



Research Report on the Investment Environment of Huangpu District, Guangzhou

(2020)



Preface

Huangpu District of Guangzhou (“Huangpu District”), located at eastern Guangzhou of Guangdong Province, and contiguous to Hong Kong and Macao, sits in the center of the Guangdong-Hong Kong-Macao Greater Bay Area (“Greater Bay Area”). As a major district of innovation in the Greater Bay Area, Huangpu District plays an important role in the “Guangzhou’s Second Central Business District”, the “Guangzhou-Shenzhen-Hong Kong-Macao Science and Technology Corridor”, and the “Pilot Zone of Guangzhou’s Artificial Intelligence and Digital Economy”. Here lies Guangzhou Development District (“GDD”), one of the first national economic and technological development districts in China. After three decades of development, GDD has gained strong economic strength and made it leading among its counterparts in China in terms of overall strength. Now GDD has become an important growth pole for economic development, a driving engine for science and technological innovation, and a core area for innovative development in Guangzhou.

During the “13th Five-Year Plan” period (2016-2020), Huangpu District leverages on competitive distinctive industries of automobile, electronics, energy, high-end chemicals, food and beverage, and electrical machinery, with a view to further developing five emerging strategic industry clusters including new-generation information technology, intelligent equipment, biomedicine, new energy and new materials, and actively developing modern service industries like headquarters economy.

Deloitte China is honored with the opportunity to be engaged with the Investment Promotion Bureau of GDD to provide this Research Report on the Investment Environment of Huangpu District Guangzhou. By using specialized research and analysis methodologies, domestic and foreign investors can understand more from an objective third-party perspective.

With input from Huangpu District on statistics and information of economic and industrial development, as well as Deloitte’s experience in the research of investment environment and industrial development, this Research Report aims to present a comprehensive overview of the investment environment of Huangpu District from the following five aspects:

- **Business environment**
- **Government policies and services**
- **Infrastructure**
- **Human resources**
- **Living environment**

This Report also analyzes the development planning of Huangpu District and government services offered by local competent authorities, presenting insights into advantages in investment environment and development prospects, in particular:

- **Premium geographic location**
- **Advantages in Competitive and Emerging Industries**
- **Favorable conditions for innovation and entrepreneurship**
- **Precise government policies and efficient government services**

Deloitte China expects that Huangpu District will further seize the opportunities brought by the “Greater Bay Area” strategy, and improve its manufacturing industry in terms of digitalization, automation and intelligence. The aim is to upgrade its product labels from “Made in China” to “Intelligently Manufactured in China” and to be more competitive in the global market. Huangpu District will provide excellent investment and cooperation opportunities for domestic and foreign investors.

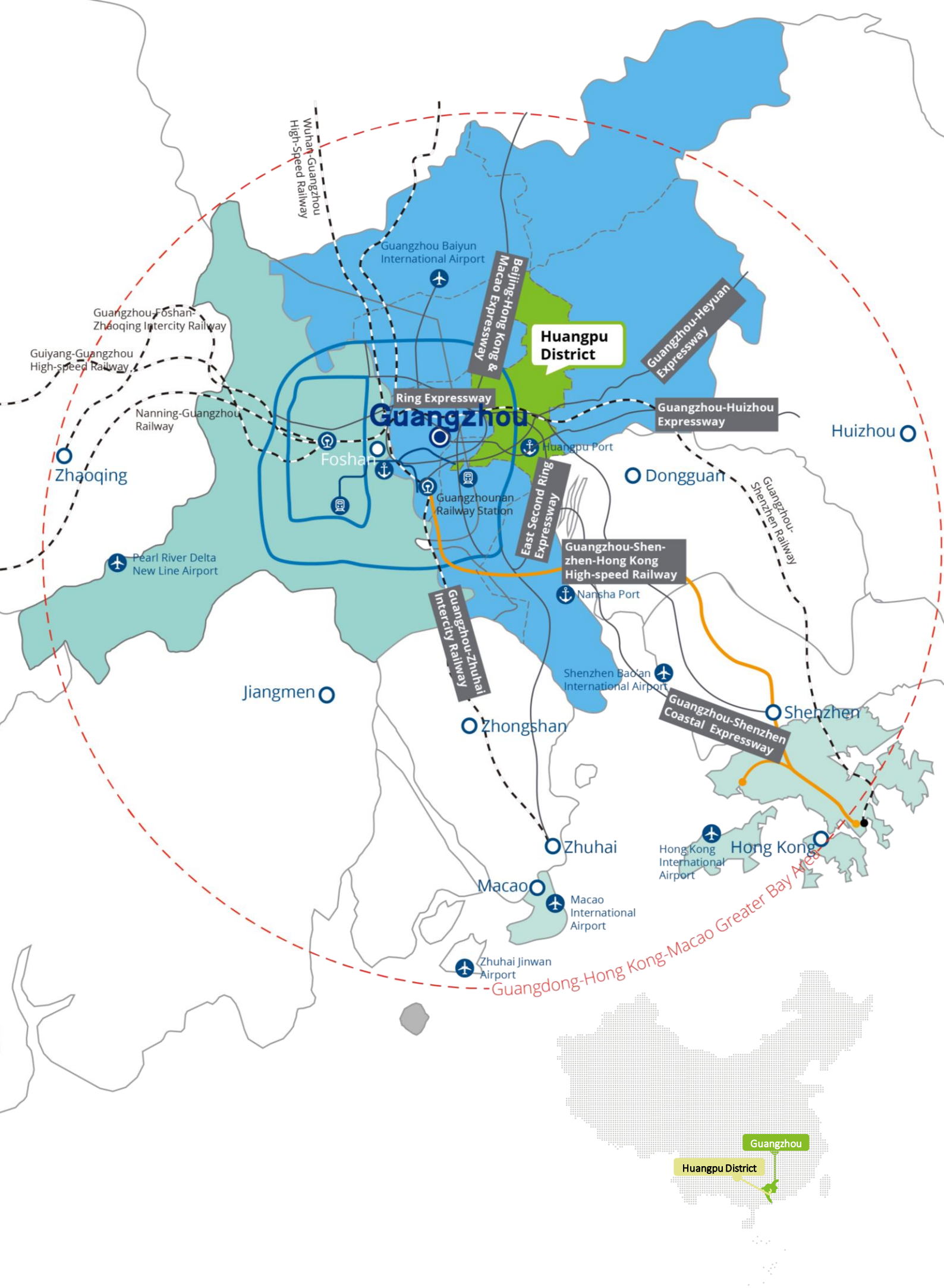


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Main data source:

1. Official website (<http://www.hp.gov.cn/>) and official account "Guangzhou Huangpu Release" of Guangzhou Huangpu District Government
2. Information provided by Investment Promotion Bureau of Guangzhou Development District
3. The official websites of the bureau of statistics, department of human resources & social security, and other and other municipal and provincial government agencies
4. China Real Estate Value (<http://www.crevalue.cn/>) and other real estate transaction websites
5. Amap (<https://ditu.amap.com>) and other geographic websites
6. Deloitte's database

Chapter I Overview of Huangpu District

An aerial photograph of the Huangpu District in Shanghai, China. The image shows a dense urban landscape with numerous high-rise residential buildings. A major highway interchange with multiple lanes is visible in the center. To the right, a large port area is filled with many red cranes, indicating a busy shipping hub. The background shows a wide river or bay under a cloudy sky.

Introduction

Located at eastern Guangzhou of Guangdong Province, the heart of the Greater Bay Area, and contiguous to Hong Kong and Macao, Huangpu District is endowed with an excellent geographical location, a sound foundation for industrial development, and a world-class environment for business and innovation.

In 2019, Huangpu District (GDD) ranked first among its counterparts in China in terms of technological innovation capability, index of business environment, the number of stationing listed companies, the number of patents licensed, and the total government finance and tax revenue, making it a good investment destination for domestic and foreign investors.

Honors of Huangpu District (GDD)

 2020	<ul style="list-style-type: none">• Ranking First among “Top 10 Industrial Parks for International Business Environment”• Ranking First among China’s Economic Development Zones for Business Environment Index• The Happiest Cities (Districts) in China 2020• The Happiest Cities (Districts) for Entrepreneurs 2020• Top 10 among Hurun’s China Top 100 Districts with the Most Investment Potential 2020
 2019	<ul style="list-style-type: none">• Ranking Fourth among China Top 100 Municipal Districts for Comprehensive Competitiveness• United Nation Investment Promotion Awards 2019 for “GE BioPark”• Ranking First among China’s Economic Development Zones for Business Environment Index• Ranking First among China Top 10 Economic Development Zones for Business Environment• 2018-2019 China Best Pilot Zone for Business Environment Reform and Innovation• 2019 China Reform – Case of the Year• Seven major indicators such as regional GDP and actual use of foreign investment, ranked first among its counterparts in China• The Happiest Cities (Districts) in China 2019
 2018	<ul style="list-style-type: none">• China Top 10 Demonstration Counties/Cities for Business Environment• Ranking Second among China Top 100 Districts for Industry• Ranking Second in Comprehensive Assessment of 219 National Economic Development Zones• Ranking First among China’s Economic Development Zones for technology innovation• Major indicators such as industrial foundation, use of foreign investment, outbound trade ranked top 3 among China’s Economic Development Zones

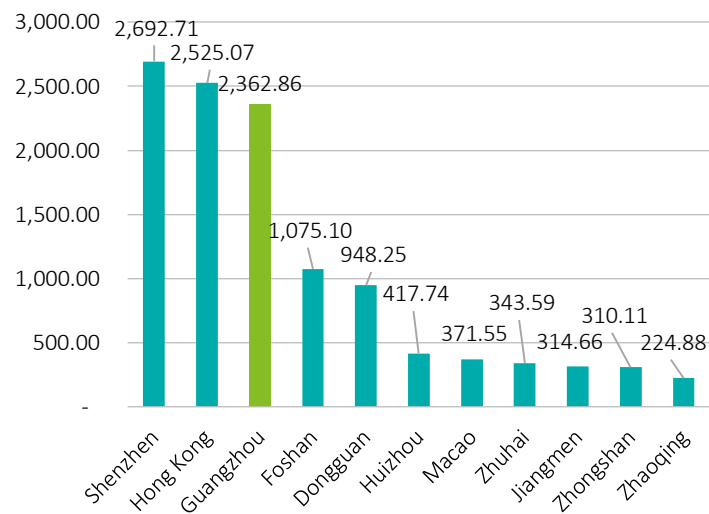


Premium Opportunities of the Greater Bay Area

Increasingly Important Role of the Greater Bay Area in China and among Bay Areas in the World

The Guangdong-Hong Kong-Macao Greater Bay Area (“GBA”) comprises nine cities in China’s Guangdong Province including Guangzhou, Shenzhen, Zhuhai, Foshan, Zhongshan, Dongguan, Zhaoqing, Jiangmen, and Huizhou, and two special administrative regions (“SARs”) of Hong Kong and Macao. By 2017, GBA had already led the other noticeable bay areas in the world in terms of land area, population and air passenger throughput. It is expected to become the world's largest bay-area economy and metropolitan area in the future. Compared with the other world-class bay areas, GBA has unique position and advantages, in that it comprises manufacturing base, financial center and science and technology center. In 2019, GBA accounted for some 12% of the country’s GDP while making up less than 6% of the total population in China, surpassing the economic efficiency of the whole country.

Figure: GDP of GBA Cities in 2019 (RMB Billion)



Guangdong Province, Center of Technological and Industrial Innovation

According to the *Framework Agreement on Deepening Guangdong-Hong Kong-Macao Cooperation in the Development of the Bay Area* signed in July 2017 by and among China's National Development and Reform Commission, the People's Government of Guangdong Province, the Government of the Hong Kong SAR, and the Government of the Macao SAR, Guangdong is set to be a driving force for open-market pilot reform, State economic growth, developing a center of technological and industrial innovation, as well as a base for advanced manufacturing and modern service industries.

Huangpu District, the Major Innovation Carrier for GBA

In February 2019, the Central Committee of the Communist Party of China and the State Council released the Outline Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area, which proposes five major strategies including “a showcase for in-depth cooperation between the Mainland and Hong Kong & Macao”, and reiterates Guangzhou’s leading position as a national core city and an integrated gateway. It is expected that Guangzhou will strengthen its international commercial and trading functions, and become an integrated transportation hub. Further, Guangzhou will cultivate as a technological, educational and cultural center, and develop as an international metropolis. The “China-Singapore Guangzhou Knowledge City” in Huangpu District of Guangzhou is expected to be a “major carrier for innovation” and is intended to be one of the hi-tech and innovation platforms. Since its inception in 1984, GDD has been exploring new ways to develop advanced manufacturing industry, new modes of transformation and development, and new paths of cooperation between Guangzhou and Hong Kong, with the mission of “relying on Hong Kong and Macao, serving the Mainland and facing the world”.

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Figure: Proportion of GBA's GDP to China's GDP in 2019 (RMB 100 million)

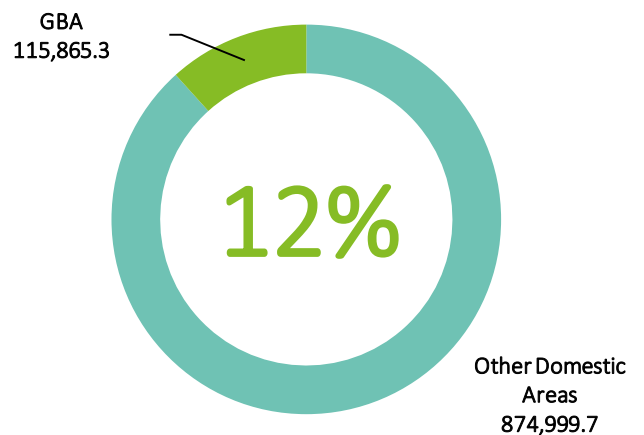


Figure: GBA Cities



Diversified National Business Functional Zones

Huangpu District boasts four national business functional zones, namely Guangzhou Economic and Technological Development Zone, Guangzhou High-Tech Industrial Development Zone, Guangzhou Export Processing Zone and Guangzhou Free Trade Zone, all of which are supported by national-level resources and various preferential policies. They provide a diversified investment environment for the development of enterprises. Such four national business functional zones work together with China-Singapore Guangzhou Knowledge City as one office while keeping their own identities (collectively referred to as the "Guangzhou Development Zone"), which implement the management system of "five zones in one" and enjoy city-level business management authority like that of Guangzhou City. With enhanced administrative approval functions, investors can be provided with more efficient government services.

Guangzhou Hi-Tech Industrial Development Zone:

1. Set up in 1988
2. Upgraded to a national high-tech development zone in 1991
3. Endowed with rich research resources by prestigious universities, national key labs, and startup incubators within the zone
4. Providing technology and talents for the development of high-tech companies

Guangzhou Economic and Technological Development Zone:

1. Founded in December 5, 1984
2. One of the first national-level economic development zones
3. Ranking second in the comprehensive development level assessment of national-level economic and technological development zones in 2019
4. Suitable for high-tech enterprises to invest and develop

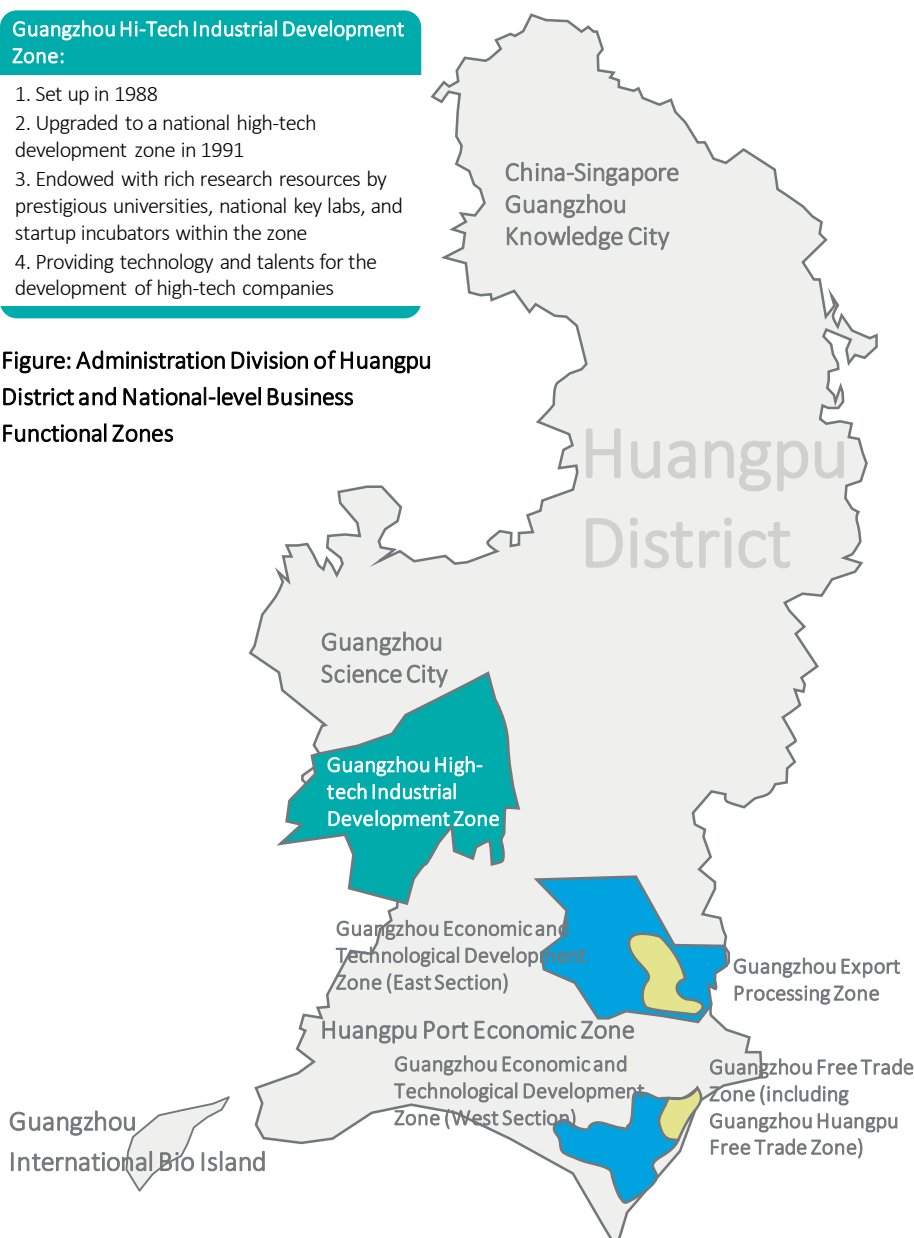
Guangzhou Export Processing Zone:

1. Established in 1992 and 2000, respectively
2. Serving as special economic zones and opening up to the world
3. Benefiting from multiple preferential customs control policies and the state's tax policies Promoting the free flow of goods, capital, people, technology, information and other elements in Huangpu District
4. Committed to the development of import and export processing and trading companies

Guangzhou Huangpu Free Trade Zone:

1. Established in May 2020
2. A state-level special functional zone, which is integrated and optimized with Guangzhou Bonded logistics Park in Guangzhou Free Trade Zone
3. Unless otherwise stipulated by laws, regulations and policies now in force, foreign goods transported into the zone shall be bonded or exempted from duty; any goods sold in the territory of China but outside of the zone by transporting from the zone shall go through the formalities of customs declaration under relevant provisions in respect of the import of goods, and taxes shall be levied according to the actual status of goods; any goods transported outside the zone but within China shall be regarded as exports and shall be subject to export tax refund; goods transactions by and between enterprises within the zone shall be exempted from VAT and consumption tax
4. Mainly engaged in bonded processing, bonded logistics, bonded services and other businesses

Figure: Administration Division of Huangpu District and National-level Business Functional Zones

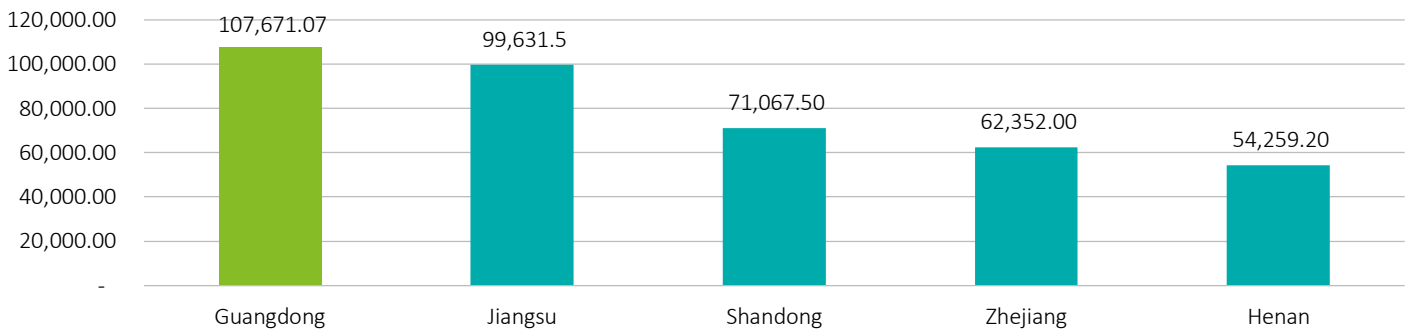


Thriving Economy

The GDP of Guangdong Province ranked First in China

In 2019, Guangdong Province's GDP amounted to approximately RMB 10.8 trillion, accounting for some 11% of China's GDP and ranking first in the country. In 2020, Guangdong Province's GDP amounted to approximately RMB 11.1 trillion, ranking first nationally for 32 consecutive years.

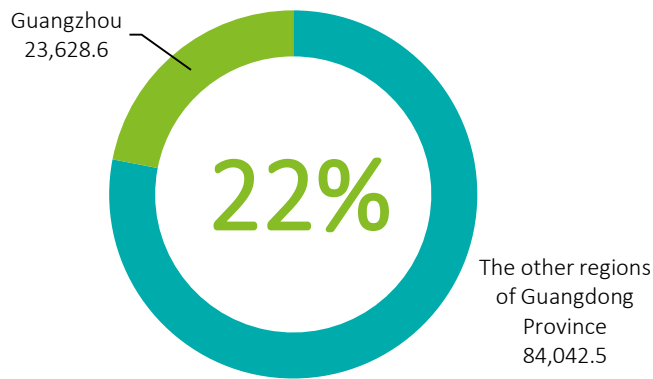
Figure: Top 5 Chinese Provinces in 2019 by GDP (RMB 100 million)



Guangzhou's GDP ranks among the highest in Guangdong Province

In 2019, Guangzhou's GDP hit RMB 2.36 trillion, accounting for approximately 22% of Guangdong's GDP and ranking second in the province.

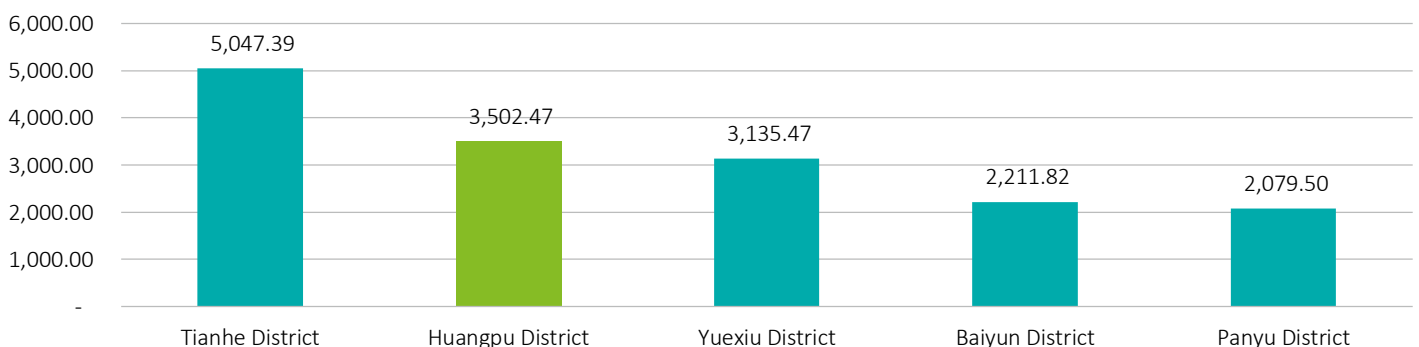
Proportion of Guangzhou's GDP to Guangdong's GDP in 2019 (RMB 100 million)



Huangpu District ranks second in Guangzhou in terms of GDP, and GDD has ranked first in terms of GDP among economic development zones in China for two consecutive years

In 2019, Huangpu District's GDP amounted to RMB 350.247 billion, accounting for approximately 15% of Guangzhou's GDP and ranking second in the city. GDD's GDP had ranked first among 219 development districts in China for two consecutive years (2018-2019).

Figure: Top 5 Districts of Guangzhou by GDP in 2019 (RMB 100 million)

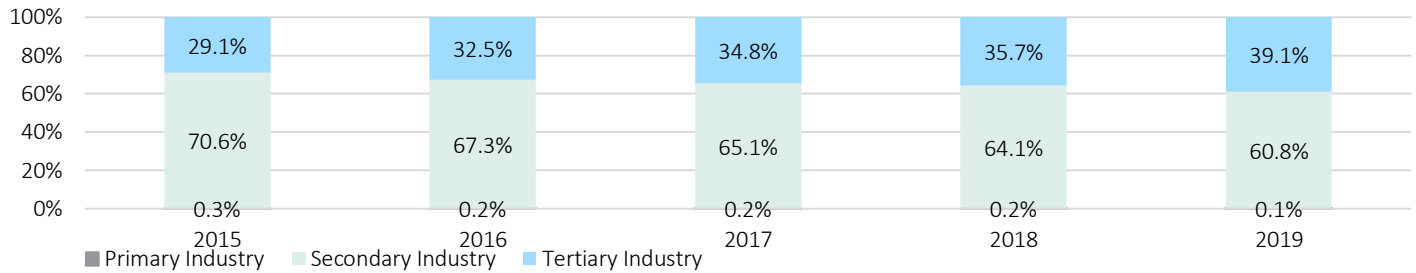


Growth in Industrial Economy & Emerging Industries

Dominating Secondary Industry

The secondary industry dominates the industrial structure of Huangpu District, and it has been continuously optimized. In 2019, the primary industry in Huangpu District produced an added value of approximately RMB 421 million, while the secondary and tertiary industries produced values of RMB 213.00 billion and RMB 136.80 billion respectively.

Figure : Proportion of Three Industries of Huangpu District to Regional GDP (2015-2019)



Improving Industrial Economy

The industries of Huangpu District have been producing an increasing total industrial output value. In 2019, Huangpu District's total industrial output value above designated size amounted to RMB 793.65 billion, accounting for some 41% of the total industrial output value above designated size of Guangzhou.

