Deloitte.

德勤



Doing Business in China 2020



Foreword	04
Chapter I Economy profile of China 1. Global & China economy outlook 2. China's 14 <sup>th</sup> Five-year Plan 3. Growth drivers	06 07 09 10
Chapter II Shaping a new era: the evolving business environment in China  1. A more open China  2. An impartial China  3. An innovative China	11 12 36 40
Chapter III Where to invest: tap emerging opportunities  1. Free trade zones in China  2. China's high potential locations  3. Greater Bay Area	59 66 72 75
Chapter IV About Deloitte Global Chinese Services Group  1. The business enabler between China and the world  2. Our activities in the market  3. Global Belt & Road Initiative 2.0	73 80 81 71
Chapter V Acknowledgement	79
Endnotes	81

### Foreword



John Hung Chairman Deloitte Global Chinese Services Group johnhung@deloitte.com.cn

The Doing Business in China 2020 handbook comes at an important moment for foreign investors. In the wake of a pandemic and rising geo-political tensions, the global trade environment has changed and the world markets are in an unprecedented period of uncertainty. In response, multinationals have to think differently about how and where they do business. As we move towards a post-pandemic world, companies in search of growth or diversification need to adapt. They need to look beyond traditional ways of doing business and focus their sights on emerging opportunities in the new normal. In this context, China has become more important than ever.

Since 2003, Deloitte's Global Chinese Services Group (GCSG) has been advising Chinese companies on expanding their global presence and multinational companies on operating in China. We believe the uncertainties of today represent a moment of real opportunity. For many, China is seen as an unconventional and complex market. The prospect of doing business here could be daunting even before the pandemic. Certainly it poses great challenges in the current climate, but as Beijing further lifts restrictions on foreign investment to stimulate economic activity, many foreign investors are well-placed to benefit from a market where new opportunities continue to emerge in a range of different sectors. China's growth playbook, the 14th Five-Year Plan (2021-2025), also targets a greater opening up and improved business environment for foreign investors.

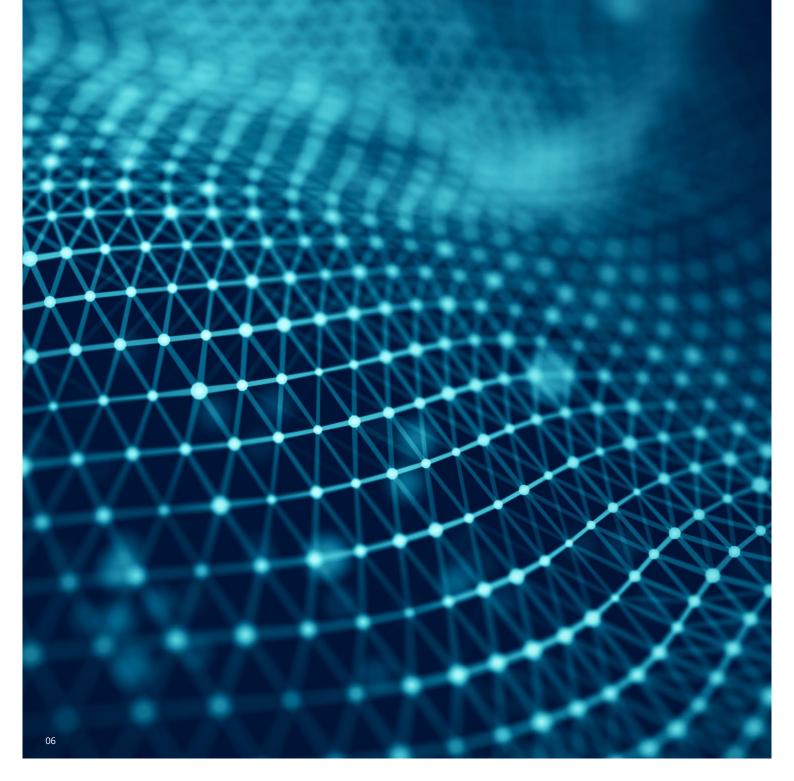
There is great potential for companies with the right support in place. This is where the *Doing Business in China* has such an invaluable role to play. You will find in this updated version a wealth of the latest market information and practical advice produced by Deloitte's subject matter experts across different industries and sectors. The handbook highlights major growth drivers for China's economic transformation and examines newly introduced policies leading to a foreign capital–friendly business environment. It also dives into some of the China hot topics with an emphasis on retail, mobility, smart city and FinTech. Last but not least, it explores the different investment location offers including regional free trade zones, economic zones, and the Greater Bay Area for newcomers as well as those looking to expand their existing presence.

This handbook provides an excellent reference for anyone considering a China market entry strategy, and also for multinationals as they expand their operations within China. I hope you will find it useful. I wish you all the best as you connect with exciting new opportunities in the new norm.



# Chapter I

Economy profile of China



### 1. Global & China economy outlook

### 1.1 Trade war and geopolitical complexity

Over the past 20 years of globalization, the global supply chain has developed into a highly-interconnected network among countries; meanwhile, the deepened international labor division has further widened the gap between the rich and the poor, and impacted the multilateral trade system and policy coordination mechanism. Currently, the protectionism and populism are gaining ground. The economic friction between the United States and its trading partners is deteriorating, causing the global geopolitical uncertainty. In this context, the global trade, as an important driving force for global economy, is facing tremendous downward pressure.

The COVID-19 pandemic further cast a shadow on the global economy. The International Monetary Fund predicts that the global GDP will fall into negative growth in 2020 and will not see signs of recovery until 2021. As countries take measures to deal with the pandemic, both market supply and demand are squeezed, causing severe impact on the normal operation of the global supply chain. Thus, many countries began to reflect on their positioning in the global value chain and to explore new modes of cooperation. As a result, countries will transfer their production capacity of strategic goods to local regions; and multinational companies will consider striking a new balance between efficiency and resilience in supply chain distribution.

#### **1.2 Economic transformation**

In the period of rising global uncertainties, China's economy has also shifted from a stage of high-speed growth to a stage of high-quality development. Besides GDP growth, regional coordination, improvement of people's livelihood, social progress and ecological environment are also important factors constituting the system of indicators used to measure high-quality development.

While transforming to high-quality development, China's economy is experiencing both cyclical slowdown and structural adjustment. Despite the decline in growth rate, China's economy is gradually releasing more growth potential and momentum. Firstly, the development of digital economy has led to the increasing investment in "new infrastructure". On the strength of strong market capacity and technological development, China's digital economy accounts for nearly 35% of its GDP (2018). The "New Infrastructure" proposed in 2020, will put more efforts on the infrastructure construction of the science and technology, with a focus on 5G, artificial intelligence, industrial Internet, Internet of Things and other fields, accelerating the development and penetration of digital economy. Secondly, the economic growth has shifted from investment driven to consumption driven. In 2019, the final consumption expenditure contributed 57.8% to the GDP growth and has been the first driving force of economic growth for 7 consecutive years.

(%) 12.00 10.00 8.00 6.00 4.00 2.00 0.00 -2.00 -4.00 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020e\* - GDP growth: world GDP growth: China

Figure 1: Slowdown of economic growth

Source: Wind, IMF, Deloitte Research

\*Note: The 2020 GDP growth for world is estimated by IMF while the one for China is by Deloitte

### 1.3 Key challenges

The high-speed growth in the earlier times has made high leverage a medium and long-term challenge for China's economy. By the end of 2019, the leverage ratio of the domestic real economy reached 245%. The COVID-19 has unprecedented impact on the economy and society. If the international pandemic situation is prolonged, the global economic growth will be seriously damaged, bringing great uncertainties to the international balance of payments and cross-border capital flows, and pressure of degradation to credit assets of the financial systems of major economies. In order to cope with the pandemic impact and achieve a virtuous circle, the Chinese

government has proposed measures to further increase the leverage ratio in 2020, such as appropriately increasing the fiscal deficit rate, issuing special treasury bonds and increasing the scale of special bonds.

Therefore, China needs to adapt to the slowdown of economic growth, create a favorable environment for high-quality development, and reduce the possibility of structural imbalance caused by high leverage. In this way, there will be more policy room for China to solve the long-term social problems such as resource shortage, environmental pollution and population aging, and finally achieve high-quality development.

High-level opening up, improved business environment, regional coordinated development, people's livelihood, innovation driven development and ecological environment will be the focuses of the 14<sup>th</sup> Five-Year Plan.

### 2. China's 14th Five-year Plan

2020 is the final year of the implementation of China's 13<sup>th</sup> Five-Year Plan, and the 14<sup>th</sup> Five-Year Planning period (2021-2025) will be the key transitional period for China to move forward from a moderately prosperous society to basically realizing socialist modernization.

Based on the evaluation of the mid-term results of the 13<sup>th</sup> Five-Year Plan, as well as the policies and guidelines concerning the development goals of 2025-2035, we find that high-level opening up, improved business environment, regional coordinated development, people's livelihood, innovation driven development and ecological environment will be the focuses of the 14<sup>th</sup> Five-Year Plan. Among these points, a higher level of opening up and improved business environment will bring strategic opportunities to foreign investors.

In terms of opening up, the *Foreign Investment Law of the People's Republic of China*, which came into force as of January 2020, has provided strong guarantee for the development of a higher level of opening up in the future by means of law governance, with a focus on the opening up of the service industry led by the finance sector. The expanding opening up of the service industry

will help realize the leap from quantity catching up type to innovation leading type. As important approaches to promoting a high level of opening up, the pilot free trade zones and free trade ports, characterized by favorable conditions for investment and trade, will provide experience that can be promoted and replicated in the rest of the country. Particularly, they will bring more innovation opportunities to the trade in services, especially digital services.

In terms of business environment, the Regulations on Optimizing Business Environment, which came into force as of January 2020, will help China build a market-oriented and law-based business environment. China will continue to streamline administration and institute decentralization, delegate power and strengthen regulation, and optimize service reform. The Opinions of the CPC Central Committee and the State Council on Building a Better Market-oriented Allocation System and Mechanism of Factors, issued in April 2020, emphasizes the elimination of all kinds of invisible barriers, allowing the free flow of factors. The Chinese government will deepen and promote the principle of competition neutrality, treating domestic enterprises, foreign-funded enterprises and other market entities equally in terms of financing and market accesses.

#### 3. Growth drivers

### 3.1 Consumption upgrading

China is witnessing an obvious trend of consumption upgrading. In 2019, the total retail sales of consumer goods exceeded RMB40 trillion.

The Engel coefficient has been the same as the average of high-income countries (about 28%), and the service consumption accounted for almost 50%. During the pandemic period, the prosperity of online consumer businesses has driven retail enterprises to increase their investment in digital and information technology, which has reshaped the consumer ecology.

Technological innovation has gradually become an important driving force for China's economic growth.

In the future, while emphasizing "expanding domestic demand" and exploring the reform of supply mode, China will accelerate the cultivation of new consumption business forms such as e-commerce and intelligent logistics, accelerate the integration of online and offline businesses, and realize 24-hour life circle covering a full range of scenarios for consumers. "Consumption sinking", "precision consumption" and "delicate consumption" will release more growth potentials.

#### 3.2 Innovation

Scientific and technological innovation

has played an important role in promoting China's economic development. The information transmission, software and information technology service industry, as the representative of science and technology, has accounted for more than 10% of the GDP in recent years. The World Intellectual Property Organization (WIPO) believes that China has changed from a major technology user to a technology producer, and technological innovation has gradually become an important driving force for China's economic growth.

As 5G, big data, Internet of Things, cloud computing, artificial intelligence and other new generation of information technology rapidly and widely penetrate into all fields of economy and society, the transformation and upgrading of traditional industries will be further accelerated. The advanced manufacturing clusters will inject strong new momentum into the sustainable development of national economy and comprehensively promote its high-quality development.

### 3.3 Integrated regional economic development

In 2017, the 19<sup>th</sup> National Congress of the CPC put the regional coordinated development in the agenda of national strategy for the first time. In the past five years, the government has completed the top-level design of the four major national strategies, namely, coordinated development of Beijing, Tianjin and Hebei, development of Yangtze River Economic Belt, construction of Guangdong-Hong Kong-Macao Greater Bay Area, and integration strategy of Yangtze River Delta. In 2019, the GDP of Beijing, Tianjin and Hebei, Yangtze River Delta, and Guangdong-Hong Kong-Macao Greater Bay Area reached RMB8.5 trillion, RMB23.7 trillion and RMB11.4 trillion, respectively, accounting for 44% of the country's total, becoming the "engine" of China's economic development.

In the future, the ecological protection and high-quality development of the Yellow River Basin will become the key to coordinated regional development. Besides, China will also speed up the implementation of other regional development strategies such as West China Development, the Comprehensive Revitalization of Northeast China, the Rise of Central China, and the construction of Chengdu-Chongging Economic Circle. China's urbanization ideas are changing. Central cities and urban agglomerations have become the main spatial forms of bearing development elements. It is expected that the government will improve supporting policies concerning land, household registration and transfer payment, and promote the integrated development of urban infrastructure, industrial distribution, ecological environment protection and public services.

### Know more about Deloitte insights on China economy, please contact



**Sitao Xu Deloitte China Chief Economist**sxu@deloitte.com.cn



**Lydia Chen Deloitte Research Director**lydchen@deloitte.com.cn

Chapter II

Shaping a new era: the evolving business environment in China **High-level opening up, business environment improvement** and innovation driven development are among top priorities of China's 14<sup>th</sup> Five-Year Plan to achieve the development goals of 2025-2035. Foreign investors can thus expect to see pockets of strategic opportunities emerging from a more open, impartial and innovative China in the coming years.

China is now taking concreate and effective measures to open its door wider, including the introduction of Foreign Investment Law, favorable tax schemes, as well as liberation of specific industries. Taking an active approach to developing fair business climate for both domestic and foreign enterprises, China has recently revised its Trademark Law and Anti-Unfair Competition law to benchmark leading practices across the world. Further to optimization of external factors, technological innovation has become a pivotal driving force to power China's sustainable economic growth. The advancement of 5G, IoT, cloud computing and Al has injected new momentum to traditional industries, bringing about a new wave of industrial upgrading.

### 1. A more open China

The introduction of new Foreign Investment Law (FIL), effective on January 1, 2020, is a concrete measure taken by Chinese government to level the playing field for foreign investors and safeguard, even stimulate their interests in China. The new FIL featuring equality and legality ensures foreign-invested companies' equal access to government supporting policies, fund raising and business opportunities in all walks of life. And for the biggest concern of most foreign companies, the law bans the practice

of forced technology transfers to further protect intellectual property rights. A complaint mechanism is also established, exploring more channels for overseas investors to speak up.

As China's commitment to building a fair rules-based environment, the FIL has made groundbreaking changes, and can undoubtedly be recognized as a legislative milestone. At a new era when China welcomes foreign investors with unprecedented market access, its economic and legal significance can't be overstated.

#### 1.1 Inception of Foreign Investment Law

This new FIL replaced several long existing laws (i.e., the Law on Wholly Foreign-owned Enterprises, the Law on Sino-foreign Equity Joint Ventures, the Law on Sino-foreign Co-operative Enterprises, collectively the "Old FIE Laws"), and is now China's basic law for regulating foreign investment.

On 31 December, 2019, the *Implementation Regulations for the FIL of the People's Republic of China* (the *"Implementation Regulations"*) was published, which also became effective on January 1, 2020. The *Implementation Regulations* further detail the principles under the FIL, reflecting China's commitment to further its open-up policy, optimize the business environment and welcome foreign investment.



Following the implementation of the FIL and the Implementation Regulations, many existing laws have been repealed or revised, including but not limited to:

#### **Repealed legislations**

- Law of the People's Republic of China on Wholly Foreign-owned Enterprises
- Law of the People's Republic of China on Sino-foreign Equity Joint Ventures
- Law of the People's Republic of China on Sino-foreign Co-operative Enterprises
- Provisional Measures on Administration of Filing for Establishment and Change of Foreign Investment Enterprises
- Provisional Regulations on Several Issues concerning the Establishment of Foreign Investment Companies Limited by Shares
- Several Provisions on Changes in Equity Interest of Investors in Foreign-invested Enterprises
- Interim Provisions of Ministry of Commerce on Capital Contribution in the Form of Equity by Foreign Investment Enterprises

### Revised legislations & regulations to be revised

- Regulations of the People's Republic of China on Foreign-funded Insurance Companies
- Regulations of the People's Republic of China on the Administration of Foreign-funded Banks
- Measures on Administration of Authorised Registration for Foreign Investment Enterprises
- Measures on Strategic Investment in Listed Companies by Foreign Investors
- Measures of the Ministry of Commerce on Handling Complaints Lodged by Foreign-Invested Enterprises



Meanwhile, new legislations have been enacted, which are related to the FIL, including but not limited to:

- Regulation on Optimization of Business Environment
- Measures on Reporting of Foreign Investment Information
- Announcement of the Ministry of Commerce on Matters Relating to Reporting of Foreign Investment Information
- Notice on Reform of "Multi-Report Integration" of Annual Report
- Interpretation of the Supreme People's Court on Several Issues Concerning Application of the Foreign Investment Law of the People's Republic of China
- Notice of the Ministry of Commerce Further Carrying out Reform and Opening up and Stabilizing Foreign Investment in Response to COVID-19 Epidemic

Under the new regulatory scheme on foreign investments, major changes have been made to further optimize business environment for foreign investors. We set out some of the salient points of the changes as follows.

### 1.1.1 Scope of coverage expanded

The Old FIE Laws regulate the establishment of foreign invested enterprises ("FIE", i.e., enterprises that are formed with foreign capital as described above under the three categories), but not mergers and acquisitions ("M&A") activities undertaken by foreign investors or FIEs in China.

The FIL, however, covers FIE investments, M&A activities of foreign investors, as well as non-FIE foreign investments (i.e., investments made by foreign investors without setting up an FIE). Article 2 of the FIL provides that foreign investment includes direct and indirect foreign investment in the following scenarios, where:

- a foreign investor establishes an enterprise in China, either alone or with another investor;
- a foreign investor acquires equity, shares, property shares, or similar rights and interests of an enterprise within China;
- a foreign investor invests in a new project in China, either alone or with another investor; and
- a foreign investor invests in any other way stipulated under laws, administrative regulations, or provisions of the State Council.

Article 3 of the *Implementation Regulations* clarifies that "other investors" under Article 2 of the FIL include Chinese natural persons, while this was not doable under the Old FIE Laws. Under the current regulatory scheme, a foreign investor may choose a Chinese natural persons as their business partners to form an FIE.

### 1.1.2 Pre-establishment national treatment and the negative list

The FIL stipulates that China will adopt a "preestablishment national treatment" system and a "negative list" for foreign investments. Pre-establishment national treatment means that, at the stage of "investment access" (i.e., the investigative and planning process leading to an actual investment, "potential" foreign investors and their "potential" investments will enjoy treatment no less favorable than that granted to domestic investors and their investments.

