective promoting.

In 2008, besides Summer DAVOS Forum, 40 expositions will be held in Binhai International Exhibition Center.

The Binhai International Exhibition Center is located at the east of TEDA Fashion Square. The main body is two-storey building. The first-phase project costs RMB 540 million yuan which was completed in the end of 2003. The second phase of the project will start on June, 2007.

It is said in the Government Work Report, Tianjin will focus on producer services and develop modern services like exposition, information, consultation and traveling.

The subject of 2008 Summer DAVOS Forum is "Next Wave of Growth". It will be held on September 27 to 28, 2008, in the Binhai International Exhibition Center. More than 1500 entrepreneurs, politicians and scholars from 70 countries and regions are expected to attend this forum. At that time, several subjects will be discussed, including "economic globalization", "risk control" and "the process of urbanization," "technological innovation", "environmental protection" and "a rising China".

Tianjin will build the biggest polar aquarium in China and visitors could have intimate contact with polar marine life

In the near future, peoples in Tianjin will make their dream come true by closely contacting with sea lions and seals, instead of going to Dalian Polar Sea World. The project of Tianjin Polar Sea World started on May 23, 2008. One of the main projects, polar aquarium, will become the biggest one in China.

Tianjin Polar Sea World is located in Xiangluo Wan Business District, which consists of emerging business, commerce, and tourism and leisure functions area in the Binhai New Area. It will include five functional areas: polar aquarium, sunshine tour-city, hotel-style apartments, city tourism board and Carnival Avenue.

Polar aquarium is one of the major projects of Tianjin Polar Sea World as well as the biggest polar aquarium in China once completed. The distinctive shape of aquarium is similar to a whale with a height of 32 meters and a construction area of 42 thousand square meters. This modeling was designed by American RPVA company, which once participated in the design of Disneyland. It also brought in the designing idea of Japanese Dentsu advertising company.

It is expected that in the spring of 2010, people could enjoy close contact with polar marine animals: they can see rare polar animals and marine life in an artificial polar world, such as romantic white whale, aggressive polar bears, tame penguins, agile otters, and huge sea lions.

These five functional areas are complementary to each other, which make effective integration of tourism and science education to provide tourism services such as experiencing, playing, leisure, entertainment, and dining, shopping, accommodation to visitors in one place.

The project will cost RMB 1.6 billion yuan, with the planned construction area of 187 thousand square meters.

Tianjin Polar Sea World will bring visitors a strong flavor of polar sea culture by the distinctive features of the Ocean, the polar unique style, and the atmosphere of harmonious coexistence between man and the nature. At that time, residents could play in the park for free, enjoying the beautiful view as well as learning marine science knowledge.

Tianjin Polar Sea World is one of important projects of Xiangluo Wan Business District. It will become a tourism spot and landmark building of the Binhai New Area, Tianjin, and even the whole North China region.

"Chinese Hollywood" in Dragon Valley of Jixian County in Tianjin

Tianjin is building Chinese cultural "silicon valley" or the "Chinese Hollywood" in Jixian County.

Dragon Valley Cultural City is located in Jixian County, the junction of Beijing and Tianjin. It is near the national Grade-five scenic spots with economic resources and cultural industries resources of Beijing and Tianjin on the back. It has become a good reception platform for industry transfer between Beijing and Tianjin. The location of this project makes full use of transport facilities of the seamless joint of Beijing-Pinggu, Jixian-Pinggu and Tianjin-Jixian Expressways.

Dragon Valley Cultural City has been listed in the key projects of Tianjin service industry. The investment comes from groups like Chinese Cultural Group of Beijing, Shanghai Greenbelt Group. It costs RMB 30 billion yuan, with a planned area of 28 square kilometers. It consists of television production centre, the media headquarters base, animation center, creative world, dynamic blocks, comprehensive performing arts center, indoor and outdoor photography, art galleries, art hotel, art studios and stars homes, the national arts institutions and top commercial facilities.

It will take 5 years to build various kinds of cultural facilities of 1.5 million square meters in the Dragon Valley Cultural City. The cultural city will consist of television, music, art, and media finally and become the Asian "silicon valley" of ecological culture, which tops the world in term of creativity. It is estimated that 65 thousand of population and 1,500 enterprises will move here and 45 thousand employment opportunities will be created.