Figure: Huangpu District's Total Industrial Output Value above Designated Size (2017-2019) (RMB 100 million)

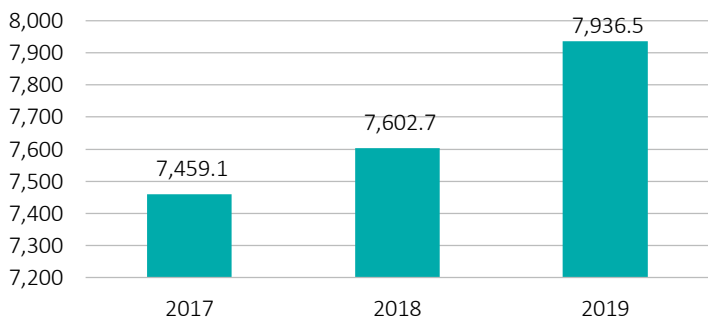
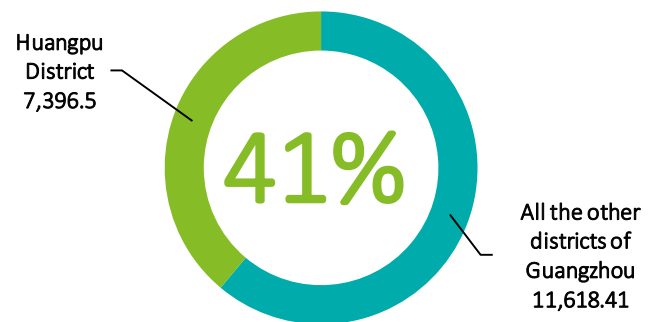
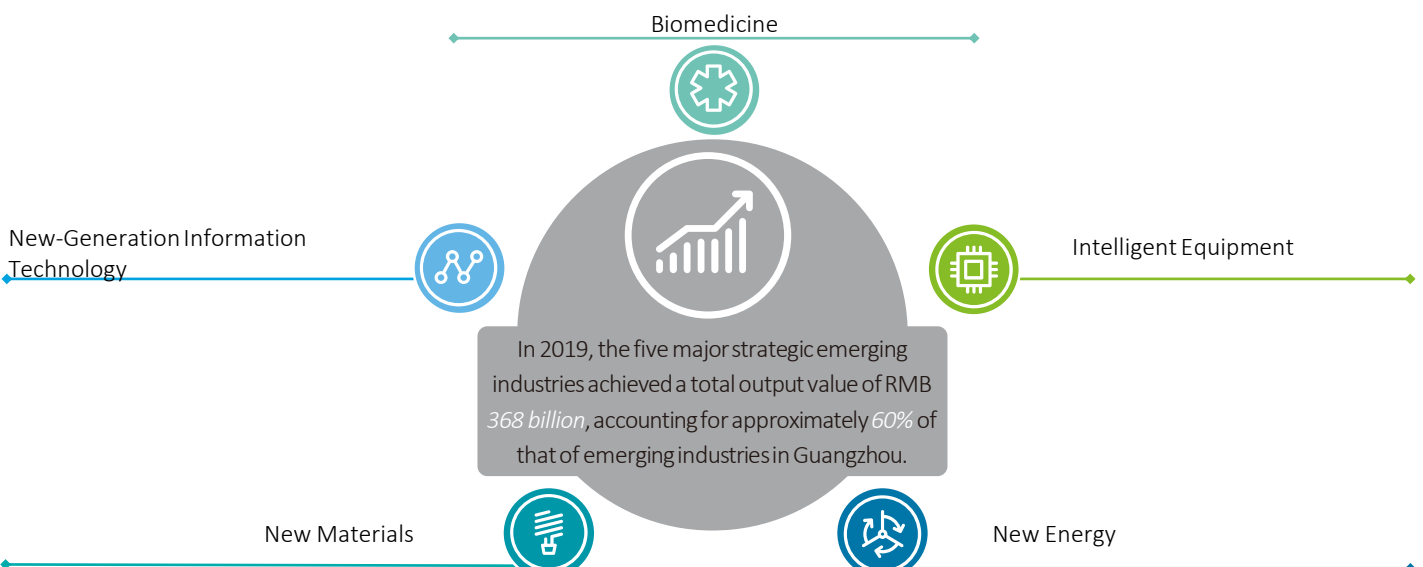


Figure: Proportion of Huangpu District's Total Industrial Output Value above Designated Size to that of Guangzhou in 2019 (RMB 100 million)



Growing Strategic Emerging Industries

Huangpu District has been actively developing five major emerging industries including new-generation information technology, intelligent equipment, biomedicine, new energy and new materials, which produced an output value of RMB 368 billion in total, accounting for some 60% of the output value of Guangzhou's emerging industries.



Increasing Attractiveness to Foreign Investors

Guangdong ranked second in China in terms of deployment of foreign investment

In 2019, Guangdong Province actually deployed foreign investment of RMB 152.20 billion, or approximately USD 21.8 billion, accounting for about 16% of the total foreign investment actually used in China, ranking second among all provinces and cities in the country.

Figure: 2019 Top 5 Provinces/Cities in China by Foreign Investment Actually Used (USD 100 million)

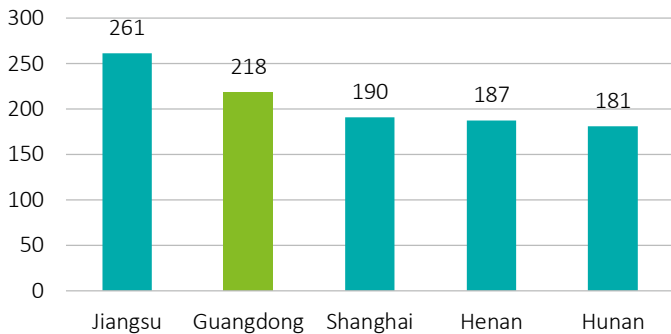


Figure: 2019 Proportion of Foreign Investment Deployed in Guangdong Province to That in China (USD 100 million)



Guangzhou, a Magnet for Foreign Investors

In 2019, Guangzhou actually utilized foreign investment of USD 7.143 billion, accounting for about 33% of that of Guangdong Province, ranking second in the province in this aspect. At the same time, according to a survey made by the American Chamber of Commerce in South China, Guangzhou was the most desired investment destination in South China for domestic and foreign investors.

Figure: 2019 Proportion of Foreign Investment Deployed in Guangzhou to That in Guangdong Province (USD 100 million)

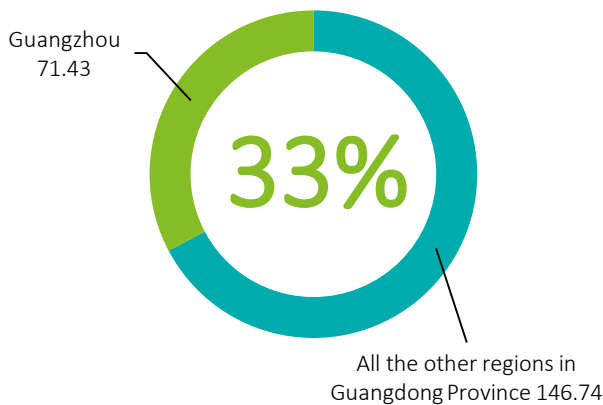


Figure: Cities in South China by Attractiveness to Foreign Investors

	Guangzhou	Shenzhen	Shanghai	Beijing	Others
2019	40%	22%	13%	2%	23%
2018	31%	10%	20%	15%	24%
2017	31%	18%	15%	7%	29%

Source: 2020 Business Status Report in South China.

Huangpu District has been one of the most attractive foreign investment destinations in Guangzhou

- Introduced 163 foreign investment projects in 2019, including 12 projects with a total investment of over USD 50 million**
- In 2019, the foreign investment deployed ("foreign direct investment") was USD 2.281 billion, ranking first both in Guangzhou and among economic development zones in China.**
- From 2014 to 2018, the total foreign investment reached USD 17.429 billion cumulatively, with an average growth rate of 85.58%**
- In 2019, the contractual foreign investment amounted to USD 3.689 billion, with an average growth rate of 85.45% from 2015 to 2019**
- As of December 2020, 197 projects of Fortune Global 500 Companies, with 2 local companies on the list of Fortune Global 500 Companies in 2020**

Gathering of Renowned Domestic and International Enterprises

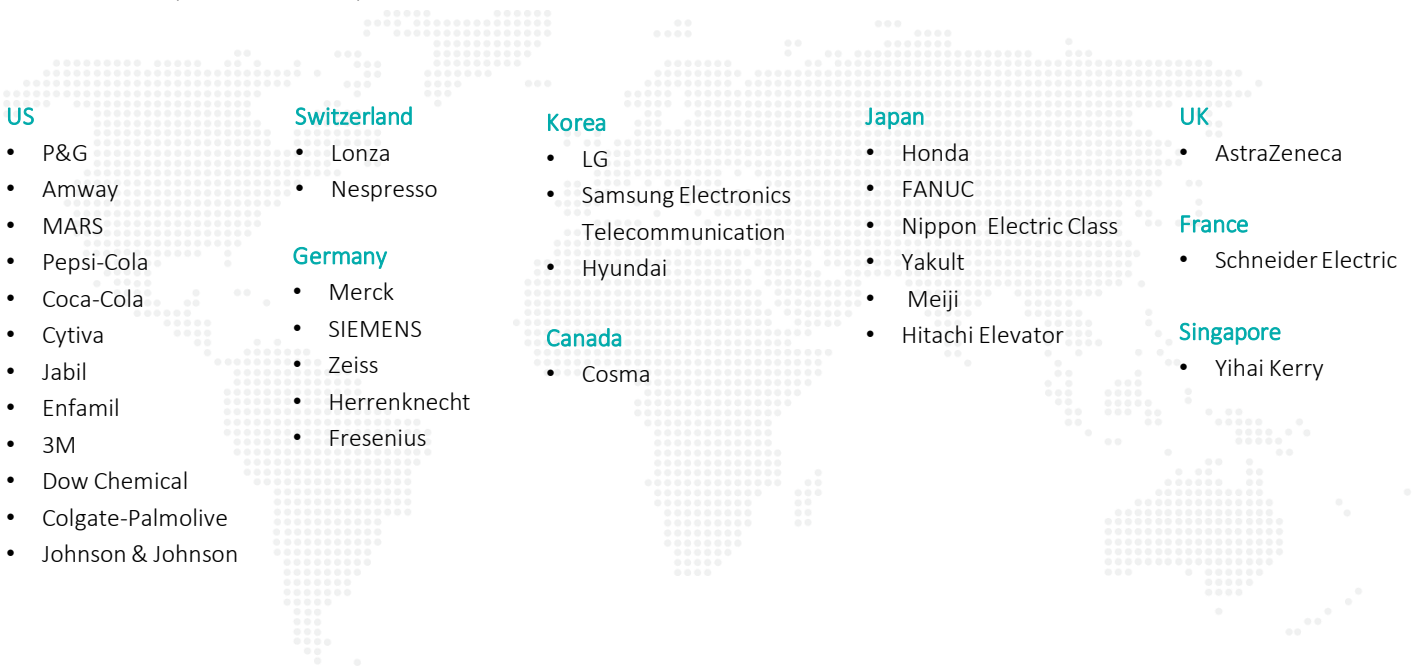
Guangzhou contributed to 3 Fortune Global 500 Companies in 2020, 2 of which are based in Huangpu District, accounting for two thirds.



Renowned Companies in Huangpu District (names not listed in order) as of December 2020



Multinational Representative Companies:

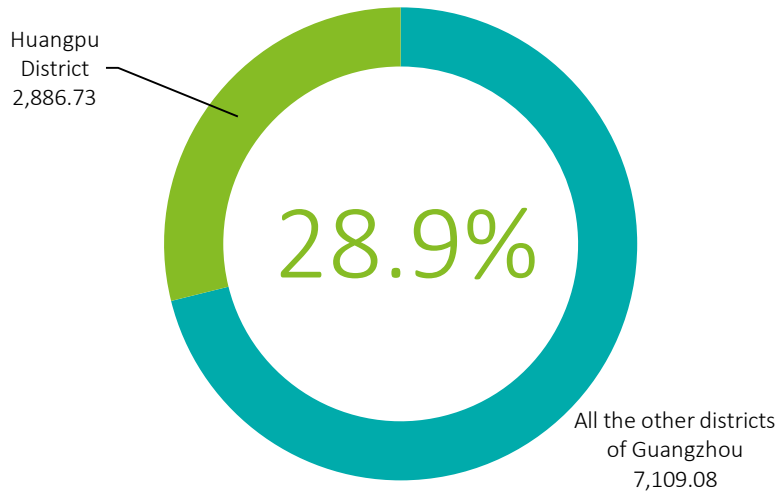


Growing Trade & Consumption

Huangpu District, a Leader in Total Import-export Volume

In 2019, Huangpu District imported RMB 160.168 billion worth of goods in total from around the globe and exported RMB 128.504 billion, achieving a total import-export volume of RMB 288.673 billion, ranking first in Guangzhou.

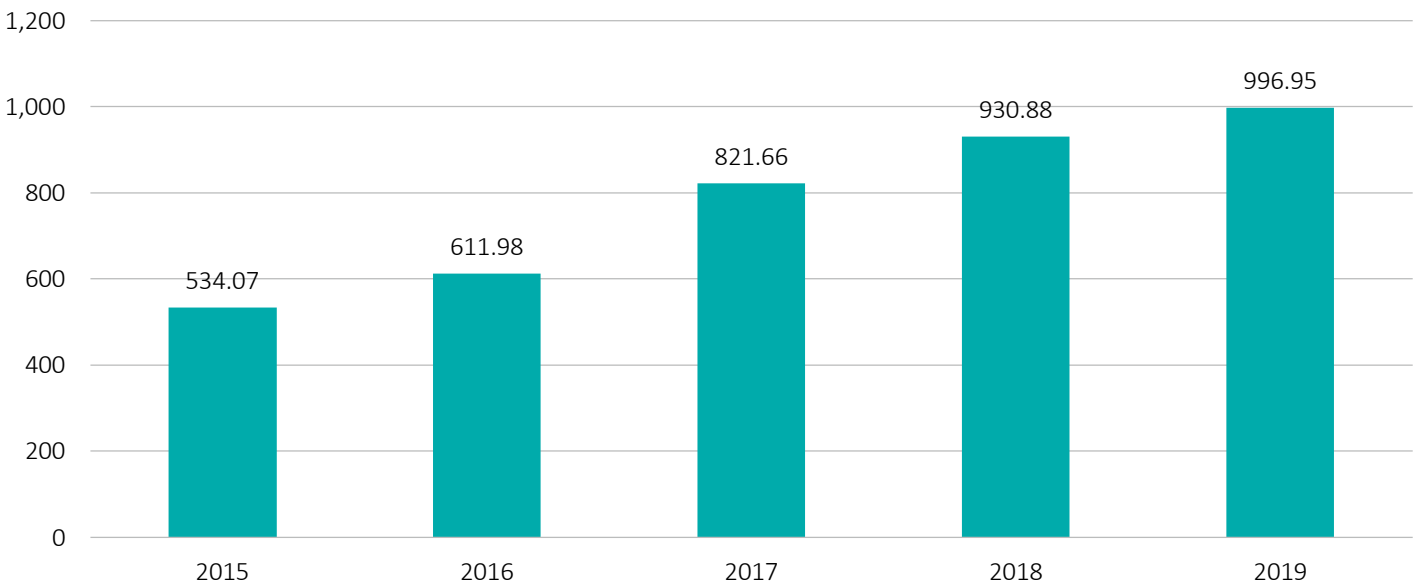
Figure: 2019 Proportion of Huangpu District's Total Import-Export Volume of Goods to That of Guangzhou (RMB 100 million)



Continuously Growing Retail Sales of Consumer Goods and Sales of Commodities

In 2019, Huangpu District achieved total retail sales of consumer goods and total sales of commodities of RMB 99.695 billion and RMB 889.973 billion, up 7.1% and 38.0% year on year, respectively, ranking first in Guangzhou in terms of growth rate.

Figure: Huangpu District's Total Retail Sales of Consumer Goods (2015-2019) (RMB 100 million)



Increasing Outbound Investment

In recent years, Huangpu District has been expanding footprint in global markets by approaching international resources.

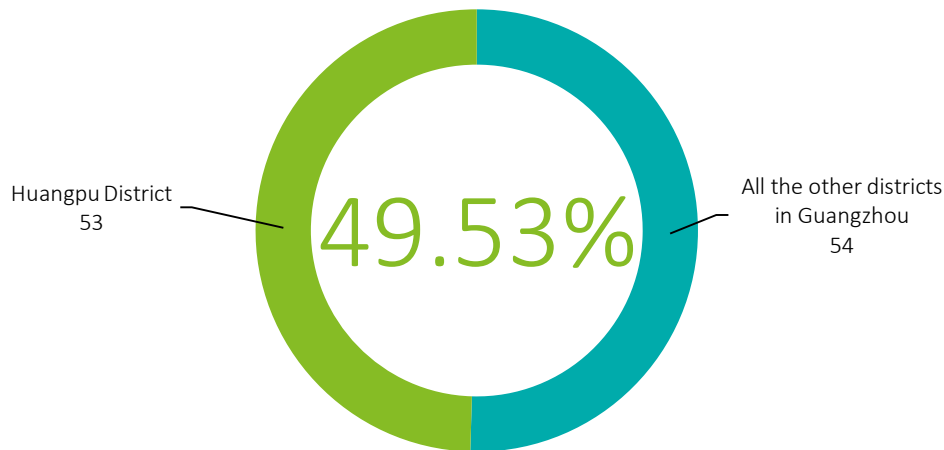
- As of December 12, 2019, Huangpu District had boasted a total of 271 outbound investment and M&A projects in 132 cities across 44 countries and regions
- More than 20 companies in the District have "gone global" to invest in the European Union, with a total investment of over USD 200 million.

Comprehensive and professional finance services and financial support

Leading in the Total Number of Listed Companies

By 2019, Huangpu District had housed 53 listed companies, making it number one in Guangzhou and among national development zones in terms of the number of listed companies. By December 2020, Huangpu District had boasted 62 listed companies in total.

Figure: Proportion of the Number of Listed Companies in Huangpu District to That in Guangzhou in 2019



Diversified Financial Institutions

Huangpu District has been home to diversified financial institutions, including those listed on Fortune China 500 Companies in 2000 such as Guangzhou Rural Commercial Bank and GF Securities Co., Ltd. It also hosts over 500 venture capitalists, including Baidu Ventures (BV), Sinovation Ventures, Korea Investment Partners (KIP) and other domestic and international top venture capitalists.

Figure: The Number of Major Financial Institutions in Huangpu District as of December 2020 (VCs excluded)







Support to Corporate Financing

Institutions in the District	Examples of the measures to support corporate financing
Banks	<ul style="list-style-type: none"> The balance of loans to companies and projects in the District exceeds RMB 170 billion, including a total investment of RMB 46 billion in an OLED panel production line project, and a RMB 20 billion in syndicated loan and credit.
Direct Equity Investment by Government	<ul style="list-style-type: none"> As of January 2020, a total of 14 projects had been supported by direct investment, with total scale of nearly RMB 300 million, and bank loan of RMB 380 million had been guided as support
Venture Capitalists	<ul style="list-style-type: none"> Managing over RMB 100 billion of capital, providing capital assistance to companies at seeding and start-up stages, and over RMB 1 billion of equity investment fund to science and technology companies in key areas

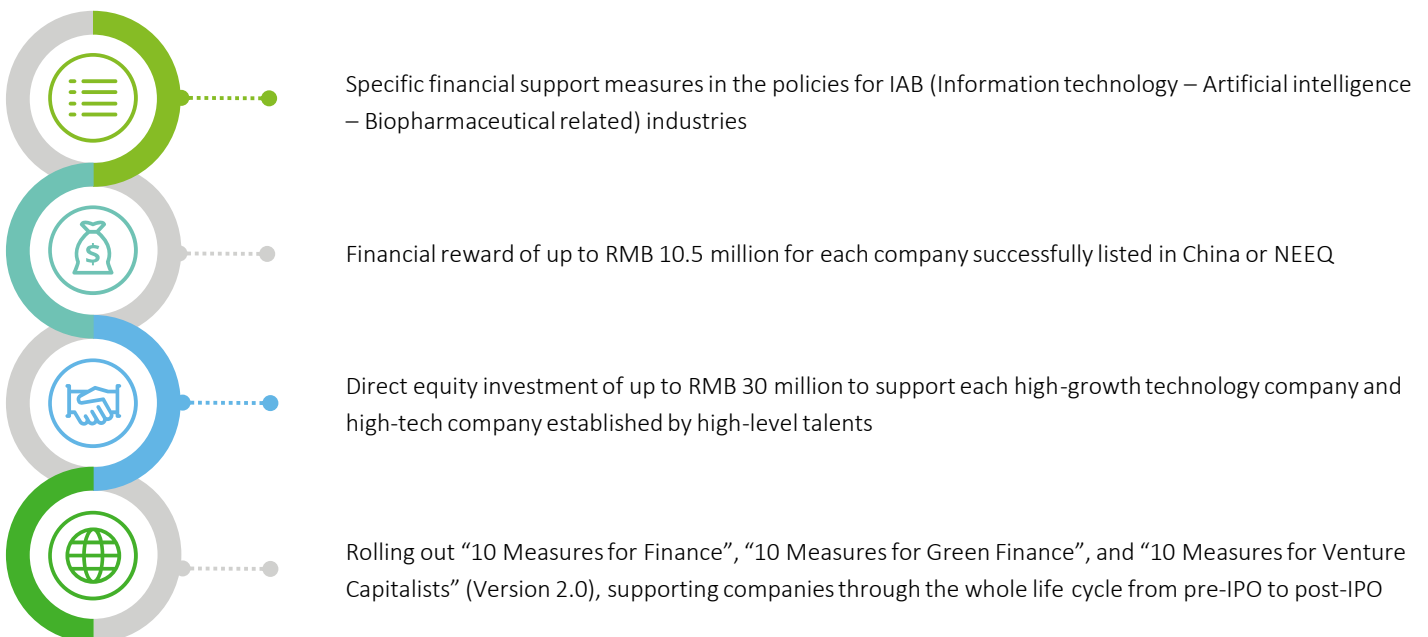
Comprehensive and professional finance services and financial support (Continued)

Sufficient Financing Platforms

Some financing platforms in Huangpu District	Description
 <p>Equity Exchange</p>	<ul style="list-style-type: none"> Huangpu District has the only securities exchange in Guangdong Province (Shenzhen excluded) – Guangdong Equity Exchange, which accelerates the listing process of companies in the District and helps them utilize the capital market for development As at the end of November 2020, a total of 19,726 companies across Guangdong Province had been listed and displayed on Guangdong Equity Exchange, achieving financing and trading transactions of RMB 120.707 billion in total; 1,442 companies in the District had been listed and displayed, with total financing and trading transactions of RMB 940 million
 <p>Financial Supermarket</p>	<ul style="list-style-type: none"> Efficiently matching corporate financing needs with financial institutions’ products by combining online applets & web platforms with offline service points As of July 2020, the Financial Supermarket had established a database of basic information for over 2,000 high-tech companies in the District, and had released over 200 types of financial service products
 <p>China-Russia Financial Center</p>	<ul style="list-style-type: none"> Planning to be a world-class international financial center that connects Central Asia, West Asia, Europe, Russia, Mongolia and other countries and regions, and improving international financing functions such as RMB loans, cross-border two-way bonds, two-way RMB intra-group cash pooling, foreign exchange cash pooling for overseas business headquarters, etc.
 <p>Roadshow Center</p>	<ul style="list-style-type: none"> Guangzhou Science and Technology Finance Roadshow Center and Guangzhou NEEQ Roadshow Center carry out activities throughout the District and provide a platform for performing companies in the District; Promoting investment and financing cooperation between companies in the District and venture capitalists, listed companies and other investment institutions

Government Policy Support

Huangpu District has constantly rolled out various measures to solve the financial difficulties of companies

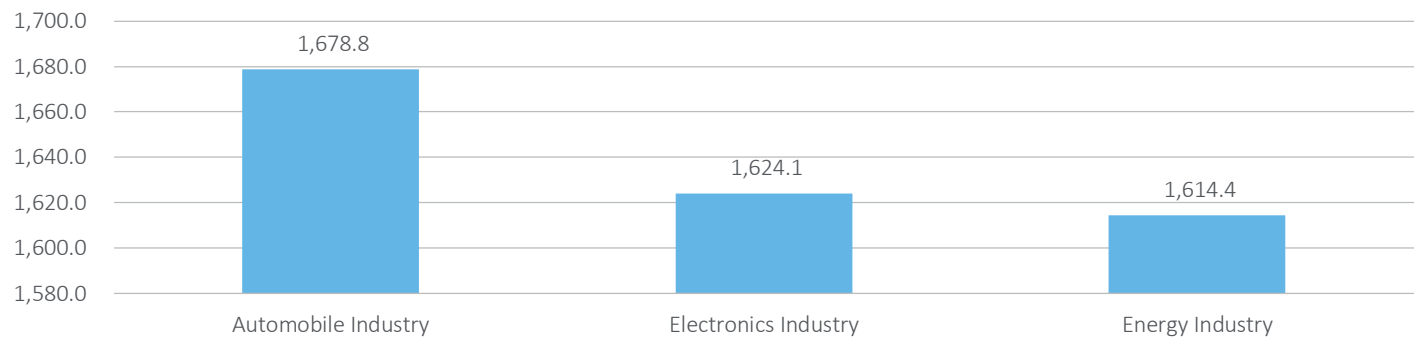


Overview of Industries

With a robust manufacturing strength, Huangpu District has developed competitive distinctive industries of automobiles, electronics, energy, high-end chemicals, food and beverage, and electrical machinery. During the “13th Five-Year Plan” period, the District has managed to integrate with the GBA economy through strong support of emerging industries, and has further developed five strategic emerging industry clusters including new-generation information technology, intelligent equipment, biomedicine, new energy and new materials. The aim is to transform and upgrade its production labels from "Made in China" to “Intelligently Manufactured in China”.

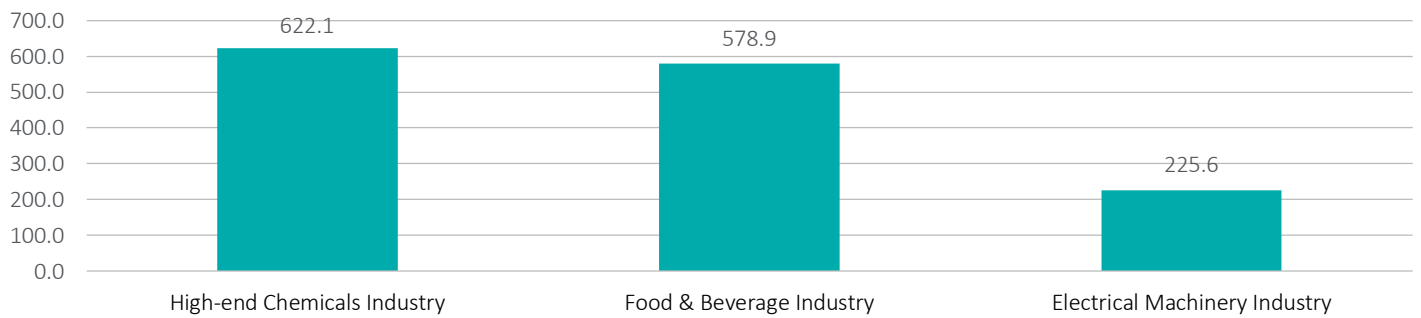
Industrial Clusters with Output Value in terms of RMB 100 billion

Figure: Huangpu District’s Industries with Output Value of at least RMB 100 billion in 2019 (RMB 100 million)



Industrial Clusters with Output Value in terms of RMB 10 billion

Figure: Huangpu District’s Industries with Output Value of at least RMB 10 billion in 2019 (RMB 100 million)



Cultivating Strategic Emerging Industries

Huangpu District is focused on cultivating five strategic emerging industries: new-generation information technology, intelligent equipment, biomedicine, new energy and new materials.