The negative list sets out the industries in which foreign investors are prohibited for investment or in which the extent or form of foreign investment will be restricted. Such restrictions include a limit on the percentage of foreign shareholding or the form of the FIE (e.g., limited to a Sino-foreign equity or cooperative joint venture). For industries not within the negative list, the government will grant the foreign investment national treatment, i.e., an FIE will be treated in the same way as a domestic enterprise.

The significance of the pre-establishment national treatment, in combination with the negative list, is that pre-investment government approval will no longer be required for a non-negative list foreign investment, as long as a similarly situated domestic enterprise would not be required to obtain such approval.

### 1.1.3 Equal treatment of FIEs and domestic enterprises

As stipulated by Article 9, 15 and 16 of the FIL, China's various policies in support of enterprise development, various industrial standards, and regulatory documents shall be equally applied to domestic enterprises and FIEs. Also, FIEs shall be equally treated during government procurements. The *Implementation Regulations* further clarifies such principles as follows:

### Application of government policies

Article 6 of the *Implementation Regulations* stipulates that governments and their relevant departments shall accord equal treatment to FIEs and domestic enterprises in terms of government funding, land supply, tax reduction and exemption, qualification licensing, formulation

of standards, project declaration, human resource policies, etc., pursuant to the law. Relevant policies, as well as the criteria, material requirements and timelines for processing administrative applications should be published as public resources, and there should be no discriminatory requirements for foreign investors.

### Formulation of laws, regulations, local rules and industrial standards

Article 10 and 15 of the FIL established the two basic principles of i) timely disclosure of regulatory documents relating to foreign investment, and ii) equal application of compulsory national standards to FIEs. The *Implementation Regulations* further explains such principles.

Article 7 of the *Implementation Regulations* stipulates that regulatory documents in relation to foreign investments shall be promptly announced pursuant to the law, and documents not yet announced shall not serve as basis for administrative actions. Regulatory documents closely relating to the production and business activities of FIEs shall, in light of actual conditions, have a reasonable time gap from announcement to implementation.

Article 14 of the *Implementation Regulations* further stipulates that compulsory national standards apply equally to FIEs and domestic enterprises, and it is forbidden to apply technical requirements higher than compulsory standards specifically for FIEs.

### Government procurement

Article 16 of the FIL provides that the China protects FIEs' participation in government procurement activities through fair competition.

The *Implementation Regulations* further specifies that the governments and their relevant departments shall not:

- 1. hinder and restrict free access of FIEs to the government procurement market;
- impose differential treatment on FIEs in terms of announcement of procurement information, determination of supplier criteria and qualification examination or bid evaluation standards;
- restrict suppliers by way of ownership, organization form, equity structure, investor nationality, product or service branding and other unreasonable criteria; and
- 4. differentiate products manufactured and services provided in China by FIEs from domestic enterprises.

For activities imposing differential treatments over FIEs and domestic enterprises, procurement supervising authorities are entitled to investigate and issue correction orders.

### 1.1.4 Formulation of investment promotion policies and government commitments

Article 18 of the FIL stipulates that the local people's governments at or above the county level have the right to formulate foreign investment promotion policies, and such policies must be based on laws, administrative regulations and local legislation.

Article 19 of the *Implementation Regulations* provides that local governments can formulate facilitation measures in terms of fee reductions, land use rights guarantees, and provision of public services. In addition, policies are also required in general to be conducive to high-quality local development, to create economic, social and ecological benefits, and to help continuously optimize the business environment. The *Implementation Regulations* also require that the regulatory documents on foreign investment formulated by the government shall be scrutinized for legality before publication.

As required by Article 25 of the FIL, local governments at all levels shall honour their commitments to policies provided to, and

contracts with, foreign investors and FIEs. The Implementation Regulations further required that such commitments must be in writing, and the content is limited to supportive policies, preferential treatments and convenience applicable only in the region administered by the local government. Moreover, Article 28 further specifies that governments shall not breach their contracts with foreign investors on the grounds of adjustment of administrative zones, change of government leaders, institutional or functional adjustment of authorities, etc. Any change of commitment or contract terms due to public interest concerns shall be processed in accordance with relevant regulations, and foreign investors shall be compensated timely and fairly for their losses.

### 1.1.5 Foreign investment information report system

Article 34 of the FIL establishes a foreign investment information report system through which foreign investors and FIEs will submit investment information to the competent market supervision authorities. Only information considered "necessary" will be required and the various government departments should not require duplicative information.

Correspondingly, The State Administration of Market Supervision ("SAMR"), the Ministry of Commerce and the State Administration of Foreign Exchange issued the *Notice on the Reform* of "Multi-Report Integration" of Annual Report on 16 December, 2019. The notice provides that starting from the annual report of 2019, which shall be filed by 30 June, 2020, instead of filing different reports in different system of various authorities, FIEs shall file an "integrated" annual report through the National Enterprise Credit Information Publicity System (the "NECIPS"). All information needed by market supervision, commerce and foreign exchange authorities will be reflected in one single report. Additional information required by the commerce or foreign exchange authorities, which may include confidential information of

FIEs, will be collected only for sharing among different authorities, and shall not be published.

The Implementation Regulations authorize the Ministry of Commerce and SAMR to determine the details of content, scope and specific process of the information report mechanism. According to the Measures on Reporting of Foreign Investment Information on 30 December, 2019, foreign investors or FIEs shall submit investment information through initial reports, change reports, deregistration reports, annual reports etc. As for the content and formality of the reports, the Announcement of the Ministry of Commerce on Matters Relating to Reporting of Foreign Investment Information issued on 31 December, 2019 set forth further details.

### 1.1.6 Working mechanisms for complaints of FIFs

Article 26 of the FIL states that a national working mechanism for complaints of FIEs will be established. According to the *Measures of the Ministry of Commerce on Handling Complaints Lodged by Foreign-Invested Enterprises* implemented in 2006, "complaints" refers to a situation where an FIE or its investor believes that the legitimate rights and interests thereof have been injured by any specific administrative act of the administrative organ, and therefore applies with the relevant authorities for settlement through coordination. The National FIEs' Complaint Center and the competent functionary department of the local people's governments at all levels shall accept the complaints of FIEs as the case may be.

### 1.1.7 Transition period

According to Article 44 of the FIL and Article 42 of the *Implementation Regulations*, after the FIL and the *Implementation Regulations* came into force, the Old FIE Laws shall be repealed. The business forms, organizational structures and governance guidelines of FIEs shall be subject to the *Company Law of the People's Republic of China* (the "Company Law") and the Partnership Law of the People's Republic of China (the "Partnership Law").

For existing FIEs, the FIL and the Implementing Regulations set a transition period of 5 years. During the transition period, existing FIEs may adjust their organizational forms and organizational structures in accordance with the *Company Law* and the *Partnership Law*, or maintain their original organizational forms and organizational structures.

Article 46 of the *Implementation Regulations* provides that after the organizational forms and organizational structures of the existing FIEs are adjusted in accordance with the law, the methods

for transfer of equities or interests, income distribution, distribution of residual property as agreed in the joint venture contracts between the joint venture investors, may continue to apply as agreed in such joint venture contracts. This means that the profit-related terms previously reached by FIEs' investors will not be invalidated by changes in FIEs' organizational form. However, starting from 1 January, 2025, the market supervision authorities shall not handle other registration matters applied by those existing FIEs that fail to adjust their organizational forms and organizational structures.

### Know more about Deloitte insights on Foreign Investment Law, please contact



Ping Liu
Deloitte China Qin Li Partner
liuping@qinlilegal.com

### 1.2 Business tax

In recent years, China tax authorities have worked with relevant departments to promote foreign investment growth and boost quality economic development. Many tax policies have proved effective and appealing to foreign investors, such as the introduction of reinvestment deferred tax policy, elimination of international double taxation, and improvement of tax support policies in key sectors. Driven by technological

advances, the tax authorities take advantage of online information platforms to provide more convenient tax experience for foreign investors.

When it comes to building a fair and modern international tax system, China has participated in the international tax reforms and the BEPS Action Plan. It is believed that the move signifies a shift towards moving China in line with international practices.

China has participated in the international tax reforms and the BEPS Action Plan. The move signifies a shift towards moving China in line with international practices.

#### 1.2.1 Overview

China's current tax system has been evolving ever since the 1994 tax reform and as a result of the subsequent changes in the relevant tax laws.

The various types of taxes imposed on different taxpayers and different types of activities are governed by separate tax laws. As from 1 January, 2008, the new Enterprise Income Tax

(EIT) Law took effect and applies to both domestic and foreign-invested enterprises at the same rate. In addition to the EIT, China levies a number of turnover taxes, such as value added tax (VAT), consumption tax and customs duties. Other taxes and levies imposed on businesses include resource tax, land appreciation tax (LAT), social security contributions, stamp duty, etc. China does not levy a branch profits tax, excess profits tax or alternative minimum tax.

Tax law and policy are developed by the State Taxation Administration (STA) and the Ministry of Finance. The STA is the body charged with collecting tax and enforcing compliance.

C	hina Quick Facts for Companies
nterprise income tax rate	25%
asis	Worldwide
articipation exemption	No
oss relief	
Carryforward Carryback	Generally 5 years No
ouble taxation relief	Yes
ax consolidation	No
ransfer pricing rules	Yes
hin capitalization rules	Yes
Controlled foreign company rules	Yes
ax year	Calendar year
dvance payment of tax	Yes
leturn due date	Within 5 months of the end of the tax year
Vithholding tax	
Dividends Interest Royalties Branch remittance tax	10% 10% 10% No
ocial security contributions	Up to about 40% of employee base salary
eal estate tax	1.2% on cost or 12% on rental value
Peed tax	3%-5% on price of real estate
and appreciation tax	30%-60% of gains on transfer of real estate
'AT	6%, 9% and 13%
onsumption tax	1%-56%
ity maintenance and construction tax	1%, 5% or 7% on the amount of VAT and consumption tax
ducation surcharge	3% (national) and 2% (local) on the amount of VAT and consumption tax

Improvement of business environments remains at the core of Chinese government's efforts to encourage foreign investment in China and unlock market vitality. Therefore, the STA has been taking solid steps in the recent years to streamline the tax administration. As it progresses, a great number of documentation filing and pre-approval requirements have been cancelled or simplified to ease the tax management burden for taxpayers. For instance, starting from 1 January, 2020, a taxpayer is allowed to claim for tax treaty benefit without submitting the supporting documents to justify its eligibility for the benefit beforehand. Such documents can just be maintained by the taxpayer for future inspections from tax authorities.

### 1.2.2 VAT reform at a glance

China's indirect tax system underwent a significant reform which replaced the Business Tax that previously applied to service industries with VAT. The application of VAT for services industries was initially introduced in 2012 by way of a pilot program for certain sectors on a

province by province basis. On 1 May, 2016, the VAT pilot program was completed with the rollout of the reform to sectors such as construction, real estate, financial services and lifestyle services, resulting in VAT replacing the Business Tax for all services sectors and ending the co-existence of Business Tax and VAT taxing mechanism in China. Since then the VAT has applied to all goods and services.

With effect from 1 April, 2019, the VAT rates for VAT taxable supplies and import of goods for general VAT payers are reduced from 16% to 13%, and 10% to 9% respectively. The 6% VAT rate remains unchanged. It is worth noting that the government has indicated that the three VAT rate bands (i.e., 6%, 9% and 13%) after this round of reductions will be further streamlined to two bands in the future.

Changes in the VAT rates and corresponding taxable activities are summarized in the table below.

Taxable activities	VAT rate <sup>1</sup>	
Taxable activities	Before 1 April 2019	After 1 April 2019
Sales and imports of general goods; provision of processing, repair and replacement services; and provision of leasing services of tangible and movable assets	16%	13%
Sales and imports of specified goods; provision of transportation, postal, basic telecom services, construction services and leasing services of immovable property and sales of land use rights or immovable property	10%	9%
Provision of value-added telecom services, financial services, modern services and lifestyle services; and sales of intangible assets other than land use rights	6%	6%

In addition to the VAT rates reduction, these latest changes and developments in the VAT system also mark China's effort to provide tax relief to all sectors and ensure the tax burden of key industries are significantly lowered, including:

- allowing input VAT credit related to the purchase of domestic passenger transportation services against output VAT (previously, such input VAT credit was not allowed) as from 1 April, 2019;
- implementation of an additional 10% or 15% VAT "super credit" for certain service industries by 31 December, 2021 (i.e. the creditable input VAT may be computed as 110% or 115% of the input VAT actually incurred by a qualifying taxpayer);
- allowing qualifying VAT payers to claim a partial or full amount of VAT refund of excessive input VAT as from 1 April, 2019 (previously, any excessive input VAT was normally unrefundable and could only be carried forward to credit against output VAT in the future);
- abolishing the previous two-instalment credit method for input VAT incurred from purchases of real estate and allowing full input VAT credits up-front as from 1 April, 2019.

### 1.2.3 Tax incentives for research & development activities

Research & Development (R&D) activity and the ownership of IP is often a core issue in multinational tax and finance considerations. With the growing emphasis and encouragement of the Chinese government on innovation and R&D, the Chinese tax regulations offer various tax incentives to encourage local R&D activities, mainly including:

### 1.2.3.1 R&D expenses super deduction

Under the 50% super deduction rules, a Chinese may deduct 150% of qualifying R&D expenses

incurred, i.e. an additional 50% deduction on top of the normal expense deduction, in computing its tax liability if the expenses do not result in the creation of an intangible asset. If intangible assets are developed, the qualifying R&D expenses that have been capitalized may be amortized based on 150% of the actual R&D costs.

In recent years, the scope of R&D expenses qualified for the super deduction has been expanded. The 50% super deduction rate has been already increased from 50% to 75% to all enterprises within the period from 1 January, 2018 to 31 December, 2020.

#### 1.2.3.2 High and New Technology Enterprise

High and New Technology Enterprise (HNTE) program offers qualified enterprises a preferential enterprise income tax rate of 15 percent (versus the 25 percent statutory enterprise income tax rate). To qualify for the HNTE status, a Chinese company must have owned the IP that has a core function in supporting the main products and/or services of the company from a technology perspective. Some other conditions must also be met, e.g. the annual R&D expenses must reaches certain percentage of the sales.

In addition to the reduced income tax rate, a company can also enjoy a 10-year carryforward for any tax losses incurred within the 5 years preceding to the year in which the company has the HNTE status.

#### 1.2.4 Tax measures to combat COVID-19

To cushion the economic hit caused by the COVID-19 outbreak, China has introduced a series of policies to support work and production resumption and shore up the confidence of businesses, mainly including:

- As from 1 January, 2020, the longest carryforward period is extended from five to eight years for tax losses incurred in 2020 for businesses severely affected by COVID-19 in transportation, catering, accommodation, and tourism industries. The deadline for such policy depends on development in the pandemic situation:
- The VAT for small-scale taxpayers was reduced or exempted during the period from 1 March to 21 May, 2020;
- As from 1 January, 2020, the VAT is exempted for taxpayers whose income are derived from public transportation services, transporting necessary daily supplies as well as lifestyle services. The deadline for such policy depends on development in the pandemic situation;
- Starting from 20 March, 2020, the export refund rate of 1,464 products is increased to 13% or 9%, with a series of measures introduced to simplify the relevant filing obligations and accelerated tax refund processes;

- Small and medium-sized enterprises may be exempted from making social security contributions during the period of 1 February through 30 June, 2020. Large enterprises may reduce the contributions by 50% from 1 February through 30 April, 2020. Businesses affected by COVID-19 may apply for an extension of time not exceeding six months to make social security payments; and
- Enterprises suffering severe losses or serious disruption on their operation activities due to the pandemic may apply for tax relief from real estate tax and land use tax.

To help foreign invested enterprise withstand the economic impacts of the COVID-19 outbreak and stabilize foreign trade and investment, Chinese government announced multi-pronged tax and non-tax measures, such as shortening the "negative list" of foreign investment (i.e. the list of sectors in which foreign investment are prohibited or restricted), expansion of encouraged industries for foreign investment, etc.

To help foreign invested enterprise withstand the economic impacts of the COVID-19 outbreak and stabilize foreign trade and investment, Chinese government announced multipronged tax and non-tax measures

Know more about Deloitte insights on business tax, please contact



Kevin Zhu Deloitte China Tax Partner kzhu@deloitte.com.cn



Rachel Ma
Deloitte China Tax Senior Manager
rachma@deloitte.com.cn

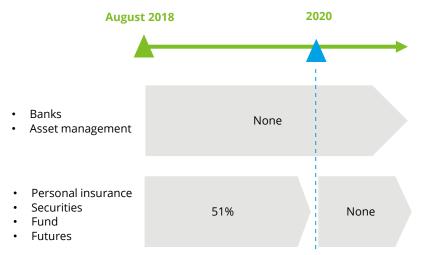
### 1.3 Industry opening up

### 1.3.1 A new era of financial opening up— Embracing opportunities in booming markets

### 1.3.1.1 Foreign ownership limits to end in 2020

According to the People's Bank of China (PBOC), in 2019 financial authorities announced more than 30 measures to liberalize the banking, securities, insurance, credit ratings, payments and financial markets, as well as brought forward the elimination of limits on foreign ownership in securities, funds, futures and personal insurance companies from 2018 to 2020.

### China to eliminate all foreign ownership limits in 2020



Source: Public information, Deloitte Research

Table 1: 2019 financial opening-up measures in major sectors

Sector	Key measures
Financial services	In July 2019, China issued 11 measures to further liberalize its financial sector, easing the entry requirements and business scope of banking wealth management subsidiaries, asset managers, insurers, securities houses, fund managers, futures brokers and rating agencies.
	<ul> <li>Financial institutions with international competitiveness and industry influence are encouraged to conduct asset management business in Shanghai.</li> <li>So far, foreign-controlled firms Nomura Securities and JPMorgan Securities have established subsidiaries in Shanghai. Amundi Asset Management and Bank of China Wealth Management have set up the 1st foreign-controlled wealth management JV in Shanghai.</li> </ul>
Bond market	<ul> <li>Foreign institutions are allowed to obtain Type A leading underwriting license in the interbank bond market.</li> <li>Support for official entrance of S&amp;P China into interbank market to rate all types of bonds.</li> </ul>
Foreign exchange/ capital	<ul> <li>Qualified Foreign Institutional Investor (QFII) and RMB Qualified Foreign Institutional Investor (RQFII) quota restrictions were removed.</li> <li>Country and regional restrictions on RQFII were removed</li> </ul>

Source: Public information, Deloitte Research

1.3.1.2 Foreign banks to improve layouts by optimizing their advantages and links with parent banks

At the end of 2019, the assets of China's financial institutions had reached RMB318.69 trillion (USD45.15 trillion), up 8.6 percent YoY, of which banking assets were RMB290 trillion, or more than 98 percent of the total.