At present, developers are negotiating with several world-class cultural complex industry groups to unfold cooperation concerning entertainment, media and leisure tourism industries.

Related insiders release that, as the most potentially robust industry, the cultural industry will turn out to be the key driving force for the world economy. It is also commonly recognized as promising industry in the 21st century. The Dragon Valley Cultural City is located at the starting point of the circum-Bohai Bay economic rim and the junction of Beijing and Tianjin. This place is of great potential, because it brings together the cultural industries resources of Beijing and Tianjin. The growth of Beijing and Tianjin will secure the development of the area, in terms of labor force, materials and information.

At present, the International Guests Theatre, the landmark in Dragon Valley, has been completed and will be applied as State-level prize presentation ceremonies in 2009. Up to 2010, all the cultural facilities in Dragon Valley will be basically completed and performances, exhibitions, ceremonies, fashion press conferences could be held at the same time.

Zhou Enlai & Deng Yingchao Memorial Hall plays an educational role with its multi functions and has received more than 4 million visitors from both Home and Abroad

Zhou Enlai and Deng Yingchao are two great role models in their generation. Zhou Enlai & Deng Yingchao Memorial Hall plays an educational role with its multiple functions and has received more than 4 million visitors from both home and abroad. It has become an important base to commemorate these two great persons, learn Chinese modern history and conduct literary research.

Located in the scenic area of Tianjin Water Park, Zhou Enlai & Deng Yingchao Memorial Hall covers 70 thousand square meters with a construction area of 10.5 thousand square meters. The main buildings are dignified and simple. Outside the hall, Memorial Square, giant granite statue "to behold a high mountain or a great man with awe", pavilion, memorial forest, grass and flowers become mutual background with the main building. The ethereal environment and solemn atmosphere highlight the elegant demeanor of these two great persons.

Zhou Enlai and Deng Yingchao were great proletarian revolutionaries, statesmen, firm Marxists and outstanding leaders of the party and the country as well. They spent their young age in Tianjin. They met, knew and loved as well as went on the revolutionary road with each other in Tianjin where they regarded as their second hometown. They left wills to scatter their ashes after death in the mountains and rivers of the motherland, especially the Haihe River in Tianjin.

In order to reminisce the great achievements and noble qualities of Zhou Enlai and Deng Yingchao, Tianjin Municipal Party Committee and Tianjin Municipal Government decided to report to the CPC Central Committee for approval that Zhou Enlai & Deng Yingchao Memorial Hall would be completed and open to the public on February 28, 1998, before the anniversary Zhou Enlai's birth of a hundred years.

Collections in the Hall are rich and the value of heritages is precious. Within the Hall, there are more than 10,000 pieces artifacts, documents, photographs and other materials, as well as more than 100 pieces of treasures, including the ashes urn that contained the ashes of these two great persons and the IL-14 plane and Jim car that had taken Zhou Enlai to travel all over the nation and many foreign countries as well as their correspondences.

The main memorial hall consists of Viewing Hall, Life Hall and Special Plane Hall to fully demonstrate the great achievements and lofty character demeanor of the two great persons in their generation.

In the frontispiece of Viewing Hall, there is a white marble statue of Zhou Enlai and Deng Yingchao, named as "deep love full of the rivers and mountains". The background of the main statue is a huge wall-hanging named "broad sea and smooth cloud". On both sides, the embossed wall was engraved some historical pictures reflecting the May 4th Movement, the Nanchang Uprising, Red Army's Long March, the Xi'an Incident, the founding ceremony of People's Republic of China, and the national construction as well.

There are 9 parts in Life Hall according to historical periods and subjects, namely "charisma of a great man(woman), the pursuit of truth, saving China, managing the State affairs, leading women's movement, turning the tide, inheriting great cause, living forever, and the last wish". Through 463 historic photos, 700 pieces of cultural relics, literature and other means of display, this hall comprehensively and systematically demonstrates the magnificent and brilliant life of Zhou Enlai and Deng Yingchao.

IL-14 aircraft numbered as No 678 is displayed in Special Plane Hall. It was a present that the Soviet Union gave Premier Zhou Enlai in August, 1957. Since 1957 to the mid-1960s, Zhou Enlai went to many places at both home and aboard by this plane.