Emerging industries	Representative segments
New-generation information technology	<ul style="list-style-type: none"> New panel displays, integrated circuits (ICs), mobile communications, Internet core equipment, etc.
Intelligent equipment	<ul style="list-style-type: none"> Industrial and household robots, CNC (Computer Numerical Control) machine tools, intelligent forming and processing equipment, automated logistics equipment, etc.
Biomedicine	<ul style="list-style-type: none"> High-end biological drugs, chemical drugs, traditional Chinese medicine, medical device manufacturing, health services, etc.
New energy	<ul style="list-style-type: none"> Solar energy, hydrogen energy, etc.
New materials	<ul style="list-style-type: none"> Materials for storing and transmitting electronic information, new energy materials, biomedical materials, energy-saving and environmental-friendly materials, high-end metals, high-performance polymer materials, etc.

Development Platforms for Major Industries

Supported by the four industrial clusters, including China-Singapore Guangzhou Knowledge City, Guangzhou Science City, Huangpu Port Economic Zone and Guangzhou International Bio-Island, Huangpu District builds a "four zones and four centers" platform in GBA, and promotes the construction of "one zone and one park" platform in the Guangzhou-Hong Kong Smart Manufacturing Special Cooperation Zone and Guangzhou-Hong Kong Science and Technology Cooperation Park. These platforms foster gathering of industrial clusters and diversify investors' needs.

China-Singapore Guangzhou Knowledge City :

Demonstration area for knowledge creation, and a national knowledge center with global influence in GBA

China-Singapore Guangzhou Knowledge City is a bilateral cooperation project between China and Singapore. The City has been home to 165 major projects and 99 in-progress corporate investment projects, with an estimated output value of over RMB 550 billion in total. As of June 2020, 1,863 companies had been registered in the City, with total registered capital of RMB 155.2 billion.

- **Leading Industries:** New-generation information technology, biomedicine & "big health", intelligent equipment, new materials, new energy, science & education services and digital creative industry
- **Representative Companies:** Lonza, CanSemi, Skyworth, Xpeng Motors, Baoneng, BeiGene, INNOCARE, Luye Pharma, Hengrui
- **Featured Parks:** Ascendas OneHub GKC, China-Singapore International Smart Industry Park, Haisi Knowledge Center, Nanometer Intelligent Technology Science Park, Top International Talents Area of Knowledge City, Huilin Science & Technology Park, GBA Fashion Intelligent Manufacturing Center



"Four zones and four centers" platform in GBA

China-Singapore Guangzhou Knowledge City

- Akesobio
- Lonza

Guangzhou International Bio-Island:

Innovation pilot zone for implementing national policies for biomedical industry, and the world's top biomedical and biological safety R&D center

Guangzhou International Bio-Island has a planned area of 1.83 square kilometers, and has attracted accumulated fixed asset investment of over RMB 10 billion in 2020. By the end of 2020, 368 bio-tech companies had been settled in the Island, including 40 national high-tech companies.

- **Leading Industries:** Biomedicine, medical testing, medical devices, stem cells and regenerative medicine
- **Representative Companies:** Thermo Fisher, AstraZeneca, Merck, Agilent, Hengrui, KingMed, Burning Rock Dx, Yipinhong Pharmaceutical, Bio-Thera, Salia
- **Featured Parks:** National Lab for Prevention and Control of Respiratory Diseases and Public Health Emergencies, Bioisland Laboratory, Merck Guangdong Innovation Center, National Human Tissue and Organ Transplantation and Medical Big Data Center, Thermo Fisher Global Precision Medicine Customer Experience Center, Guangzhou China-Israel International Life Science Parallel Incubation Center

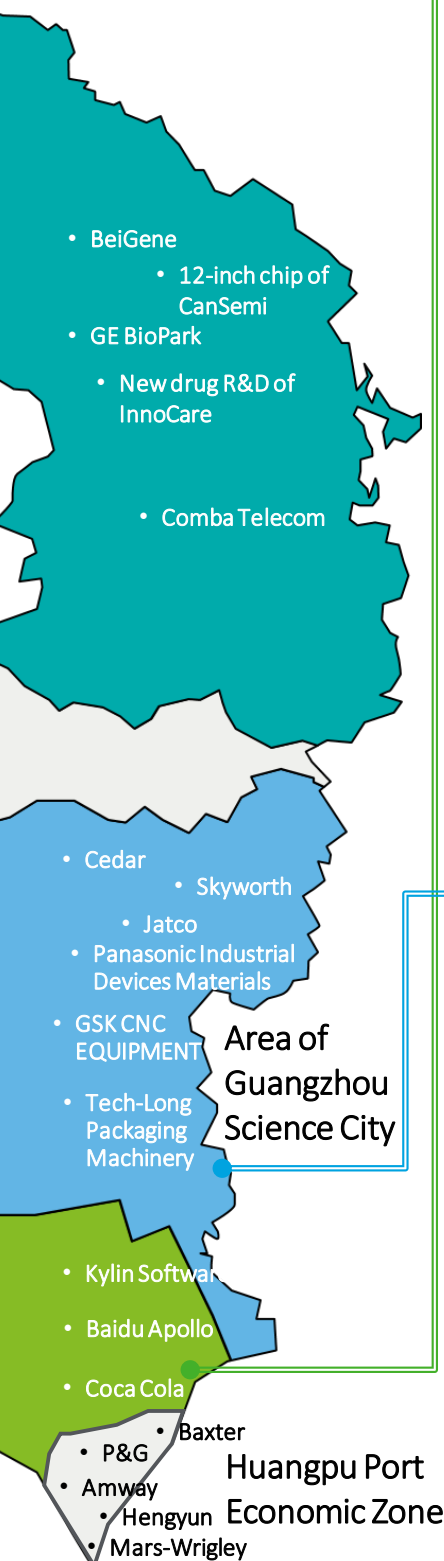


Biolsland

- Merck Innovation Hub
- South Headquarters of Hengrui
- KingMed Diagnostics

- Kingfa
- Wondfo
- Dongfeng Honda Engine
- Xiangxue Pharmaceutical
- MINO Automotive Equipment
- 3M
- Solderwell Advanced Materials
- Jabil
- GRGBanking
- Nanfang Media
- Guangzhou Daily
- Guangzhou Port Group
- Sinotrans Limited

Development Platforms for Major Industries (Continued)



Huangpu Port Economic Zone:

Innovation zone for modern service industries in GBA, and innovation center for new trades under the “Belt and Road” initiative

Huangpu Port Economic Zone sits at the heart of Guangzhou Second Central Business District and Guangzhou AI & Digital Economy Pilot Zone. This Zone is home to Nanhai God Temple, "one of the starting points of China's Maritime Silk Road", the Huangpu Military Academy, "the cradle of Chinese generals", and the Huangpu Port, a millenarian “ancient and excellent port”. From 2015 to May 2019, more than 1,500 companies (each with registered capital of at least RMB 5 million) settled in Huangpu Port Economic Zone, with total registered capital of over RMB 18.6 billion.

- **Leading Industries:** Headquarters economy, artificial intelligence and digital economy, port and shipping services, high-end commerce, cruises & yachts, modern finance, scientific innovation and culture
- **Representative Companies:** Nanfang Media, Guangzhou Daily Technology and Culture Center, Sinotrans South China Co., Ltd., Guangzhou Port Group, Guangzhou SIASUN Technology Co., Ltd., Guangzhou Phytium Information Technology Co., Ltd., Kylin Software Co., Ltd., Guangdong Top Ideal SCM Technology Co., Ltd., Guangzhou Ruoyuchen Technology Co., Ltd., Swire Guangdong Coca-Cola Limited, Guangzhou Jishi Construction Group Co., Ltd., Baidu Apollo, China Industrial Internet Center, Guangzhou 4399 Information Technology Co., Ltd., Guangzhou Lakala Information Technology Co., Ltd.
- **Featured Parks:** China Software CBD, China Game Software Valley, Guangzhou International Port and Shipping Center, Poly Yu Zhu, Guangwu Yuzhu Industrial City Complex, Yuzhu Intelligence Valley, Sinotrans Building, COSCO Shipping Building, Guangzhou Port Design Institute Building, Yuzhuwan Haisi Innovation Center, Guangdong National Institute of Nano Technology Innovation in Guangdong-Hong Kong-Macao Greater Bay Area, Sinomach Intelligence Park, Greater Bay Area Research Institute of Aerospace Information Research Institute, Chinese Academy of Sciences, Guangdong Institute of Corrosion Science and Technology, SIASUN International Robot Industrial Park



Guangzhou Science City:

Pilot zone for institutional innovation in the GBA, and center of intellectual manufacturing in China with global influence

Guangzhou Science City is the pivot of Guangzhou High-Tech Industrial Development Zone, which had gathered more than 3,200 science and technology companies and over 500 R&D institutions by 2018, accounting for one fourth of those in Guangzhou, being an important base for high-tech R&D and industrialization in Guangzhou. In 2019, the total output value of industrial companies above designated size in Guangzhou Science City amounted to RMB 270.046 billion.

- **Leading Industries:** New-generation information technology, artificial intelligence, bio-medicine, headquarters economy
- **Representative Companies:** Samsung, LG Display, Sony, Hitachi, Cedar Center, Skyworth, Baoneng, Bio-Thera, Wondfo, Xiangxue Pharmaceutical
- **Featured Parks:** 11 national industrial bases (parks) including Guangdong-Hong Kong-Macao Greater Bay Area Youth Innovation and Entrepreneurship Base, biology, electronic information and other bases (parks)





Chapter II Business Environment

Cluster of RMB 100 Billion-Level Competitive Distinctive Industry



Automobile Industry

Overview: In 2019, Huangpu District's automobile industry achieved a total industrial output value of RMB 167.88 billion, up 2.5% year on year. With the development trend of energy saving, intelligence and networking in the automobile industry, Huangpu District is actively developing new fields such as automobile electronics, new energy automobiles, etc. and exploring breakthrough in assembly and key components.

Representative Enterprises: Magna, Webasto, JATCO (Guangzhou), GAC Honda, Xpeng Motors, Stanley Electric, Baoneng Motor

Successful Case

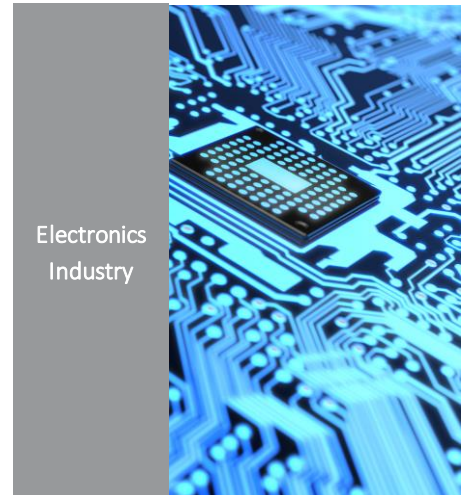
GAC Honda, founded on July 1, 1998, has 3 plants in Zengcheng, Huangpu and Guangzhou Development Zone respectively. With a basic production capacity of 600,000 vehicles per year, GAC Honda manufactured over 760,000 vehicles in 2019, i.e. utilization rate was over 120%. It is expected that its annual capacity will reach 770,000 vehicles in 2020.

Overview: In 2019, Huangpu District achieved a total industrial output value of RMB 162.41 billion in the electronic industry, representing an increase of 5.3% over the previous year, and it was home to a large number of leading companies such as LG, Jabil and Shiyuan. Taking the new display industry as an example, LG's 8.5th-gen OLED panel project has attracted more than ten supporting high-tech upstream and downstream companies to the Parks. This demonstrates a gathering effect and remarkable development of the industry cluster.

Representative Enterprises: LG, Jabil Circuit (Guangzhou), Skyworth, Guangzhou Shiyuan Electronic Technology Company Limited

Successful Case

Guangzhou Shiyuan Electronic Technology Company Limited, founded in December 2005, is a world-leading supplier of LCD controller board headquartered in Huangpu District. Its global market share in 2017 exceeded 29%, including 61% China domestic market share. The scale ranked first in the world for ten consecutive years.



Electronics Industry



Energy Industry

Overview: The energy industry in Huangpu District mainly covers energy production and supply, energy equipment manufacturing, and energy services, with a total industrial output value of RMB 161.44 billion in 2019, up 7.5% year on year. High-efficiency energy-saving equipment (within the energy equipment sector) is the most competitive product in the District, constituting the largest output value in the industry.

Representative Enterprises: China Southern Power Grid, Sinopec Group, Kinfa, Guangzhou Hengyun, Guangzhou Hirp Chemical, Guangdong Yuehua Power, Guangzhou GCL Power

Successful Case

Founded in 2004 and headquartered in Huangpu District, China Southern Power Grid is mainly engaged in the production and supply of electricity and heat. It has been listed on the Fortune Global 500 for three consecutive years. Two projects led by China Southern Power Grid were awarded the top prize of the National Science and Technology Progress Award in 2020 for "key technology, major equipment and engineering application of VSC-HVDC power transmission technology".

Cluster of RMB 10 Billion-Level Competitive Distinctive Industry



High-end
Chemical
Industry

Overview: In 2019, the high-end chemical industry in Huangpu District achieved a total industrial output value of RMB 62.21 billion, up 12.2% year on year. It is focused on the development of cosmetics, home care products, fragrances and flavors, and fine chemicals for emerging industries.

Representative Enterprises: P&G, Amway, Colgate, Guangzhou NipponPaint

Successful Case

Founded in 1837, P&G is one of the world's largest consumer goods providers, with over 65 brands of products sold in more than 180 countries and regions, covering haircare, health and beauty, fabric and home care, baby care, feminine and family care.

In 1988, P&G settled in Huangpu District and established its first joint venture in China, Procter & Gamble (Guangzhou) Limited. P&G Greater China is also headquartered in Huangpu District.

Overview: In 2019, the food and beverage industry in Huangpu District achieved a total industrial output value of RMB 57.89 billion. The major clusters developed include "cool" food and beverage products, as well as new areas such as high-end food, functional food, green and organic food, urban leisure food and health food.

Representative Enterprises: Mars, Pepsi, Coca-Cola, MeadJohnson, BiosTime, Uni-President, Yantang Dairy

Successful Case

Mars, headquartered in the United States, produces the world's leading confectionery and pet products, with annual sales of more than USD 35 billion. Mars Wrigley is a global leading food manufacturer with brands such as Dove, M&M's and Snickers. Mars Wrigley China, headquartered in Huangpu District, is a major contributor of output value, revenue and taxes to the District and it will invest nearly USD 10 million in the Mars Wrigley Global Gum and Candy Innovation Center in the District.

Food &
Beverage
Industry



Electrical
Machinery
Industry

Overview: The output value of the electrical machinery industry in Huangpu District is in the mid-upstream level in China. It is focused on processing equipment, measurement and control devices, key basic parts and components of equipment, etc. In 2019, the total industrial output value of this industry reached RMB 22.56 billion, with a year-on-year growth of 3.8%.

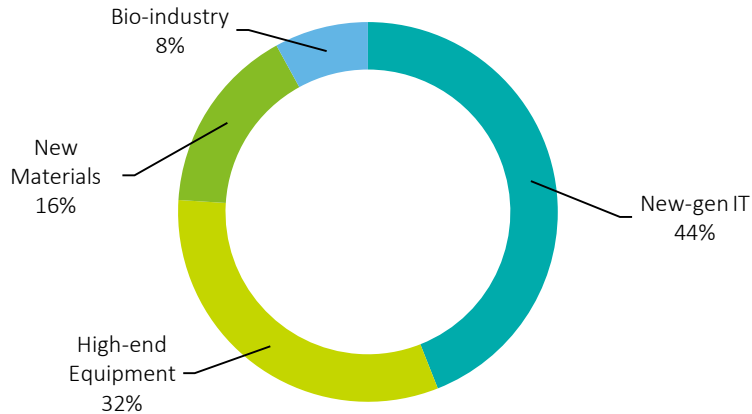
Representative Enterprises: Panasonic, Hitachi, Siemens, Schneider, Guangzhou Nanyang Cable, Guangzhou Zhiguang Electric

Cluster of Strategic Emerging Industry—New-Generation Information Technology

Development Trend of New-generation Information Technology

The new-generation information technology industry is surging as investment hotspot for innovation in science and technology at home and abroad. Of the first batch of companies trading on the Sci-tech Innovation Board (“STAR Market”), 44% are new-generation IT companies.

Figure: The First Batch of Companies Trading on STAR Market by Industry



Source: ChinaVenture Investment Consulting Ltd.

Increasing Output Value and Burgeoning Businesses

In 2019, the new-generation information technology industry of Huangpu District achieved a total industrial output value of RMB 161.47 billion, with more than 40% of companies contributing an average output value of over RMB 100 million.

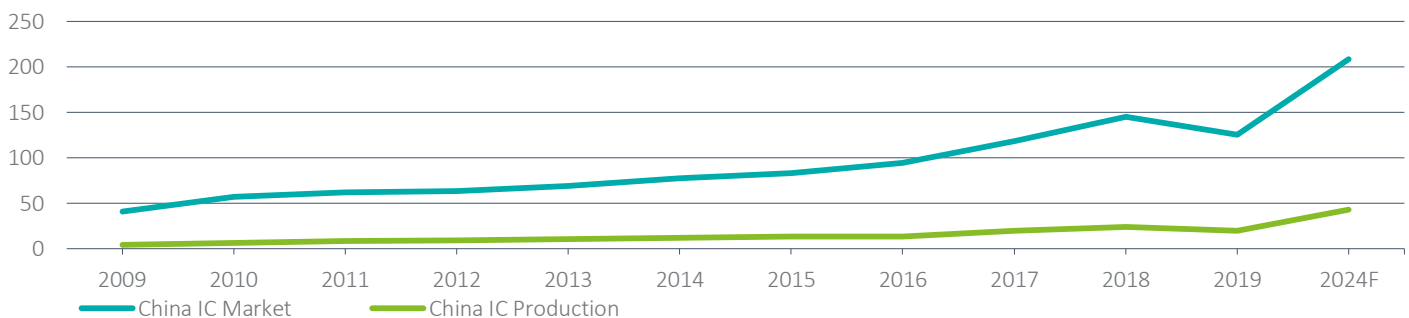
Industry	Representative Enterprises
Integrated circuit	• Guangzhou CanSemi Technology
New type of display panel	• LG, Shiyuan Electronic
Intelligent terminals and other operation services for intelligent finance; big data solutions	• GRG Banking
Solution and service provider for telecommunication and information technology	• Comba Telecom, Haige Communications

Buoyant Development of Integrated Circuits (“IC”) Industry

Huge IC Market

China is the world’s largest consumer of ICs, but its IC manufacturing capacity lags behind international level. Of the USD 19.5 billion of ICs manufactured in China in 2019, only 6.1% came from Chinese domestic companies, while the rest came from contract manufacturing companies established by foreign foundries or developers like TSMC, SK Hynix, Samsung, Intel, etc. in China. That means a large portion of China's chips were manufactured by multinational companies.

Figure: China IC Market and IC Production (USD billion)



Source: IC insights.

Cluster of Strategic Emerging Industry—New-Generation Information Technology (Continued)

Guangzhou CanSemi Technology in Huangpu District - plugging the gap of chips industry in Guangzhou

Due to a lack of self-developed and manufactured chips, Guangzhou had always relied on imported chips. In December 2017, Guangzhou CanSemi Technology Inc. was established in China-Singapore Guangzhou Knowledge City, and it boasts the first 12-inch chip plant in China with virtual IDM (Integrated Device Manufacturing) operation strategy. CanSemi Technology’s 12-inch wafer project has led to the only mass-produced 12-inch chip production line in Guangdong Province, providing local chip supply to Guangzhou and the entire GBA. The first phase is focused on manufacturing 0.18um-90nm analog chip and discrete device, catering for urgent needs of the IoT (Internet of Things) and automotive electronics market. The second phase concentrates on the world's most advanced high-end high-voltage 65nm-40nm BCD analog chip technology to meet the demand for analog chips and discrete devices of high-end automotive electronics, AI, 5G and other innovative applications.



Image: Guangzhou CanSemi

More than 50 IC companies have been settled in Huangpu District and GDD, including Gowin Semiconductor Corp., Anyka, Fastprint, etc., and most of these companies are engaged in design, encapsulation, testing, etc.

Prominent Panel Display Industry

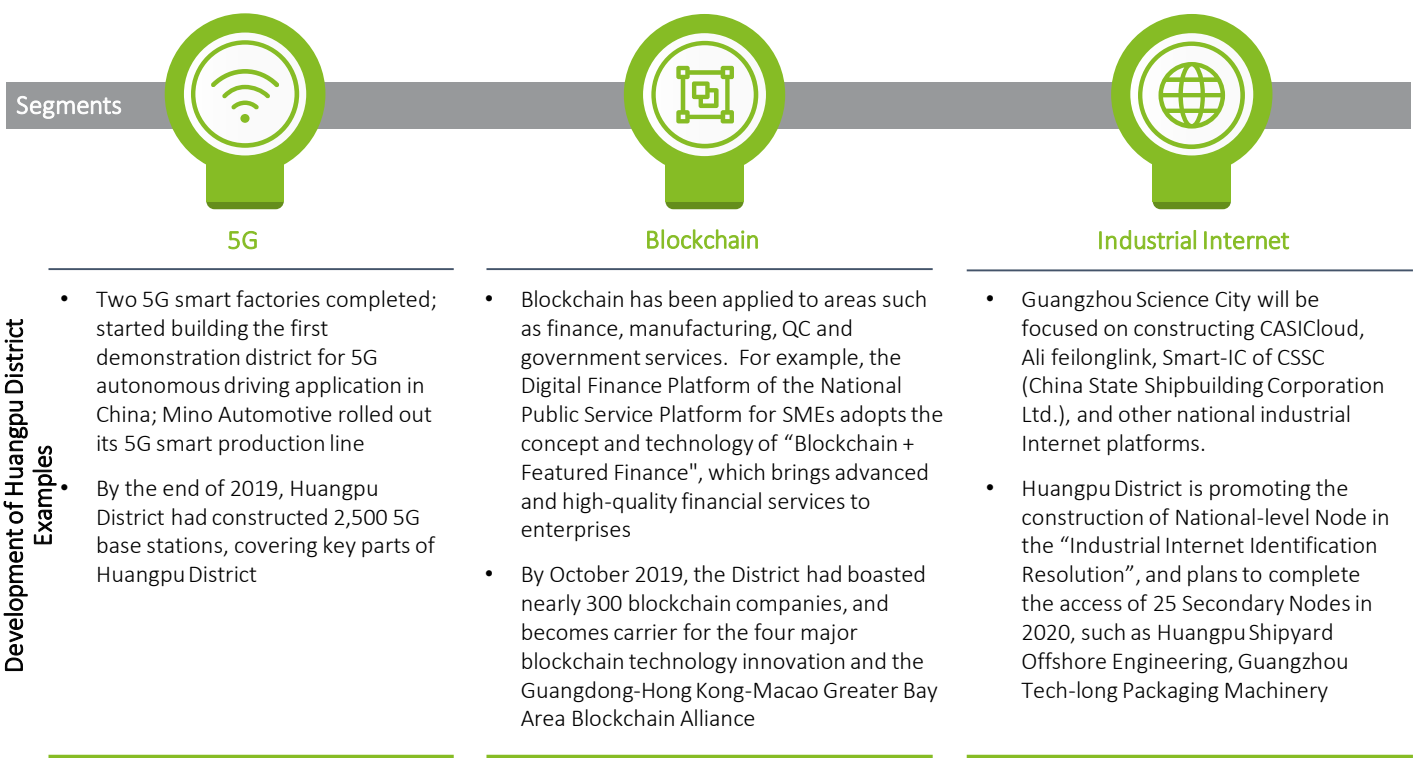
LG Display is the world’s only manufacturer capable of producing large-size OLED panels. It has invested in constructing an 8.5th generation (2,200mm × 2,500mm) OLED panel production plant in Guangzhou High-Tech Industrial Development Zone. LG Display’s Guangzhou OLED panel plant will be focused on manufacturing large-size high-resolution OLED products including 48-inch, 55-inch, 65-inch and 77-inch panels to promote the development of new display technology in Huangpu District.



Image: LG Display Plant

Solid Foundation for Digital Economy

Huangpu District is actively developing 5G, blockchain and Industrial Internet, and all industries in the District will benefit from the improved digital economy brought by such development.



Cluster of Strategic Emerging Industry–New-Generation Information Technology (Continued)

Diversified Industry Platforms

As a center for the development of new-generation information technology companies, China-Singapore Guangzhou Knowledge City and Guangzhou Science City have three provincial-level strategic emerging industry platforms, including Guangzhou New-Generation Communication Devices and Terminals Manufacturing Industry Base, Guangzhou Internet of Things Industry Base and Panel Display Industry Base.

Numerous R&D Institutions

Examples of New-gen IT Institutes in Huangpu District

Introduction



Guangdong New-gen Communications & Networks Institute

- Conducting fundamental, cutting-edge and application-oriented technical research on broadband communications and new-type networks



Guangdong Greater Bay Area Institute of Integrated Circuit and System

- Developed platforms for high-end IC testing and evaluation, and R&D for EDA generic technology
- Developing key technology for high-end core chips in automotive electronics and commercial spaceflight, with a view to offering a range of products

Supportive Government Policies

Huangpu District has rolled out the IAB industrial policy to support the development of emerging industries. The IAB industrial policy has specific provisions to support the new-generation information technology, AI and biomedicine industries, respectively.

Supports

Examples of Supportive Measures of IAB Industrial Policy for New-Generation Information Technology



Project Establishment

- Major new projects in the field of the new-generation information technology will be awarded with RMB 5 million to RMB 200 million based on the level of total fixed assets investment
- New IC companies with paid-in registered capital of more than RMB 20 million will be rewarded with 5% of their paid-in registered capital



Development Support

- Rewards of RMB 20 million to RMB 50 million to IC companies achieving certain level of principal business income as compared with total income in a year
- Discount loans for qualifying new-generation information technology projects
- Subsidies at 50% of actual rent paid or 10% of the purchase price for offices



Product Promotion & Application

- Subsidies of up to RMB 3 million to companies that purchase at least RMB 2 million of products and services from new-generation information technology companies in Huangpu District in a year



Public Platform Construction

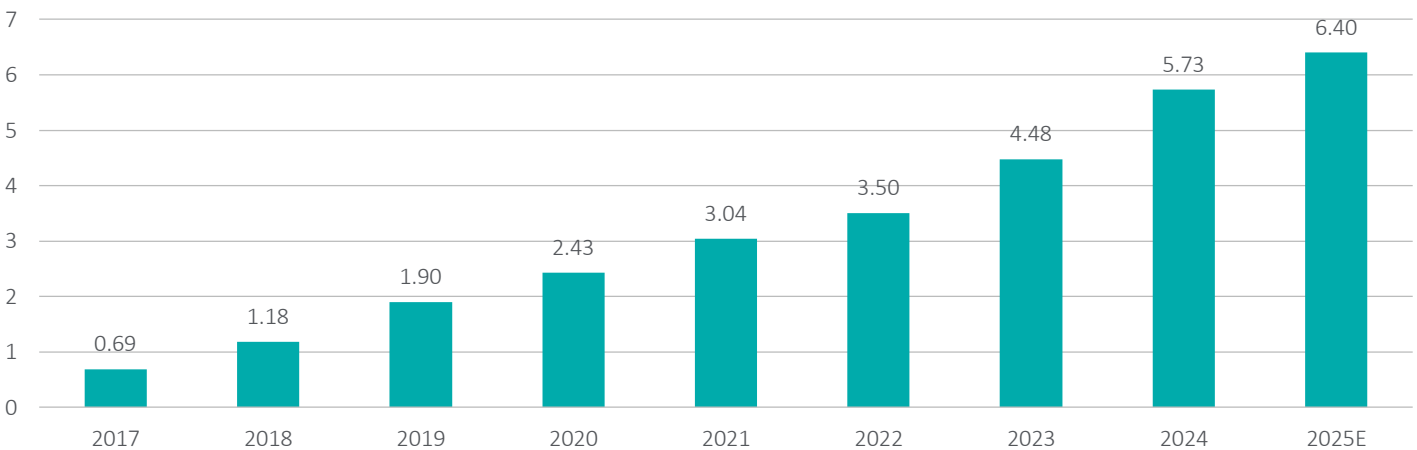
- Enterprises that develop public service platforms for new-generation information technology will be rewarded with 50% of the platform construction costs (including equipment costs), capped at RMB 5 million

Cluster of Strategic Emerging Industry–Intelligent Equipment

Artificial Intelligence (“AI”) – the Future of the World

A growing number of governments and enterprises around the world have gradually realized the importance of AI in economic and strategic development, and have applied it in national strategies and business activities. The global AI market is expected to experience phenomenal growth at a compound annual growth rate of 30% during 2017-2025, and to exceed USD 6 trillion in 2025.