Due to previous market access limits, foreign banks have represented a very small proportion in China's banking sector, with only 1.60 percent of total assets as of H1 2019. The main challenge for foreign banks is their lack of equivalent advantages, such as local resources and strong networks that domestic banks possess. China's state-owned banks in particular have many branches and sub-branches with long-term, local customer relationships.

However, foreign banks have advantages in risk management and control, product research, talent and technique, which they can utilize to perform better in China. There are two main opportunities for inbound development due to policy promotion as well as the need of capital by Chinese banks.

1) CBIRC has officially announced to promote the development of foreign banks and insurers furtherly in the 2025 Development plan for Banking and Insurance, by which there will be opportunities for foreign players to utilize the advantages of their overseas parent companies. Foreign banks are being encouraged to strengthen links with their overseas parents to develop trade finance, SME financing, commodity financing and wealth management. Foreign banks and insurers have an opportunity to optimize their network layouts to increase their number of regional branches and sub-branches in Central, Western and Northeast China.

2) Non-performing loan (NPL) conditions in the Chinese banking sector remain pressurized, with NPL ratio having reached 1.86 percent overall, and 2.32 percent among city banks, as of 2019. Small and medium sized Chinese banks are expected to be the main inbound investment targets for overseas financial institutions, as they are in urgent need of capital and have a much more flexible manner of operation. The business model of "foreign capital holding + local operation" will not only increase the market share of foreign capital, but also enhance the operational and management capabilities of Chinese institutions.

### 1.3.1.3 Chinese health insurance will embrace a booming market

In 2019, the annual premium income of China's insurance sector reached RMB4.26 trillion, up 12.2% YoY. Total insurance sector assets reached RMB20.56 trillion, exceeding RMB20 trillion for the first time. The amounts of assets and premium income are expected to post double-digit increases again in 2020.

In 2019, health insurance premium income reached RMB706.6 billion, surpassing automobile insurance for the first time and becoming the second largest insurance segment after life cover. According to goals set by CBIRC, the health insurance market will exceed RMB2 trillion by 2025, which would represent compound annual growth of about 20 percent in retirement and health insurance from 2020-2025.

Opening-up will promote the development of health insurance and pensions insurance. Entry conditions and share ratio restrictions on foreign insurance companies are gradually being eased. The opening of the first wholly foreign-owned insurance company, Allianz (China) Insurance Holdings Co., was officially approved in November 2019, another positive signal.

As in banking, lacking the networks and branch resources of their Chinese counterparts is the main challenge for foreign insurers. However, with Chinese regulators starting to allow insurers to invest their long-term funds in the capital market, foreign insurers can leverage their advantages in risk management and control, asset management, as well as online insurance product development and sales.

In future, more large multinational insurance institutions will promote their China market layouts, boosting the development of currently weak insurance segments.

### 1.3.1.4 Capital market: COVID-19 not a long-term threat, direct financing continues to increase

At the end of Q1 2020, China's bond market had reached RMB103 trillion, up 4 percent from the end of 2019 and becoming the 2<sup>nd</sup> largest bond market in the world. In terms of opening-up, 822 overseas legal entities hold just 2.2 percent (RMB2.26 trillion) of China's inter-bank bonds, below the global average. To cope with the COVID-19 epidemic and encourage direct financing flows to the real economy, the proportion of direct financing for enterprises in the bond market will gradually increase.

In the past two years, China has been growing its power in global financial markets, with A shares and bonds added to major global indexes (A shares are now in the MSCI, FTSE Russell and S&P Dow Jones indexes and bonds are in the Bloomberg Barclays index). Also, Chinese capital market reform has proceeded at a remarkable pace in 2019, as we referred to above (abolition of QFII and RQFII quotas, revision of the *Securities Law*, and S&P China being allowed to rate Chinese bonds). An estimated USD700 billion-800 billion of foreign investment is expected to flow into the

onshore RMB bond market over the next five years.

Chinese authorities have introduced measures in several areas to stimulate China's capital market development. The long-term funds of bank and insurance institutions will gradually enter the market, converting some of people's traditional savings into long-term funds in the capital market, which will increase the proportion of direct financing. More highly anticipated opening-up is just around the corner. In 2020, foreign shareholding limits in futures, funds and securities companies will be cancelled. As a result, more foreign wealth and asset management players will enter the Chinese market, benefiting the sector. In the medium and long term, China's capital market is expected to flourish.

## 1.3.2 Boost stake or cash out: how auto MNCs should prepare themselves for this new era of opening-up

In April 2018, Chinese government for the first time announced it would loosen up the limits for how much stakes a foreign car company can own in its joint ventures--a longstanding regulation that the country imposed in 1994 as part of the efforts to protect its fledgling domestic industry. The ownership cap will be relaxed in a gradual manner (see below chart) and finally torn apart in 2022 by when multinational car companies are able to either take full ownership of their local ventures or establish wholly owned subsidies in China though with conditions attached.

The move to build a more opened-up market and level the playing field has reinforced the country's commitment to increase its competitiveness as one of the most attractive foreign investment destinations against the backdrop of slowing global auto market.

2018 2020 2022

Segments

Passenger vehicle

Commercial vehicle

Special-purpose vehicle, NEV

Full ownership

Full ownership

Figure 2: China's three phases to remove ownership caps

### **Loving China**

#### China's EV Golden Rush

Electric vehicle is the first subsector that exempted from the ownership restriction. Since the announcement, foreign automakers have increased their investment and intensified their efforts by bringing core EV technologies into China and building up local production capacity. The re-entry strategy are taking various forms. Some are setting up joint ventures with new partners (Volkswagen's partnership with JAC, Toyota with BYD). Some are producing EVs locally in their own plants (Tesla). The rest are tying the knots with key suppliers (BMW has secured large battery order from battery maker CATL).

Apart from automakers, foreign auto parts suppliers also bet big on EVs. For instance, both Japanese and Korean battery manufacturers have ramped up their investment to grow lithiumion battery production capacity since Chinese government in June 2019 removed the "white list" of recommended battery suppliers—an implicit catalogue containing domestic EV battery makers only that automakers have to choose from to make sure their NEV products are eligible for financial subsidies.

In its recent national initiative "the new infrastructure", China has promised to invest 10 billion to expand the country's charging network

by 50% in 2020 as part of the attempts to increase EV penetration. With surging availability of charging facilities, maturing domestic EV supply chain and growing overall demands (both operational and personal fronts), China has made the top EV market to invest in.

### Connected Car Trends Spell Opportunities for Foreign OEMs

Connected vehicle is another hot spot that foreign OEMs can tap into. Growing consumer demands, strong policy as well as technology development all play key parts in it. First, Chinese consumers are showing rising preference over all the safety, connectivity and value convenience that a vehicle can bring. And such features will to a large extent increase their vehicle purchase intention.

In the meantime, Chinese government sets ambitious goals for connected car and its ultimate future—autonomous driving, and has been formulating standards and rules around the emerging technologies in recent years. A few municipal governments have started to test the water by designating roads that allow self-driving cars to carry passengers and issuing temporary license plates for the test vehicles. Foreign OEMs have been allowed to grab a slice in self-driving market. There are at least four foreign automakers have been granted to carry out self-driving tests in China.

With 5G commercialization being put onto fast track since the beginning of 2020, Chinese cities one after the other have been launching LTE-V2X pilot projects, representing golden opportunities for foreign OEMs to test the technology and amass experience.

### Leaving China

Despite of gaining a free access to the market, foreign auto companies have to be made aware of a few things. First, China's auto market is slowing since 2018 and the competition gets much intense. A few underperforming foreign car brands have sold their stakes and pulled out of Chinese joint ventures since last year.

Second, Chinese market is characterized by rapid changes in both consumer behaviors and technology innovation. For instance, China is leading ahead in almost every aspect of mobile service and related application, such as e-commerce penetration and mobile payment transaction. And that trend is influencing automotive field as well. Besides, there's rising awareness among Chinese consumers of the enhanced convenience, safety and security functions that intelligent vehicles can offer. This software-led changes happen so quickly that both domestic and foreign auto companies are struggling to keep pace with. A few indigenous carmakers have been able to gain the upper hands by establishing deep ties with software and internet companies. In this new digital era, foreign auto OEMs will have to change their Chinese market strategy. OEM alliance or collaborations with internet companies, or diversified investment to close capability gap, all proving to be viable approaches to cope with changes.

Third, there's still major risks when investing in China. Regulatory and policy inconsistency tops that list. In this April, Chinese government announced it will extend subsidies and tax breaks

for NEV by two years until the end of 2022 to reinvigorate the sector that has been hammered by COVID-19. However, the extension decision is deemed as a setback to China's opening-up moves. It poses great uncertainty for foreign OEMs and parts suppliers who have expanded their investment in the belief that China will end NEV subsidy in 2020. Restriction of technology outflow is another risk that arise from the recent US-China trade conflicts. In early 2020, the US government imposed bans on the export of certain Al programs overseas. The restriction applies to programs that using machine learning to process geospatial imagery. High-resolution mapping is considered as the key component to build self-driving technology. This new ban will increase US automakers' R&D costs as they are prevented from exporting existing AV technologies to China and will have to find local suppliers and redesign it from the scratch.

### 1.3.3 Snapshot of China's LSHC industry—innovation drives growth

#### 1.3.3.1 Industry landscape

Life science and health care sector in China enjoyed double digit growth in 2018, while impacted by radical regulation environment change, growth is expected to drop to around 4% in 2019 (Figure 3) and is forecasted to maintain a 5-7% growth in coming years mainly driven by patent drugs. The proportion of total health expenditure to GDP reached 6.4% at 2018 with 10% year-over-year growth rate. It is estimated that by 2020, the proportion of total health expenditure to GDP will have reached 6.5%-7%. There are multiple engines behind such a long period of middle- and high-speed growth for the life science and health care sector in China.

• First, the most important engine is the changes in the demographic structure. The continuous growth of the aging population and the

- declining labour force will accelerate the rise of medical demand.
- In addition, a series of top-level designs and plans from the government, including the "Healthy China 2030" plan, show that the life science and health sector will play an increasingly important role in China's economy.
- At the same time, the involvement of social capital in the healthcare industry is also deepening. The scale of VC/PE investment has grown rapidly in the past few years with a
- growth rate of over 40%. For HKEx, the volume of IPO companies in the healthcare industry in 2019 is 70% higher than that in 2018 and the value is 13% higher; China also established STI board to further encourage start-ups in high-tech area, which attracts 5 IPOs in healthcare sector. <sup>2</sup>
- In addition, factors such as the continuous acceleration of urbanization and the growth of resident income are also attracting attention to the healthcare industry.

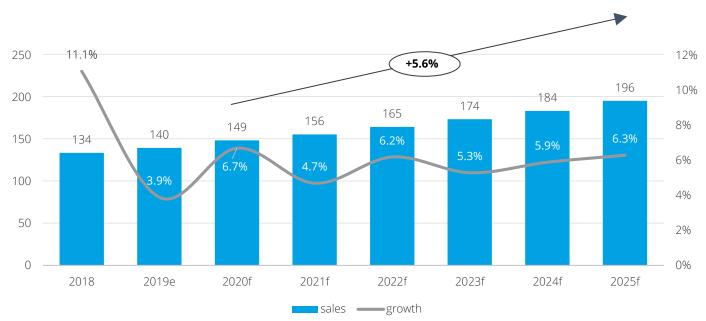


Figure 3. Sales & growth of pharmaceutical industry will continue to improve in China, billion USD

Source: BMI Research; Deloitte research

In the near future, the focus of life science and health sector in China will remain on innovations of medical reforms, drug development, and digital medical technology, which are important engines for the sector to maintain a stable and effective growth.

### 1.3.3.2 Accelerated price regulation led by government

NHSA (National Health Security Administration) has led a series of radical changes ever since establishment in May 2018, armed with consolidated regulatory power which was decentralized in multiple administrations before, making 2019 the most dynamic year in healthcare reforms, including Volume Based Procurement (VBP), NRDL price negotiation, DRG payment etc. VBP, aiming at squeeze excessive profit of generic drugs keeps expanding its scope from 25 drugs in 11 cities to 57 drugs nationwide, and is clearly stated that it will be a "new normal". Same rationale as NRDL price negotiation, NHSA relies on its high market volume and alleviated patient OOP to bargain with patent drug manufactures, ending up with 97 drugs successfully entering NRDL through fierce price-cut. And this negotiation is estimated to happen more frequently and covers more drugs in coming years.

Through series regulation, government is delivering a message to medical product manufacturer and distributor, few "easy money" is available in the future. A company must develop innovative and high quality products in order to survive and thrive. We will see a higher concentration in generic drug manufacture and higher investment of R&D for both domestic and MNC players.

#### 1.3.3.3 R&D investment in new biological drug

China is striving to assert itself as a hub of R&D innovation. Market authorization approvals process has been greatly shortened from the 5-8 years duration in recent two years, together with improved intellectual property protection, more MNC are determined to bring more new drugs to China. More than 50 new drugs have been approved annually in recent two years. Besides, with the revision of new "Drug Administration Law" in 2019", "Market authorization holder (MAH)" mechanism unbinds drug developer and drug manufacturer, activating the innovative drug start-ups and research institutes. In coming years, government will keep encouraging local innovative drug development and MNC bringing more new drugs to China, we estimated to see more new drugs will be approved and more frequent and deep cooperation between local start-ups and MNC.

Amid the trend of "asset-light" pharmaceutical R&D, medical giants and investment institutions in the pharmaceutical sector have acquired R&D pipelines for new drugs, especially bio-based drugs, through investment and M&As. In recent years, there is a growing investment of new drug R&D investment focusing on small- and mediumsized biotechnology companies in four major areas (Figure 4). The first is the field of cellular immunotherapy, represented by CAR-T therapy, which began to attract wide attention in 2017, and the second is biosimilar, which entered the Chinese market in 2018. In addition, traditional macromolecular monoclonal antibodies and small molecule targeting drugs will still be hot spots for investment considering huge market demands.

Figure 4. Four major R&D investment areas for new drugs

**Cell Immuno Therapy** 



**Blosimilar** 

**Monoclonal Antibody Therapy** 

**Targeted Drug** 

### 1.3.3.4 Digital transformation

Driven by COVID-19 unexpectedly, digitalization trend of healthcare system will continue in the near future. The fundamental of healthcare information system has been established after years of efforts, the next step is to implement more cutting-edge technologies like 5G+telemedicine, Al diagnostic assistant, etc., which we've already seen some pilot practice during COVID-19 epidemic. More investment will flow into this area, and more healthcare providers will embrace new technologies.

Big techs like BAT (Baidu, Alibaba and Tencent) and niche market leading companies like iFlytek will continue its heavy investment in the sector. As regulation has allowed online healthcare service covered by the country's medical insurance system for some conditions through Internet hospital channel, we expect to see more internet hospitals in the following two years. Together with online healthcare service, online medicine will also enjoy a high growth, encouraged by both regulation and huge investment from big techs and big pharmacos.

Yet, to drive the industry to enter a profit-making phase, market participants and investors should

focus on the transformation of digital technology from "technology-focused" to "value-focused" in the future. Key questions to answer include how to use medical technology in the future, e.g. how to link data to clinical decisions.

### 1.3.4 Manufacturing: back on track

#### 1.3.4.1 Two policy trends

Two trends are becoming clear in China's long-term policy strategy to develop its manufacturing industry. One is focusing on high tech manufacturing for quality growth. The other is maintaining its commitment to further opening up its market and boosting inbound foreign investment.



Table 2: Latest policies affecting manufacturing industry

Policy	Implication to manufacturing industry
New "Foreign Investment Law"	<ul> <li>Investment promotion: equal treatment of domestic and foreign companies, rights to raise funds through public offerings of equity and debt securities</li> <li>Investment protection: protection of foreign IP rights and trade secrets, prohibition of forcing technology transfer</li> </ul>
2019 FDI Negative List / 2019 FI Encourage Catalogue	<ul> <li>Eliminate cap on foreign ownership of JVs in general manufacturing (e.g. auto in 5 years)</li> <li>Encourage foreign investment in high-tech manufacturing, e.g. computers, communications and electronic equipment, industrial robots key component, new energy vehicle, new materials etc.</li> </ul>
Western region preferential policies	<ul> <li>Extended profit tax reduction for qualified investment* in China's western regions (e.g. lower corporate income tax rate of 15% comparing to standard rate of 25%. <sup>3</sup>)</li> <li>Qualified investment refers to investment in certain sectors and regions listed in subcatalogue of FI Encourage Catalogue (e.g. auto and high-end manufacturing in Sichuan province) <sup>4</sup></li> </ul>
Guide opinion on promoting shared manufacturing (MIIT)	<ul> <li>Foster a shared manufacturing platform</li> <li>Explore construction of shared factories, support the development of public technology centres, and promote sharing of service capabilities</li> <li>Enhance digital infrastructure, improve the digital level of enterprises, and strengthen network security. <sup>5</sup></li> </ul>

Source: Public information, Deloitte Research

### 1.3.4.2 Market dynamics to watch

China's manufacturing sector appears to be well on the path to recovery. It will also benefit from the nation's "new infrastructure" initiative, which focus on enabling industries and cities with technological infrastructure.

Manufacturing sector is on the path to

**recovery.** Businesses are indeed resuming operations. According to National Bureau of Statistics, China's manufacturing purchasing managers' index (PMI), a poll which leans towards large state-owned firms, stood at 50.8 in April, above the 50 level that separates growth from contraction. Meanwhile, construction PMI surged

to 59.7 from 55.1, suggesting that Chinese infrastructure stimulus is gaining traction.

With the resumption of domestic demand, which is the most important factor determining the pace of China's recovery, we think China's manufacturing appears to be well on the path to recovery.

Manufacturing sector stands to benefit the most from the rise of Al/IoT/5G. China will heavily invest in new infrastructure, which refers to infrastructure used for high-tech and sustainable purposes. This includes, for example, 5G infrastructure, Al, data centre and EV charging stations among other areas. Meanwhile, smart factories are becoming the norm in manufacturing, and they rely on networks and connected devices to leverage technologies like AI, IoT and more.

It is expected that addressable AI market in China's manufacturing industry will have exceeded USD 2 billion by 2025. According to Deloitte's survey of leading manufacturers in

China, 87% of survey respondents have already started or plan to start their Al deployment in two years.

Figure 7: Al application in China manufacturing industry



Source: 2019 Al application in China's manufacturing industry survey by Deloitte

Figure 8: Al deployment plan two years (China manufacturers survey 2019)



Production relocation will continue, but not likely to change China's position as world's manufacturing hub. For many manufacturers, moving production inland was a way of offsetting the rising cost. Now the trend appears to be accelerating. China has adopted a series of tax and fee reduction

policies to reduce to attractive foreign investment in western regions.
Government also reduced logistic costs for exported-oriented foreign companies.