February of this year, Zhou Enlai & Deng Yingchao Memorial Hall spent one year and a half to complete the reconstruction project of the Xihua Hall in Zhongnanhai. "Xihua Hall" was built in accordance with the layout and style of Xihua Hall in Zhongnanhai in 1960s by the proportion of 1:1. It was an office and residence place of Zhou Enlai and Deng Yingchao, after the People's Republic of China was founded.

In May 2008, the Zhou Enlai & Deng Yingchao Memorial Hall was named as the national level museum by the State Administration of Cultural Heritage.

To feel the enriched historical and cultural accumulation of Tianjin, Tianjin Museum has received more than 1.5 million visitors from home and abroad

As a public museum and a symbol of cultural facilities combining the functions of collection, protection, research, and exhibitions, Tianjin Museum has received more than 1.5 million visitors from home and abroad since its opening in December, 2004. It not only shows visitors the enriched historical and cultural accumulation of Tianjin through time and space, but also adds a unique cultural atmosphere to Tianjin.

Located at the Galaxy Square in Tianjin downtown, Tianjin Museum costs RMB 327 million yuan and covers 57,000 square meters, with the construction area of 35,032 square meters. Opening on December 20, 2004, Tianjin Museum is a large-scale comprehensive historical and artistic museum based on the Tianjin History Museum and Tianjin Art Museum. Its construction shape is similar to a swan that flies above the lake with clean and lively lines and full of strong visual appeal and vitality.

There are 200,000 various artifacts in Tianjin Museum, including bronzes, ceramics, calligraphy, paintings, jade, imperial jade seal, ink-slab, oracle-bones, coins, historical documents, local crafts, and other categories of collections. Among them, the ancient ceramics, calligraphy, painting, ink-slab, coins and contemporary and modern historical relics are especially outstanding.

In addition, the Tianjin Museum also has a book and information centre, which contains 200,000 specialized books.

The collections in Tianjin Museum are rich in quantity and nice in quality, enjoying high reputation at home and aboard. These collections are not only wide in range, but also form a system in each character. What's more, the age of collections spans from primitive society to modern time. Among these collections, there are some valuable relics which deserve the reputation of "National Treasures", such as the world-renowned bronze "Taibao Chinese ancient cooking vessel in Western Zhou Dynasty". It is a rare four-legged square vessel with unique shape and exquisite casting and of historical value and high artistic value. The famous copy in Calligraphy history, the copy of Wang Xizhi's "Calligraphy in the November 27th" in Tang Dynasty, is one of the earliest copies of Wang Xizhi's cursive and retains its original elegant appearance well. Another world treasure collected by the Museum is Fan Kuan's "the picture of snow and forest" in Northern Song Dynasty. It is one of the only two pictures of Fan Kuan, whose ink landscapes printings were the representatives of the North School in the mature period because of its magnificence and well-design.

Tianjin Museum is not only entrusted with the important duty of protecting intangible cultural heritage of the region, but also is a place to display Chinese civilization and to continue the local history and culture of Tianjin. Within the museum, there are a series of thematic art displays like large-scale historical display "Look at the China of the last century in Tianjin", the large-scale cultural relics display "Collections in the past hundred years — the display of valuable relics in the museum", and the "Ancient Chinese porcelain decorative arts display".

Tianjin Museum, together with Tianjin Natural History Museum and Zhou Enlai & Deng Yingchao Memorial Hall, is listed in the recently published national-level museums.

The Tianjin Natural History Museum has become an important base to cultivate the awareness of environmental and ecological protection

As China's oldest museum of natural science, Tianjin Natural History Museum has been adhering to the principle of public welfare in the past years and has been making use of the advantages of materials and personnel in the museum to develop diversified science education activities for the majority of young people. Since opening to the public 10 years ago, it has received more than 2 million visitors and become a popular science educational base for patriotism education, which combines the functions of collection, research, outreach education, and tourism.

Tianjin Natural History Museum is one of the few Chinese comprehensive museums that consist of animals, plants, paleontology, geology, and other subjects. The number of collections in the museum reaches to 400 thousand, among which there are 1,282 pieces of treasures of first-level and second-level as well as 1,452 pieces of specimens. It mainly collects natural sciences specimens in Northwest China and North China as well as representative and typical natural sciences specimens at home and abroad. Tianjin Natural History Museum ranks the first in similar museums because of its long history, rich collections, and outstanding research achievements.