Figure: Size of Global AI Market (USD trillion)



Source: Deloitte Research.

AI is developing rapidly in China, and Pearl River Delta Region is one of the key AI Clusters

The AI market size in China has been expanding year by year since 2015 and reached RMB 21.69 billion at the end of 2017, with a year-on-year increase of 52.8%. The output value of China’s core AI industry grew at a compound annual growth rate of about 37% from 2017 to 2020, and reached RMB 77 billion in the first half of 2020.

Driven by both policy and capital, the number of AI companies has also increased rapidly. According to informal study, there are more than 1,000 AI companies in China. The Beijing-Tianjin-Hebei region, Pearl River Delta, and Yangtze River Delta are the areas with the most AI companies.

AI reshapes the ecosystem of manufacturing

Since the commercialization of AI technology in 2015, an increasing number of application has been noted in various industries. For instance, embedding AI technology to production and manufacturing could improve overall productivity. Robots are widely used in domestic manufacturing and management process, demonstrating an improvement of automated manufacturing.

Cluster of Strategic Emerging Industry—Intelligent Equipment (Continued)

Rapid Development of Intelligent Equipment Industry in Huangpu District

Numerous representative enterprises with large output value

Huangpu District pays special attention to the combination of AI and competitive distinctive manufacturing, and has applied the concept to automobile production, autonomous driving, packaging equipment, high-end CNC (Computer Numerical Control) machine tools, wood grading and other fields. The intelligent equipment industry in Huangpu District achieved an industrial output value of RMB 34.77 billion in 2019, with 32 enterprises in the District having annual sales that exceeded RMB 100 million.

Representative companies and achievements in intelligent equipment industry in Huangpu District

Development areas	Representative Enterprises and milestones in Huangpu District
 Automobile production	<ul style="list-style-type: none"> FANUC, the world's largest robot company, opened its headquarters in South China in Guangzhou Science City. Guangzhou Mino Automotive Equipment Co., Ltd. has established the world's first flexible assembly line of non-standard intelligent manufacturing equipment with a five-fold increase in productivity, and has built the first State platform for intelligent analysis and diagnosis of big data in automobile production. Guangzhou Risong Intelligent Technology Holding Co., Ltd. is in a leading position in automobile welding in China.
 Autonomous driving	<ul style="list-style-type: none"> Weride, Baidu Apollo will build an intelligent automobile ecological base and an automatic driving operation base in Huangpu District. EHang is a world-leading technology company for intelligent autopilot aircraft, and has developed the world's first manned aircraft with all-electric low-altitude autopilot function.
 Packaging equipment	<ul style="list-style-type: none"> Aptar, a global leading manufacturer of packaging and distributing system, invests in Asia's first "Industry 4.0" intelligent manufacturing project in Huangpu District. The automatic counting and packaging line developed and manufactured by Pharmapack Technologies Co., Ltd. accounts for 70% of domestic market share. Guangzhou Tech-Lon Packaging Machinery Co., Ltd. is the world's third largest provider of full-automatic production lines for liquid food and beverages, and its products have ranked first in domestic market share for many years.
 High-end CNC machine tools	<ul style="list-style-type: none"> GSK CNC Equipment Co., Ltd. is a professional supplier of full-set machine tools for CNC system, and its leading technology earned "Top 10 Robots in China" rating. Guangzhou Haozhi Industrial Co., Ltd. has an annual production capacity of 50,000 electric spindles and a market share of 40%.
 Wood grading	<ul style="list-style-type: none"> Guangzhou KDT Machinery Ltd. is a typical provider of panel furniture machinery in China.

As AI technology in transportation industry is becoming smarter, more motorized and knowledge-shared, an intelligent transportation industrial chain with autonomous driving as a core will gradually take shape. AI can reduce transportation costs of passengers and goods effectively, hence improving the commercial value of autonomous driving. Weride, Baidu Apollo and EHang UAV are promoting the development of autonomous driving industry in Huangpu District.



Figure: Mino auto production line



Figure: Planning picture of Baidu Apollo



Figure: EHang UAV

Cluster of Strategic Emerging Industry–Intelligent Equipment (Continued)

Diversified Industrial Development Platforms

AI technology has large demands for qualified talents, capital and technology. Huangpu District helps to cluster these supplies by establishing AI industrial parks, providing high-quality and integrated resources for AI enterprises in the park.

Examples of AI Industrial Parks in Huangpu District Introduction

	High-End Intelligent Equipment Industrial Park	<ul style="list-style-type: none"> • Located in China-Singapore Guangzhou Knowledge City, covering an area of 248.5 hectares • Mainly engaged in scientific R&D, fostering incubation and high-end manufacturing
	CNC and Industrial Robot Industrial Park	<ul style="list-style-type: none"> • Located in Yunpu Industrial Zone • Mainly engaged in production and manufacturing, focusing on the recently introduced robot and intelligent equipment industrial projects
	Mechanical Valley	<ul style="list-style-type: none"> • A dedicated base for Guangzhou Strategic Emerging Industry (Second Batch) • Mainly introducing enterprises in R&D, testing, manufacturing, displaying, and trading of intelligent equipment

Numerous R&D Institutions

Scientific research institutions are the main force of AI patent application as well as important places for AI technology R&D. Since 2014, the number of AI research papers in China has exceeded that of the United States and has far surpassed those in other countries, which is closely related to the rapid development of AI research institutions. There are many AI research institutions in Huangpu District, including Guangzhou Intelligent Equipment Institute, Guangdong Robotics Innovation Center, Guangzhou Institute of AI and Advanced Computing, Institute of Automation, Chinese Academy of Sciences, Huanan Industrial Technology Research Institute of Zhejiang University, Guangdong Robotics Innovation Center (Risong), Guangdong High-end CNC Machine Tool and Key Functional Components Innovation Center (GSK), Guangdong CPS Discrete Manufacturing Digital Innovation Center (Mino).

Examples of AI Research Institutions in Huangpu District		
	Guangdong Robotics Innovation Center	Guangzhou Intelligent Equipment Institute
Introduction	<ul style="list-style-type: none"> • The first provincial-level robotics innovation center in China • An intelligent equipment and robotics Industry-University-Research platform, planning to produce 5-10 technological achievements every year, with an estimated production value of RMB 500 million to 1 billion in three years 	<ul style="list-style-type: none"> • Focusing on the entire robot and intelligent equipment industry chain • Integrating R&D, design, testing and production

Strong Government Policies and Support




As one the strong support measures of the IAB industrial policies in Huangpu District, AI companies and platforms in the District can get various subsidies.

Policy support	Support measures of IAB industrial policy to AI industry
Project Establishment	<ul style="list-style-type: none"> • A reward of RMB 5 million to 100 million to new AI projects based on their total fixed asset investment
Development support	<ul style="list-style-type: none"> • M&A subsidies and discount loans for AI projects • Rental subsidies for new AI companies registered capital of more than RMB 10 million, at up to 50% payment, capped at RMB 5 million
Product promotion and application	<ul style="list-style-type: none"> • Special funding for AI pilot applications, to reward enterprises using certified technology platform services
Construction of public platform	<ul style="list-style-type: none"> • One-off reward of RMB 100,000 to makerspace or incubator that successfully cultivates AI enterprises reaching annual business income of RMB 20 million or more for the first time. • The AI technology platform will be awarded 30% of its construction investment cost, with a maximum reward of RMB 10 million for each project.

Cluster of Strategic Emerging Industry– Biomedicine

Biomedicine – On the Increase





Biomedicine is a strategic emerging industry vigorously developed in China, and it is also one of the six major industries supported by the Science and Technology Innovation Board. There are four main driving forces of the biomedicine industry.

Driving forces	Description
 Consumption upgrade	<ul style="list-style-type: none"> The per capita disposable income of national residents was RMB 28,228 in 2018, 6.5% higher than that of the same period last year after excluding inflation factor. With the gradual improvement of residents' level of consumption, the demand for better medical treatment process and effect is on the rise. New concepts and formats such as non-state owned clinics and precision medicine are being developed.
 Aging population	<ul style="list-style-type: none"> As of 2018, China's population over 60 years old had been close to 250 million, accounting for 17.9% of the total. The aging population has led to increasing attention to tumor, cardiovascular diseases, and the demand for rehabilitation and nursing care.
 Scientific and technological progress	<ul style="list-style-type: none"> Driven by technological innovation, the number of patents related to medical big data, cell therapy, gene therapy and other fields continues to increase. The application and market penetration of gene sequencing, big data, AI, and the Internet in the medical field will also bring more opportunities, and monoclonal antibody drugs are being developed rapidly.
 Government incentives	<ul style="list-style-type: none"> The State Council issued an outline for the “Healthy China 2030” initiative on October 25, 2016, marking the development of the biomedicine industry as a national development strategy. Preferential policies for the biomedicine industry have been continually promulgated since 2018, covering aspects such as innovative medical services, generic drug R&D, Internet-plus medical care, elderly care, and healthcare big data.

Rapid Development of Biomedicine Industry in Huangpu District

Leading industry scale in Guangzhou

Huangpu District gathered more than 1,000 biomedical companies in 2019, achieving a business output value of more than RMB 89.6 billion, accounting for about 60% of that in Guangzhou. They contribute to four major industrial chains of medicine manufacturing, biotechnology, medical equipment, clinical treatment and healthcare services. Guangzhou High-tech Industrial Development Zone ranks sixth in the "Top 100 Biomedical Industrial Parks in 2020" and first among the six biomedical industrial parks in GBA.

Main industry chains	Key segments	Representative enterprises in Huangpu District
 Medicine manufacturing	Biological products, chemical drugs, modern Chinese medicine, etc.	<ul style="list-style-type: none"> AstraZeneca, Lonza, Agilent, Innocare, BeiGene, Xiangxue Pharmaceutical, Baiyunshan Zhongyi, Bio-Thera, Yipinhong, Yangtze River Pharmaceutical Group, etc.
 Biotechnology	Gene editing, medicine outsourcing such as CRO/CDMO, stem cell technology	<ul style="list-style-type: none"> Saliai, Ribobio, RayBiotech, Koncen, etc.
 Medical equipment	In Vitro Diagnostics (“IVD”), medical consumables, advanced treatment and auxiliary equipment, etc.	<ul style="list-style-type: none"> Zeiss, Daan Gene, Wondfo, Guanhao Biotech, IBP Medicine, Hedymed, Medprin, etc.
 Clinical treatment and healthcare services	Medical information, genetic testing, health management, etc.	<ul style="list-style-type: none"> Thermo Fisher, KingMed Diagnostics, Burning Rock Dx, SurExam, Huayin Medical Laboratory, HybriBio, etc.

Cluster of Strategic Emerging Industry– Biomedicine (Continued)

The biomedicine industry in Huangpu district has achieved outstanding results in anti-tumor drugs, biotechnology, medical equipment, clinical treatment and healthcare services

Anti-tumor drug

The present R&D of innovative drugs is mainly focused on tumor. China has one fourth of the world’s cancer cases, with confirmed cases rising at a rate of 10,000 per day and cancer mortality rate higher than the global average. Therefore, tumor treatment is an area worth being invested in to meet clinical needs and to exploit market potential. At present, antibody drugs are mostly used in the treatment of tumors and immune diseases. Compared with traditional chemical drugs, antibody drugs have obvious advantages of high targeting effect, little side effects and high effectiveness. In the segments of biomedicine, domestic antibody drug enterprises started late, but their R&D and production technology are upgraded rapidly, forming a rampart of high technology with good development potential.

Representative companies and achievements in antitumor drugs in Huangpu District

Company name	Achievements
Innocare	<ul style="list-style-type: none"> Co-founded by Professor Shi Yigong, a world-renowned structural biologist, and Dr. Cui Jisong, an outstanding entrepreneur in the biomedical industry. The company focuses on the development of new drugs in the treatment of tumors and autoimmune diseases. Discovered and developed 9 candidate drugs, including one in the NDA (New Drug Application) registration stage (Orelabrutinib), two in phase I/II clinical trials, and six in the IND (Investigational New Drug) preparation stage Suitable for lymphoma, liver cancer, gastric cancer and other solid tumors and autoimmune diseases that have high incidence among the Chinese
Bio-Thera	<ul style="list-style-type: none"> An innovative biopharmaceutical enterprise centering on the development of innovative drugs and biosimilars Products for treatment of tumors, autoimmune diseases, cardiovascular diseases and other major diseases endangering human life or health. Obtained approval from the National Medical Products Administration for the marketing registration application of its product of Adalimumab injection
BeiGene	<ul style="list-style-type: none"> Developed Tislelizumab Injection, the world's first tumor immunotherapy drug Zanubrutinib, a self-developed new anti-cancer drug, was approved in the US by the FDA for marketing.

Biotechnology

Representative companies and achievements in biotechnology in Huangpu District

Company name	Achievements
Guangzhou Saliat Stem Cell Science and Technology Co., Ltd.	<ul style="list-style-type: none"> The number of stem cell patent applications of Saliat ranked first in China for three consecutive years, and the company has Phase-II-clinical new anti-tumor leukogenic drugs and 48 high-tech products.



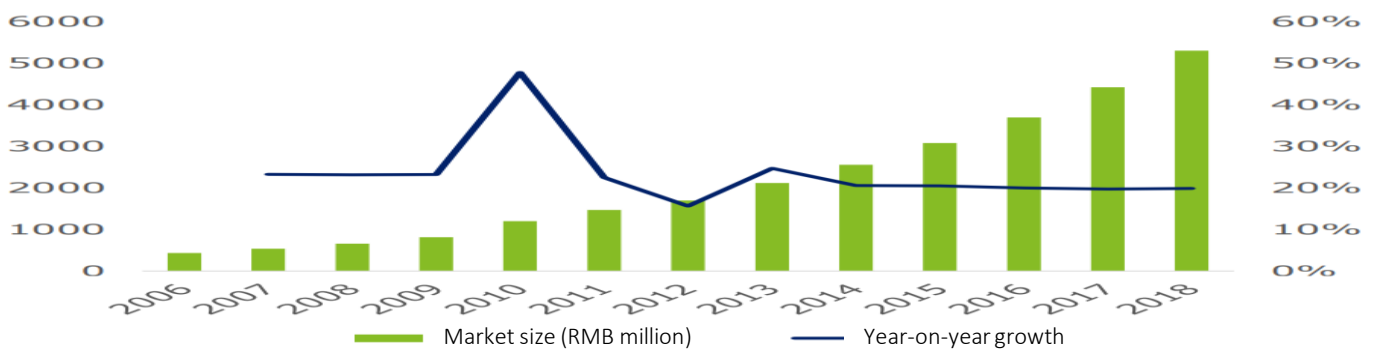
Figure: Guangzhou Saliat Stem Cell Science and Technology Co., Ltd

Cluster of Strategic Emerging Industry– Biomedicine (Continued)

Medical equipment

The medical equipment industry is multidisciplinary, knowledge-intensive, capital-intensive and technology-intensive, marking a high entry barrier. It covers many segments which have different technologies, market spaces and competition levels. Among them, the two segments of IVD and heart disease have larger market sizes. The market size of China's medical equipment industry reached RMB 530.4 billion in 2018, with a year-on-year growth of about 20%. With the technological progress of medical equipment enterprises and the maturity of the supporting industrial chain in China, import substitution will be the targeted development trend.

Figure: Market size and growth rate of China's medical device industry from 2006 to 2018



Source: edited by Evaluate MedTech and ChinaVenture.

Representative companies and achievements in the medical device industry of Huangpu District

Company name	Achievements
Wondfo	<ul style="list-style-type: none"> A national high-tech enterprise dedicated to product R&D, in the field of rapid testing in the biomedical IVD reagent industry
Medprin	<ul style="list-style-type: none"> The first enterprise in China to develop implantable medical devices using bio-3D printing technology

Clinical treatment and healthcare services

Representative companies and achievements in clinical treatment and healthcare services in Huangpu District

Company name	Achievements
KingMed Diagnostics	<ul style="list-style-type: none"> Providing more than 2,500 health screening items in 6 categories, and having obtained 28 domestic and foreign certificates, such as those accredited by CAP in the US and ISO15189, etc. Ranked first in independent clinical laboratory in China
Burning Rock Dx	<ul style="list-style-type: none"> Providing the most clinically valuable next-generation sequencing (NGS) products and services for tumor precision medicine Boasting the first NGS test kit approved by National Medical Products Administration (“NMPA”)



Figure: KingMed Diagnostics pathology diagnosis center

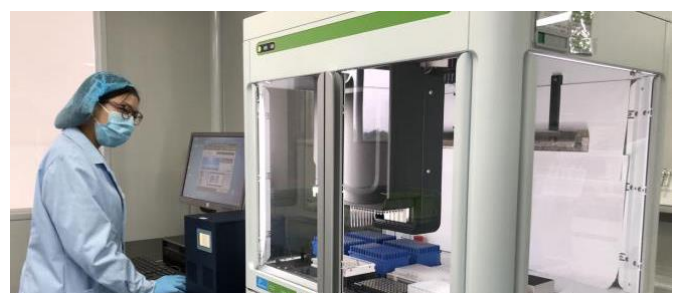


Figure: Burning Rock Dx

Cluster of Strategic Emerging Industry– Biomedicine (Continued)

Development of Biomedicine Industry and Gathering of Research Institutions

Numerous industrial development bases

Guangzhou Science City, China-Singapore Guangzhou Knowledge City, and Guangzhou International Bio Island serve as biomedical clusters in Huangpu District, which enjoy world-class biomedical industrial development.

Industrial Platforms	Introduction
Merck Guangdong Innovation Hub	<ul style="list-style-type: none"> The first innovation center of Merck, a global high-tech giant, in GBA Key industries: medicine and healthcare, life sciences, high-performance materials, and cross-field innovation Providing support to start-up technology companies and setting up seed funds worth RMB 100 million
Industrial platform of China-Israel Biology	<ul style="list-style-type: none"> A cooperation platform between China and Israel, aiming at introducing and cultivating excellent biotechnology in the world Including Guangzhou Sino-Israel Bio-industry Investment Fund and Guangzhou Sino-Israel Bio-industry Incubation Base Currently incubating 12 projects
GE BioPark (Now "Cytiva")	<ul style="list-style-type: none"> Focusing on the production of monoclonal antibody biopharmaceuticals Introduced well-known pharmaceutical companies such as BeiGene, Lonza, Luye Pharma, Innocare, Hengrui Pharmaceuticals, and Akesobio. GDD Administrative Committee was awarded "Investment Promotion Awards 2019" by the United Nations for introducing GE BioPark.

Advanced Talent Cultivation Base

Institution	Introduction
Guangzhou Bioprocess Academy	<ul style="list-style-type: none"> It is the first bioprocess institution in China, which is jointly established by GDD Administrative Committee, Cytiva, a Fortune Global 500 company, and the World's well-known Ireland's National Institute for Bioprocessing Research and Training ("NIBRT"). As a talent training facility, it provides hands-on practical training and features customized services. It aims to provide international and specialized system training to support the growth of biomedicine industry in China. It will accelerate the development of biomedicine industry professionals in southern China, cultivate high quality talents, and provide guidance for biomedicine industry professionals' future career path.



Figure: Guangzhou Bioprocess Academy

Cluster of Strategic Emerging Industry– Biomedicine (Continued)

Numerous research platforms

As of 2018, Huangpu District has 96 provincial-level R&D institutions, including key laboratories, engineering centers and technology centers in the field of biomedicine. Among them, 6 are national R&D institutions, forming a fairly complete biomedical technology research and innovation development platform.

Examples of biomedicine R&D Institutions in Huangpu District	Introduction
Guangzhou Regenerative Medicine and Health Guangdong Laboratory	<ul style="list-style-type: none"> Mainly focused on life science, biomedicine, transformation research of regenerative medicine, and “big health” Divisions include Basic Research & International Cooperation, Clinical Transformation Science, Industrial Innovation, Medical Instrument, Huangpu Academy, etc.
South China Institute of Stem Cell & Regenerative Medicine	<ul style="list-style-type: none"> Mainly focused on fundamental research, transformation and application of stem cells and regenerative medicine Having a million-people-level database of clinical-grade cells and stem cells, cell and stem cell preparation center, testing and analysis center and central laboratory Obtained more than 50 national patents, 4 PCT patents, and published more than 300 academic papers in internationally renowned academic journals
The South China Center for Innovative Pharmaceuticals	<ul style="list-style-type: none"> 4 research centers: South China Institute of Stem Cell & Regenerative Medicine, South China Center of Biosafety, Military Medical Research and Support Center, South China Achievement Transformation Center Mainly focused on stem cell and regenerative medicine, new drug creation and manufacturing, radiological-chemical-biological specialty medicine, tropical medicine, medical equipment and devices, etc.
Guangzhou Institutes of Biomedicine and health, Chinese Academy of sciences	<ul style="list-style-type: none"> Focused on major frontier scientific issues and important disease mechanisms in life and health



Figure: Merck Innovation Hub



Figure: Guangzhou Regenerative Medicine and Health Guangdong Laboratory




Figure: Guangzhou Institutes of Biomedicine and Health, Chinese Academy of sciences

Cluster of Strategic Emerging Industry– Biomedicine (Continued)

Plenty of funding for biomedicine industry

There are many venture capital funds investing in biomedicine companies in Huangpu District , including:



- China-Israel Fund of RMB 606 million, which has been invested in 7 projects with total investment value of about RMB 250 million



- Guangzhou Biomedicine and Health Industry Investment Fund of RMB 10 billion

Strong Government Support

Convenient government services

The government of Huangpu District has created a convenient channel for the import of biological materials.





Biomaterial import platform in Huangpu District	Introduction
South China Biomaterial Exit and Entry Public Service Platform	<ul style="list-style-type: none"> • China’s third and South China’s first one-stop public service platform for import and export of biomaterials • The platform enables a quick customs clearance of biomaterials such as recombination protein, medium, human blood, antibody, kit, cell line, strain, virus, and nucleic acid. • Saving about 2-3 working days for each shipment, leading to 30-50% reduction in customs clearance costs.



Figure: South China Biomaterial Exit and Entry Public Service Platform

Adequate policy support

Among the IAB industrial policies of Huangpu District, there are policies specifically supporting the development of biomedicine industry in an all-round way.

Supports	Examples of specific support of IAB industrial policies for biomedicine industry
 Project establishment	<ul style="list-style-type: none"> • A reward of RMB 5 million to RMB 100 million will be given to new major projects in biomedical industry based on the total investment in fixed assets.
 Encourage technological innovation	<ul style="list-style-type: none"> • Each enterprise who has obtained new drug certificates or registration approvals will be given a reward up to RMB 10 million. A reward of 2 million per drug will be given to enterprises whose generic drugs pass the quality and efficacy consistency evaluation. • For those who have obtained new drug certificates and production approval documents or registration certificates of Class II and III medical devices and are industrialized in Huangpu District, an annual reward of up to RMB 50 million will be given according to their degree of contribution to local economic development.
 Support platform construction	<ul style="list-style-type: none"> • Accredited major public technical service platforms for biomedicine will be awarded 50% of their actual construction budget, with a maximum reward of RMB 50 million.
 Support enterprise development	<ul style="list-style-type: none"> • Those who undertake commissioned production from unrelated drug owners will be awarded 30% of their respective annual contribution to local economic development, with a maximum of RMB 10 million. • For corporate M&A and reorganizations with equity investment in unrelated biomedical companies, an annual reward of up to RMB 10 million will be given based on 5% of the actual M&A transaction amount. • New biomedical companies with a paid-in registered capital of more than RMB 10 million will be given 50% of office rent reimbursement or rental subsidy of up to RMB 5 million.

Cluster of Strategic Emerging Industry—New Energy






New Energy—the Global Development Trend

On the one hand, the oil and gas industry is under unprecedented pressure due to the COVID-19 pandemic and low oil prices. On the other hand, with the global oil and gas industry undergoing technological changes and strategic transformation, the energy industry will be focused on making breakthroughs in clean and low-carbon energy transformation, intelligent energy systems, innovation and opening up.

Rapid Development of New Energy in Huangpu District

High output value and matured industry chain

The new energy industry achieved a total industrial output value of RMB 136.76 billion in 2019, with key areas covering energy production, energy equipment, energy conservation and new energy services, and will gradually accelerate the development of hydrogen energy, “Energy Internet” and new-energy vehicles. In terms of the development of hydrogen energy industry, Huangpu District has formed a hydrogen energy industry chain containing fuel cell catalyst, proton exchange membrane, membrane electrode, battery stack system, vehicle hydrogen system and hydrogenation equipment, vehicle equipment manufacturing, inspection and testing, demonstration and application, etc.

Representative companies in new energy in Huangpu District	Introduction
 Zhiguang	<ul style="list-style-type: none"> Mainly engaged in power mechanism, power grid control, power transmission, energy utilization and transformation, electrical automation and informatization. A leading provider of integrated energy technology and services in China
 SinoHyKey Technology	<ul style="list-style-type: none"> The first enterprise in China to realize the large-scale industrialization of proton fuel cell membrane electrode assembly (“MEA”) Providing low-cost high-performance membrane electrode core assembly for domestic and foreign fuel cell manufacturers
 Guangdong Electric Power Design Institute	<ul style="list-style-type: none"> Providing one-stop integrated solutions and full life-cycle management services in the energy and infrastructure construction fields of power, nuclear industry, architecture, network communication, municipal transportation, water conservancy, environmental protection, marine resource, etc.
 Devotion Thermal	<ul style="list-style-type: none"> Mainly engaged in biomass moulding fuel and other new clean energy
 Sanjing Electric	<ul style="list-style-type: none"> Possessing the closed-loop digital energy management and eSolar ecological service system

Agminated development platforms

Baoneng New Energy Automobile Industrial Park and the New Energy & New Material Value Innovation Park are built in Huangpu District, and a 6.4-square-kilometer new energy, new material and smart chip park is planned to be established in the center of China-Singapore Guangzhou Knowledge City, providing support for the development of the new energy industry.

Numerous R&D institutions

There are many new energy R&D institutions in Huangpu District, including the Hydrogen Energy Innovation Center and Academician Workstation supported by top international talents, the Qingfeng Hydrogen Energy Academician Workstation and Hydrogen Energy Innovation Center, the Sino-German Institute of Hydrogen Energy, and new energy materials research institute projects (of Professor Hu Xiaobin), etc.