Meanwhile, manufacturers will continue to invest in ASEAN as an alternative for relocating China

production and mitigating China risks. Besides the availability of low cost labour in ASEAN, trade and tax incentive is another reason. ASEAN has free trade agreements with China, India, Japan, South Korea and Australia. This means it is possible to establish a manufacturing presence in ASEAN and export back to the US or EU.

Figure 8: World Manufacturing Capacity (US\$ billion)

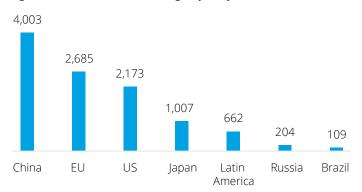
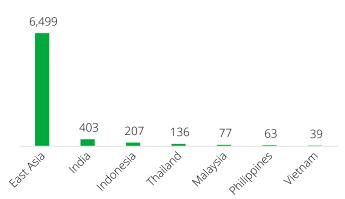


Figure 9: Asian Manufacturing Capacity (US\$ billion)



Source: World Bank, Deloitte Research

### 1.3.4.3 Opportunities and challenges



### **Opportunities**

#### New infrastructure

China remains an attractive market and domestic demand is new picking up. Investment in "new infrastructure" falls in lie with China's plan to transform manufacturing to a high quality industry driven by domestic market.

### Technology commercialization opportunities

Leverage China's sizable yet various markets to accelerate new technology commercialization and new production development.

• Sustainable and green manufacturing increase needs for low-carbon equipment and services.

### ( Challenges

### • Geo-politics risks and trade tension

De-globalization casts a shadow on international trade and the flow of capital, goods and human resources.

### • "New infrastructure" investment risk

Return on investment on new infrastructure is less certain than is the case with traditional infrastructure.

#### Cyber risks

Manufacturing industry is also exposed to cyberattack as IoT and other digital applications are gaining momentum.

Doing Business 2020, a report issued by the World Bank, shows that China's business environment has raised to the 31<sup>st</sup> place in the global ranking, up by 15 places from the previous year.

### 2. An impartial China

#### 2.1 IP protection

Doing Business 2020, a report issued by the World Bank, shows that China's business environment has raised to the 31<sup>st</sup> place in the global ranking, up by 15 places from the previous year. In creating a favourable business environment, intellectual property ("IP") protection plays an important role. According to the 2019 Business Confidence Survey, released by the European Union Chamber of Commerce in China, about 60% of enterprises believe that China's IP administration and judicial protection have been significantly improved.

During the first ten years after China's accession to the WTO, China's IP legal regime gradually became in line with international standards. The IP system encouraged the creativity of the whole society, and the enhancement of innovation ability contributed to the development of China's economy. At present, China has established a complete legal system for IP rights. The IP system, with patent, trademark and copyright as its three pillars, has become increasingly fine-tuned. A complete system of IP protection, application and management has been established by the legal, planning, policy-making and executive agencies. From the granting of IP rights, the exercise of IP rights to the protection of IP rights, there are corresponding institutional supports at each stage, providing protection for foreign enterprises to enter the Chinese market. In addition, China is also a contracting party to most international IP conventions. From law enforcement to legislation, China's IP laws and regulations have now been in line with the Agreement on Trade-Related Aspects of Intellectual Property Rights ("TRIPS").

### 2.1.1 IP legislation

In terms of legislation, aside from revising its own laws and regulations in accordance with the TRIPS after China' accession to the WTO, China recently revised the Trademark Law and the Anti-*Unfair Competition Law* to fortify the protection of trademarks and trade secrets. What will come next is the further revisions to the Copyright Law and the Patent Law. At the beginning, China created its IP system in order to sync up with the world, and then adapted itself to domestic economic and social development. Now, China leaps to the world's advanced level of IP legislation, consolidating the institutional basis for protecting IP under the law, improving the level of IP protection, and promoting innovation and development of the economy and society.

Chinese law protects the following categories of IP rights: patent (including invention, utility model and design), trademark (including well-known trademark), copyright (including computer software) and neighboring right, layout design of integrated circuits, new plant variety, trade secret, etc.

In 2019, the PRC Anti-Unfair Competition Law went through its second revision, which focused on the protection of trade secrets. The revisions cover the definition of trade secret, specified acts of infringement, parties liable for torts, distribution of infringement liabilities, and burden of proof. As a result of the revisions, the scope of protection of trade secrets is expanded and the protection of trade secrets is strengthened.

The ongoing fourth revision of the Patent Law has drawn much attention too. In order to solve the outstanding problems in patent protection, safeguard in a greater way the legitimate rights and interests of patent owners (both Chinese and foreign), enhance the inventors' confidence in patent protection, and bring the innovation and creativity of the whole society into full play, the National Intellectual Property Administration started the revision in H2 of 2014. In-depth investigation and research have been conducted, amendment proposals have been made, and opinions have been solicited from both Chinese and foreign right holders and the general public. By now, the revised draft of the Patent Law and the revised draft of the Copyright Law have both been included in the "Legislative Work Plan of the State Council in 2018" and will be submitted to the Standing Committee of the National People's Congress for deliberation.

Meanwhile, the revision of the "Patent Agency Regulations" and other relevant laws and regulations are also in progress.

On 28 April, 2020, the Beijing Treaty on Audiovisual Performances came into effect. This is the first international IP treaty concluded in China and named after a Chinese city since 1949. Up to now, 31 countries have approved or acceded to the Beijing Treaty on Audiovisual Performances. The conclusion and entry into force of this treaty is a milestone in China's copyright protection. It will generally enhance the protection of performers by the international community. And as a result it will promote the protection of the rights of audiovisual performers and the development of the audiovisual industry.

### 2.1.2 Judicial protection system

China implements an IP protection system that focuses on judicial protection and parallel administrative protection.

At present, with the "National Intellectual Property Outline" as the core and the "China Intellectual Property Judicial Protection Outline (2016-2020)" as the support, China's IP judicial protection system continues to be improved. In 2014, the specialized IP courts in Beijing, Shanghai and Guangzhou successively implemented specialized IP trials.

In 2019, the Supreme People's Court IP courts began to hear highly specialized and technical IP appeal cases nationwide, gradually unifying the criteria for judging such cases. The Supreme People's Court has approved the establishment of specialized adjudication agencies in intermediate people's courts in 21 cities, to exercise central jurisdiction over certain first-instance IP cases across regions.

Along with the three IP courts established in 2014, a new pattern of IP trial has been created, consisting of the Supreme People's Court Intellectual Property Tribunal, the Intellectual Property Court, 32 high courts, 3 IP courts, and a number of intermediate and basic courts.

These measures protect materially the legitimate interests of foreign investors. According to statistics, in 80% of litigation cases initiated in China by foreign-owned enterprises for IP infringement, foreign right holders won. At present, China's IP trial mechanism continues to be improved and its judicial protection level continues to rise, promoting the overall efficiency of the IP protection system.

### 2.1.3 Administrative protection system

In 2018, China integrated the law enforcement authorities of industry and commerce, quality inspection, food, trademarks, patents, etc., and began to implement comprehensive law enforcement of market oversight over rights. The General Administration of Market Supervision

has set up a special law enforcement inspection bureau, which undertakes the organization of law enforcement for trademark, patent, and other IPs. The administrative enforcement of IP has become an important part of the comprehensive enforcement of market oversight over rights. Now, the IP administrative management system has changed into a "two-in-one" management mode, and IP administrative enforcement has been formally incorporated into the market oversight. At present, 31 IP protection centers have been set up nationwide in 17 provinces (autonomous regions and municipalities), including 7 "provincial" protection centers and 24 "municipal" protection centers, covering more than 20 industries (such as new-generation information technology, high-end equipment manufacturing, bio-medicine, and new materials). These measures give market players convenient, efficient, and low-cost means of IP rights protection. China has also formulated and refined standards for trademark/patent infringement judgment, inspection, and appraisal, and has issued guidelines for administrative ruling on patent infringement disputes, which have improved the effectiveness of administrative protection of IP. In 2019, the national IP system handled 39,000 patent infringement dispute cases through administrative ruling (a year-byyear increase of 13.7%).



### 2.1.4 IP applications

Today, China ranks first in the world in the number of patent and trademark applications each year. The number of patent applications submitted through the Patent Cooperation Treaty ("PCT") and the number of trademark applications submitted through the Madrid Agreement on International Registration of Trademarks have ranked second and third in the world respectively in the recent years. In 2019, China's PCT international patent applications surpassed the United States for the first time in the history of the PCT, making China the world's largest country of patent application. The quality of IP creation, effectiveness of protection, efficiency of application, and international influence are also continuously improving. Judging from the figures, China is already a big patent country, a big publishing country, and a big trademark country, and is also developing into a power in IP rights.

Future competition will be a battle for consumers and their time, with the key criterion to assess market share being the percentage of the 24 hours of a consumer's day occupied by the market player." Said Zhang Tianbing, Deloitte China Consumer Products and Retail Sector Leader.

#### 3. An innovative China

### 3.1 Future of consumer: the path to innovation

In China's unique digital environment, disruptors, partners, and traditional retailers, the three key consumer-centred market players, are all striving to reshape the retail ecosystem to be more consumer-oriented with the aid of increasingly sophisticated technology and analytics.

The very notion of the "future of consumer" stems from the changes brought along by disruptors and the future landscape of the retail sector will continue to change as the transformation deepens. "leading disruptors such as Alibaba and Tencent & JD are devoted to facilitating penetration at a range of consumer touch points and propelling the transformation via resource integration and innovative models, which will inevitably trigger another significant change in the future of consumer - retail competition will no longer be bound by conventional notions of products and geographic markets. Future competition will be a battle for consumers and their time, with the key criterion to assess market share being the percentage of the 24 hours of a consumer's day occupied by the market player." Said Zhang Tianbing, Deloitte China Consumer Products and Retail Sector Leader.

### 3.1.1 Three characteristics of China's new retail

### 3.1.1.1 Transformation and optimization of traditional value chains

In order to keep up with the fast-changing consumer needs and optimize the operation efficiency of the system, market players in retail are faced with pressing need to digitalize the entire retail process, using effective analytics to maximize the value of data and propelling value chain transformation.

#### 3.1.1.2 Cross-channel integration

Integrating multiple channels, especially online and offline channels, is of key significance to enterprises striving to ensure innovative consumer engagement in various life scenarios. There are obvious discrepancies between e-commerce enterprises and brick-and-mortar retailers regarding resources and technological competitiveness. Integrating resources and data from various scenarios and processes and forming systematic solutions for consumer needs will substantially boost the efficiency and competitiveness of the entire ecosystem.

As an example, the Tmall mini store launched by Alibaba's LST platform effectively pooled resources and respective strengths of retailers, brand owners and mom-and-pop stores and helped them address their pain points and develop digital competence, ultimately enabling integrated cross-channel services. In this very process, store owners not only get a better

selection of goods, but are also able to optimize procurement order placing and day-to-day management through the use of digital devices; through shared channel resources, distributors can now come into contact with more offline mom-and-pop stores and upstream brands; while brand owners aided by this integration can interact with more consumers via the LST platform, boosting distribution efficiency. Furthermore, as the platform that prompted such integration, LST is also able to integrate all resources in the Alibaba system in order to improve consumer touch points and the ecosystem at large.

#### 3.1.1.3 Model and service innovation

The changing consumer needs are resulting in increasingly noticeable discrepancies in business models in the retail space. In the fast-changing market environment, as a principal touch point in consumer interaction, the retail outlets in various business models need to stay open-minded when it comes to innovation and use innovative models and services to ensure higher consumer satisfaction.

A good example would be Alibaba's Hema stores. After two years of fast development, this new species in the retail landscape has established a highly efficient business model featuring a combination of shop front and storage as well as seamless integration of retail, in-store dining and delivery services that bridges online and offline retail, and meets diverse consumer needs with more precise and efficient product, service and experience. In this innovative model, the physical store focuses more on

consumer experience, while the online channel, backed by mobile devices and a fast delivery service of 3 km radius, covers a larger number of consumers and handles more sales.

To sum up, technology and analytics are undoubtedly the foundational enabler for all the pathways mentioned above. According to a joint global survey by Deloitte and MHI, new technologies including cloud computing & storage, sensor & automatic identification, inventory & network optimization, robotics & automation are already widely adopted worldwide as key drivers of enterprise optimization and innovation; while emerging technology such as wearable & mobile technology, predictive analytics, 3D printing, Internet of Things and driverless vehicles are looking at exponential growth and increasing adoption rate in the coming five years. The advances in tech and analytics are allowing more opportunities and possibilities of interaction between businesses and consumers, as well as providing companies more approaches in reshaping value chain. To ensure continuous innovation and the transition towards the future of consumer, it is essential for companies to stay open-minded about new technological revolution and make full use of these technological advances to enable strategic transformation.

Based on the latest trends in China's new retail sector, Deloitte advises overseas consumer goods companies interested in entering Chinese market to:

• A battle compete for consumer's time via multiple touch points.

- Alibaba and Tencent & JD provide a useful example; in addition to upgrading the core competitiveness of the long-established platforms, the two dominant ecosystems are taking progressive steps to ensure maximum consumer engagement in various life scenarios via e-commerce, SNS, entertainment and payment. The innovative consumer engagement model is the battlefield for the major ecosystems to fight to occupy maximum share of a consumer's day. By providing increasingly diverse services and contents, the two ecosystems are aiming to attract and retain consumers by ensuring continuous satisfaction.
- Establish around-the-clock consumer engagement for data collection and analytics
- Establishing around-the-clock consumer engagement also helps data collection and analytics. In meeting consumer needs and establishing consumer interactions through comprehensive touch points, ecosystems are able to collect multi-dimensional and comprehensive data from consumers to gradually form precise consumer insights and profile, which will in turn drive the optimization and personalization of each specific touch point, thus ensure that the ecosystem is readily present for every consumer demand to deliver fast, personalized and precisely unique experience.

### Intelligent connectivity is the carrier and accelerator of the automotive industry.

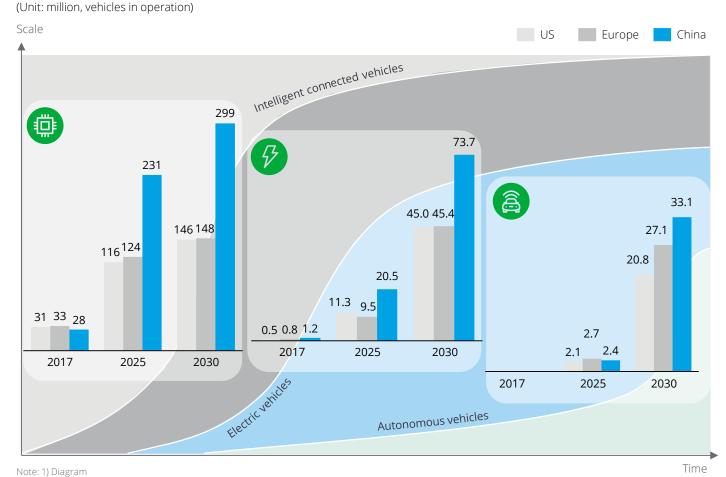
# 3.2 Future of mobility: how can automotive OEMs win the digital transformation battle

In terms of the development and evolution of the global automotive industry, Chinese market has played an important role. In the past decade, China's automotive market has been the fastest growing one throughout the world with its annual compound growth rate reaching 15%. The focus

of automotive industry is now shifting from traditional parts manufacturing to future mobility in four dimensions: vehicle electrification, intelligent connectivity, car sharing, and autonomous driving.

Intelligent connectivity is the carrier and accelerator of the automotive industry, promoting digital transformation of the whole value chain. For automotive manufacturers, only those who have grasped new opportunities of intelligent connectivity will win the battle of digital transformation. As the key player and leader in automotive industry, China is accelerating its realization of vehicle electrification, intelligent connectivity and autonomous driving, which is reflected in the rapid increase in the number of relevant vehicles.

Figure 9: Development trends of electric vehicles, intelligent connected, and autonomous vehicles in China<sup>1</sup>



Data sources: IHS, China Association of Automobile Manufacturers (CAAM), China Automobile Dealers Association, Deloitte Analytics

38



#### **Vehicle electrification**

since 2015, sales of new-energy vehicles in China have accounted for more than 55% of global market shares for five consecutive years. Domestic brands rose quickly, accounting for over 90% of domestic market shares.



#### **Shared mobility**

the number of operating vehicles is also rising rapidly, and Didi has become the world's largest ride service platform. As of 2019, Didi's user base has reached 550 million. At the same time, Meituan, Amap, Caocao, T3 Alliance and other companies have emerged in the market, either by virtue of the increasing market size or their own advantages in the industrial chain.



#### **Autonomous driving**

Chinese consumers are more receptive to the autonomous driving technologies than the rest of the world, with over 80% of respondents saying that traveling with autonomous vehicles would be a good experience. Deloitte forecasts that China will have 30 million autonomous vehicles in operation by 2030, ranking the first in the world.

The mobility demand for Chinese consumers is shifting from travel from point A to point B to driving & riding experiences and valueadded services throughout the **journey.** It is believed that, in the next 3-5 years, intelligent connectivity of the automotive industry will witness a round of rapid improvement. For example, in the hardware aspect, smarter human-vehicle interaction devices, more advanced vehicle sensors and safer driving assistance systems will replace the gearbox and gradually become the new core selling points; more application scenarios and business models will be unlocked to provide consumers with plentiful high-value travel experiences; user acceptance, frequency and the overall user scale will all witness fast growth during the process.

The evolution is fuelled by three key drivers.

Policy support: the Chinese government has played an important role in promoting the growth of China's automotive industry. Introduction and implementation of supporting policies as well as the regulation of

auto industry will make a significant impact on the market. Government at the central and local levels have issued relevant policies concerning top-level design, innovation guidance, technical standards, operational demonstrations, product imports and information security. In February 2020, 11 national ministries, including the National Development and Reform Commission (NDRC), jointly issued the Strategy for Innovative Development of Intelligent Vehicles (SID), setting a clear goal for the strategic vision of China's smart vehicle development. By 2025, the ecosystem of China's standard intelligent vehicles including technological innovation, industrial ecology, infrastructure, regulations and standards, product supervision and cyber security will be formed, in order to achieve large-scale production of intelligent autonomous vehicles and realize market application of highly autonomous intelligent vehicles in certain conditions. From 2035 to 2050, China's standard intelligent vehicle system will be further optimized. In the Long-Term Development Plan for the Automotive Industry issued by the Ministry of Industry and Information Technology (MIIT), the goal of reshaping the future value chain of

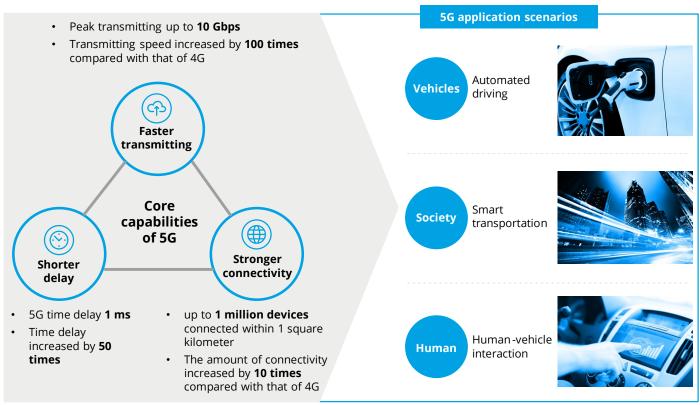
automotive industry has also been put forward. It is clearly stated that the automotive aftermarket services will account for more than 55% of the value chain by 2025.