The predecessor of the nearly 100-year-old Tianjin Natural History Museum is the Northern Museum which was founded in 1914 and renamed as Tianjin Natural History Museum in 1957. In 1997, the Tianjin Municipal Government invested and renovated the Natural History Museum and re-opened it to public in 1998.

The new museum occupies 20,000 square meters with construction area of 12,000 square meters. It consists of four functional areas: galleries, library collections, business premises, the Botanical Garden. The main building with the shape of "seashells with beads" implicates that Tianjin Natural History Museum is a pearl on the coast of the Bohai Sea.

As a popular science educational base and an important window for the building of spiritual civilization, Tianjin Natural History Museum adheres to the principle of public welfare and opens the basic display to the public all year round.

Tianjin Natural History Museum organizes a group of full-time and part-time workers who have professional knowledge on explanation, reception and counseling, as well as more than 100 volunteers ranging from primary school students to 80-year-old senior people. They have done a lot of work on collecting, explanation and other services in the past years.

Built and opened in 2004, Tianjin "Ocean World" fills the blank of large aquarium in Tianjin. The education of "Ocean and Environment" held in Tianjin Natural History Museum, was welcomed by the majority of the visitors.

The Museum operated in a flexible way to let the museum known by the community. During the last five years, the roving exhibition had attracted audience of more than 2 million, and toured more than 100 exhibition venues all around China. In 2005, "The exhibition supermarket" program won the first prize of outstanding popular science activities in Tianjin.

As one of first batch of national-level museums, the Tianjin Natural History Museum is active in research activities. During recent 10 years, it has assumed a number of national, provincial and ministerial-level scientific research projects. The fossils of Microraptor gui and New Species of D.paradoxus were published in the English magazine *NATURE*. It published *Flora of Tianjin* to fill the blank of flora monograph in Tianjin. In addition, it published *General Knowledge of Tianjin · Birds* to fill the blank of birds monograph in Tianjin.

Little Station Military Training Park, which shows the evolution of modern military training, has been basically completed

As one of the subjects of "to see modern China in Tianjin", Little Station Military Training Park has been basically completed. It consists of some important historical buildings like Kungfu Hall and the central Basilica which are built according to historical materials. Within the park, the Military Museum exhibits cold steels in ancient China, hot weapons in modern times, as well as army clothing and quartermaster materials in different periods.

Located at the Jinnan District in Tianjin, Little Station Town was an important military base to organize and train the new army during the campaign to learn Western technology in the late Qing Dynasty. This place contributed to the conversion of cold and hot weapons in China as well as created the first modern Chinese army.

Little Station Town was flourished because of military training and famous for its rice. There were five Presidents of the Republic of China, 17 Prime Ministers and 28 Provincial Governors came from Little Station Town. Through this subject, the construction of Little Station Military Training Park will display the evolution of modern military training, reproduce the culture of rice and form a new bright spot of "look at modern China in Tianjin and look at modern Tianjin in Little Station".

It is understood that Jinnan District is also on the construction of "military training station — tourism area in the Little Station Military Training Park of North China." Based on the historical facts of military training in Little Station, the construction of tourist area takes the history of North China, modern culture in Tianjin and rice culture of Little Station as skeleton. The key functions of this area are historical display and interactive emotional experience. It is a story-theme style historical and cultural tourist area with the functions of education, leisure, shopping and meeting.

Sketch map of New Army's barracks

Tianjin, a famous cultural city with a history of six hundred years, attaches importance to the protection of intangible cultural heritage

Tianjin, a famous cultural city with a history of six hundred years, is endowed with rich history and a great variety of cultural heritage, among which there are tangible items with a concrete form and there are intangible ones passed down through mouth teaching.

In recent years, Tianjin has adhered to the guideline of "putting protection and rescue at first place; practicing rational utilization, inheritance and development", effectively protecting valuable intangible cultural heritage, promoting cultural heritage and national spirits.

Presently, there are fifteen types of folk arts listed on State-Level Intangible Cultural Heritage Directory, which include Peking Opera, Baodi Pingju Opera, Tianjin Shidiao Opera, Jingdong Bass Drum, Yangliuqing Spring Festival Woodcut Painting, Zhang's Clay Figurines, Jinmen Fagu, Hui-Nationality Heavy-Knife Martial Art, Hangu Cymbal, cross talk, Hebei Bangzi Opera, Pingju Opera, Wei's kite-making technique, Tianjin Huanghui Fair, so on and so forth.