Attracting talents

Huangpu District has introduced Ye Siyu, an academician of the Canadian Academy of Engineering, cooperating with laboratories in Tsinghua University, Tongji University, etc., and has gathered more than 100 hydrogen energy professionals including the team of Dr. Zou Yuquan.

Gradually improved infrastructure

Two hydrogen refueling stations have been built and put into operation in Huangpu District, and five hydrogen refueling stations is being constructed. It is expected that the network will cover the whole District by 2020.

Cluster of Strategic Emerging Industry—New Energy (Continued)

Multi-party cooperation

Huangpu District partners with domestic and foreign energy giants in new energy industry:

- Cooperated with Sinopec Sales Co., Ltd. to build more than 20 "five-in-one" comprehensive energy sales stations providing hydrogen refueling, oiling, charging, non-oil businesses, and photovoltaic power generation, etc.;
- Cooperated with ABB to carry out smart energy demonstration projects of photovoltaic power generation and energy storage;
- Signed an investment cooperation agreement with General Electric Company, a Fortune Global 500 company, to establish an offshore wind power operation and development center.

Integrated Development of New Energy Industry and Automobile Industry

Supported by national policy

China has issued a number of favorable policies to encourage the development of new energy vehicles. In 2015, "Made in China 2025" proposed new energy vehicles as one of its ten key sectors. According to data from the automobile industry, the production and sales volume of new energy vehicles in China rose from 75,000 in 2014 to 1.26 million in 2018.







Xpeng Motors, the leading enterprise of new energy vehicle in Huangpu District

Founded in 2015, Xpeng Motors is one of the "star" enterprises in Huangpu District. It is also China's leading designer and manufacturer of intelligent electric vehicles, and a technology company combining cutting-edge Internet technology and AI innovation, leading the automobile industry in the transformation to electric manufacturing, intelligent manufacturing and vehicle-network integration. Xpeng Motors was listed on the New York Stock Exchange on August 27, 2020.

Supportive Government Policies

The new energy industry is supported by various industrial policies for IAB. Huangpu District has launched "Measures for Promoting the Development of the Hydrogen Energy Industry in Huangpu District and Guangzhou Development Zone" (10 Measures for Hydrogen Energy) to boost the development of the new energy industry.

Policy supports	Examples of 10 Measures for Hydrogen Energy
 <p>New Investment</p>	<ul style="list-style-type: none"> • New hydrogen energy companies or R&D institutions will be awarded RMB 5 million to RMB 100 million according to total investment in fixed assets.
 <p>Development support</p>	<ul style="list-style-type: none"> • Qualified hydrogen energy enterprises or institutions will be awarded discount loans, with a maximum interest reduction of RMB 5 million per year. • Subsidies will be given to hydrogen energy enterprises or institutions at 50% of the actual rent expenses.
 <p>Industrial park support</p>	<ul style="list-style-type: none"> • An annual operating subsidy of up to RMB 1 million will be given to eligible hydrogen energy industrial parks according to their actual operating expenses. • Industrial parks introducing hydrogen energy enterprises or institutions will be given subsidies of up to RMB 1 million per year.
 <p>R&D Institution support</p>	<ul style="list-style-type: none"> • The accredited hydrogen energy R&D institutions will be given subsidies of up to RMB 10 million.

Cluster of Strategic Emerging Industry—New Material

The new material industry in Huangpu District is developing rapidly and covers a wide range of fields

The new materials industry in Huangpu District achieved a total industrial output value of RMB 66.69 billion in 2019, with a year-on-year increase of 5.1%. It has gathered more enterprises engaged in production of high-end metal materials and high-performance polymer materials, and has fostered rapid development of cutting-edge new materials such as the new-energy materials, energy saving and environmental friendly materials.

Representative companies in new materials in Huangpu District	Main business
3M	<ul style="list-style-type: none"> New materials are produced covering household products, medical products, transportation, construction, commerce, education, electronics, communications and other fields
COVESTRO	<ul style="list-style-type: none"> high-tech polymer materials
Kingfa Sci. & Tech. Co., Ltd.	<ul style="list-style-type: none"> A leading domestic company in modified plastic materials
Guangzhou Tinci Materials Technology Co., Ltd.	<ul style="list-style-type: none"> Functional materials of personal care products, lithium-ion battery materials, silicone rubber materials
Solderwell Advanced Materials Co., Ltd.	<ul style="list-style-type: none"> Lead-free solder, PCB electroplating anode materials, preformed solder
Guangzhou Huaxinke Intelligent Manufacturing Technology Co., Ltd.	<ul style="list-style-type: none"> Polymer materials
Guangzhou Pochely New Materials Technology Co., Ltd.	<ul style="list-style-type: none"> Phenolic epoxy resin for composite material, phenolic epoxy resin for electronic packaging, powder coating and silicone
Guangzhou Sanfu New Materials Technology Co., Ltd.	<ul style="list-style-type: none"> Surface treatment additives

Successful Case

Kingfa Sci. & Tech. Co., Ltd. owns 47 companies and has offices in South Asia, North America and other overseas regions, mainly engaged in R&D, production and sales of new polymer materials. It is a world-leading new material company ranking first in the Asia-Pacific region and listed on Fortune China 500 Companies 2020. In 2019, Kingfa sold 2.1678 million tons of new material products which were widely used in automobiles, household appliances, electrical and electronic equipment, etc. By the end of 2019, the company had applied for 2,983 invention patents at home and abroad. It was a top winner of the National Prize for Progress in Science and Technology in 2020 for its Complete Set of Industrialization Technology for the Synthesis, Processing and Application of High-performance Polymer Materials for LED Packaging won.

Numerous Industry Platforms

Guangzhou Science City and China-Singapore Guangzhou Knowledge City are the areas gathering enterprises and characteristic industrial bases in the new material industry, including South China Advanced Material Innovation Park and Guangzhou Industrial Base for High Performance Carbon Fiber Materials. Among them, South China New Material Innovation Park was invested RMB 1 billion, covering an area of 160 mu, with a total construction area of 220,000 square meters. It has been identified as a national science and technology business incubator and a national makerspace. There are more than 520 enterprises in the park so far.



Figure: Kingfa Sci. & Tech. Co., Ltd.



Figure: South China New Material Innovation Park

Cluster of Strategic Emerging Industry–New Material (Continued)

Numerous Scientific Research Institutions

There are many new material research institutions in Huangpu District, including provincial-level research institutes established by the government and national-level new materials R&D institutions established by leading enterprises.

Examples of New Materials Research Institutes in Huangpu District



Guangdong National Institute of Nano Technology Innovation in Guangdong-Hong Kong-Macao Greater Bay Area



Changchun Institute of Applied Chemistry, Chinese Academy of Sciences - Huangpu Institute of Advanced Materials

Introduction

- Integrating domestic and foreign researchers to produce a number of world leading nanoscience achievements and to promote their transformation.
- Carrying out fundamental and high-end application R&D in advanced electronic information materials, biomedical materials, IVD technology, special polymer materials, etc.



Figure: Headquarters of Guangdong National Institute of Nano Technology Innovation in Guangdong-Hong Kong-Macao Greater Bay Area



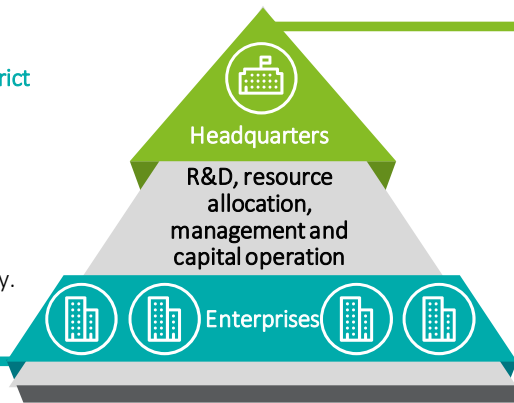
Figure: Changchun Institute of Applied Chemistry, Chinese Academy of Sciences - Huangpu Institute of Advanced Materials

Headquarters Economy

Huangpu District cultivates headquarters economy by introducing such headquarters of Baoneng, Cedar Holdings and other financial groups, gradually forming a headquarters economic belt that integrates management and decision-making, procurement and sales, R&D, capital operation, shared services and other functions.

Numerous headquarters in Huangpu District

By the end of 2018, 99 enterprises in Huangpu District have been identified as headquarters, accounting for 20% of the total number of headquarters in Guangzhou and ranking second in the city.

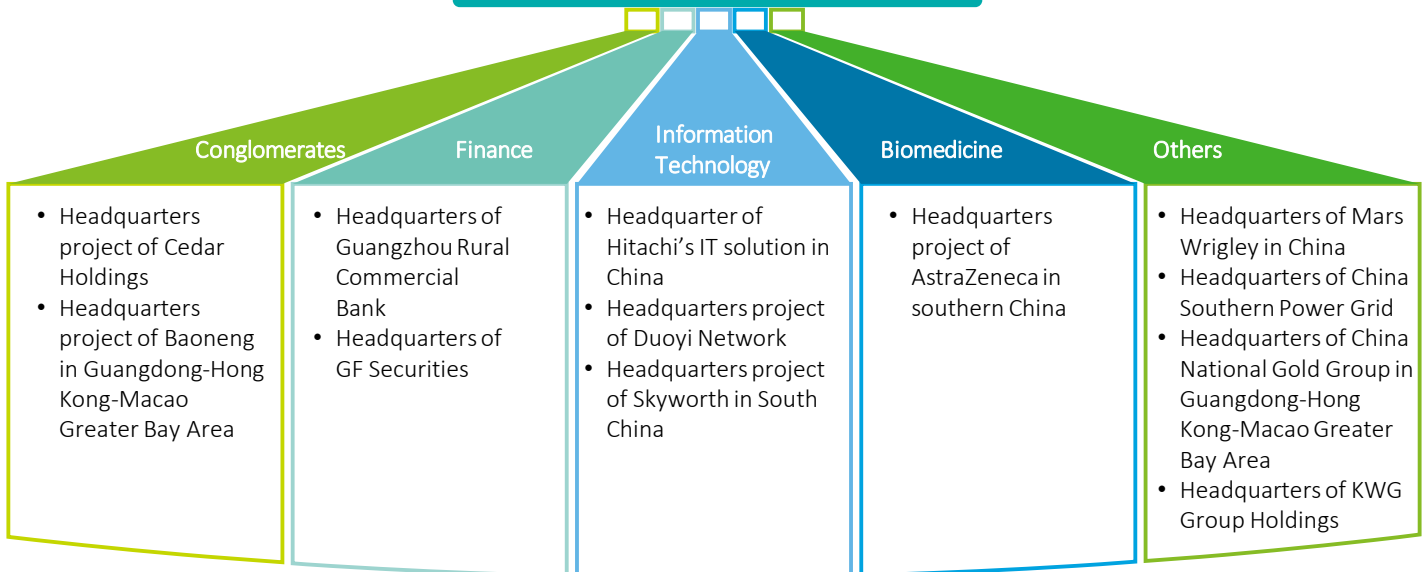


Strong and significant headquarters in Huangpu District

- Fortune China 500 Companies 2020: Gf Securities Co., Ltd. Guangzhou Rural Commercial Bank Co., Ltd.
- Fortune Global 500 Companies 2020 : China Southern Power Grid Co., Ltd. Cedar Holdings

Diversified Industries of Headquarters

Famous Headquarters Projects in Huangpu District



Numerous Headquarters Platforms

Guangzhou Science City and Huangpu Port Economic Zone are the areas gathering headquarters. Among them, Huangpu Port Economic Zone provides high-end carriers and business support services for headquarters in Poly Yu Zhu, Yuzhuwan Haisi Innovation Center, Guangzhou Yuzhu Industrial City Complex, etc.



Successful Case: Cedar Holdings

Founded in 1997, Cedar Holdings owns business segments of bulk commodities, new chemical materials, tourism and culture, and smart city services. It also owns two A-share listed companies, Qixiang Tengda and Sinoer, and controls Cedar International Trust and Dalian Financial Assets Exchange. Cedar Holdings relocated its headquarters to Huangpu District in 2017, and the headquarters building is located in the central area of Guangzhou Science City. As a RMB 100-billion-level private enterprise cultivated in Huangpu District, Cedar Holdings has been listed on Fortune Global 500 Companies for three consecutive years (2018-2020).

Complete Supporting Services for Intellectual Property Rights

Huangpu District is at the leading position in China in terms of the deployment and protection of intellectual property (“IP”) rights. It is also the first comprehensive reform pilot zone for the deployment and protection of IP rights in China. It provides investors with all-rounded services including creation, protection, utilization and management of intellectual property rights.

Convenient IP Application Process

The Patent Examination Cooperation Guangdong Center of the Patent Office, CNIPA is located in Huangpu District, which is authorized by the China National Intellectual Property Administration. It is engaged in substantive examination of applications of patent for invention, as well as international search and international preliminary examination of PCT international applications.

Strong Protection for IP

Huangpu District is the only region in Guangzhou which has the provincial authority over patent enforcement, and has set up a number of IP protection institutions to adjudicate patent disputes, foreign-related disputes, as well as other major, complicated or influential patent cases in the city. It creates a favorable environment for the development of IP rights.




Examples of institutions for IP protection in Huangpu District	Introduction
 <p>Guangzhou Intellectual Property Court</p>	<ul style="list-style-type: none"> Mainly trying civil and administrative cases in respect of patents, new plant varieties, integrated circuit layout designs, technical secrets, and computer software. By September 2019, 33,622 cases had been closed.
 <p>China (Guangzhou) Intellectual Property Protection Center</p>	<ul style="list-style-type: none"> Providing IP protection services including "fast preliminary hearing, fast affirmation, and fast rights protection" to the new-generation information technology and biomedicine industries
 <p>Guangdong-Hong Kong-Macao Greater Bay Area Intellectual Property Mediation Center</p>	<ul style="list-style-type: none"> Providing fast, efficient and convenient mediation services for IP disputes
 <p>Guangzhou Intellectual Property Notarial Office, Guangdong Province</p>	<ul style="list-style-type: none"> Providing professional IP notarization services for enterprises in cross-border trade disputes



Figure: Patent Examination Cooperation Guangdong Center of the Patent Office, CNIPA



Figure: Guangzhou Intellectual Property Court



Figure: Guangdong Intellectual Property Protection Center

Complete Supporting Services for Intellectual Property Rights (Continued)

Convenient IP Transactions

Guangzhou IP Exchange established in Huangpu District provides efficient services for IP transactions within the District. From January to October 2020, Guangzhou IP Exchange completed IP transactions of RMB 1.804 billion, including RMB 812 million for technology contracts, RMB 842 million for patents, and RMB 150 million for copyrights.

Support for IP Financing

Huangpu District implemented a multitude of finance measures to help companies with IP deployment.

Examples of IP Financing Projects	Introduction
 Building Service Platforms	<ul style="list-style-type: none"> Huangpu District established the first IP financial service center in China. With an operation model of "IP service agencies + financial service supermarket", the center has built a basic information database covering more than 2,000 high-tech companies and has been home to 80 financial service agencies and 16 intellectual property service agencies. It has also released 5 IP financial products and provided services such as IP evaluation, pledge financing, securitization, and technology transformation and matchmaking.
 IP Pledge Financing	<ul style="list-style-type: none"> Huangpu District has set up a risk compensation fund pool of RMB 20 million for IP pledge financing to undertake 30% of banks' risks; regularly holding the branding activity of IP Pledge Financing Matchmaking ("Zhi Rong Hui") and building the platform of Bank-Company Coordination ("Yin Qi Jie"), to provide one-on-one services for companies in respect of financing communication and negotiation. The District has completed RMB 2.149 billion of patent pledge financing, helping 144 technology companies with financing, and accounting for 37.91% of Guangzhou's, ranking first in the city.
 IP Operation Funds	<ul style="list-style-type: none"> Huangpu District has established RMB 65 million of IP operation and development funds and guided RMB 600 million of Guangzhou major IP industries' operation funds to settle in. Such two levels of funds have completed 10 equity investment projects in technology companies in the District with a total investment of about RMB 290 million. Guangzhou Jet Bio-Filtration Co., Ltd. and Guangzhou Aosong Electronics Co., Ltd. invested using district-level funds, and Bio-Thera Solutions, Ltd. using city-level funds, all of which have been listed on the STAR Market.
 IP Securitization	<ul style="list-style-type: none"> In September 2019, "Xingye Yuanrong – Guangzhou Development District Patent License ABS" was successfully launched. It is the first pure patent backed security in China, which has helped 11 technology companies to obtain over RMB 301 million of financing, pioneering patent financing in the capital market by technology companies. This practice has been replicated and promoted in Shanghai, Shenzhen, Foshan and other places. In August 2020, two products of intellectual property securitization in respect of biomedicine and new-generation information technology were issued, which have provided RMB 434 million of financing for 24 companies.
 IP Insurance	<ul style="list-style-type: none"> The District has promoted the issue of China's first overseas IP right infringement liability insurance; PICC P&C Guangzhou Branch issued insurance policies to four companies, including Kingfa Sci. & Tech., Comba Telecom, EHang AAV, and T.K Medical Instrument, for overseas IP right infringement liability, providing them with RMB 9.75 million of protection against overseas risks.
 Counselling for Listing of Sci-Tech Companies	<ul style="list-style-type: none"> In June 2020, the project "IP-Related Assistance in Sci-Tech Innovation Companies Preparing for Listing" was launched and three IP service agencies were organized, including King & Wood Mallesons, PAIF, and Guangzhou Huaxiang Intellectual Property Service Co., Ltd. They provide IP counseling for 16 sci-tech innovation companies, issue reports on the attributes of sci-tech innovation, and support the listing of sci-tech innovation companies on the STAR Market and the Second-board Market.

Complete Supporting Services for Intellectual Property Rights (Continued)

Supportive IP Policies

Huangpu District rolled out the *Measures of Guangzhou Huangpu District and Guangzhou Development District to Promote Guangdong-Hong Kong-Macao Mutual Acceptance and Communication of Intellectual Property (Trial)* and the *Measures of Guangzhou Huangpu District, Guangzhou Development District and Guangzhou High-tech Industrial Development Zone to Further Strengthen the Use and Protection of Intellectual Property* [“Ten Measures for Intellectual Property” (Version 2.0)] to further improve the supporting services for intellectual property.

Supports	Examples of IP Policies of Huangpu District
IP Recognition	<ul style="list-style-type: none"> The intellectual property from Hong Kong and Macao may enjoy the same treatment as that from Chinese mainland in relation to rewarding, subsidizing and qualifications in projects at Huangpu District level
Introduction of IP Agency	<ul style="list-style-type: none"> Qualifying new IP service agency may be granted lump-sum reward of RMB 1 million to RMB 10 million Foreign IP service agency newly established in China-Singapore Guangzhou Knowledge City may be granted rental subsidies
Development Encouragement	<ul style="list-style-type: none"> Qualifying IP service agency will be rewarded with up to RMB 10 million according to its contribution to the economic development of Huangpu District Accredited IP trading platform will be rewarded with 1% of its annual trading amount of patents, trademarks, and copyrights, capped at RMB 10 million per year
Financial Support	<ul style="list-style-type: none"> Providing discount loans and premium subsidies to companies financing through IP pledge; annual financial incentives of up to RMB 6 million for issuers of innovative IP securitization products
Protection Funding	<ul style="list-style-type: none"> Funding companies' IP protection costs at up to RMB 5 million a year

Support for Entrepreneurship and Innovation

The three elements that startups value most in a district are the availability of innovation institutions, innovation resources and innovation environment.

Innovation Element	Description
Innovation Institutions	<ul style="list-style-type: none"> Advanced companies building labs and scientific research institutions
Innovation Resources	<ul style="list-style-type: none"> Government funding, innovative talents, scientific research institutions, cooperation between universities and companies, and deployment of international resources
Innovation Environment	<ul style="list-style-type: none"> Incubators and government services

Huangpu District gathers elements in innovation institutions, innovation resources and innovation environment in order to create an “entrepreneurship paradise” for companies.

Innovation Institutions

Huangpu District allows companies to take a leading role in innovation. For example, Kingfa Sci. & Teach., a world’s leading company ranking first among its counterparts in Asia Pacific, boasts three national-level scientific research platforms: the National Advanced Polymer Material Industry Innovation Center, the National Enterprise Technology Center and the National Engineering Laboratory. The leading position of Kingfa Sci. & Teach. in new materials has largely enhanced the development of the new material industry in Huangpu District.

Innovation Resources

Heavy Investment in Scientific Research

China’s R&D spending intensity (i.e. the ratio of R&D expenditures to GDP) increased rapidly from 0.89% in 2000 to 2.12% in 2017. In terms of total R&D spending, China ranked second in the world for the first time in 2014, and the gap in this aspect between China and the United States has been narrowing in recent years, laying a solid scientific research and technology foundation for the development of China's strategic emerging industries.

In 2019, Guangzhou spent RMB 67.774 billion on scientific research, accounting for around 21.9% of Guangdong's scientific research spending, ranking second in Guangdong. In 2019, Huangpu District spent RMB 15.342 billion on scientific research, accounting for 22.64% of Guangzhou’s scientific research spending and 4.38% of GDP, ranking first among all districts of Guangzhou.

Figure: Proportion of Guangzhou’s Scientific Research Spending to That of Guangdong Province in 2019 (RMB 100 million)

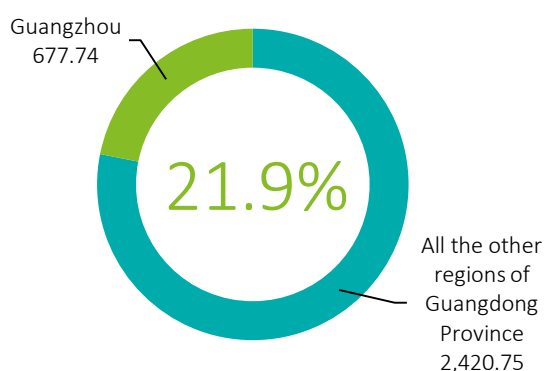
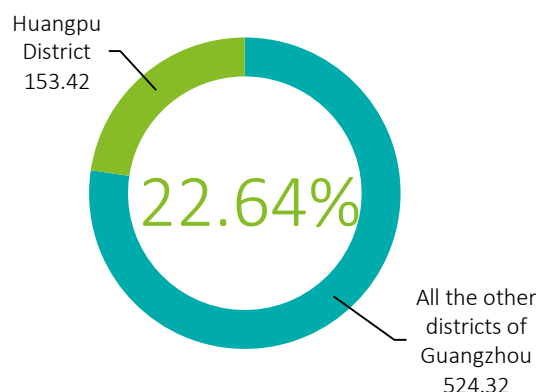


Figure: Proportion of Huangpu District’s Scientific Research Spending to That of Guangzhou in 2019 (RMB 100 million)



Support for Entrepreneurship and Innovation (Continued)

Abundant High-end Scientific Research Institutions

Huangpu District has set up a number of scientific research institutions at district, provincial and state levels to promote the sharing and transformation of technology and resources. As of 2019, Huangpu District had housed 34 national-level R&D institutions and 26 provincial-level new-type R&D institutions, accounting for nearly half of the total in Guangzhou.

Synergizing Hong Kong, Macao, and International Resources

In terms of deployment of Hong Kong, Macao, and international resources, Huangpu District strengthens its partnership with Hong Kong, Macao, Israel, the United States, the United Kingdom, Germany, Japan and other innovative highlands, building platforms for project cooperation. The district promotes inbound investment, deployment of advanced technology, in-flow of high-caliber talents, settlement of international capital and other resources.



Region	Cooperation with Huangpu District
Hong Kong & Macao	<ul style="list-style-type: none"> Establishing Guangdong-Hong Kong-Macao Youth Entrepreneurship and Innovation Base
Israel	<ul style="list-style-type: none"> Establishing Guangzhou China-Israel International Life Science Parallel Incubation Center
UK	<ul style="list-style-type: none"> Establishing UK-China Biotech & Health Technology Innovation Hub
US	<ul style="list-style-type: none"> Establishing Guangzhou Stanford International Research Institute in Huangpu District and promoting the transformation of its achievements
Germany	<ul style="list-style-type: none"> Heidelberg, the “University Town of Germany”, and Huangpu District exchanged innovation space and set up offshore innovation centers in each other’s location.

Special Government Funds

In terms of financing resources, Huangpu District relies on both government finance and social capital. Huangpu District government has set up special funds for the development of small and medium-sized enterprises and funds for guiding startups in the emerging industries. It also leverages social capital by guiding investing institutions to provide financing services for technology companies. An example is the RMB 30 billion industrial investment funds to support the development of small and medium-sized enterprises.

Innovation Environment

Huangpu District promotes the construction of incubators and makerspaces, and provides a supporting system for startups.

Start-up Platforms in Huangpu District	Quantity
 Incubator	<ul style="list-style-type: none"> Huangpu District owns the largest incubator cluster in South China. By the end of 2019, the total incubation area had reached 5 million square meters, being home to 22 provincial-level incubators and 14 national-level incubators
 Makerspace	<ul style="list-style-type: none"> By the end of 2019, Huangpu District had built a total of 47 district-level makerspaces, including 15 at provincial level and 9 at national level

Support for Entrepreneurship and Innovation (Continued)



Guangdong Software Park



Scientific and Technological Business Accelerator,
Guangzhou Development District



Guangzhou International Business Incubator

Fruitful Achievements in Science and Innovation

The number of patent applications and licenses ranked first in Guangzhou

In 2018, companies in Huangpu District applied for 9,556 invention patents, accounting for 30.1% of total corporate invention applications in Guangzhou; 2,228 corporate inventions were licensed, accounting for 34.9% of total corporate inventions licensed in Guangzhou. The number of both patent applications and licenses ranked first among all the districts in Guangzhou. In 2019, Huangpu District ranked first in Guangzhou in terms of major IP indexes, with the number of PCT applications amounting to 756.

Huangpu District comes out on top in the number of high-tech companies in Guangzhou

The total number of high-tech companies in Guangzhou has grown from 1,919 in 2015 to 12,099 in 2019, achieving rapid growth for four consecutive years. Currently, Guangzhou ranks 4th among mainland cities in terms of the total number of high-tech companies, accounting for approximately 26% of that of Guangdong Province. The total number of high-tech companies in Huangpu District exceeded 2,100 in 2019, accounting for approximately 20% of the total in Guangzhou.

Figure: Proportion of the Number of High-tech Companies in Guangzhou to that of Guangdong Province in 2019

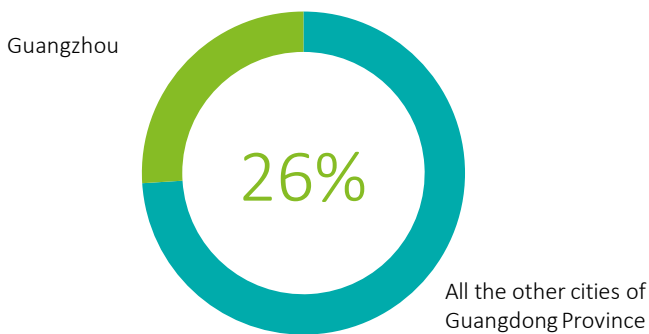
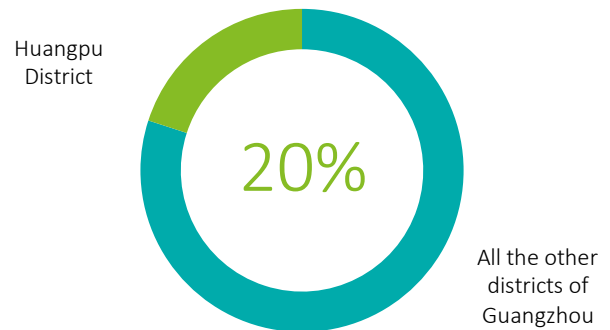


Figure: Proportion of the Number of High-tech Companies in Huangpu District to that of Guangzhou in 2019



Huangpu District ranks first among its counterparts in Guangzhou in terms of the number of companies listed on the STAR Market

As of November 2020, Huangpu District has fostered 5 companies for listing on the STAR Market, accounting for 83% of the total number of companies in Guangzhou listed on the Market.