Technological advancement: the

development and application

of artificial intelligence (AI), 5G, autonomous driving and other technologies will drive the development of the Internet of Vehicles (IoV) and expand innovative business scenarios. Al will be applied to a variety of complex issues through massive data training and optimal algorithms; IoT can increase the diversity of connection, enabling vehicles to connect with more terminals; cloud computing can provide flexible computing resources for vehicle information flow; virtual reality and augmented reality (VR and AR) can offer users more relaxed and realistic driving experiences; commercialization of 5G will significantly improve the processing and mining capabilities of the big data of loV, and empower the industry, ultimately realizing application in complex scenarios such as autonomous driving, smart transportation, human-vehicle interaction, etc.

Figure 10: 5G will significantly improve the processing and mining capabilities of the big data of IoV, empowering application in complex scenarios



Data sources: Huawei GIV, Deloitte Analytics

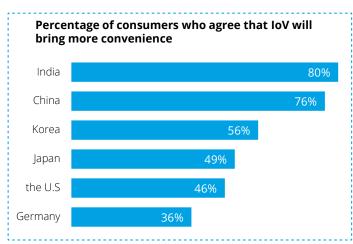
Consumer transformation: In China, where consumers are surrounded by various digital tools, the essence of competition in mobile Internet lies in the competition of different apps for people's time and attention every day.

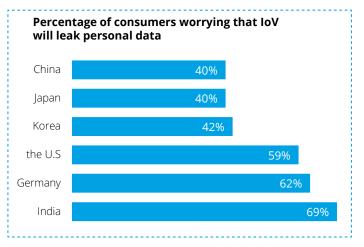
IoV has natural advantages in the competition for users' attention and time, thus expecting a high potential growth in market value. By comparing daily usage of Apps on mobile phones with market value of the corresponding company, it can be found that the longer usage time spent on Apps, (e.g., WeChat, Taobao and Douyin) the higher market value that the company will have. It is indicated that a service taking up more time in users' daily life has higher value recognition. The application of loV can provide lifestyle, entertainment,

and aftermarket services for drivers and passengers through efficient use of riding time. Once autonomous driving is commercialized and drivers are free from concentrating on driving, users' time in the car will be the focus of competition, which would unlock tremendous business potentials.

Thanks to high penetration rate of mobile Internet, Chinese consumers also show a high degree of acceptance of automotive intelligent connectivity. According to Survey of 2020 Global Automotive Consumers by Deloitte, 76% Chinese respondents agree that the development of IoV will bring more convenience to driving, much higher than that of US, Germany, Japan and South Korea, indicating that Chinese consumers are embracing the idea of application ecosystem of IoV.

Figure 11: Consumers' recognition of intelligent connected vehicles





Data sources: 2020 Deloitte Global Automotive Consumer Study.

Q3: To what extent do you agree with the following statements regarding to future vehicle technology? |

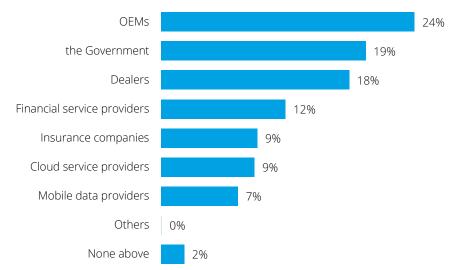
Sample size: n=18,118

The protection of user data, including personal data, vehicle information as well as user behavior patterns, has long been an important topic in the development of IoV. Consumers' trust in appropriate usage and protection of their personal data also determines the overall deployment speed of IoV. According to *Survey of 2020 Global Automotive Consumer* by Deloitte,

Chinese consumers show greater trust in OEMs (24%), followed by government (19%) and dealers (18%). In this respect, OEMs which previously lacked direct contact with users now enjoy considerable opportunities to manage user data to bring extra value to both drivers and passengers.

Figure 12: Consumers trust OEMs most in management of collected data

Respondents' preference on which type of organization you trust to manage your data



Compared with fragmented time occupied by mobile apps, users' time in automotive is more complete and has greater potential of commercial value. According to 2020 Deloitte Global Automotive Consumer Study, more than 90% of Chinese consumers are willing to pay for loV-related technologies, among which 25%-30% are willing to pay more than RMB 5,000.

Data sources: 2020 Deloitte Global Automotive Consumer Study, China,

Q36: If your vehicle has IoV functions, what type of organization would you trust most to manage your data? | Sample size: n=3,019

■ Unwilling to pay ■ RMB 5000 at most ■ More than RMB 5000 Connected with the in-vehicle entertainment 25% 9% and social networking 24% Automatic parking and paying parking fees Interacting with other vehicles and road 30% infrastructure to improve safety Transmitting technologies of optimizing 27% traffic flow Health problems detected by sensors 29% 6% in cockpit Functions including automatic-diagnosis, 27% reservation and maintenance of vehicles

Figure 13: Consumers' willingness to pay for IoV-related technologies

Data sources: Survey of 2020 Global Automotive Consumers by Deloitte, China Q37: How much will you pay for the following IoV-related technologies? | Sample size: n=3,019

In terms of policy trend, technology advances, consumer behaviours and ecological basis, China has sufficient preparations and opportunities to take the lead in automotive intelligent connectivity. However, to overtake competitors in the digital transformation, companies not only

need the determination to forge ahead and make decisive changes, but also a better understanding the evolutionary direction of the value chain in intelligent connectivity, so as to develop suitable transformation strategies for their development stage.

In the 2019 list, three of the top 10 leading global FinTech innovators were Chinese companies and 7 companies were selected in the top 50.

#### 3.3 Financial innovation is booming in China

In recent years, high-tech such as big data, distributed bookkeeping, cloud computing, and artificial intelligence have promoted the rapid development of China's financial innovation, spawning new formats such as internet payment, online lending, equity crowdfunding financing, and intelligent investment consulting.

China's FinTech sector has become highly attractive in the world. As the leading FinTech investment destination, in 2018, Chinese FinTech companies received 615 investments, accounting for 56.1% of global financing transactions with loan amount reaching RMB326 billion, accounting for 74.8% of the global total.

In recent years, China's development in FinTech area has continued to be strong. According to the recent *FinTech100* (by H2 Ventures) lists, China is the country with the largest number of top 10 companies. Chinese FinTech companies are involved in wealth management, insurance and cross-industry enterprises. Technology and innovation applications have expanded to an increasing number of financial services in China.

In the 2019 list, three of the top 10 leading global FinTech innovators were Chinese companies and 7 companies were selected in the top 50. Ant Technology Group, which is the world's largest third-party payment platform, has been ranked 1<sup>st</sup> for the past two years; Jingdong Digital Technology, which provides online and offline full-scene services around data and user needs, ranked 3<sup>rd</sup> and Du Xiaoman Financial which provides short lending and investment services, ranked 6<sup>th</sup>.

#### 3.3.1 Overview

At present, the players in FinTech area in China are mainly traditional financial institutions and large technology enterprises.

Traditional financial institutions continue to innovate and develop in use of scientific and technological approaches. 1) Optimizing business strategies and structures to explore diversified channels such as mobile phone applications and online direct sales and expand online services; 2) Improving service efficiency, to innovate product services, and carry out supply chain finance, small and micro enterprise network financing and other businesses; 3) Improving operating efficiency such as introducing blockchain technology in payment and clearing, credit management, asset custody, etc., and using smart contracts to simplify risk management.

Large technology enterprises have speeded up the layout of the financial industry. On the acquisition of licenses, *Ali* and *Tencent* each launched the establishment of *Zhejiang MyBank* and *Qianhai WeBank* to set up "service places" online to break the time and space constraints of traditional financial services; Mobile phone payment is deeply applied in the field of retail payment. Ant Group also provides credit information, cloud computing, asset trading platform and other financial services through *Sesame Credit*, financial cloud, *Wangjin agency* and other business.

In addition, traditional financial institutions are in alliances with technology enterprises to develop online operating platforms. Chinese big stated-owned banks (*ICBC*, *ABC*, *BOC* and *CCB*) have cooperated with big FinTech giants (*Alibaba*, *Tencent*, *Jingdong*, *Baidu*) to boost transitional innovations, co-developing FinTech labs, big data risk control, precision marketing, e-payment and the like.

# 3.3.2 China's development of FinTech brings opportunities

By 2019, The People's Bank of China issued *the FinTech Development Plan (2019-2021)*, which requires the "four beams and eight columns" of China's FinTech development should be

established and perfected, and "innovation, safety, inclusiveness and openness" should be taken as the basic principles to further enhance the scientific and technological application capacity of the financial industry by 2021.

Table 3: Current FinTech development situations in main Chinese cities

Locations	FinTech development situation
	Ten provinces and cities such as Beijing, Shanghai, and Guangdong have launched pilots for FinTech applications.
FinTech pilots cities	Beijing took the lead in carrying out pilot projects for FinTech innovation supervision, involving commercial banks, clearing organizations, payment institutions, technology companies and other institutions, focusing on the Internet of Things, big data, artificial intelligence, blockchain, API and other technologies, covering digital finance and other application scenarios.
	Shanghai accelerates the construction of a financial technology center. Shanghai has complete financial elements, a sound system, a solid foundation for scientific research and innovation, and broad prospects for the development of financial technology.
Shanghai	In January 2020, Shanghai released the <i>Accelerating the Implementation Plan for the Construction of the Shanghai FinTech Center,</i> which will successively launch a series of measures such as FinTech enterprise cultivation, tax incentives, and talent introduction, and build a globally competitive FinTech center within 5 years.
Shenzhen	Shenzhen's financial technology innovation model have been lead the country. <i>The World Intellectual Property Organization (WIPO)</i> patent database <i>Top 100 Global FinTech Patent Rankings in 2020</i> shows that Shenzhen ranks first in the number of patents.
SHEHZHEH	The development advantages of Shenzhen's leading FinTech companies are driving the Guangdong-Hong Kong-Macao Greater Bay Area to become a pivotal FinTech pole in China.

Source: PBOC, Public information, Deloitte Research

The role of blockchain has been becoming increasingly prominent. The combination of blockchain and FinTech and supply chain finance will produce many scenarios. At the same time, the combination of FinTech and blockchain is an important direction for the future digital transformation of industries, such as blockchain + industry chain finance, industry chain finance + FinTech/ Big data finance, FinTech + supply chain finance.

The central bank's legal digital currency will change the financial ecology. At present, the central bank's digital currency DC/EP has been tested in some cities and scenarios. Related areas include currency issuance (core banking systems), circulation (electronic wallet, payment) and management (encryption, identity authentication), which will create a large number of business opportunities centring around the transformation of banking IT systems, payment services and encryption technologies, with a higher demand for network information security. At present, the three telecom operators, China Mobile, China Unicom, China Telecom and the Big Four Stateowned banks, are participating in the pilot tests while third-party institutions in related fields will also have the opportunity to become cooperative partners of the Central Bank and provide support services soon.

# 3.3.3 Challenges of China's FinTech development

The development of FinTech has promoted inclusive finance, which has played an active role in facilitating financial transactions, meeting diversified investment and financing needs, improving the quality of financial services, and improving the efficiency of resource allocation. However, there are also related problems that bring challenges to maintain the stable operation of the financial industry.

First of all, it will aggravate the risk transmission across industries, markets and regions. FinTech has brought financial institutions, technology companies and financial market infrastructure closer together. Problems in any of the three may be quickly amplified. Secondly, there are hidden risks of information security. FinTech has helped financial institutions to understand customers, however, it also brings about social problems such as excessive information collection, misuse and substitution at the same time. As a result, some organizations have mastered massive consumer data and monopolize the entire information chain. Once the event of a data breach or cyber attack occur, it may even pose a threat to the data security of the whole country.

In short, policy support and regulatory guidance are critical to the healthy development of FinTech. Financial regulatory authorities have grasped the direction from the perspective of top-level design, and have promoted the rapid implementation of FinTech innovation applications by releasing policy dividends. Authorities will continue to improve regulatory efficiency, reduce compliance costs, and promote the development of FinTech by application of the regulatory technology, under an inclusive and prudential regulatory framework.

#### 3.4 Smart city 2.0: the next generation

# 3.4.1 Accelerating urbanization promotes the smart city development

Urbanization has brought various impacts on city economy, resource utilization, quality of life, time cost, sustainable development and other aspects. With the ongoing urbanization and increasing population, city managers around the world are faced with increasingly severe challenges as follows.

Figure 14:

#### **Population**

- Global population is approaching 7.6 billion, of which urban population exceeds 4 billion; China's total population is close to 1.4 billion, and its urban population has reached 830 million.
- "Megacity" is defined by the UN as an urban agglomeration of more than 10 million residents. In 2019, there were at least 40 megacities in the world, among which 13 are located in China such as Beijing, Tianjin, Shanghai, Chongqing, Guangzhou and Shenzhen.

#### **Urban wastes**

- It is estimated that by 2050, the average amount of wastes generated by urban residents around the world will have increased from 2 billion tons to 3.4 billion tons per year, mainly resulting from rapidly growing cities in developing countries.
- 57% of China's waste is disposed of landfills, and accumulation of urban wastes nationwide occupies more than 500 million square meters of land, causing annual economic losses of RMB 30 billion.



- The average time of commuting in large cities is over **30 minutes**, and the average distance of commuting in Beijing, Shanghai and Guangzhou is over **15km**.
- The average commuting time in New York is **35 minutes**.
- In cities with advanced smart transportation such as **London**, **New York and Shanghai**, commuting time is reduced for the same distance.

Data sources: Didi Chuxing Big Data Platform; National Bureau of Statics; American Community Survey; Department for Transport, UK; World Health Organization; World Bank; Deloitte Research

In addition, rapid urbanization will also bring about other problems such as lack of public resources, decline in urban life quality and slowdown of urban economic growth, etc., all of which are closely related to sustainable development of cities.

#### Figure 15:

#### **Health**

- More than **75%** of Chinese people are in sub-health state.
- Chronic nutrition-related diseases, such as cardiocerebrovascular diseases and cancers, account for 80% of death causes in China.
- By 2020, the elderly who need medical care due to inability to live on their own will exceed **20 million**.

#### **Pollution**

- First, urban air pollution has become the biggest health threat.
  - According to WHO, only 9% of the world's population live in cities where the air quality meets WHO standard.
  - According to the study of Yale University, China's air quality ranks the **second to last** in the world, with PM2.5 not meeting the standard in most areas.
- Second, urban noise pollution undermines life quality.
  - In 2018, noise complaints in China accounted for 43% of the total environmental complaints, while nearly 130 million people in Europe are disturbed by road noise over 55 decibels.

#### **Communication**

 The rising demand for communication imposes challenges on urban network infrastructure construction and operators' capabilities of network maintenance.

#### **Education**

- The high school enrolment rate in China's urban areas is **93%**, but that in rural areas is only **37%**.
- There are clear disparities of education expenditures per student among provinces in China. For example, education expenditure for senior high school students in Beijing is 8.7 times that of Henan Province.

Data sources: China Internet Network Information Centre; Educational Statics Yearbook of China; China Urban-Rural Construction Statistical Yearbook; Ministry of Ecology and Environment of China; Institute for Urban and Environmental Studies Chinese Academy of Social Sciences; World Health Organization; World Bank; Deloitte Research

# 3.4.2 Countries and regions worldwide are actively building smart cities while Asia-Pacific leverage late-mover advantages to lead the way

To meet the challenges brought by urbanization, many countries invested heavily in the construction of smart cities in the past decade.

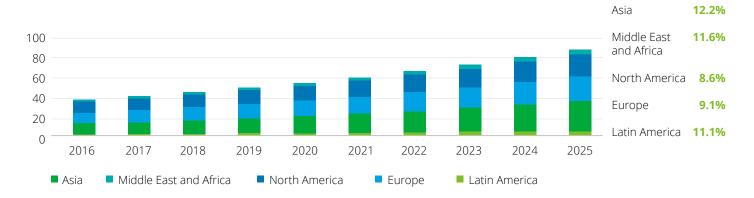
The investment increases year by year and is expected to reach the peak in the next five years. Thanks to late-mover advantages and huge development potential, Asian countries and regions have more opportunities in building smart cities.

Figure 16: Global investment of smart cities construction (billion dollars)

Smart city stage 1.0: First-movers formulate strategies to make investment

Smart city stage 1.0: First-movers formulate strategies to make investment

Compound annual growth rate





#### 2004

The Korean government launched the "U-Korea" strategy, aiming to lead Korea into a smart society through technologies development such as the Internet and wireless



Singapore clearly defined "smart country" as a leading strategy for economy and society.



Japan formulated i-Japan 2015 strategy, focusing on people.



Three priorities in European 2020 Strategy, are intelligent growth, sustainable growth and inclusive growth.



Amsterdam Smarter City plan of the Netherlands was dedicated to sustainable development of life and transportation.



China's Smart Cities Industry Alliance led by MIIT was established. During the 12th Five-year Plan, total planned investment on smart cities was up to RMB 500 billion.



The U.S government made new initiatives on smart city, actively arranging smart transportation, grid and broadband, with a total investment of USD 160 million.



India proposed to build 100 smart cities in the mode of PPP. The government announced to make an investment of 7.5 billion dollars in the next five years.



#### 2016

The Vietnam government vigorously support industries related to smart cities, making an investment of 2.94 million dollars to Kien Giang province.



The Government of Hong Kong Special Administration Region proposed a blueprint including nearly 20 projects with a total investment of 100 million dollars.



#### 2018

ASEAN smart city network covered 26 pilot cities funded by 20 million dollars from Australia, and the two sides cooperated in developing smart cities.

Data sources: Governments public information; Navigant; Deloitte Research

The market of Smart city solutions is in great demand. The growth rate of Asia-Pacific market has overtaken that of Europe and America. Asia-Pacific region has its unique national conditions and urban development demands, different from those of Europe and America in key projects of smart cities.