Apart from this, there are eight people listed as the Representatives and Traditional Bearers of State-Level Intangible Cultural Heritage, including Cao Shijie, inheritor of Hui-Nationality Heavy-Knife Martial Art, Huo Qingshun and Huo Qingyou, folk artists from Xiqing District, Feng Qingju and Wang Wenda, inheritors of Yangliuqing Spring Festival Woodcut Painting, Li Rongwei and Zhang Youlin, renowned Peking Opera artists, and Wang Yubao, famous Tianjin Shidiao Opera artist. There are also thirty

items such as Dagu Dragon Lantern and Tianjin Tianhou Religion listed in Municipal-Level Intangible Cultural Heritage Directory.

The abundant intangible cultural heritage items and folk arts are invaluable treasures of the country and symbols of the outstanding intelligence and unique creativity of its people. The intangible cultural heritage should be more effectively protected to allow the traditional culture better inherited, developed and vitalized.

Tianjin Yangliuqing Spring Festival Painting: a re-invigorated cultural heritage from agrarian society

A senior person, Wang Wenda, is stooping and carving a wooden board attentively with a graver in a workshop of several square meters. As one of the four inheritors of the intangible cultural heritage of Yangliuqing Spring Festival Painting, Wang has been improving his craftsmanship continuously ever since he was an apprentice.

As one of the four types of New Year paintings in the world, Yangliuqing Spring Festival Painting is now flourishing, invigorated by both the government sponsorship and the market demand. According to preliminary statistics, more than 100,000 paintings of this kind are sold annually.

In the Tianjin Traditional Culture Street several kilometers away, Yangliuqing Spring Festival Paintings can be seen throughout the area. Spring Festival is the busy season of the Yangliuqing Spring Festival Painting sale. People buy the paintings either as gifts or as collections. Paintings of different sizes are taken by tourists to all over the world.

Spring Festival Painting is an art form of Chinese folk culture. During the lunar New Year in China (Spring Festival), people buy Spring Festival Paintings to adorn their rooms, celebrate the occasion, keep away evil spirits and pray for good fortune.

The technique for Yangliuqing Spring Festival Painting is "half printing and half painting", whose procedure is first carving linings for the picture on a piece of wooden board, then printing the picture in ink on a piece of paper, and hand-coloring the picture after several single-color printings. The unique combination of the flavor of woodblock prints and the colorfulness and subtlety of hand-painting makes the painting stand out from other types of New Year paintings.

"Yangliuqing Spring Festival Painting, rooted in an agrarian society, is a 'living fossil'. It is the fruit of Chinese culture and at the same time, a mirror reflecting the local people's life and custom," said Zhang Zhong aged over 70, a famous folk art expert and member of Tianjin Research Institute of Culture and History.

Yangliuqing Spring Festival Painting has a history of more than three hundred years, originating from Emperor Chongzhen's reign in the Ming Dynasty and it enjoyed its prime time before the Guangxu Emperor's reign in the Qing Dynasty. At that time, many households in Yangliuqing Town and the neighboring villages in Tianjin were running Spring Festival Painting workshops. It is said that during that period, "every family knew how to paint" and it is from its birthplace, Yangliuqing Town, that the painting derived its name. After the Opium War, the area was afflicted and the painting industry dropped seriously.

In 1958, Tianjin Yangliuqing Painting Society was established, protecting this endangered art form from being wiped out. Presently, the society has a collection since the Ming Dynasty, of more than 100,000 paintings and over 6,000 ancient woodblocks, and it also keeps the complete traditional manufacturing technique for the painting.

In 2004, the Ministry of Culture endorsed Tianjin Yangliuqing Woodcut Spring Festival Painting as "Trial Item of Traditional Chinese Folk Art Protection Project", starting the work concerning the art form's history, sorting and research.

In 2005, National Art Museum of China held the "Tianjin Yangliuqing Woodcut Spring Festival Painting Collection Exhibition" and created quite a stir.

In 2006, the painting was listed on the first edition of "State-Level Intangible Cultural Heritage Directory", ranking first in the category of Fine Arts.