Successful Case : The Greater Bay Area Headquarters of Sinovation Ventures

As a world-renowned venture capitalist, Sinovation Ventures boasts the world's first AI institute and initiates the "VC+AI" model. In June 2019, the GBA headquarters of Sinovation Ventures was established in Huangpu District.

- Investment Orientation: AI, big data, education, consumption upgrading, B2B business services
- R&D Institutions: Sinovation Ventures will set up its Sinovation Ventures AI Institute for the Greater Bay Area in Huangpu District to promote the output of AI talents and technologies from Huangpu District

Activities to Attract Sci-Tech Innovation and Investment

Diversified Sci-Tech Innovation Activities

Various high-end science and technology innovation forums were held in Huangpu District, attracting a large number of scientific and technological talents.

Examples of Sci-Tech Innovation Activities Held in Huangpu District

Guangzhou International Biological Forum

The "Davos Forum" in the field of biomedicine, an important academic event for the bioscience circle in China, was held annually in Guangzhou International Bio-Island, attracting domestic and foreign bioscience talents, experts and scholars.



The Fourth Guangzhou International Biological Forum

Conference of the China High-Tech Industrialization Summit

A national-level large conference for science and technology industrialization, attracting nearly 100 academicians, experts and scholars every year to discuss the industrialization of science and technology, use of technology in industry, and the industrial ecology.



The 3rd Conference of the China High-Tech Industrialization Summit

China Innovation & Entrepreneurship Competition

The largest makerspace and the strongest entrepreneurial support platform in China. The 8th Final Competition for Innovation and Entrepreneurship in China National Biomedical Industry was held in Huangpu District, and two companies in the District won the first prize in the startup group and the growth group respectively.



8th Final Competition for Innovation and Entrepreneurship in China

Tremendous Investment Promotion Activities

Huangpu District holds numerous investment promotion and exchange activities every year to facilitate mutual understanding with investors, and to attract a large number of investment projects to settle in Huangpu District.

Examples of promotion and exchange activities in Huangpu District

Huangpu District Sub-Forum of Guangzhou Annual Investment Conference, China in 2020

An international large investment promotion event, with the theme of biomedicine, attracting companies and their officers from many countries and regions, where a signing ceremony was held for Baidu project, 360 Brain of Security project and several major biomedical projects.



Huangpu District Sub-Forum of Guangzhou Annual Investment Conference, China in 2020

The Greater Bay Area Biomedicine "Cloud Promotion and Exchange Meeting"

An online activity for the cross-border exchange of the biomedical industry and a means for investment promotion, which enhances knowledge of European biomedical companies about Huangpu District and promotes the partnership between China and Germany in the biological industry.



The Greater Bay Area Biomedicine "Cloud Promotion and Exchange Meeting"

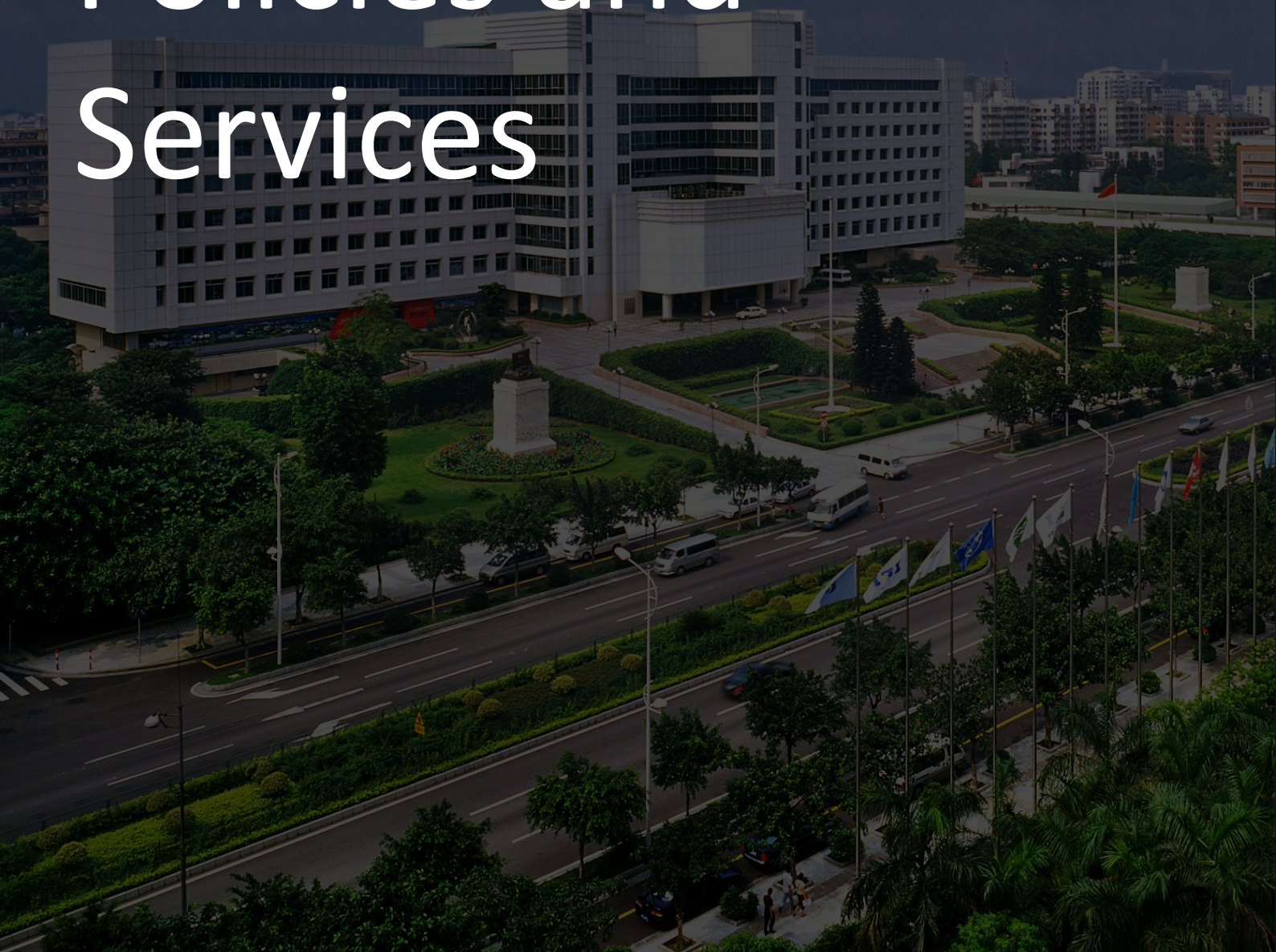
Guangdong-Hong Kong-Macao Greater Bay Area Exchange Activity, China Development Forum 2019

Held at Guangzhou Science City Conference Center, attracting more than 40 experts from governments, enterprises and research institutions to discuss the development of GBA and investment opportunities in Huangpu District.



Guangdong-Hong Kong-Macao Greater Bay Area Exchange Activity, China Development Forum 2019

Chapter III Government Policies and Services

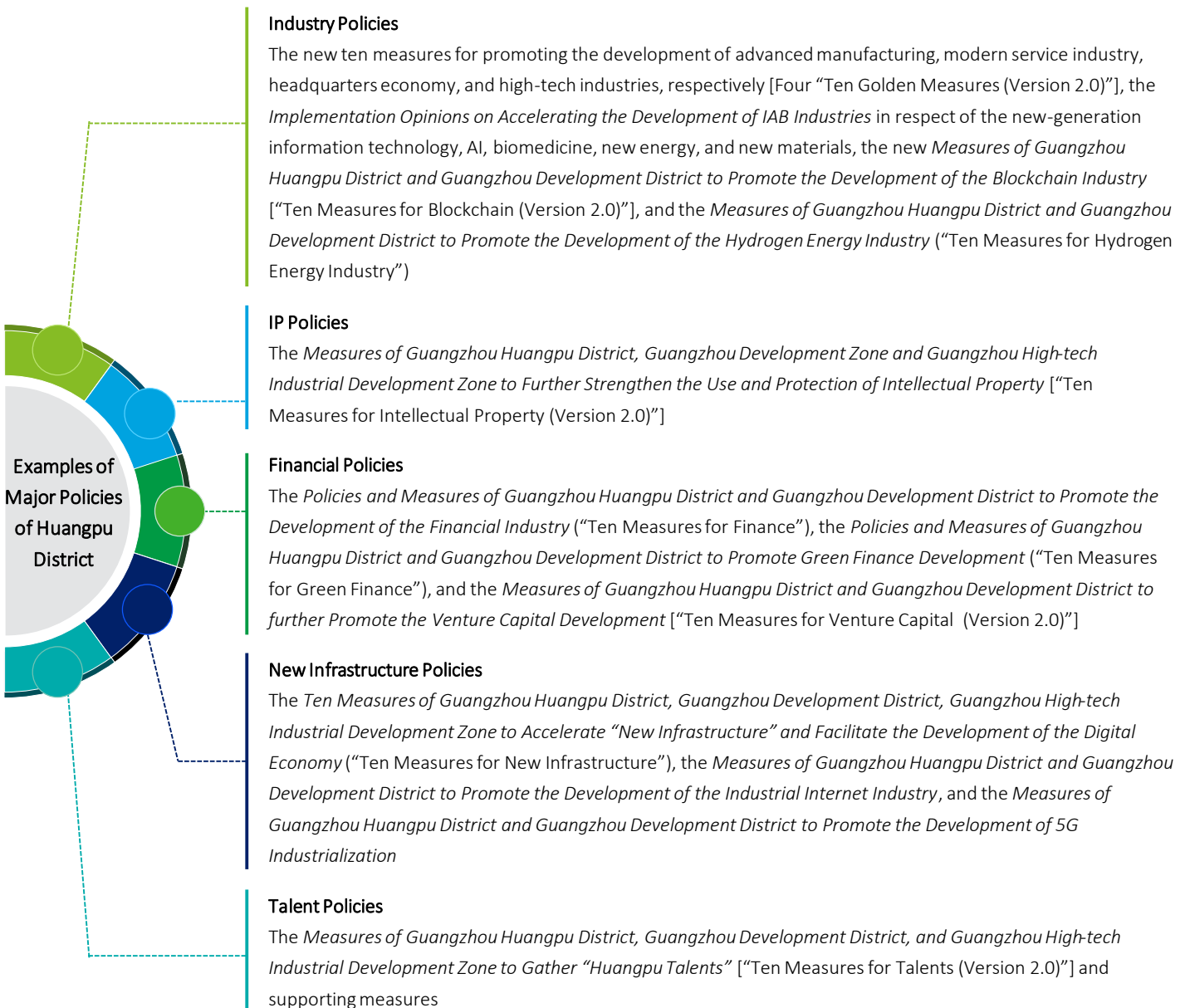


Comprehensive Government Policies

Huangpu District has rolled out many industry and talent policies to provide all-round support for companies and talents in the areas of scientific and technological innovation, financial services, and career development.

Highlights of Innovative Government Policies in Huangpu District

- **Broad Coverage**—Covering competitive distinctive industries, strategic emerging industries, and new infrastructure construction
- **Multiple “First”**—The first district with dedicated policy on intellectual property, the first “new infrastructure” policy, the first 5G policy in China, and the first blockchain policy in Guangdong Province
- **Strong Support**—Huangpu District has rolled out comprehensive and supportive district-level policies for the financial industry in GBA



Comprehensive Government Policies (Continued)

Targeted Industry and Talent Policies of Huangpu District

- Stimulating investment and business and promoting industrial transformation and upgrading
 - To attract and support the introduction of new projects, Huangpu District has rolled out targeted incentive policies to encourage the transformation and upgrading of competitive traditional industries and to actively guide the innovative development of strategic emerging industries.
- Reducing business operating costs and financing costs
 - Huangpu District funds businesses through rental subsidies, financing subsidies, business contribution rewards and talent rewards to provide full support for the entire life cycle of businesses.
- Precisely meeting various demands of talents
 - Huangpu District has market-oriented standards to identify and evaluate talents, offering convenient procedures to implement talent policies, and providing preferential treatment for talents. Financial assistance of up to RMB 1.5 billion can be provided to talent innovation and start-up projects.

Examples of Policy Implementation Achievement



Remarkable achievements since the release of “Ten Measures for Venture Capital” [now “Ten Measures for Venture Capital (Version 2.0)”], as at December 2020:

- Various support funds of over RMB 100 million in total have been provided
- 57 venture capitalists have been benefited
- Helping technology companies in the District obtain over RMB 1 billion of equity investment



Since the release in 2017 of “Ten Golden Measures” [now “Ten Golden Measures (Version 2.0)”], “Ten Measures for Talents”, and other policies in the series of “Golden & Jade Measures”:

- 30,000 incidents of policy fund disbursements have been made in three years
- Benefiting over 5,000 companies
- Companies have saved cost of RMB 2.505 billion under the “Ten Golden Measures”
- The District has attracted about RMB 600 billion of investment



From the end of 2017 to October 2019, the “Ten Measures for Blockchain” [now “Ten Measures for Blockchain (Version 2.0)”] had:

- Provided funds of RMB 55 million in total



The Measures of Guangzhou Huangpu District and Guangzhou Development District to Promote the Development of the Cultural and Innovative Industry (“Ten Measures for the Cultural and Innovative Industry”) was rolled out in September 2018. As at September 2020:

- Had supported 59 projects of 45 companies and institutions in the District
- Offered support funds of about RMB 25.71 million
- Attracted Li Haiying, Xu Qinsong, Wu Feifan, and other cultural masters to establish studios in Huangpu District
- Effectively promoted the development of the cultural and innovative industry of Huangpu District

Industrial Policies that Promote Transformation and Upgrading

Huangpu District has rolled out various industrial support policies to promote the transformation and upgrading of competitive distinctive industries and to support the development of emerging industries such as the new-generation information technology, AI, biomedicine, new energy and new materials. The four different types of national-level business functional zones in the District also enable companies establishing their presence in Huangpu District to enjoy many national preferential policies simultaneously.

Examples of Industrial Policies of Huangpu District

 <p>Four “Ten Golden Measures” (Version 2.0)</p>	<ul style="list-style-type: none"> • New companies with qualifying level of paid-in registered capital will be rewarded for their settlement in the District • Companies of which the output value or operating income meets certain criteria will be given business contribution award or development award • Companies' eligible talents will be rewarded with 15% of their taxable income, up to RMB 3 million a year • Qualifying advanced manufacturing technology transformation projects and modern service industry's service-oriented manufacturing demonstration projects will be rewarded • Eligible science and technology projects, research and development institutions, technology transactions of high-tech companies will be given financial incentives.
 <p>Implementation Opinions on IAB Industries</p>	<ul style="list-style-type: none"> • Major industrial projects completed and put into operation as required will be rewarded based on the amount of the fixed asset investment • Companies with qualifying level of paid-in registered capital or operating income will be rewarded with support funds. • Eligible technology service platforms will be given financial incentives • Eligible companies purchasing new-generation IT products and services, AI demonstration application projects, and companies undertaking the commissioned production from unrelated drug owners will be rewarded
 <p>Ten Measures for Hydrogen Energy</p>	<ul style="list-style-type: none"> • Rewards of RMB 5 million to RMB 100 million will be given to major projects of hydrogen energy companies or R&D institutions newly established in Huangpu District • Up to RMB 10 million will be subsidized to identified hydrogen energy R&D institutions • Subsidies will be given to eligible hydrogen energy industrial parks and hydrogen fueling stations • interest subsidies of up to RMB 3 million per year will be offered to eligible hydrogen energy companies or institutions for a period of three years
 <p>Ten Measures for Blockchain (Version 2.0)</p>	<ul style="list-style-type: none"> • Setting up blockchain industry funds to provide various services to blockchain companies, such as angel investment, equity investment, and post-investment value-added services • Focusing on supporting the construction for settlement of 2 public blockchains or consortium blockchains each year; and focusing on cultivating 1 to 3 leading blockchain companies each year • Rewarding companies or institutions that use or provide blockchain demonstration project services • Funding eligible platforms like GBA Blockchain Innovation Center and Offshore Incubation Base

Driving the Development of Digital Economy

“New infrastructure” refers to the strategic network-based infrastructure projects with multiplier effects, including 5G, data center, AI, industrial Internet, ultra-high voltage, intercity high-speed rail and intercity rail transit, and charging station for new energy vehicles. Huangpu District has rolled out *Ten Measures of Guangzhou Huangpu District, Guangzhou Development District, and Guangzhou High-tech Industrial Development Zone to Accelerate “New Infrastructure” and Facilitate the Development of the Digital Economy* (“Ten Measures for New Infrastructure”) to create a vital environment for digital transformation of emerging industries in Huangpu District.

Examples in “Ten Measures for New Infrastructure”

Constructing New Infrastructure

Eligible new infrastructure projects in relation to 5G, AI and industrial Internet will be rewarded with up to RMB 10 million

Rewarding High-end Projects

Newly introduced world’s leading digital technology companies will be rewarded with up to RMB 500 million for each project based on the ratio of fixed asset investment to total investment

Building Featured Parks

Eligible featured parks or platforms for 5G, industrial Internet, AI and other digital economy will be subsidized.

Support Policy for Talent





Talents in Huangpu District can not only obtain financial subsidy according to the preferential Individual Income Tax policy of GBA, but also enjoy other premium talent policies of Huangpu District. The talent policies support talents in the District in career development, social security, convenient life, etc.

Supporting Talents' Innovation and Entrepreneurship Projects

Examples of policies

- Overseas top talents will be given project support funds of up to RMB 1.5 billion
- Talents who lead innovation and entrepreneurship will be given start-up funds of up to RMB 10 million, as well as investment incentives of up to RMB 10 million
- A project reward of up to RMB 1 million will be given to entrepreneurial talents

Supporting Individual Talents

Supports	Examples of policy details
 Subsidy of Individual Income Tax	<ul style="list-style-type: none"> • Financial subsidies shall be given to qualified overseas high-end talents and urgently-needed talents who have paid Individual Income Tax in Guangzhou in excess of 15% of their taxable income
 House purchasing subsidy	<ul style="list-style-type: none"> • Subsidies of up to RMB 5 million, 3 million and 2 million will be given to qualified outstanding talents, excellent talents, and elites respectively according to 80% of their actual residential purchasing amounts in the District
 Talent apartment	<ul style="list-style-type: none"> • At least 5,000 apartments dedicated for talents will be arranged through construction or acquisition, etc. Talents in Huangpu District have the priority to reside there and are given housing security
 Talent mobility	<ul style="list-style-type: none"> • Providing convenience for talents when they apply for permanent residence and talent visa

Supporting Talent Platforms

Supports	Specific measures
Institutions that establish new stations for post-doctoral research	<ul style="list-style-type: none"> • A one-time subsidy of up to RMB 500,000 will be given to institution that set up new post-doctoral research stations (bases, or centers); for each postdoctoral fellow recruited, RMB 50,000 will be awarded to the institution
Talent service organizations and human resources service organizations	<ul style="list-style-type: none"> • For all kinds of organizations in Guangzhou Human Resources Service Industrial Park, which are engaged in human resources and human capital, legal, financial, consulting, intellectual property and other talent-related services, a rental subsidy of up to RMB 1 million will be given based on the actual area of the site. Qualifying human resources service organizations that assist in employing high-end or urgently-needed talents will be rewarded with 50% of the headhunting expenses, capped at RMB 300,000 for each person, and the maximum reward for each organization is RMB 1 million each year.

Support Policy for Talent (Continued)

Optimizing Talent Evaluation and Policy Implementation

Examples of measures to evaluate talents and implement policies in Huangpu District



Introducing social capital to set up “Huangpu Talent Fund” at RMB 5 billion in total

- Assessing talents through skills contest, salary and other market evaluation methods



Talent allowance – “unlimited purpose, billing proof not required, online application, and direct payment”

- Simplifying the policy implementation process and application materials to ensure that things requiring presence in person get done in one place and without the need for a second visit

Figure: Talent apartment—Xiangxue International Apartment in Guangzhou

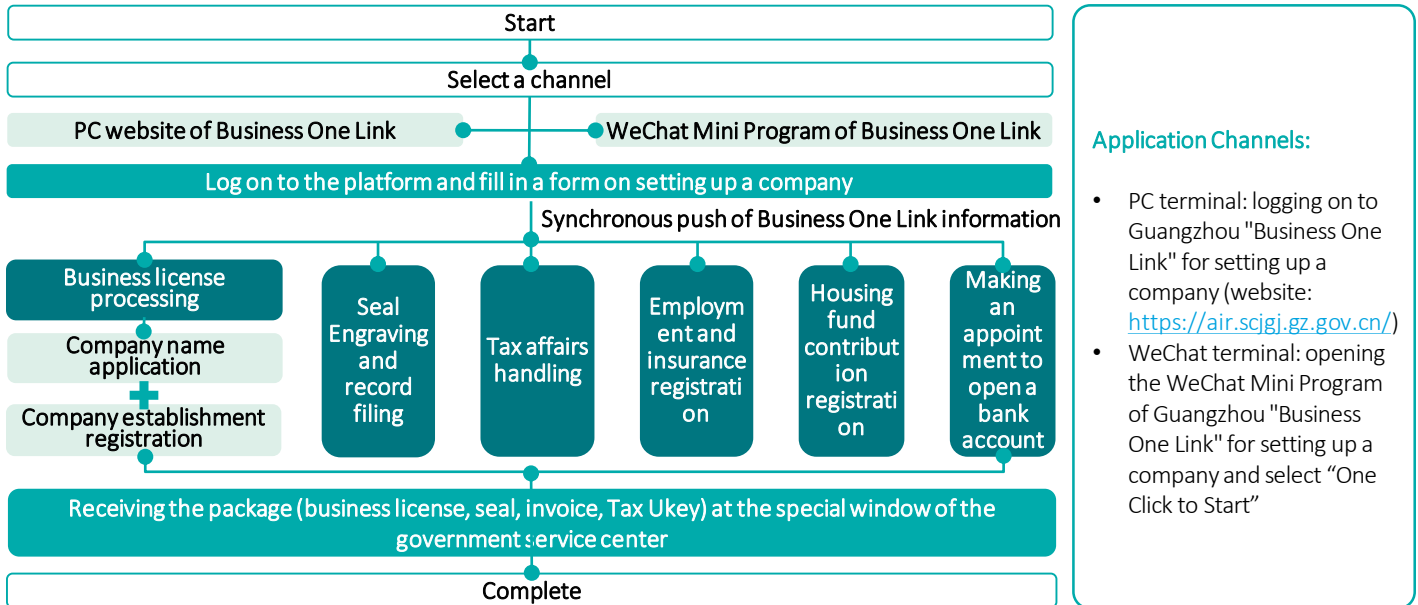


Convenient and Efficient Government Services

Convenient to Set Up a Company in Huangpu District

Investors can apply online for setting up company in Huangpu District through the WeChat Mini Program of Guangzhou "Business One Link" or PC terminal. The application items include business license, engraved seal, invoice (including Tax Ukey), employment and insurance registration, housing fund contribution registration, and making appointment for bank account opening, which can all be completed in half a day at the earliest.

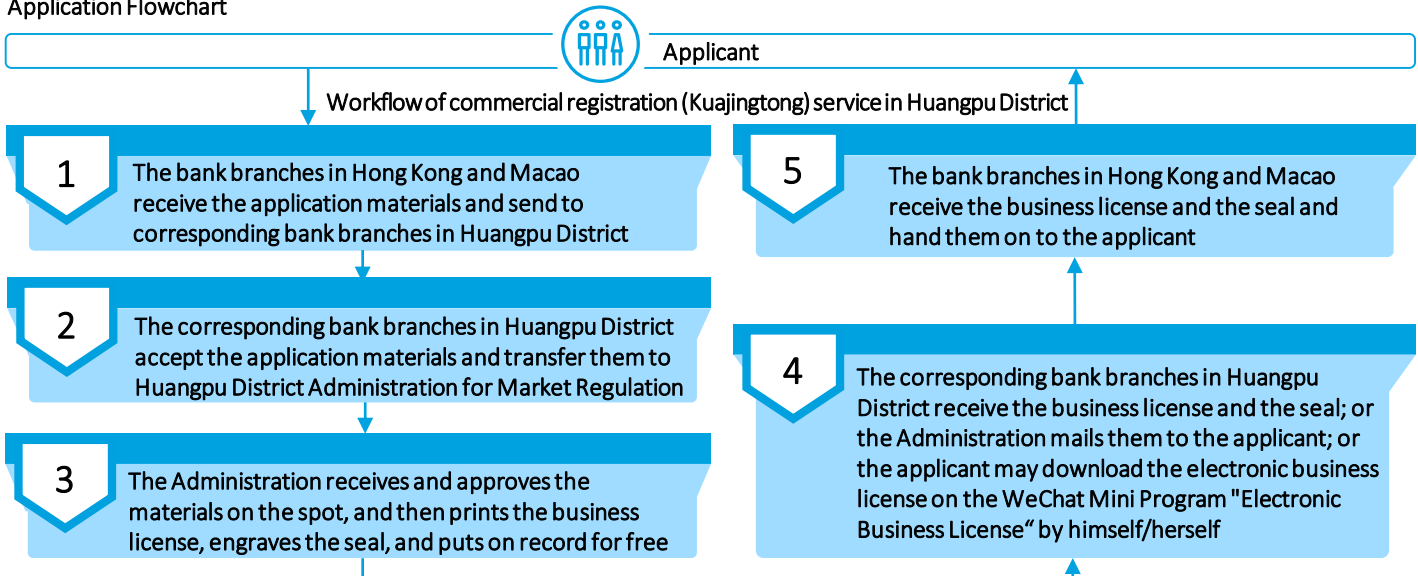
Application Flowchart



"Kuajingtong" service— Hong Kong and Macao investors can also set up a company in Huangpu District without leaving home

In the past, Hong Kong and Macao resident who intended to set up a company in Chinese mainland had to first obtain certain id entity certificate outside Chinese mainland, and then bring along all materials required to domestic certification centers in person and go through the formalities at the counters of market supervision, seal engraving, taxation, human resources and social security, business, etc. The process was once quite cumbersome. Now, as commissioned by Huangpu District Administration for Market Regulation, the six major banks (including China Merchants Bank, China Construction Bank, China Guangfa Bank, Bank of China, Agricultural Bank of China, Industrial and Commercial Bank of China) and their Hong Kong and Macao branches can provide commercial registration services, consultation and acceptance of related matters, and transmission of materials and certificates. Investors from Hong Kong and Macao only need to submit the materials on setting up a company to the local branches of such banks, and then the banks will submit the same through internal channels to the market supervision departments of Huangpu District for approval. Applicants can get the business licenses and seals at local branches.