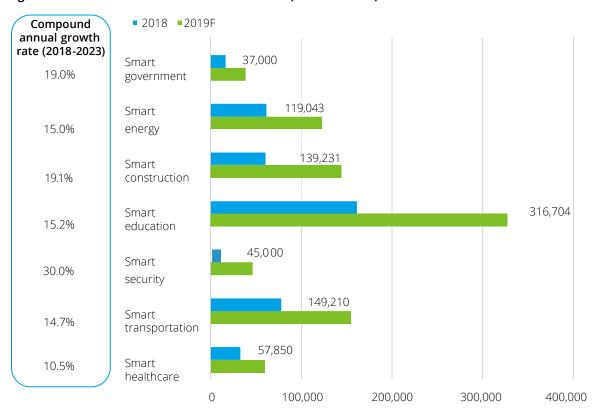
Table 4: key projects of smart cities in Asia-Pacific regions

	Challenges	Solutions	Lessons Learned
Smart transportation (Seoul)	Due to insufficient infrastructure, rapid increase in private cars results in heavy traffic as well as environmental problems such as air and noise pollution.	<ul> <li>Seoul has established comprehensive transportation system, in which transportation data can be obtained through smart cameras in subways, so that the speed and frequency of trains can be adjusted in real time; in addition, sensors are installed to monitor train components to prevent malfunction.</li> <li>More than 800 video cameras are deployed on the roads, so that traffic conditions are automatically shared on social platforms. Traffic Guiding LED Display can show the information such as the arrival time and destination of vehicles, with the accuracy rate reaching 94% and satisfaction rate of citizens up to 96%.</li> </ul>	<ul> <li>Traffic congestion and pollution are relieved by the improvement of public transportation infrastructure.</li> <li>According to statistics, by 2025, the commuting time in cities with smart transportation application will be decreased by 15-20% on average.</li> </ul>
Smart environment (Yokohama)	Japan is a country with inadequate oil and gas resources but frequent occurrence of natural disasters. After 3.11 earthquake, the Japanese government shut down some nuclear power plants. In order to relieve tensions in energy supply, Japan has shifted its focus to reducing energy consumption in smart city research and construction.	<ul> <li>Deploying a set of energy management systems in household and commercial buildings can realize "visualization" of energy management. After solar energy generation and residential energy management system are applied, the generation, consumption as well as sales of power would be displayed on the system.</li> <li>Government subsidies are provided to encourage citizens to install household energy management system and solar panels.</li> </ul>	<ul> <li>Real-time monitoring of energy consumption can reduce energy waste. Carbon dioxide emission in Yokohama has decreased by 39,000 tons, and citizens' power demand in peak hours by 15% on average.</li> <li>Citizens are motivated to participate in construction of smart city with policy incentives.</li> </ul>
Smart healthcare (Singapore)	Singapore is facing serious aging problems. Senior citizen's demands for healthcare and caretaking will bring pressure to the society, government and development of the whole aging industry.	<ul> <li>In 2017, the promotion of <i>Video Consultation</i>, a kind of remote healthcare consultation, realized citizens' online medical consultation on smartphones and computers.</li> <li>Smart medical rehab centers are established so that patients can use wearable devices to seek online advice from therapists.</li> </ul>	<ul> <li>When choosing where to focus in smart city construction, balance should be achieved between satisfying special groups and the public.</li> <li>According to statistics, the use of applications related to smart healthcare can decrease disability-adjusted life year (DALY) by 8-15%.</li> </ul>

Smart education has the largest market share among various fields of smart cities worldwide. It is predicted that it will maintain the highest market share till 2023, while smart security is also witnessing obvious growth. There are a larger

number of smart projects in Asia, while Middle East and Africa, where water resources are scarce, top the list of the number of smart water system projects in the world.

Figure 17: Market share of smart cities worldwide (million dollars)

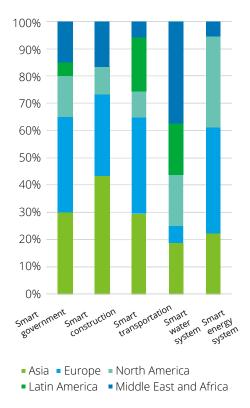


Data sources: Juniper Research; Market Watch; Markets and Markets; Market Research Future; Grandview Research; Deloitte Research



China deploys a multi-tier And multipilot development model, focusing on both the quality and efficiency of smart city construction.

Figure 18: Proportion of ongoing projects of smart city worldwide



3.4.3.1 Expanding from east to west, from pilots to clusters

Whether in developed regions such as Europe and America, or in developing regions in Africa and some parts of Asia, most countries in the world are actively involved in the construction of smart cities, among which Europe, North America as well as Japan and South Korea are taking the lead. China is also actively nurturing smart cities, forming several smart city clusters.

China has become the most vigorous country to build smart cities in the world, with its total number of pilot projects exceeding that of Europe.



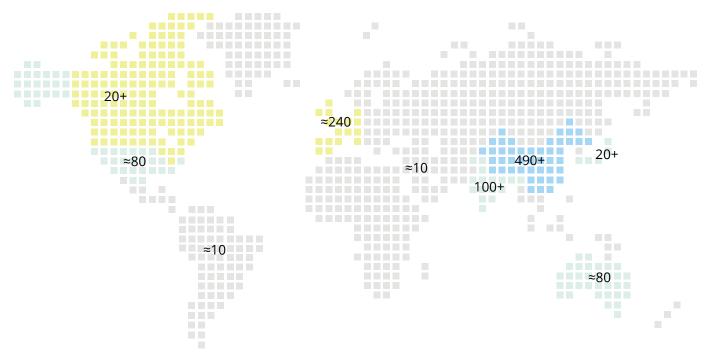
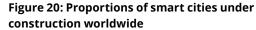
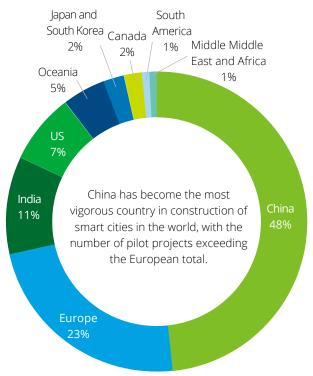


Figure 19: Numbers of smart cities under construction worldwide





Data sources: public information of Chinese, Indian, Japanese and Korean government; public information of US Department of Transportation; public information of EU; Smart City Council; Navigant; Deloitte Research

Since the strategy of building new smart cities was proposed, China has adopted a multi-tier development model to improve the quality and efficiency of smart city construction. Most of the cities and regions selected as national smart city pilots are located in Bohai Rim Area and Yangtze River Delta.

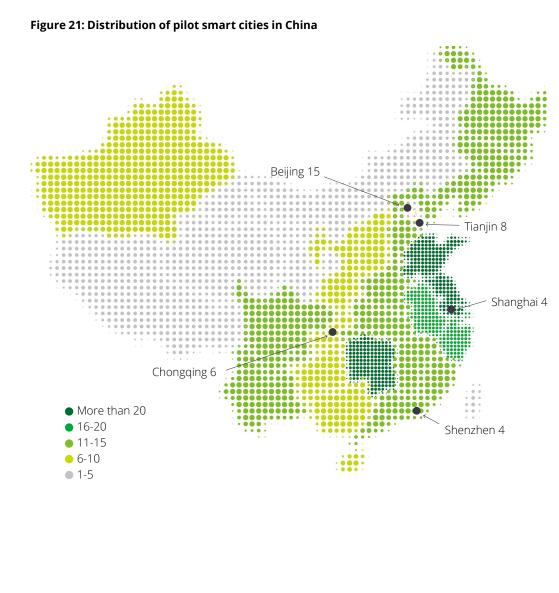


Figure 22: Number of smart city pilots in various provinces and municipalities in China

44       Jiangsu         39       Shandong         27       Sichuan         26       Hunan         26       Zhejiang         23       Henan         22       Anhui         18       Hebei         18       Jilin         18       Liaoning         17       Yunnan         16       Hubei         15       Guangdong         15       Guangdong         15       Gansu         15       Gansu         15       Gansu         15       Guangxi         14       Shanxi         13       Heilongjiang         13       Heilongjiang         13       Jiangxi         11       Xinjiang         Ningxia       Tianjin         6       Shaanxi         6       Chongqing         5       Hainan         4       Shenzhen         Qinghai       Shanghai		
27         Sichuan           26         Hunan           26         Zhejiang           23         Henan           22         Anhui           18         Hebei           18         Liaoning           17         Yunnan           16         Guizhou           16         Hubei           15         Guangdong           15         Gansu           15         Gansu           15         Gansu           15         Guangxi           14         Shanxi           13         Heilongjiang           13         Jiangxi           11         Xinjiang           8         Ningxia           11         Shaanxi           6         Chongqing           5         Hainan           4         Shenzhen           4         Qinghai	44 -	
26         Hunan           26         Zhejiang           23         Henan           22         Anhui           18         Hebei           18         Liaoning           17         Yunnan           16         Hubei           15         Guangdong           15         Fujian           15         Gansu           15         Guangxi           14         Shanxi           13         Heilongjiang           13         Heilongjiang           13         Jiangxi           12         Inner Mongolia           11         Xinjiang           8         Ningxia           3         Tianjin           6         Chongqing           5         Hainan           4         Shenzhen           4         Qinghai	39 -	Shandong
26       Zhejiang         23       Henan         22       Anhui         18       Jilin         18       Jilin         18       Liaoning         17       Yunnan         16       Hubei         15       Guangdong         15       Beijing         15       Gansu         15       Gansu         15       Guangxi         14       Shanxi         13       Heilongjiang         13       Jiangxi         12       Inner Mongolia         11       Xinjiang         8       Ningxia         3       Tianjin         6       Shaanxi         6       Chongqing         5       Hainan         4       Shenzhen         4       Qinghai	27 -	Sichuan
23         —         Henan           22         —         Anhui           18         —         Jilin           18         —         Liaoning           17         —         Yunnan           16         —         Guizhou           16         —         Hubei           15         —         Guangdong           15         —         Guangu           15         —         Gansu           15         —         Guangxi           14         —         Shanxi           13         —         Heilongjiang           13         —         Jiangxi           12         —         Inner Mongolia           11         —         Xinjiang           8         —         Ningxia           8         —         Tianjin           6         —         Shaanxi           6         —         Chongqing           5         —         Hainan           4         —         Shenzhen           4         —         Qinghai	26 -	
22       Anhui         18       Hebei         18       Jilin         18       Liaoning         17       Yunnan         16       Guizhou         16       Hubei         15       Guangdong         15       Fujian         15       Gansu         15       Guangxi         14       Shanxi         13       Heilongjiang         13       Jiangxi         12       Inner Mongolia         11       Xinjiang         8       Ningxia         8       Tianjin         6       Shaanxi         6       Chongqing         5       Hainan         4       Shenzhen         4       Qinghai	26 -	Zhejiang
18         —         Hebei           18         —         Jilin           18         —         Liaoning           17         —         Yunnan           16         —         Guizhou           16         —         Hubei           15         —         Guangdong           15         —         Fujian           15         —         Gansu           15         —         Guangxi           14         —         Shanxi           13         —         Heilongjiang           13         —         Jiangxi           11         —         Xinjiang           8         —         Ningxia           8         —         Tianjin           6         —         Shaanxi           6         —         Chongqing           5         —         Hainan           4         —         Shenzhen           4         —         Qinghai	23 -	Henan
18         —         Jilin           18         —         Liaoning           17         —         Yunnan           16         —         Guizhou           16         —         Hubei           15         —         Guangdong           15         —         Fujian           15         —         Gansu           15         —         Guangxi           14         —         Shanxi           13         —         Heilongjiang           13         —         Jiangxi           12         —         Inner Mongolia           11         —         Xinjiang           8         —         Ningxia           8         —         Tianjin           6         —         Chongqing           5         —         Hainan           4         —         Shenzhen           4         —         Qinghai	22 -	Anhui
18         Liaoning           17         Yunnan           16         Guizhou           16         Hubei           15         Guangdong           15         Beijing           15         Fujian           15         Gansu           15         Guangxi           14         Shanxi           13         Heilongjiang           13         Jiangxi           12         Inner Mongolia           11         Xinjiang           8         Ningxia           8         Tianjin           6         Shaanxi           6         Chongqing           5         Hainan           4         Shenzhen           4         Qinghai	18 -	Hebei
17       Yunnan         16       Guizhou         16       Hubei         15       Guangdong         15       Fujian         15       Gansu         15       Guangxi         14       Shanxi         13       Heilongjiang         13       Jiangxi         12       Inner Mongolia         11       Xinjiang         8       Ningxia         8       Tianjin         6       Shaanxi         6       Chongqing         5       Hainan         4       Shenzhen         4       Qinghai	18 -	 Jilin
16         Guizhou           16         Hubei           15         Guangdong           15         Beijing           15         Fujian           15         Gansu           15         Guangxi           14         Shanxi           13         Heilongjiang           13         Jiangxi           12         Inner Mongolia           11         Xinjiang           8         Ningxia           8         Tianjin           6         Shaanxi           6         Chongqing           5         Hainan           4         Shenzhen           4         Qinghai	18 -	Liaoning
16       Hubei         15       Guangdong         15       Beijing         15       Fujian         15       Gansu         15       Guangxi         14       Shanxi         13       Heilongjiang         13       Jiangxi         12       Inner Mongolia         11       Xinjiang         8       Ningxia         8       Tianjin         6       Shaanxi         6       Chongqing         5       Hainan         4       Shenzhen         4       Qinghai	17 -	Yunnan
15         —         Guangdong           15         —         Beijing           15         —         Fujian           15         —         Gansu           15         —         Guangxi           14         —         Shanxi           13         —         Heilongjiang           13         —         Jiangxi           12         —         Inner Mongolia           11         —         Xinjiang           8         —         Ningxia           8         —         Tianjin           6         —         Shaanxi           6         —         Chongqing           5         —         Hainan           4         —         Shenzhen           4         —         Qinghai	16 -	Guizhou
15       —       Beijing         15       —       Fujian         15       —       Gansu         15       —       Guangxi         14       —       Shanxi         13       —       Heilongjiang         13       —       Jiangxi         12       —       Inner Mongolia         11       —       Xinjiang         8       —       Ningxia         8       —       Tianjin         6       —       Shaanxi         6       —       Chongqing         5       —       Hainan         4       —       Shenzhen         4       —       Qinghai	16 -	 Hubei
15       —       Fujian         15       —       Gansu         15       —       Guangxi         14       —       Shanxi         13       —       Heilongjiang         13       —       Jiangxi         12       —       Inner Mongolia         11       —       Xinjiang         8       —       Ningxia         8       —       Tianjin         6       —       Shaanxi         6       —       Chongqing         5       —       Hainan         4       —       Shenzhen         4       —       Qinghai		Guangdong
15       Gansu         15       Guangxi         14       Shanxi         13       Heilongjiang         13       Jiangxi         12       Inner Mongolia         11       Xinjiang         8       Ningxia         8       Tianjin         6       Shaanxi         6       Chongqing         5       Hainan         4       Shenzhen         4       Qinghai	15 -	Beijing
15       —       Guangxi         14       —       Shanxi         13       —       Heilongjiang         13       —       Jiangxi         12       —       Inner Mongolia         11       —       Xinjiang         8       —       Ningxia         8       —       Tianjin         6       —       Shaanxi         6       —       Chongqing         5       —       Hainan         4       —       Shenzhen         4       —       Qinghai	15 -	Fujian
14 - Shanxi 13 - Heilongjiang 13 - Jiangxi 12 - Inner Mongolia 11 - Xinjiang 8 - Ningxia 8 - Tianjin 6 - Shaanxi 6 - Chongqing 5 - Hainan 4 Shenzhen 4 Qinghai	15 -	Gansu
13 - Heilongjiang 13 - Jiangxi 12 - Inner Mongolia 11 - Xinjiang 8 - Ningxia 8 - Tianjin 6 - Shaanxi 6 - Chongqing 5 - Hainan 4 Shenzhen 4 Qinghai	15 -	Guangxi
13       —       Jiangxi         12       —       Inner Mongolia         11       —       Xinjiang         8       —       Ningxia         8       —       Tianjin         6       —       Shaanxi         6       —       Chongqing         5       —       Hainan         4       —       Shenzhen         4       —       Qinghai	14 -	Shanxi
12 - Inner Mongolia 11 - Xinjiang 8 - Ningxia 8 - Tianjin 6 - Shaanxi 6 - Chongqing 5 Hainan 4 Shenzhen 4 Qinghai	13 -	Heilongjiang
Xinjiang  Xinjiang  Ningxia		Jiangxi
<ul> <li>8 - Ningxia</li> <li>8 - Tianjin</li> <li>6 - Shaanxi</li> <li>6 - Chongqing</li> <li>5 Hainan</li> <li>4 Shenzhen</li> <li>4 Qinghai</li> </ul>		 Inner Mongolia
8 - Tianjin 6 - Shaanxi 6 - Chongqing 5 Hainan 4 Shenzhen 4 Qinghai	11 -	Xinjiang
6 - Shaanxi 6 - Chongqing 5 Hainan 4 Shenzhen 4 Qinghai		Ningxia
6 - Chongqing 5 Hainan 4 Shenzhen 4 Qinghai		Tianjin
5 Hainan 4 Shenzhen 4 Qinghai		Shaanxi
4 — Shenzhen 4 — Qinghai		Chongqing
4 — Qinghai		Hainan
Qirigilar		Shenzhen
4 Shanghai		Qinghai
	4	Shanghai

Note: the number of smart city pilots is calculated based on information released by the Ministry of Housing and Urban-rural Affairs and official websites of local governments. The data may be incomplete given that administrative levels of the regions are different and when there are several pilot projects in the same region, they are considered as one.

Data sources: Public information of Chinese government; China Smart City; Deloitte Research

Figure 23: Distribution of elected smart city pilots

#### Wuhan: smart life

 Increased interactions between the government and citizens and improved people's livelihood through efficient transmission of information and intelligent response

# Chongqing: IT+ smart infrastructure

 Improved information infrastructure and urban sensing infrastructure; optimized public information platforms, and extended network coverage

#### Chengdu: smart transportation

 Improved transportation network and promotion of tourism through cooperation with Didi Chuxing Microsoft, etc. and application of cloud computing technologies and Internet of Things (IoT)

#### Shenzhen:

Smart security + smart government affairs

 Fully deployed urban security monitoring system in all districts with networking relying on IoT and government data centers

#### Smart transportation

 Building model roads and new management system of smart transportation through the application of "Smart Transportation Brain traffic management platform" and the improvement of transportation technology facilities

### Nanjing: IoT platform

 Application of government data centers and convenient facilities such as citizen cards through IoT

#### Beijing:

Big data + smart economy

 Full IT application and IoT construction in capital city through a wider coverage of and intelligent integration of information applications

#### Smart life

 Integration of all kinds of government services closely related to citizens' life through the "Internet + government services" and removal of information barriers between various departments

#### Tianjin: smart environment protection

 Build an integrated system of intelligent environmental monitoring technologies to achieve energy-saving management in cities and lower energy consumption in economic construction

#### Shanghai: Smart life

 Build a unified food tracking system to supervise food safety

#### Smart education

 One-stop services such as online classrooms and personal lifelong learning profiles through integration of educational resources

#### Hangzhou:

Urban Data Brain 2.0 + Smart economy

Cloud computing and big data industry centers

#### **Smart transportation**

 Automatic adjustment of the duration of signal lights and dispatching platform of public transportation

### Guangzhou: Smart transportation

• On-demand platform covering core areas, primary and secondary roads, etc. to realize real-time monitoring

#### Smart education

• Implementation of "Digital Education City" project: establishments of a municipal digitalized public education service platform and 100% connection of the public primary and secondary schools with broadband network and 100% access to the Internet of private schools

Data sources: Public information of Chinese government; China Smart City; Deloitte Research



The strategy of building China's smart cities is adapted to their local situations. From the perspective of regional distribution, smart cities expand from the east coast to the central and western regions, from pilots to clusters.