In 2007, Yangliuqing Spring Festival Painting Society was listed as one of "Tianjin's Old Brands", becoming a brand product of Tianjin.

Apart from the society, many folk Spring Festival Painting workshops have sprung up since the 1990s. At present, Wang Wenda, Feng Qingju, Huo Qingshun and Huo Qingyou are nominated as inheritors of Yangliuqing Spring Festival Painting. After the Huo Brothers, there have been approximately 50 Spring Festival Painting workshops, more than 60 Spring Festival Painting shops and over 700 people who work in the manufacturing and distributing fields of the industry in Yangliuqing Town, with the annual turnover totaling more than 10 million yuan.

The manufacturing of Yangliuqing Spring Festival Painting is now well on the track of industrialization and becoming more influential. Many countries, including Japan, France, Britain, Italy, Thailand and Singapore, have held exhibitions for this unique Chinese folk art.

Yangliuqing Spring Festival Painting Art Center, a project totaling several dozen million yuan, will begin its construction in Tianjin this year.

Tianjin — Home of North China's Quyi performances plays a positive role to inherit and develop the Quyi performances

Talking about Northern China's Quyi performances, people could not ignore Tianjin, known as the home of Northern China's Quyi performances. A highlight of Tianjin's culture and art scene, Quyi is not only an important part of the city's culture, but becomes the unique cultural brand of the city.

A variety of story-telling, story-singing, cross-talk and other Quyi performances were rooted, evolved, developed and flourished in Tianjin. Though some genres such as Meihua Dagu, Xihe Dagu, Danxian, Cross-talk and Pingshu did not originate in Tianjin, after spread into the city, they grew up well, gradually established different styles and have successfully passed on generation by generation. Others such as Jingyun Dagu, Jingdong dagu, Tiepian Dagu and Kuaibanshu, their primitive forms were born in other regions, but flourished, enjoyed great popularity in Tianjin and were named here.

The real local Quyi performances of Tianjin including Tianjin Shidiao, Tianjin kuaiban, Xichengban, Dalei Laxi are also very popular among the Quyi fans from both home and abroad.

Tianjin is not only famous for its variety of the Quyi performances, but has a large number of renowned performers and performing styles. The big names in the history of Tianjin's Quyi performances are too numerous to be listed. The cross-talk maestro Zhang Shouchen and Ma Sanli, Luo Yusheng, founder of the Luo's-styled Jingyun Dagu, Wang Yubao, artist of Tianjin Shidiao, Hua Sibao, artist of Meihua Dagu, Liu Wenbin and Dong Xiangkun, artists of Jingdong Dagu, Li Runjie, artist of Kuaibanshu, either the founder of a form or leading artist of a form, they all have made great contribution to inherit and develop Tianjin's Quyi performances.

In addition to those pioneers, many artists started their careers and came to the fore in Tianjin. The Dagu maestro Liu Baoquan, "King of Meihua Dagu" Jin Wanchang, "King of Danxian" Rong Jianchen, "Queen of Zhuizi" Qiao Qingxiu, Cross-talk maestro Hou Baolin all established as masters of the Quyi performances. After the founding of the People's Republic of China, Tianjin has put great effort into training young generation of Quyi performers and many of them have been very active on stage. In 1986, Tianjin established the only Quyi School in China and has trained a large number of Quyi performers and writers. Many young artists have won wide acclaim and gain national wide popularity.

Tianjin also has a strong team of Quyi writers and theoretical researches, a large number of fans who love Quyi and know well of the performances, many venues running Quyi performances regularly and various active amateurs. Many forms on the brink of extinction have been inherited and revived in Tianjin.

A kind of traditional performing art, Quyi has combined with the modern culture to become an important part in Tianjin's cultural calendar and the local people's life. The natural characters of the Tianjiners, their open-mindedness, frankness and optimism serve as the fertile soil in which the Quyi performances have grown up well and laden with fruits.

To promote the development of Quyi performances, Jingdong Dagu and Tianjin Shidiao have been listed as China's Intangible Culture Heritage. Xiangsheng (cross talk), Luo's-styled Jingyun Dagu, Li's-styled Kuaibanshu and Dalei Laxi have been listed as Tianjin's Intangible Cultural Heritage. These measures have brought vigor to revive Tianjin's Quyi performances.