Application Flowchart



Convenient and Efficient Government Services (Continued)

Improved Services for Business Start-up

Accelerating approval of investment and construction of businesses

Huangpu District has streamlined the approval process of business investment and establishment. Only by submitting a letter of notification and commitment can a qualified business pass through the "Green Channel" of administrative approval. Thirty-eight approval items originally undertaken by 8 departments and involved in the whole chain of business preparation, including project approval, planning, environmental protection, construction, municipal administration, bidding and so on, etc. are now examined and approved centrally by Guangdong's first administrative approval authority. Thus, the time required for the approval of business investment and establishment in Huangpu District has been reduced from 110 working days to as short as 13 working days. The time needed for approval of the investment and establishment of public finance projects has been reduced from 466 working days to 75 working days.

Solving the problems of business preparation at any time

Huangpu District launched its first app for business preparation in China, which enables businesses to report problems during the preparation at any time and to quickly get linkage responses. Huangpu District also provides "one-to-one" and "point-to-point" customized free services for key businesses and projects from project introduction to the completion of construction.

Examples of Projects	Introduction
BeiGene	<ul style="list-style-type: none"> It took less than half a year from negotiation to contract signing, only 14 days from contract signing to construction commencement, and only 18 months from piling to completion of construction
Carl Zeiss	<ul style="list-style-type: none"> Driven by the "Trusted Preparation" policy, it took only 6 months to complete the capping on the main structure of the 50,000-square-meter plant
Guangzhou Siemens Distribution Transformer Intelligent Factory	<ul style="list-style-type: none"> Problems including temporary power consumption, seedling migration and earthwork outward transportation were solved through the "Business Preparation APP". By using the APP, the project side has completed the transmission of temporary power supply in construction within 15 days, saving about 1 month compared with that in the normal process



Convenient for Logistics and Delivery

Huangpu District has 24-hour customs clearance at maritime ports to reduce the cost of customs clearance for import and export companies. In addition, the South China Bio-material Exit and Entry Public Service Platform set up on Guangzhou International Bio Island keeps the clearance time for biological materials within 1-2 days.



Image: Huangpu Port



Image: South China Bio-material Exit and Entry Public Service Platform

Convenient and Efficient Government Services (Continued)

Smart and Fast Approval (Examination) Service




Huangpu District is the first in China to promote the Smart and Fast Approval (Examination) Service. It has released the *Implementation Plan of Guangzhou Huangpu District (Guangzhou Development District) to Accelerate the Smart and Fast Approval (Examination) of Government Service Matters* and the *List of Smart and Fast Approval (Examination) of Government Service Matters (First Batch) in Guangzhou Huangpu District (Guangzhou Development District)*. The first batch of 100 items of Smart and Fast Approval (Examination) Service was launched simultaneously on 42 intelligent all-in-one machines for government affairs in 37 places in Huangpu District, such as towns, communities, parks, and convenient service stations. They realize "intelligent application, automatic approval, and online certificate issuance", reduce the burden of manual approval and provide convenience for enterprises and people.

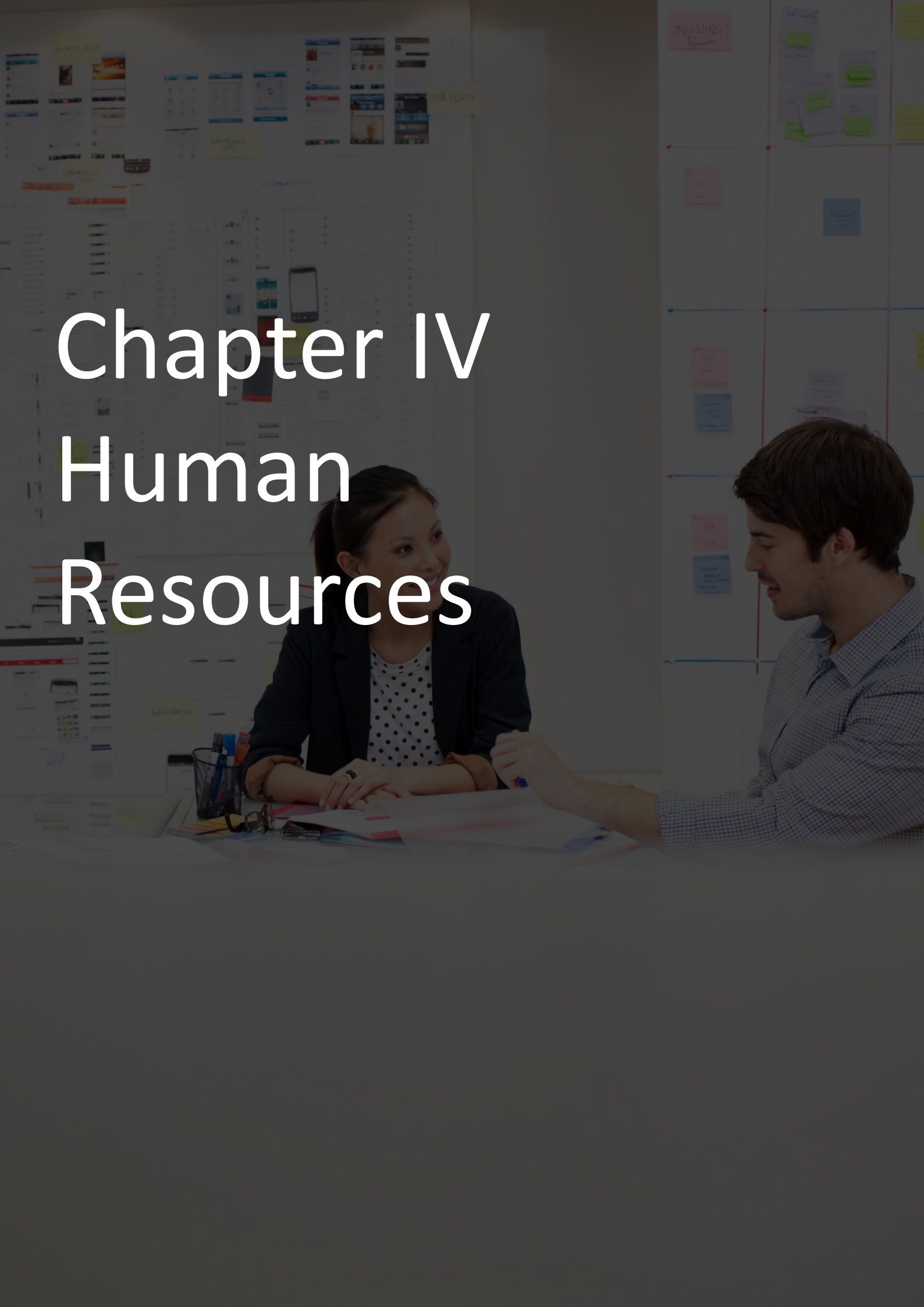
Convenient Policy Implementation

Huangpu District has launched China's first express service delivery information system, pledging completion of 517 items in 19 departments within 34 days each.

Enterprise Service Platform

Huangpu District has multiple enterprise service platforms that provide assistance and convenience to enterprises and talents in the District in their daily operations.

<p>Government Service in Huangpu District (Guangzhou Development District)</p>	<p>Yueshangtong-Huangpu (Guangzhou Development District) Zone</p>	<p>Huangpu Duixiantong</p>	<p>Mucuna Birdwoodiana Project for Enterprise Services</p>
<p>It is an official public service platform, enabling individuals and corporations to apply online for 1,310 government services from 35 departments</p>	<p>The platform integrates 53 matters in 9 major sectors, including enterprise notification, business commencement, business preparation, business operation, service progress, policy support, and government announcement.</p>	<p>It is a platform for policy implementation, providing enterprises with considerate services such as explanation of policy details, matching of policy, application deadline reminders, mobile application, etc. which can be completed within 34 days</p>	<p>It is a production, supply and marketing service platform for enterprises, providing them with one-stop online and offline matchmaking services, promoting commodity circulation, and quickly solving enterprises' needs for factors of production</p>
			



Chapter IV Human Resources

Sufficient Human Resources

Human resources is one of the important factors that ensure the development of enterprises and promote industrial transformation and upgrading through innovation. Huangpu District has a high-quality platform for talents, which gathers high-level, skilled, technical and other talents to provide investors with high-quality human resources.

Various Types of Talents

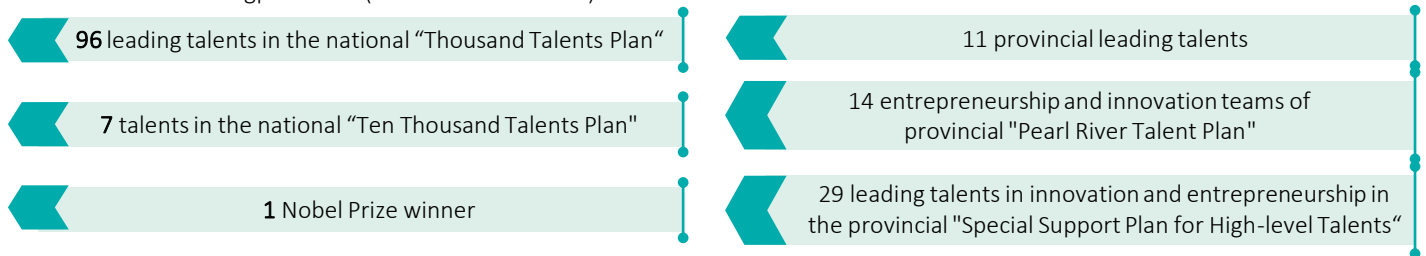
Fresh graduates

Guangzhou has abundant higher education resources, providing sufficient human resources for enterprises in Huangpu District. In terms of postgraduate study, Guangzhou has 39,500 newly-admitted postgraduate students, a total of 112,400 postgraduate students, and 26,700 fresh graduates in 2019. As for the general higher education, there were 361,600 newly-admitted students, a total of 1.153 million students, and 290,000 fresh graduates in Guangzhou in 2019.

Experts and scholars

As of the end of July 2020, Huangpu District has 1,004 high-level talents selected into the national, provincial, municipal, and district talent programs, ranking first among all districts of Guangzhou. Talents introduced in Huangpu District include Xu Tao, the first full-time academician in the District, Xie Xiaoliang, an academician of Four Academies in China and the US, and the teams of strategic scientists and academicians, such as Wang Xiaodong, Shi Yigong, Tang Benzong, Chen Yeguang, Richardson, and Arthur. Different types of talents continue to gather and bring to Huangpu District a wealth of high-end scientific and technological achievements and cutting-edge projects.

Various talents in Huangpu District (as of the end of 2018)



Continuously Innovating Talent Platforms

First-class universities

Guangzhou Higher Education Mega Center is a high-level talent training center in South China and a first-class university park integrating industries, universities and research institutes in China.

Type of universities	Examples of universities in Guangzhou
Universities and disciplines selected into the world first-class universities as well as first-class disciplines in the world (abbreviated as the "Double First Class" initiative)	<ul style="list-style-type: none"> Sun Yat-sen University, Jinan University, South China University of Technology, South China Normal University, Guangzhou University of Chinese Medicine
China's first batch of universities providing eight-year successive graduate, postgraduate and doctoral program in Clinical Medicine	<ul style="list-style-type: none"> Southern Medical University

Platforms for industries, universities and research institutes ("IUR")

Huangpu District gathers high-tech talent cultivation, scientific research and development in universities, and higher education resources. Many well-known universities at home and abroad set up research institutes and postgraduate schools in Huangpu District.

Examples of IUR universities and platforms in Huangpu District

 Guangzhou Institute of Technology and Postgraduate School of Xidian University	Huangpu Research Institute and Postgraduate School of Guangzhou University
 Huangpu Research Institute, Guangdong University of Foreign Studies	The University of Hong Kong, Hong Kong University of Science and Technology, University of Macau and other well-known universities in Guangdong Province, Hong Kong and Macao will carry out strategic cooperation with the GBA Institute of Collaborative Innovation in Huangpu District

Sufficient Human Resources (Continued)

Doctoral and postdoctoral research and innovation platforms

Huangpu District has 98 doctoral and postdoctoral research and innovation platforms, covering strategic emerging industries such as biomedicine, new materials, new energy and electronic information. There are 148 post-doctoral fellows studying in the District.

Doctoral and postdoctoral research and innovation platforms in Huangpu District	Examples of platforms
Mobile Postdoctoral Research Station	<ul style="list-style-type: none"> Guangzhou Institutes of Biomedicine and Health, Chinese Academy of Sciences
Postdoctoral Research Station	<ul style="list-style-type: none"> 35 platforms, including the Management Committee of China-Singapore Guangzhou Knowledge City, Guangzhou Regenerative Medicine and Health Guangdong Laboratory
Postdoctoral Research Substation	<ul style="list-style-type: none"> 12 platforms, including Guangzhou Xiangxue Pharmaceutical Co., Ltd., Patent Examination Cooperation Guangdong Center of the Patent Office, CNIPA
Guangdong Postdoctoral Innovation Practice Base	<ul style="list-style-type: none"> 23 platforms, including Guangzhou Wondfo Biotech Co., Ltd., Guangzhou ChinaRay Optoelectronic Materials Co., Ltd.
Guangzhou Postdoctoral Innovation Practice Base	<ul style="list-style-type: none"> 19 platforms, including Guangzhou Daan Clinical Laboratory Center Co., Ltd., Guangzhou MINO Equipment Co., Ltd.
Huangpu District Postdoctoral Innovation Center	<ul style="list-style-type: none"> 8 platforms, including Guangzhou Deaou Biotechnology Co., Ltd., Guangzhou EZlife Sci & Tech Co., Ltd.



Image: Guangzhou Institutes of Biomedicine and Health, Chinese Academy of Sciences

Cost Advantage of Human Resources

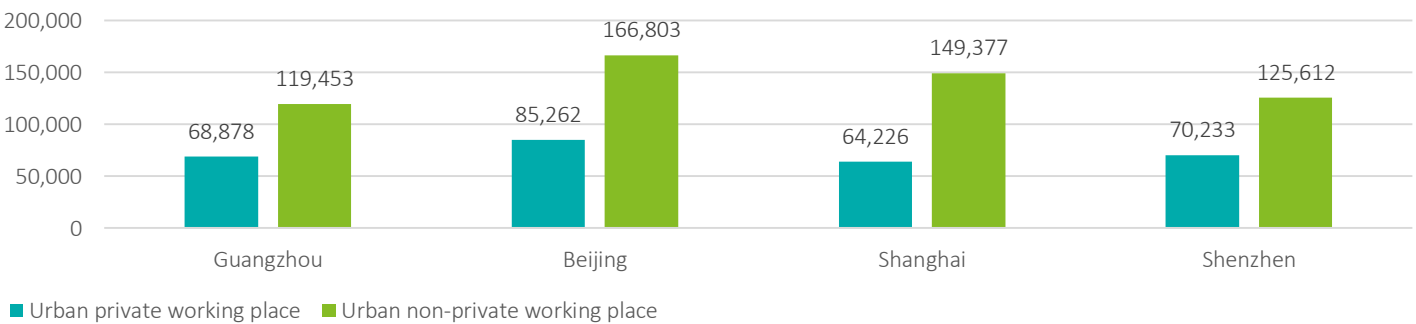
Talent cultivation platforms set up by famous enterprises

Examples of famous enterprises	Introduction to the talent cultivation platforms
SAS – the top data analyzer in the world	To establish China's first digital ecological innovation center in Huangpu District, which can cultivate 1,000 big data professionals each year
HUAWEI	To set up Huawei ICT Academy in Huangpu District to cultivate innovative and application-oriented technical talents for society and Information and Communication Technology (“ICT”) industry chain
Cytiva	To establish a biomedical talent cultivation base in Guangzhou International Bio Island

Low Cost of Human Resources

In 2019, the average annual pay of employees in urban private working places in Guangzhou is RMB 68,878, and that in urban non-private working places is RMB 119,453. Guangzhou has cost advantage in pay as compared with other first-tier cities in China.

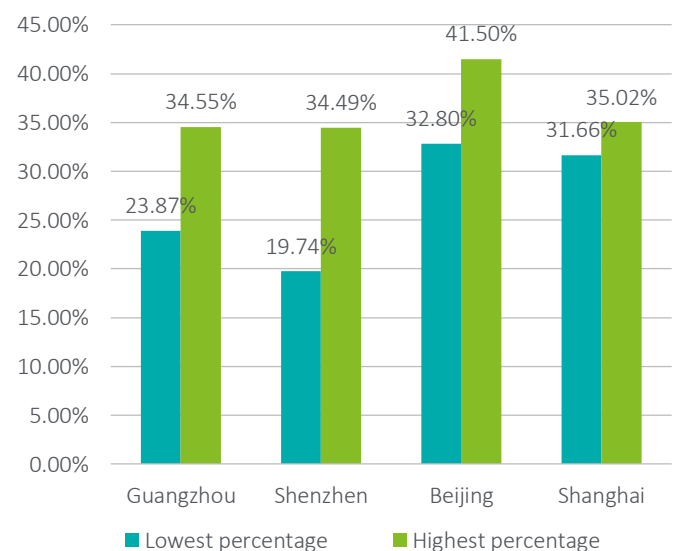
Figure: Annual average pay of employees in first-tier cities in 2019 (RMB)



In 2020, enterprises in Guangzhou were subject to 23.87% to 34.55% of the “five social insurance and one housing fund”, which has a cost advantage over Beijing and Shanghai.

Percentage of five social insurance and one housing fund undertaken by enterprises in Guangzhou (2020)	
Basic endowment insurance	12%-14%
Basic medical insurance	5.5%
Employment injury insurance	0.20%-1.40%
Maternity insurance	0.85%
Unemployment insurance	0.32%--0.80%
Housing fund	5%-12%
Total	23.87%-34.55%

Figure: The highest and lowest percentage of five social insurance and one housing fund undertaken by enterprises in first-tier cities in 2020





Chapter V

Infrastructure

Convenient Transportation Network

Huangpu District has a transportation network extending in all directions. It is adjacent to Guangzhou Baiyun International Airport and is home to Huangpu Port, a thousand-year-old "ancient port" and "good port". Huangpu District is accelerating its construction of the wharf for Guangzhou-Hong Kong-Macao self-guided tours and the Guangzhou-Hong Kong-Macao helicopter passenger station to deeply integrate into the "one hour life circle" of GBA.

Ports

As of 2018, there had been 17 ports in Huangpu, which connect to more than 600 ports in over 100 countries and regions in the world. It is about 65 nautical miles from Guangzhou-Hong Kong ferry terminal in Huangpu Port to Hong Kong through the Pearl River. The well-developed Huangpu Port facilitates the development of port and shipping companies in the District. By the end of 2019:



Port handling capacity: 184 million tons, accounting for 29.34% of that of Guangzhou Port



Container throughput: 5.14 million TEUs, accounting for 22.12% of that of Guangzhou Port



Maximum navigable tonnage: 70,000 tons



Successful case: The project of Sunwah Guangzhou-Hong Kong City

At least RMB10 billion has been invested into the project of Sunwah Guangzhou-Hong Kong City. The construction started in 2019 and is expected to be finished in 2020.

Water transport: The Guangzhou-Hong Kong-Macao exit-entry building of the project will open a water route in the western part of the GDD, connecting Hong Kong International Airport and Macao International Airport. It will take **1 hour and 20 minutes** to Hong Kong International Airport and **1 hour and 50 minutes** to Tsim Sha Tsui, Hong Kong.

Air transport: Guangzhou-Hong Kong-Macao helicopter passenger station of the project will provide helicopter passenger service from Guangzhou to Hong Kong and Macao, which can realize the **30-minute** high-end business circle in GBA.



Convenient Transportation Network (Continued)

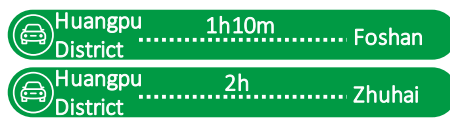
Highway

Huangpu District has dense traffic arteries, including East Second Ring Expressway, Guangzhou-Shenzhen Expressway, Guangzhou-Huizhou Expressway, and Guangzhou-Heyuan Expressway. The Shayuzhou Tunnel is under construction in the District. When the tunnel is opened, it will help improve the trunk road network in the eastern part of Guangzhou and promote the diversion of traffic, as well as facilitating the close connection of Guangzhou, Dongguan and Foshan.

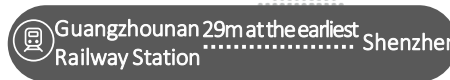
High-Speed Railway

Huangpu District is about 40 kilometers away from Guangzhounan Railway Station, the core high-speed railway station of GBA, and the journey takes about 46 minutes. According to the *Strategic Plan of Guangzhou Transportation Development for 2035*, two railway hubs, Huangpu District Railway Station and Knowledge City Railway Station, will be built in Huangpu District.

Traveling time by car



Traveling time by high-speed train rail



Metro

Huangpu District has been crisscrossed by six metro lines, namely Line 4, Line 5, Line 6, Line 13, Line 14 and Line 21. The District will have 14 lines in total, including the existing lines, 3 lines under construction and 5 lines planned.

Airport

Guangzhou Baiyun International Airport is one of the three major aviation hubs in China. In 2019, its passenger throughput exceeded 18.5 million, and its cargo and mail throughput exceeded 1.9 million tons. The flight route network of the airport covered more than 230 destinations worldwide.

Huangpu District is about 50 kilometers away and around 50 minutes' drive away from Guangzhou Baiyun International Airport. Once the construction of the second airport highway in Huangpu District is completed, the time to get to the airport will be greatly shortened.

Traveling time by airplane



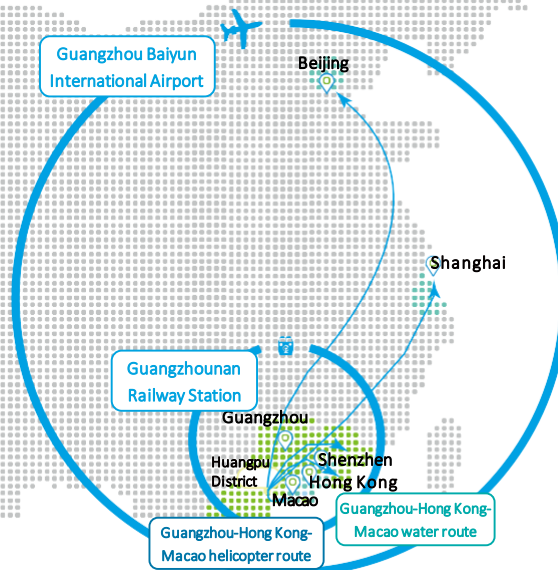
The Guangzhou-Hong Kong-Macao helicopter route coming soon



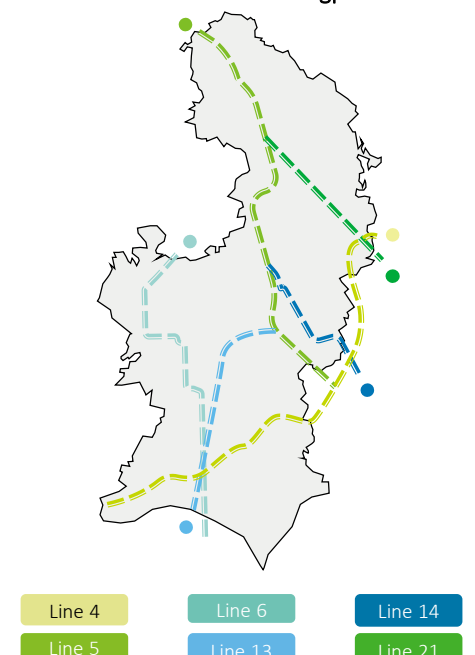
The Guangzhou-Hong Kong-Macao water route coming soon



Three-Hour Economic Circle of Huangpu District



Six metro lines in Huangpu District



Comprehensive Business Supporting Facilities

Extensive Hotel & Conference Facilities

Huangpu District has 14 four-star hotels with convenient transportation, considerate service and premium facilities, including Xiangxue International Apartment Guangzhou, Hilton Guangzhou Science City, DoubleTree by Hilton Hotel Guangzhou - Science City, Holiday Inn Guangzhou Science City, etc.

Well-developed Commercial Buildings

Huangpu District showcases a wealth of commercial buildings with good environment and comprehensive service system, including Class A office buildings of Luogang Aoyuan Plaza, Poly Zhongyu Plaza and Poly Yu Zhu, as well as Class A+ office buildings like Guangzhou Greenland Central Plaza.

Examples of Office Buildings in Huangpu District	Introduction
Guangzhou Greenland Central Plaza	<ul style="list-style-type: none"> A 42-storey 200m-high Class A+ iconic office building located at Kexue Avenue, Guangzhou Science City
Poly Zhongyu Plaza	<ul style="list-style-type: none"> Comprised of a 26-storey office building, a 5-storey commercial wing building and two underground floors Surrounded by the tax office, archives administration and other major government agencies, facilitating investors' business
Poly Yu Zhu	<ul style="list-style-type: none"> Covering an area of 590,000 square meters and a total construction area of 1.1 million square meters, it will be a large riverside complex integrating residence, commerce, entertainment and office, with a good transport network connecting to the whole city
Luogang Aoyuan Plaza	<ul style="list-style-type: none"> A large urban complex integrating residences, apartments, office spaces and shops
Guangzhou International Seaway Center	<ul style="list-style-type: none"> A landmark building of about 250 meters high, supplemented by experiential riverside commerce, mainly introducing companies from the high-end shipping service and financial industry



Image: Poly Yu Zhu



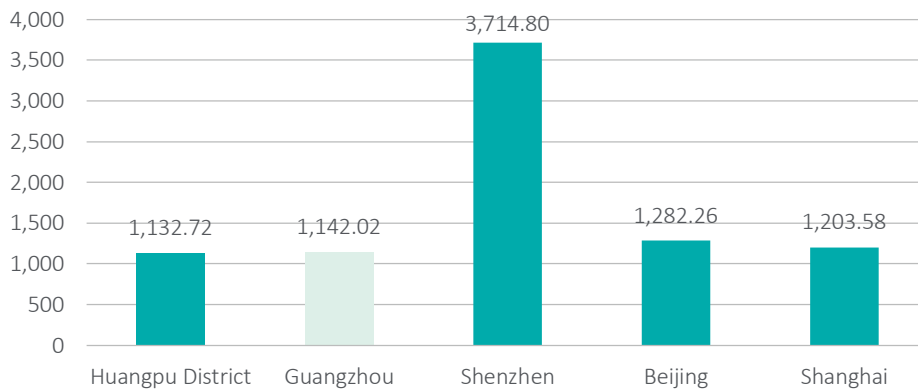
Image: Guangzhou International Seaway Center

Significant Advantage in Investment & Property Purchase Cost

Outstanding Cost Advantage of Huangpu District in Industrial Land, Office Rental, and Property Purchase

Price of Industrial Land

Figure: Average Transaction Price of Industrial Land in July 2020 (in: RMB/m²)

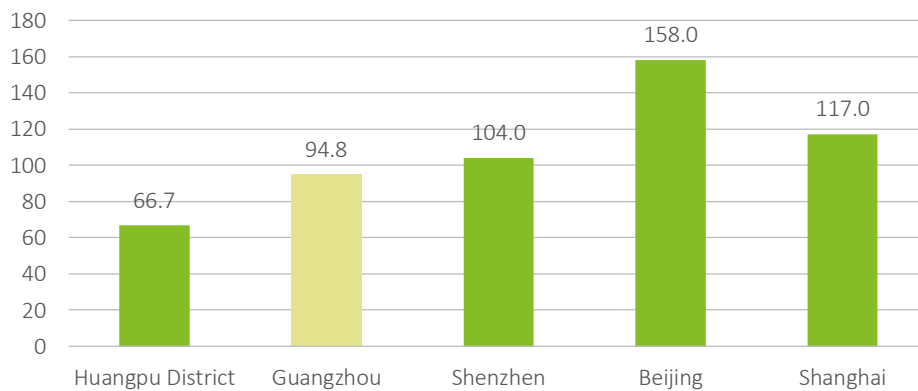


Source: fang.com.