3.4.3.2 Smart logistics, smart construction and smart government witness rapid growth, while smart healthcare shows great potential

The market size of smart cities in China has maintained a growth rate of more than 30% in recent years. Smart logistics, smart construction and smart government affairs occupy a large market share, while other fields such as smart healthcare have shown huge growth potentials.

Figure 24: Market size of various fields of smart cities in China (2018)

18.71%

19.64%

28.93%

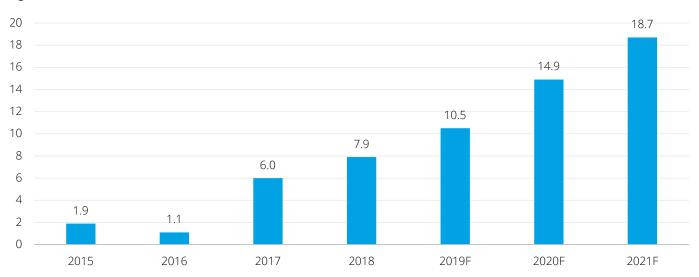
24.36%

Others

Smart household appliances
Smart construction

Smart logistics

Figure 25: Market value of China's smart cities in the future (RMB trillion)



■ Smart government affairs

Data sources: public information of Chinese government; Institute of Forward-looking Industries; Deloitte Research

3.4.3.3 First-tier cities have a clear competitive edge in innovation while all smart cities are powered by advanced technologies

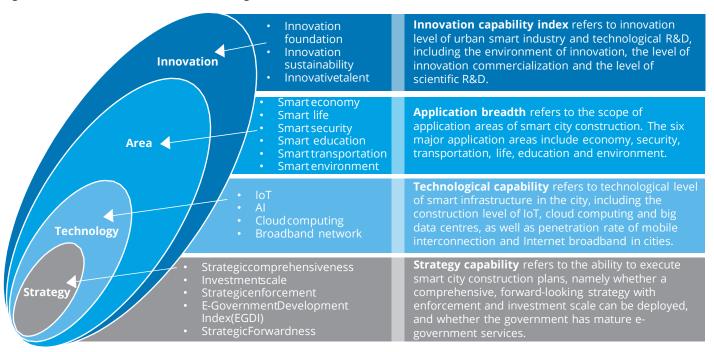
Deloitte conducts a systematic analysis of 26 key cities in China from four dimensions, namely strategy, technology, area, and innovation, to identify the development status of China's smart cities and determine the gap between these cities and super smart cities.

Smart megacities can be measured in four aspects: firstly, there is long-term strategic planning in place, which can reflect the government's determination to develop smart cities; secondly, there is sufficient support from

technology infrastructure; thirdly, it is smart enough both horizontally and vertically; fourthly, it is capable of sustainable innovation, a promise to the bright future of smart cities.

Most of the selected cities (including the first, second- and third-tiers) are located along the eastern coast and in the central/western regions, including four major first-tier cities and some second-tier cities whose development status is approaching first-tier cities in recent years, as well as other representative cities. The development and planning of smart cities are related to the level of economic level of the cities which have more capabilities to plan and execute smart development strategies.

Figure 26: Assessment models of smart megacities



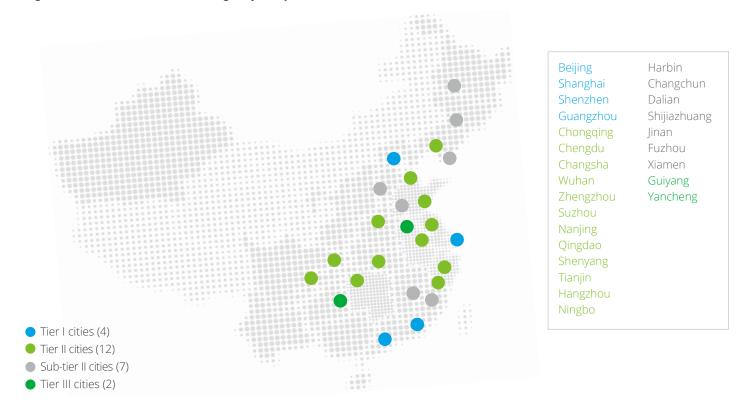


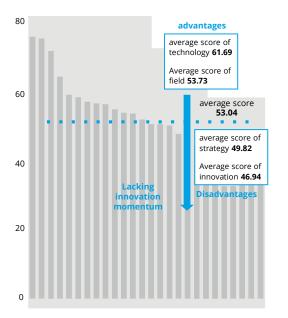
Figure 27: Distribution of smart megacity samples

Data sources: Deloitte Research.

Note: cities are classified with reference to CBN: China's new first-tier cities, among which second-tier developed cities are classified as new first-tier cities.

On the whole, first-tier cities are far ahead of other cities in terms of smart city construction. Second- and third-tier cities show obvious shortcomings when it comes to innovation, which is unfavorable to the construction of sustainable smart city. In addition, there exist different gaps among smart cities in terms of application breadth.

### Figure 28: Average scores of smart megacities in four areas



Data sources: Statistical Communique of Communication Industry in 2018, Deloitte Research

#### Technological capability is generally high among cities.

- Under the guidance of national policies such as "Broadband China", "Digital China", "Internet+" and initiatives such as "Big Data" and "Artificial Intelligence", local governments across China have been devoted to the development of relevant technological fields, with advances in smart city construction in smart cities.
- Eight provinces and municipalities including Shandong, Chongqing, Guangdong and Zhejiang have set up government agencies to manage big data
- In 2018, the goal of achieving full coverage of optical network in cities is was almost achieved, and more than 90% of cities had access to broadband Internet through optical fibre.

#### Differences in six major areas among cities are prominent

- There is no clear gap among cities in terms of smart education, environment, life, transportation and economy. The smart city system is complete good development momentum while smart security needs improvement.
- There are obvious gaps among tier I, II and III cities in some certain areas. First-tier cities witness balanced development in all aspects. Second-tier cities such as Harbin lag behind in terms of smart economy. Third-tier cities in Northeast China need to catch up in terms of smart environment, life and transportation.

#### Smart strategies should be supported by stronger enforcement and more funds

- Governments of most cities have issued comprehensive smart city plans, with some cities having included plans till 2035, indicating the forwardness and comprehensiveness of strategies. In addition, thanks to the central government's active promotion, e-government has achieved balanced and rapid development among cities.
- Restricted by limited financial budgets and investment, enforcement of smart city strategies needs to be strengthened.

#### Innovation momentum is insufficient

- As first-tier cities are at a more advanced stage of urban development, they have greater advantages in innovation environment, innovative talents, and innovation sustainability.
- However, second- and third-tier cities have shown insufficient innovations in almost all aspects. The innovation infrastructure and innovation environment of some north-eastern and mid-western cities are in desperate need of improvement, as the lack of resources can directly lead to talent shortage and unsustainability.

#### Know more about Deloitte insights on hot topics, please contact



Zhang Tianbing
Deloitte APAC Consumer Products
and Retail Sectors Leader
tbzhang@deloitte.com.cn



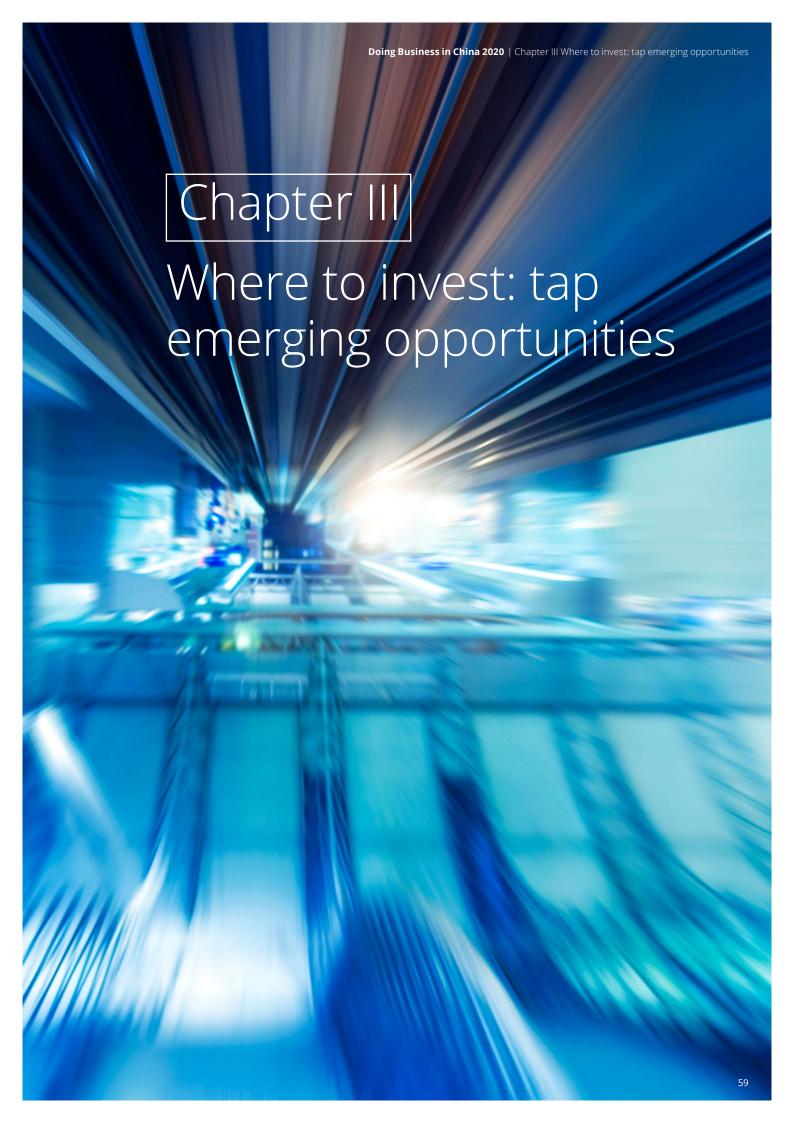
David Wu Deloitte China Financial Service Industry Leader davidwjwu@deloitte.com.cn



Andy Zhou
Deloitte China Automotive
Sector Leader
andyzhou@deloitte.com.cn



Clare Ma
Deloitte China Smart City
Leader
clarma@deloitte.com.cn





### Free trade zones in China China key FTZs

With the opening-up of Chinese economy, vigorous macro-economic environment with structural reforms and more open business environment are taking shape in China. The establishment of Pilot Free Trade Zones (PFTZs) represents China's major move to adopt a more proactive strategy of opening up in line with the new trend of global economic development. An FTZ is a specific area delimited by a certain country or region within its own territory, and implements special preferential tax and regulatory policies.

Currently, PFTZs are considered as a new highland for China opening-up, which include both special Customs supervision and non-Customs supervision areas. The special Customs supervision areas mainly carry out trade facilitation reforms and implement FTZ-like policies; while the non-Customs supervision areas mainly take reforms in investment liberalization, financial internationalization, and regulatory legalization.

From September 2013 to August 2020, China has established 21 PFTZs across the country to experiment with new regulations and explore ways to improve the business environment that would later be replicated nationwide. The launch of PFTZs in China has grown into the pattern of "1+3+7+1+6+3".

On April 13, 2018, Xi linping solemnly announced the establishment of a free trade port in Hainan at the celebration of the 30<sup>th</sup> anniversary of the establishment of a special economic zone in Hainan province. On October 16, 2018, the overall plan of the Hainan Free Trade Zone was officially announced. It was a major decision made by the Party Central Committee and the State Council with a view to international and domestic development, in-depth research, and scientific planning, and a major initiative to actively promote the determination of economic globalization. On June 1, the Overall Plan for the Construction of Hainan Free Trade Port was officially released, aiming to build it into a globally influential high-level free trade port by the middle of the century.

In the past year, Hainan province has focused on promoting institutional innovation in 12 areas and has formed six batches of 71 institutional innovation cases, which have promoted the continuous optimization of Hainan's business environment and social governance, enhancing the vitality of market players. On April 25 2020, China's Hainan province held a press conference in Haikou on its first batch of institutional innovation cases in 2020 concerning Hainan Pilot Free Trade Port construction. The island province unveiled six institutional innovation cases at the conference.

The FTZs have promoted deeper reforms, played leading roles in exploring new models of opening-up, and strongly boosted China's high-quality development. In the future, the PFTZs will further facilitate high-level opening-up and boost high-quality development through deeper reforms.

An FTZ is a specific area delimited by a certain country or region within its own territory, and implements special preferential tax and regulatory policies.



The establishment of Pilot Free Trade Zones (PFTZs) represents China's major move to adopt a more proactive strategy of opening up in line with the new trend of global economic development.

Figure 29: "1+3+7+1+6+3" Newly Coordinative Pattern of PFTZs

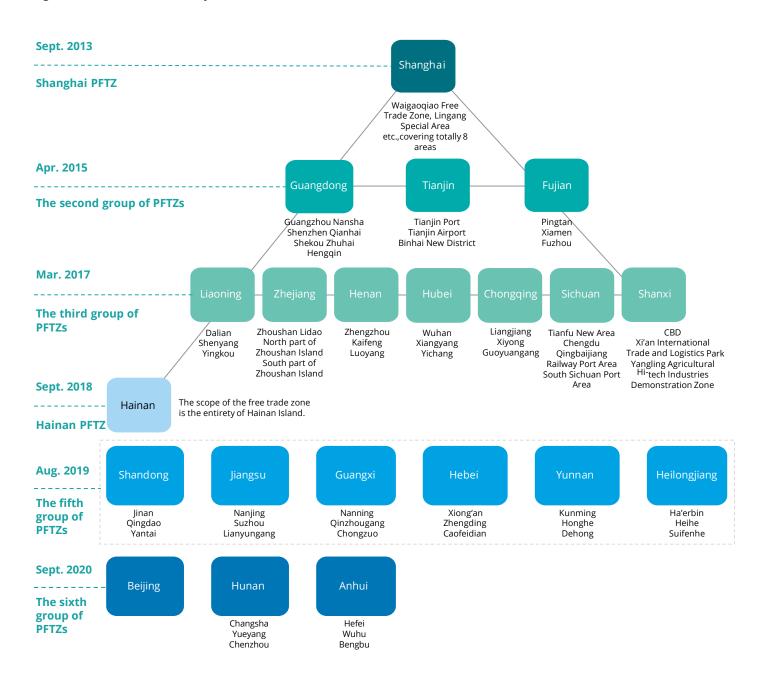
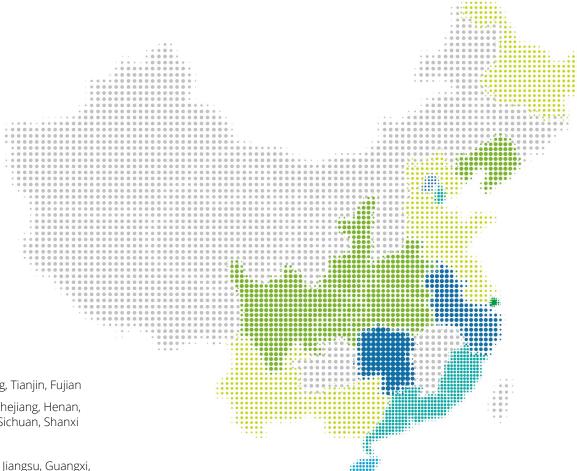


Figure 30: The map of PFTZs in China



- 2013.09 Shanghai
- 2015.04 Guangdong, Tianjin, Fujian
- 2017.04 Liaoning, Zhejiang, Henan, Hubei, Chongqing, Sichuan, Shanxi
- 2018.10 Hainan
- 2019.08 Shandong, Jiangsu, Guangxi, Hebei, Yunnan, Heilongjiang
- 2020.09 Beijing, Hunan, Anhui, Zhejiang (Expansion)

#### 1.2 Supportive policies/incentives

To further open up, China has introduced a series of policies or incentives for PFTZs in terms of overall reform plan, accessibility, talent, and industries etc.

- Overall reform plan: Since the establishment of PFTZs, the State Council has successively issued overall plans for 21 PFTZs. To further deepen the reform and opening up of PFTZs, they have also issued specific and comprehensive deepening plans of their own.
- Accessibility: China has issued Negative Lists for Foreign Investment Access in Pilot Free Trade Zones every year since 2015, and the Special Administrative Measures (Negative List) for Admission of Foreign Investment in PFTZs (Year 2019) has been implemented with effect from 30 July 2019. The list includes 37 special administrative measures. According to the List, a foreign investment project is no longer subject to approval so long as it is not included on the List. Such mechanism allows majority foreign ownership or wholly owned foreign enterprises engaged in more business areas, in order to increase international cooperation. It's a welcome step in China's ongoing opening up process. The removal/raising of equity caps for foreign investment in selected areas of the Chinese economy has the potential to bring new opportunities for some foreign companies to enter the market or expand their footprint.
- Talent policies: A series of supportive policies are issued for different types of talents, including entrepreneurial and innovative talents, advanced talents, high-level talents, skilled talents, innovation teams, etc. PFTZs introduced various policies and incentives to attract and support these talents, including benefits on work permit, residence permit, education and medical care, living support, etc.

On August 20, 2019, the Lingang Special Area of China (Shanghai) Pilot Free Trade Zone was officially launched. The new section will match the standard of the most competitive free trade zones worldwide and will facilitate overseas investment and capital flows and realize the free flow of goods. The area, administered like a special economic zone, will establish an institutional system with its focus on investment and trade liberalization and set up an open industrial system with global competitiveness. The area, home to Tesla's gigafactory, has become a cluster of high-end industries after more than a decade of development, and it emphasizes the development of key industries like integrated circuits, AI, biomedicine and civil aviation.

• Industries policies: According to key industries, PFTZs have introduced different industrial preferential policies, focusing on industrial capacity building and upgrading, and independent innovation capacity building, etc. These preferential policies aim to provide enterprises with subsidies such as funds and renting houses in the process of industrial development.

At the beginning of Year 2020, Shanghai carried out a comprehensive review of the administrative examination and approval system and administrative penalty system at the municipal and district levels that will be centrally exercised by the China (Shanghai) Pilot Free Trade Zone Lingang Special Area Administration. Business affairs for companies will also be simplified, which will enable Lin-gang Special Area to build a first class investment environment.