Office Rental

Figure: Recent Average Office Rental (in: RMB/Month/m²)

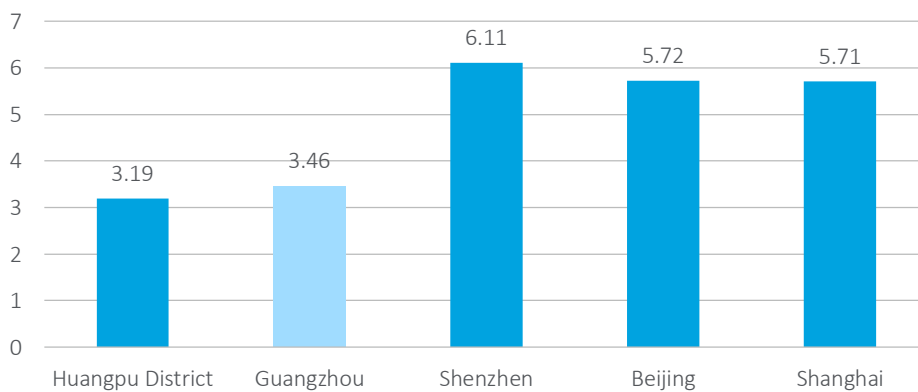


Source: creprice.cn (data as of November 9, 2020)



Sales Price of Residence

Figure: Recent Average Sale Price of First-Hand Residence (in: RMB 10,000/m²)



Source: creprice.cn (data as of November 9, 2020)



Chapter VI

Living Environment



Sufficient Supporting Facilities for Education

Huangpu District is able to provide a good education environment for the children in the District through its sound basic education system and sufficient international education resources, pluralistic internationalized premium education system, and high-end education services introduced from home and abroad.

Basic Education

Perfect Education Resources

As of December 2019, Huangpu District had boasted a total of 238 primary and secondary schools of all kinds. It has partnership with high-quality well-known schools such as Beijing Normal University Education Group, Guangzhou No. 2 High School Education Group, and the Middle School Attached to Guangzhou University Education Group. The number of places such schools offered to the children of migrant workers to Guangzhou has ranked first in Guangzhou for three consecutive years.

Huangpu District is also rich in faculty resources. As of May 2020, Huangpu District had 22 stationing senior teachers, ranking second in Guangzhou in terms of total number and net increase. It has established 55 “Reputed Teacher Workshops” of various types, and recognized 213 “City-level Backbone Teacher Candidates”. During the COVID-19 epidemic, the number of clicks and likes for the online live courses of all subjects kept ranking first in Guangzhou.

Premium Education Quality

- **High School Enrollment Rate**
 - Huangpu District's rate of high school students' enrollment into national key universities for undergraduate programs increased from 12.7% in 2016 to 26.49% in 2020
- **Excellent Sports Teams**
 - The Athletics Team of Guangzhou Yuyan Middle School won the Team Champion in Guangdong-Hong Kong-Macao-Fujian Student Athletics Championships in 2018; the Jump Rope Team of Donghui Huayuan Primary School won 23 titles at the World Jump Rope Championships 2018, accounting for two thirds of the total gold medals of China Jump Rope Team

- **Outstanding Innovation Ability**

- The science and technology education teams of Guangzhou Yuyan Middle School and Liyuan Primary School were listed on the “Second Batch of Guangdong Youth Science and Technology Education Innovation Teams”

International Education

Numerous International Educational Institutions

In recent years, many famous international schools like Hwa Chong Institution in Singapore have settled in Huangpu District to start schools. As of October 2018, international schools in Huangpu District had accounted for 60% of those in Guangzhou. Huangpu District's international education progress has been in a leading position in Guangzhou.

Sufficient Education Resources for Hong Kong and Macao Children

The Affiliated Foreign Language School of South China Normal University is the first school in Guangzhou to set up the “class for children from Hong Kong and Macao”, which only admits Hong Kong and Macao children holding a Residence Permit for Hong Kong and Macao Residents, providing more premium and diverse basic public education services for Hong Kong and Macao children of school age.

Examples of International Schools in Huangpu District

Huangpu District now has 5 international schools including American International School of Guangzhou, Japanese School of Guangzhou, OISCA G.Z. Japanese Kindergarten, BASIS International School Guangzhou, and ISA International School. In addition, the Singchin Academy is under construction.

Guangzhou Yuyan Middle School

Founded in 2006, Yuyan Middle School is a national model high school in Guangdong, a model school for moral education in Guangdong, a school featuring robotics in Guangzhou, a school featuring art in Guangdong, a national school for traditional sports (athletics), a national school featuring youth campus football, and a national school featuring youth campus basketball.



American International School of Guangzhou

The School is an international school for preschool students to 12th Grade students, with 2 campuses in Guangzhou, one of which is the Guangzhou Science City campus in Huangpu District, with over 1,000 students of over 50 nationalities. Sixty-five fresh graduates in 2020 have received offers from over 107 universities worldwide and have been admitted to top universities in 13 countries or regions.

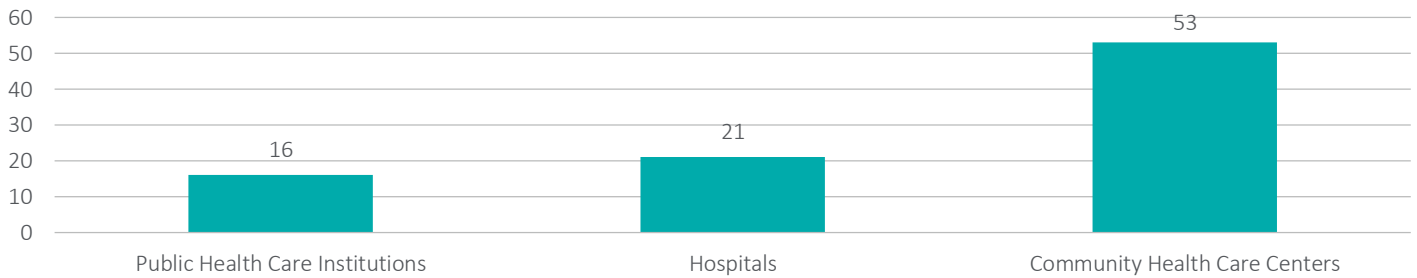


Strong Supporting Healthcare Facilities

Sufficient Public Health Care Resources

By the end of 2019, Huangpu District had boasted 368 health care institutions, 4,360 beds in health care institutions of all kinds, and 9,044 health care workers.

Figure: Number of major health care institutions in Huangpu District (2019)



Outstanding Specialized Medical Fields

Treatment Area	Examples of Health Institutions in Huangpu District
Atrial Fibrillation	<ul style="list-style-type: none"> The Atrial Fibrillation Treatment Center of the East Division of the First Affiliated Hospital, Sun Yat-sen University
Tumor	<ul style="list-style-type: none"> Three leading tumor hospitals in China, including the China-Singapore Guangzhou Knowledge City Division of Sun Yat-sen University Cancer Center, Guangzhou Concord Cancer Center, and RoyalLee Cancer Hospital
Proton Therapy	<ul style="list-style-type: none"> Two proton therapy centers of Hengjian proton medical device demonstration project and Guangzhou Concord Cancer Center respectively
TCM Treatment	<ul style="list-style-type: none"> The national traditional Chinese medicine inheritance and innovation Project of Guangdong Second TCM Hospital starts construction

Improving International Medical Service

The international medical service level in Huangpu District has been steadily increasing. In recent years, Huangpu District has introduced many top international medical institutions such as Guangzhou Barcelona International Hospital and Pantheon Medical Center, providing more options for residents to enjoy high-end medical services in line with international standards.

Lingnan Hospital, the Third Affiliated Hospital of Sun Yat-sen University

Lingnan Hospital is a tertiary hospital located in Guangzhou Science City, specializing in organ transplantation, blood and bone marrow transplantation, otology, child developmental behavior and biological therapy. It has 22 wards with 600 beds and advanced medical equipment such as DSA, MR, 64 slice CT scanner, DR, automatic biochemical analyzer, gastrointestinal X-ray machine and color ultrasound, as well as a number of medical facilities at world's advanced level, including the central intensive care system and the 100-level laminar flow operating room.



High-Quality Life

Huangpu District was named the “Happiest Cities (Districts) in China 2019” for its complete cultural and recreational facilities. They increase attractiveness of the city to high-quality citizens. At the same time, the presence of perfect sports and fitness facilities and abundant internationally renowned events make the city vibrant.

Excellent Eco-system



Good Air Quality

In 2019, Huangpu District had 321 days with good ambient air quality, accounting for 87.9% of the total days in a year. All the six pollutant indicators met the national secondary standard, and the air quality composite Index ranked fifth among all districts in Guangzhou.



Pleasant Climate

The average annual temperature in Huangpu District is 22.8 degrees Celsius.



High Forest Coverage Rate

The forest coverage rate in Huangpu District is over 40 percent.

Numerous Sports Facilities

Examples of Sports Facilities in Huangpu District	Description
Football Field	<ul style="list-style-type: none"> In 2019, a new community mini-football field for seven people was constructed
Basketball Court	<ul style="list-style-type: none"> In 2019, 6 basketball courts were renovated
Sports Center	<ul style="list-style-type: none"> Huangpu Sports Center is open to the community for free or at a preferential price. In 2019, the Center was open for 20,000 hours cumulatively and it served a total of 286,000 person times
Tennis Court	<ul style="list-style-type: none"> Guangzhou Development District International Tennis School has been open to the public for a total of 90,000 hours cumulatively, serving about 94,000 person times

Complete Facilities for Leisure and Entertainment

By the end of 2019, Huangpu District had built 57 libraries, cultural center branches and service points at sub-districts, towns and companies. It also owned Guangzhou’s first 24/7 library – Yuanchuang Café, ranked first among Guangzhou’s district-level libraries in terms of the number of reader reception, book borrowing, book collection and many other indicators since 2016, and boasted 24 city-level parks.

Numerous Well-known Events

Many well-known events have been held in Huangpu District, including the Guangzhou Huangpu Marathon, the National New Area, Economic Development Zone, and High-tech Development Zone Staff Health Games, the final of the Guangdong-Hong Kong-Macao Greater Bay Area Youth 3x3 Basketball League, the Regatta of World Leading Universities, etc.

Guangzhou Huangpu Marathon

Guangzhou Huangpu Marathon is a large state-level marathon held annually. In 2019, the event attracted 20,000 runners from 31 countries and regions and was awarded the "Silver Medal Race" by the Chinese Athletics Association.



Regatta of World Leading Universities

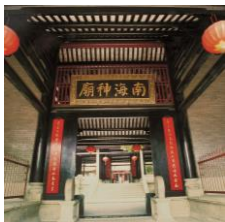
In 2019, the "Huangpu Silk Road" Regatta of World Leading Universities was officially launched on Changzhou Island in Huangpu District, attracting the rowing teams from Oxford University, Cambridge University, Monash University and other top universities around the world to gather in Guangzhou for the first time.



Cultural Landscape

Crisscrossed by various rivers, Huangpu District is abundantly rich in water and lush greenery. With a blend of ecological beauty and fascinating history, the District features many great cultural attractions and former residences of celebrities with domestic and international fame. The distinctive cultural landscapes combine to nurture the charming traditional culture, one of the most unique and vibrant regional cultures in China.

- "Guangzhou Huangpu Military Academy Tour Route" and "World Heritage Application Involved Guangzhou Maritime Silk Road Historical Sites Tour Route" are included in the tour route of cultural heritage of GBA
- The adventure route of Guangdong Tianluhu Forest Park's "Hiking at Niutou Mountain – Enjoying Mucuna Birdwoodiana – Flying through the Jungle" was selected into the specialty route of Guangdong forest tour
- "Slow Living on Huangpu Changzhou Island Cultural Tour" is included in the first batch-of-choice routes of Guangdong's rural tourism
- "Guangzhou Star Observation, Health and Beauty Tour" is included in the choice route of Guangdong's industrial tourism



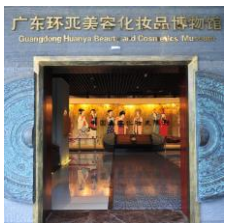
Nanhai God Temple

A national 4A-level tourist attraction, a birthplace of the ancient maritime Silk Road, and the largest, best preserved, and only surviving temple among the four ancient sea god temples of China



Huangpu Military Academy Memorial Hall

The Memorial Hall solemnly displays the development of Huangpu Military Academy, being the only historical and cultural building of Huangpu Military Academy in China, where the footprints of many influential figures were left and the immortal spirit of great soldiers forged.



Guangdong Uniasia Beauty & Cosmetic Museum

A national 3A-level tourist attraction, the first Chinese beauty cosmetics museum in the world, recreating the Chinese civilization of beauty and cosmetics



The Memorial Museum of 1911 Revolution

The Memorial Museum, a national 3A-level tourist attraction, was built to commemorate the 1911 Revolution led by Sun Yat-sen, and is dedicated to studying the 1911 Revolution and collecting related collections.



Liantang Ancient Village

Liantang Ancient Village is an extremely beautiful famous historical and cultural village in Guangdong, where lotus flowers bloom in the lotus pond, and the quaint Lingnan-style architecture is full of charm and character. It is a must-see place in summer



Guangdong Tianluhu Forest Park

This Park is known as the "East Lung of Guangzhou" and conserves a large field of wild mucuna birdwoodiana landscape only in urban Guangzhou



Yuyan Academy

The academy was built in the Southern Song Dynasty (1127-1279) and named after Zhong Yuyan, a scholar official in the Song Dynasty. It is an elegant attraction with nearly one thousand years of history



Luogang Xiangxue Park

One of the "Eight Top Attractions in Guangzhou". At the turning of a year, the plum blossoms in the "Ten-li Plum Forest" here are in full bloom, with their white petals falling in the wind, like snowflakes



Shenjing Ancient Village

One of the traditional ancient villages in Guangzhou, retaining the architectural style in the late Ming and early Qing dynasties



Nanwan Water Town

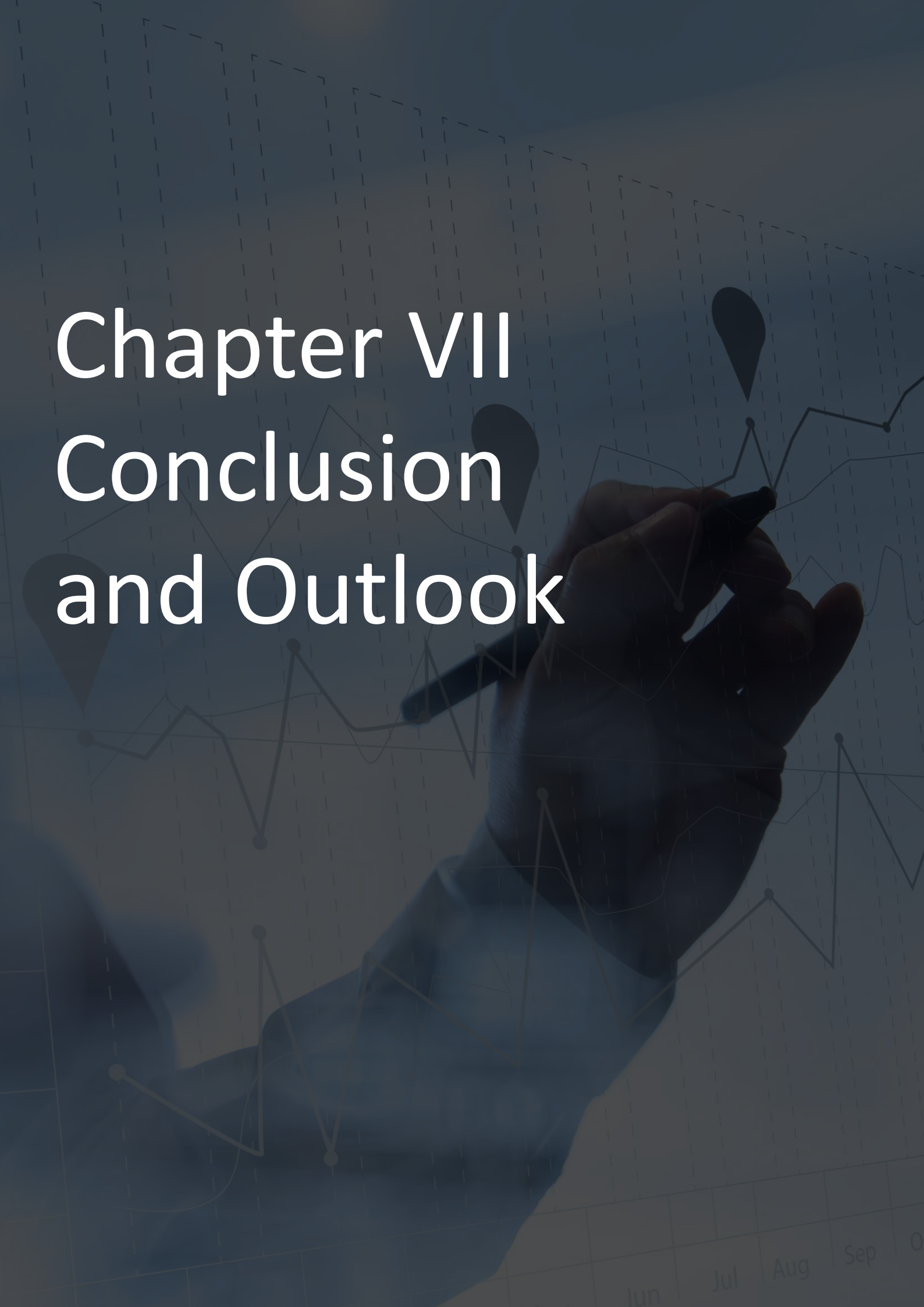
Built in the 29th year of Hongwu Emperor's reign (1396) in the Ming Dynasty, with a history of more than 600 years, the village boasts the characteristics of water town in the Pearl River Delta



Longping International Modern Agricultural Park

As a "Guangzhou City-level Agricultural Park", it will be an iconic project for rural revitalization and a beautiful ecological landscape on the islands in eastern Guangzhou.

Chapter VII Conclusion and Outlook

The background of the slide features a dark blue grid with several white line graphs. A hand in a blue sleeve is visible on the right side, holding a black pen and pointing towards one of the graphs. The overall aesthetic is professional and analytical.

Conclusion and Outlook

Based on the analysis of the investment environment of the Huangpu District, Guangzhou, this report summarizes the four most attractive advantages for investment in Huangpu District as follows:

1. Premium Geographical Location

Located at the eastern part of Guangzhou and the center of GBA, Huangpu District serves as the innovation platform of the "Greater Bay Area" strategy, with its intercity comprehensive transportation network closely connecting the District with other major cities in the GBA. The completion of a series of projects including the Guangzhou-Hong Kong-Macao Helicopter Passenger Station and the Guangzhou-Hong Kong-Macao Exit-Entry Building will further connect the premium location of Huangpu District with the advantageous resources of Hong Kong and Macao.

2. Advantages in Competitive and Emerging Industries

Huangpu District boasts national-level economic and technological development zone, high-tech development zone, export processing zone and bonded area. It leads various economic indicators, owns large-scale competitive industrial clusters, and has developed upstream and downstream industrial chains well, remarkably contributing to regional industrial development. Meanwhile, facilitated by the solid industrial foundation, leading emerging industry clusters taking shape in Huangpu District are seeing rapid convergence and growth. In addition, the sound environment for digital economy in the District can also serve the growing needs of emerging industries.

3. Favorable Conditions for Innovation and Entrepreneurship

As the first comprehensive reform pilot zone for the deployment and protection of intellectual property in China, Huangpu District has a fully-fledged system to guarantee the innovation of enterprises. Aiming to provide environment for the entrepreneurship and innovation of investors from home and abroad, the District has also

built the largest incubator cluster in South China to introduce and establish numerous high-end scientific research platforms, attracting a large number of sci-tech enterprises and facilitating sci-tech innovation.

4. Precise Government Policies and Efficient Government Services

Huangpu District government is dedicated to providing succinct, efficient and interactive administrative services, which have been widely praised by enterprises. At the same time, it has formulated a series of pragmatic policies to support the transformation and upgrading of competitive distinctive industries and the establishment of emerging industrial systems, so as to facilitate the sustainable development of various industries and enterprises and potential investors from China and abroad.

To conclude, with the rapid development of China's economy, Huangpu District has effectively combined its fundamental industrial strength with advantageous geographic location, committing itself to industrial transformation and upgrading. It has made efforts to improve government policy services, talent reserves and urban environment. The vigorous business environment and competitive investment environment in the District help enterprises gain more competitiveness, making it a top destination for domestic and overseas investors.

In the years to come, Huangpu District can further deepen the Guangdong-Hong Kong-Macao innovation cooperation, pool international innovation resources, optimize innovation systems and policy environment, and enhance the transformation of technology into productivity on the momentum of the rapid economic development of the GBA, so as to build itself into a global scientific and technological innovation highland and an important cradle of emerging industries.



Contact Information of Government Agencies in Huangpu District

Investment Promotion Bureau of Guangzhou Development District

Responsible for investment promotion of the whole district, providing investors and settled enterprises with full-process services including contact, negotiation, and approval

Investment Promotion Division One

Responsible for the investment promotion of foreign enterprises

Tel: +86 20 8211-8734/8211-3273

E-mail: liling@gdd.gov.cn

Investment Promotion Division Two

Responsible for the investment promotion of domestic enterprises

Tel: +86 20 8211-3399/8211-2592

E-mail: hongxd@gdd.gov.cn

Investment Promotion Division Three

Responsible for investment promotion of biomedicine and office leasing

Tel: +86 20 8211-2175/8211-4350

E-mail: huanghf@gdd.gov.cn

Investment Promotion Center

Responsible for liaison, follow-up and other services to enterprises investing in the District

Tel: +86 20 8211-9328/8211-9323

E-mail: lijianbo@gdd.gz.cn

Contact Information of Deloitte

China Government Service Team

Victor Li

Partner, Tax and Business Advisory Services

Tel: +86 755 3353 8113

E-mail: vicli@deloitte.com.cn

Leo Yang

Partner, Tax and Business Advisory Services

Tel: +852 2852 1626

E-mail: leoyang@deloitte.com.hk

Office locations

Beijing

12/F China Life Financial Center
No. 23 Zhenzhi Road
Chaoyang District
Beijing 100026, PRC
Tel: +86 10 8520 7788
Fax: +86 10 6508 8781

Changsha

20/F Tower 3, HC International Plaza
No. 109 Furong Road North
Kaifu District
Changsha 410008, PRC
Tel: +86 731 8522 8790
Fax: +86 731 8522 8230

Chengdu

17/F China Overseas
International Center Block F
No.365 Jiaozi Avenue
Chengdu 610041, PRC
Tel: +86 28 6789 8188
Fax: +86 28 6317 3500

Chongqing

43/F World Financial Center
188 Minzu Road
Yuzhong District
Chongqing 400010, PRC
Tel: +86 23 8823 1888
Fax: +86 23 8857 0978

Dalian

15/F Senmao Building
147 Zhongshan Road
Dalian 116011, PRC
Tel: +86 411 8371 2888
Fax: +86 411 8360 3297

Guangzhou

26/F Yuexiu Financial Tower
28 Pearl River East Road
Guangzhou 510623, PRC
Tel: +86 20 8396 9228
Fax: +86 20 3888 0121

Hangzhou

Room 1206
East Building, Central Plaza
No.9 Feiyunjiang Road
Shangcheng District
Hangzhou 310008, PRC
Tel: +86 571 8972 7688
Fax: +86 571 8779 7915

Harbin

Room 1618
Development Zone Mansion
368 Changjiang Road
Nangang District
Harbin 150090, PRC
Tel: +86 451 8586 0060
Fax: +86 451 8586 0056

Hefei

Room 1201 Tower A Hua Bang ICC Building
No.190 Qian Shan Road
Government and Cultural
New Development District
Hefei 230601, PRC
Tel: +86 551 6585 5927
Fax: +86 551 6585 5687

Hong Kong

35/F One Pacific Place
88 Queensway
Hong Kong
Tel: +852 2852 1600
Fax: +852 2541 1911

Jinan

Units 2802-2804, 28/F
China Overseas Plaza Office
No. 6636, 2nd Ring South Road
Shizhong District
Jinan 250000, PRC
Tel: +86 531 8973 5800
Fax: +86 531 8973 5811

Macau

19/F The Macau Square Apartment H-L
43-53A Av. do Infante D. Henrique
Macau
Tel: +853 2871 2998
Fax: +853 2871 3033

Mongolia

15/F, ICC Tower, Jamiyan-Gun Street
1st Khoroo, Sukhbaatar District
14240-0025 Ulaanbaatar, Mongolia
Tel: +976 7010 0450
Fax: +976 7013 0450

Nanjing

40/F Nanjing One IFC
347 Jiangdong Middle Road
Jianye District
Nanjing 210019, PRC
Tel: +86 25 5790 8880
Fax: +86 25 8691 8776

Ningbo

Room 1702 Marriott Center
No.168 Heyi Road
Haishu District
Ningbo 315000, PRC
Tel: +86 574 8768 3928
Fax: +86 574 8707 4131

Sanya

Floor 16, Lanhaihuating Plaza
(Sanya Huaxia Insurance Center)
No. 279, Xinfeng street
Jiyang District
Sanya 572099, PRC
Tel: +86 898 8861 5558
Fax: +86 898 8861 0723

Shanghai

30/F Bund Center
222 Yan An Road East
Shanghai 200002, PRC
Tel: +86 21 6141 8888
Fax: +86 21 6335 0003

Shenyang

Unit 3605-3606,
Forum 66 Office Tower 1
No. 1-1 Qingnian Avenue
Shenhe District
Shenyang 110063, PRC
Tel: +86 24 6785 4068
Fax: +86 24 6785 4067

Shenzhen

9/F China Resources Building
5001 Shennan Road East
Shenzhen 518010, PRC
Tel: +86 755 8246 3255
Fax: +86 755 8246 3186

Suzhou

24/F Office Tower A, Building 58
Suzhou Center
58 Su Xiu Road, Industrial Park
Suzhou 215021, PRC
Tel: +86 512 6289 1238
Fax: +86 512 6762 3338 / 3318

Tianjin

45/F Metropolitan Tower
183 Nanjing Road
Heping District
Tianjin 300051, PRC
Tel: +86 22 2320 6688
Fax: +86 22 8312 6099

Wuhan

Unit 1, 49/F
New World International Trade Tower
568 Jianshe Avenue
Wuhan 430000, PRC
Tel: +86 27 8526 6618
Fax: +86 27 8526 7032

Xiamen

Unit E, 26/F International Plaza
8 Lujiang Road, Siming District
Xiamen 361001, PRC
Tel: +86 592 2107 298
Fax: +86 592 2107 259

Xi'an

Room 5104A, 51F Block A
Greenland Center
9 Jinye Road, High-tech Zone
Xi'an 710065, PRC
Tel: +86 29 8114 0201
Fax: +86 29 8114 0205

Zhengzhou

Unit 5A10, Block 8, Kailin Center
No.51 Jinshui East Road
Zhengdong New District
Zhengzhou 450018, PRC
Tel: +86 371 8897 3700
Fax: +86 371 8897 3710



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