Taking Shanghai PFTZ Lin-gang special area as an example, the supportive policies and incentives are illustrated as below:



In accordance with the Overall Plan for the Lin-gang Special Area of the China (Shanghai) Pilot Free Trade Zone, the "6+2" innovations in system reform will be experimented in the Lin-gang Special Area, featuring five FREEs (free investment, free trade, free capital, free transportation, free mobility of practitioners), one FACILIATATION (facilitating quick and convenient flow of information) and two systems of tax and risk control and management.

- Free Investment: Further opening up key industries for foreign investment and facilitating investment and business operation by establishing the business registration confirmation system and improving the mechanism of resolving civil and commercial disputes.
- **Free Trade:** Encouraging the development of Yangshan Special Comprehensive Bonded Zone, new international trade, cross-border e-commerce and services trade.
- Free Capital: Supporting cross-border financial business, implementing the pilot program of integrating domestic and foreign currencies under free trade accounts and supporting overseas investors to establish financial institutions in China.
- Free Transportation: Expanding the functions of Lin-gang as a global pivotal port and further opening up international shipping registration, tax rebate at the port of loading and international shipping services.

- Free Mobility of Practitioners: Easing the restriction on recruiting high-caliber professionals in the modern service industry and granting them with preferential treatment in entry-exit registration and permanent residence.
- Facilitating Quick and Convenient Flow of Information: Improving the internet infrastructure, promoting the safe flow of cross-border data and strengthening the protection of intellectual properties and data.
- Globally Competitive Tax System: Levying 15% of business tax on companies which play a core role in the key industries and granting subsidies to overseas professionals to offset the extra personal income tax.
- All-around Risk Management System: Tightening the supervision on key areas and establishing a comprehensive service platform for information management to strengthen the credit rating management and the network border security.

#### 1.3 Deloitte solutions

Deloitte aims at providing "one-stopshop" service offerings. The services Deloitte can provide are listed as below:

- Assist MNCs in making tax planning for their operation model in FTZs to achieve overall tax efficiency;
- Assist MNCs in the implementation

of their investment plan in FTZs and providing all ranges of support, including site-selection/relocation, business registration, local government incentives negotiation and application, accounting service, tax compliance and consulting service;

• Assist MNCs in providing the

general business advisory and legal service, e.g. tax/financial policies benchmarking, the analysis and comparison of the policies in relation to the FTZs.

The reasons why Deloitte can be the ideal advisor of providing the above service are included but not limited to below:



### **Aspect**



#### **Content**

Highly dedicated professional team with strong execution capability

• Deloitte has many experienced partners and (senior) managers who used to work for various government authorities for many years.

Relationship with government authorities of FTZs

- Deloitte devotes resources to maintain an extensive network and close relationship with various governmental authorities of FTZs on a regular basis;
- Deloitte can have access to the right persons in the government authority;
- Deloitte can meet key decision-makers to expedite the negotiation/ approval process.

**Understanding needs of authorities** 

- Deloitte can understand and identify the key needs and considerations of the authorities when they review the investment plan;
- Deloitte knows what the government authorities would need to go through their internal review process.

Practical solutions

- Deloitte can not only identify issues/exposures but also provide advice and practical solutions;
- Deloitte knows how to communicate with management and minimize the management's burden when handling accounting service and tax compliance service for our clients;
- Technical expertise on tax and business advice with integrated team approach;
- Industrial insight and creativity gained from practical experience.

Know more about opportunities emerging from China FTZs, please contact



**Eddie Yan Deloitte China Tax & Business Advisory Services Partner**eyan@deloitte.com.cn



#### 2. China's high potential locations

China's national high tech zones occupy 0.2% of the land but account for 40% of China's total foreign direct investment (FDI) and 12% of nation's USD14 trillion GDP<sup>6</sup>. As of 2019, there are close to 3,000 national and provincial level economic zones in China. Competition among these regions for converging industries and talents, presents striking dynamic and investment opportunities.

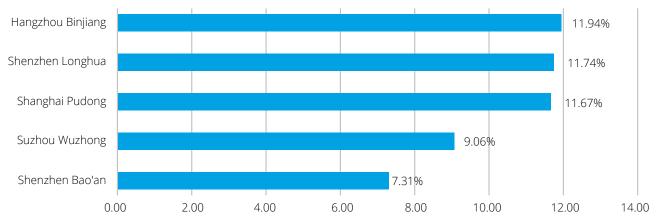
Regional competition is good news to businesses: investment attraction packages and "tailor made deals" are offered at promotion fairs and private meetings. Businesses with strong brand or in growth sectors are shopping around locations for the highest bidder. On the other hand, facing myriad of information and alternatives, locating business is no longer straightforward comparison among tier 1-2-3 cities, tax rebates, operating costs, etc. rather more of

strategic alignment of factor conditions and value chain distribution. The key success driver becomes integration of factor accumulation by industry clusters, with innovation platform fostered by local governance.

Richness of industry participants along the value chain evidently demonstrates factor conditions, like auto cluster in China's Wuhan and LCD cluster in Hefei economic zones Innovation platform, which is less visible and quantifiable, strengthens knowledge sharing and breakthrough spill over across businesses, academia, financier, professional services, and government bodies. Zhangjiang Science City<sup>7</sup> of Shanghai represents a plausible model, where 8 of top 10 global pharmaceutical companies concentrate with high value activities from new drug exploration, screening, pharmacology, clinical research, pilot scaling, registration and manufacturing.

Cash injection, through professionally managed government incentive fund, can accelerate innovation in most direct way. Back in 2014, Chinese central government had started to advocate for industrial parks "innovate to strengthen value chain, finance to enable innovation"8. China's government incentive fund has been around over 10 years, and progressed from ad hoc cash subsidy for few companies, to regulated investment to selected industries. Incentive funds are now active in full stages from angel money to pre-IPO, playing powerful roles of fostering industries of regional vibrancy to enhance long term prosperity. This government backed, end-to-end model of "incentive fund for prosperity", requires a clearly defined, forward looking, and unique industry strategy at regional level.

Figure 31: Average ROE of listed electronic hardware companies<sup>9</sup>





China's national high tech zones occupy 0.2% of the land but account for 40% of China's total foreign direct investment (FDI) and 12% of nation's USD14 trillion GDP.

Locations who excel on "multiplying" local industry factors, innovative ecosystem, and government incentive funds can expect to win, at specific industry level, among thousands of economic zones. Figure 31 illustrates

a partial list of China economic zones and districts who lead in electronic hardware industry in China.

For the past 40 years, China industry parks has transformed

from manufacturing space provider with basic land management type of services, to regions' co-investor spurring innovation for long term prosperity.

### Businesses may take a close look at the following when searching for high potential locations:

- A focused, vs. generic, "do everything", industry strategy with unique value proposition
- A sustainable spatial allocation that supports the strategy
- A clearly defined, industry and scenario specific incentive package
- An active government incentive fund of fund / sub-fund structure
- A proactive organization that drives innovation ecosystem
- A robust governance that safeguards businesses and citizens' wellbeing during crisis

No single location suites all industries at all development stages, managers have high stakes in identifying and partnering with right locations, to maximize risk adjusted return.

Deloitte China's Regional Economic Advisory (REA) provides end-to-end regional prosperity solutions, covering industry strategy, TOD planning, concept and architectural design, incentive policy advisory, regional promotion and tools, business introduction and financing.

REA invites your participation in location investment survey, please scan below code







CN

Know more about opportunities emerging from China's national high tech zones, please contact



River Huang
Deloitte China
Regional Economic Advisory Partner
riverhuang@deloitte.com.hk



#### 3. Greater Bay Area

# 3.1 The first world-class bay area across two systems

The Guangdong-Hong Kong-Macao Greater Bay Area is a mega-plan in motion to integrate key cities in Guangdong Province with Macau and Hong Kong. GBA comprises nine municipalities located in Guangdong Province being Guangzhou, Shenzhen, Zhuhai, Foshan, Huizhou, Dongguan, Zhongshan, Jiangmen and Zhaoqing along with the two Special Administrative Regions of Hong Kong and Macao. GBA has international financial center and shipping center developed under highly marketoriented environment, as well as world manufacturing center and leading technology innovation hub nurtured during economic transition.

### 3.2 The plan

# **3.2.1 Two objectives** By 2022:

- Substantially increase overall strength of GBA, deepen and broaden cooperation among Guangdong, Hong Kong and Macao, and further enhance internal driving forces for development in the region;
- Essentially form a framework for

an international first-class bay area and world-class city cluster that is vibrant and highly innovative with an optimized industrial structure, a smooth flow of various factors and a pleasant ecological environment.

#### By 2035:

The markets within the Greater Bay Area should basically be highly connected, with very effective and efficient flow of various resources and factors of production. The coordination of regional development should be remarkably improved, with the influence on neighboring regions further strengthened. The people should become wealthier and the level of social civility should reach new heights, with cultural soft power demonstrably strengthened, Chinese cultural influence broadened and deepened, and exchange and integration between different cultures further enhanced. Meanwhile, the levels of conservation and efficient use of resources should be significantly improved, the ecological environment should be effectively protected, and an international first-class bay area for living, working and traveling should be fully developed.

#### 3.2.2 Five strategic positioning

- A vibrant world-class city cluster
- A globally influential innovation and technology hub
- An important pillar for the Belt and Road Initiative
- A showcase for in-depth cooperation between the mainland and Hong Kong and Macao
- A high-quality sphere for living, working and travelling

#### 3.2.3 Eight priorities

3.2.3.1 Spatial layout (driven by poles, supported by axes and radiating to nearby areas)

### Guangzhou

Comprehensively strengthen its functions as an international commerce and industry center and integrated transport hub as well as enhancing its function as technological, educational and cultural centers

#### Shenzhen

Expedite its transformation into a modern and international city and strive to become a city of innovation and creativity with global influence



The Guangdong-Hong Kong-Macao Greater Bay Area is a mega-plan in motion to integrate key cities in Guangdong Province with Macau and Hong Kong. GBA plan is to make the region becoming an important global center for advanced manufacturing and to focus on innovation, financial services, transport and logistics, trade, and tourism and leisure.

### The first world-class bay area across two systems

GBA comprises nine municipalities located in Guangdong Province being Guangzhou, Shenzhen, Zhuhai, Foshan, Huizhou, Dongguan, Zhongshan, Jiangmen and Zhaoqing along with the two Special Administrative Regions of Hong Kong and Macao. GBA has international financial center and shipping center developed under highly market-oriented environment, as well as world manufacturing center and leading technology innovation hub nurtured during economic transition.

GBA is home to more than 170 universities, 40 national key laboratories and partnership labs. It also nurtures emerging industries such as electronic communications, the Internet, biomedicine, as well as innovative enterprises.

#### Масао

Develop into a world-class tourism and leisure center, a commerce and trade cooperation service platform between China and Lusophone countries, a base for exchange and cooperation where Chinese culture is the mainstream and diverse

#### Hong Kong

To consolidate and enhance its status as international financial, transportation and trade centers and an international aviation hub and to develop innovation and technology industries, nurture emerging industries. To establish itself

as the center for international legal and dispute resolution services in the Asia-Pacific region.

3.2.3.2 Developing an international innovation and technology hub

It pursues the development of the "Guangzhou-Shenzhen-Hong Kong-Macao" innovation and technology corridor and supports the development of major technological infrastructure facilities, R&D institutes as well as innovation platforms in the GBA. It will also support institutes in Guangdong, Hong Kong and Macao to proactively participate in national

technological programs (special projects, funds, etc.)

#### 3.2.3.2 Expediting infrastructural connectivity

It calls for efforts to strengthen infrastructural development, enhance external and internal connectivity, push forward the establishment of an infrastructural network with a rational layout, comprehensive functions, smooth connections and efficient operations, and provide solid support for socio-economic development in the GBA.

# 3.2.3.3 Building a globally competitive modern industrial system

Leveraging the strengths of Hong Kong, Macao, Guangzhou and Shenzhen in innovation and R&D, it plans to enhance the ecosystem of innovation development for the manufacturing industry in the Pearl River Delta, to develop an industrial belt for advanced equipment manufacturing on the west bank of the Pearl River spearheaded by Zhuhai and Foshan and to develop a cluster of world-class high-end manufacturing industries, such as electronic communications, on the east bank of the Pearl River with Shenzhen and Dongguan as its core

#### 3.2.3.4 Putting forward ecological conservation

Stressing on the establishment of ecological protection barriers, strengthening environmental protection and management, and adopting an innovative, green and low-carbon development model.

# 3.2.3.5 Developing a high-quality sphere for living, working and travelling

It stresses upholding the philosophy of peoplecentered development and proactively expanding cooperation in fields such as education, culture, tourism and social security in the Greater Bay Area.

# 3.2.3.6 Strengthening cooperation and jointly participating in the Belt and Road Initiative

By creating a globally competitive business environment, it plans to establish systems and regulations that are in line with advanced international standards for investment and trade regulation, to transform the function of the government, refine the pre-establishment national treatment, negative list management approach for foreign investments, and strengthen interim and ex-post supervision, to strengthen judicial exchanges and cooperation among Guangdong, Hong Kong and Macao and to refine the mechanism for international commercial dispute resolution, and develop the international arbitration center. A new service model of "Internet + government services" will be created.

# 3.2.3.7 Jointly developing Guangdong-Hong Kong-Macao cooperation platforms

It stresses enhancing the functions of Shenzhen-Hong Kong modern service industry cooperation zone in Qianhai of Shenzhen, strengthening the role of Qianhai as an engine of cooperation and development, developing systems for open and innovative industries through links with Hong Kong, and taking forward the opening up and innovative development of the financial sector as well as enhancing cooperation in legal matters.

#### 3.2.4 Strategic emerging industries

GBA is entering a new era of deepened coordination and integration, becoming a brighter spot on the map of world economy. It is home to more than 170 universities, 40 national key laboratories and partnership labs. It also nurtures emerging industries such as electronic communications, the Internet, biomedicine, as well as innovative enterprises.

The efficient flow of capital, technologies, talents, and information indicates that the bay area has entered a new era of coordination. It also releases strong impetus for the creation of a world-class industrial cluster in the area.

#### 3.2.5 Opportunities and challenges

The development of the Greater Bay Area have huge opportunities and faces many challenges which cannot be listed out all.



#### Al—a new symbol of innovation and technology in GBA

Guangdong Government released planning for the development of new-generation AI in 2018. Major GBA cities will complement each other in joint development of AI industrial ecosystem. It will create lots of opportunities in AI, high-tech development.



#### **Building a modern industrial system**

Shenzhen, one of the major cities, led the way in experimenting with market reforms. Guangdong Province is famous as being 'factory of the world', with Hong Kong as its center of marketing, distribution and financial management. Together with Macau and Guangzhou, plus nine other cities in Guangdong, the Greater Bay Area has a 70 million population and GDP of USD1.5 trillion. The scale up of will drive the smart manufacturing and experimentation with new technologies.



#### Growth in real estate needs

Property demand for commercial and logistics space should grow throughout the development phase over the next decade to support the targeted economic growth, making commercial and logistics space two of the most attractive sectors for investors and businesses.



#### Connectivity

Other than high speed railway and Hong Kong-Zhuhai-Macao Bridge, many infrastructure projects are under construction or in planning which will further reduce travelling time between cities in GBA.



#### Talent and skilled labour

Talent and skilled labour force are more important contributors to productivity growth of cities than capital. This is also a big challenge to the success of the plan.



#### Merger of 9 cities + 2 special administrative regions

Differences in rules & regulations, employment policies, culture, lifestyle, working environment, sector-specific restrictions, etc., are hindering either labour mobility or movement of capital because China is still liberalising its capital account. Some restrictions on labour mobility, including visa requirements, have been released. However, there are still lot of works to be done.



#### **Coronavirus created fresh uncertainty**

The outbreak of coronavirus limits the flow of people and affects every aspect of our life which created fresh uncertainty on timeline of the GBA plan.

#### 3.2.6 Conclusion

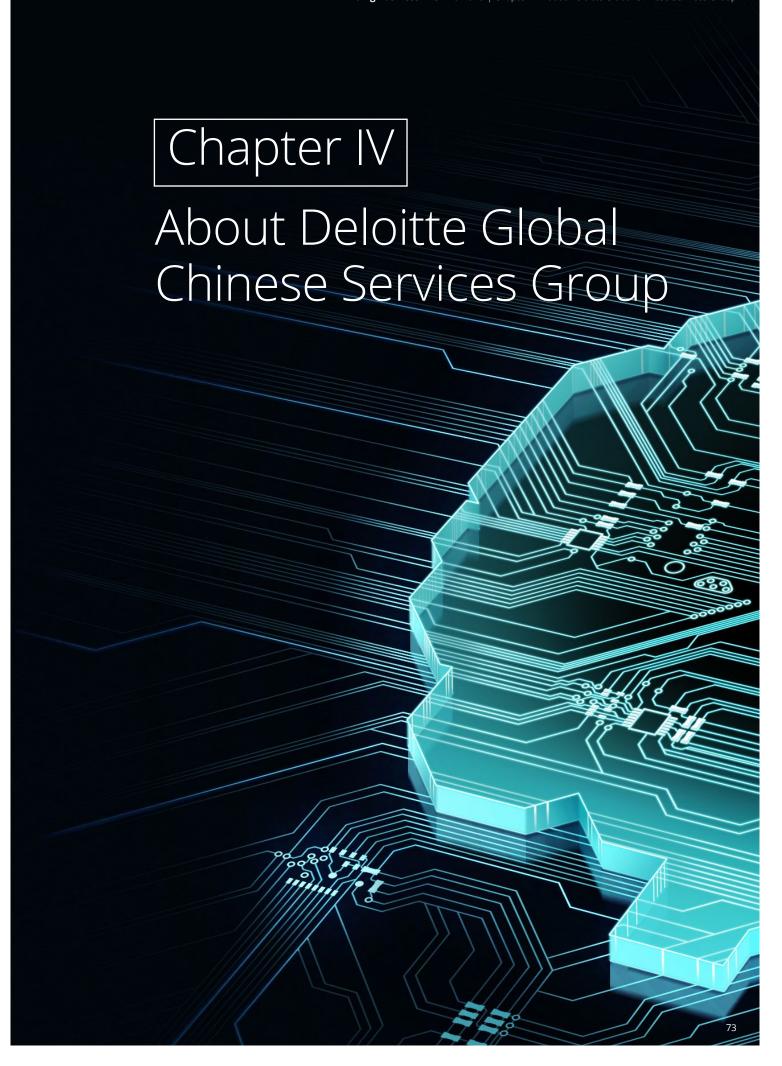
Unity is power. Once it is physically integrated, the Greater Bay Area will put the region in a stronger position to increase the Chinese economy's value adding capabilities and boosting internationalization. GBA plan is to make the region becoming an important global center

for advanced manufacturing and to focus on innovation, financial services, transport and logistics, trade, and tourism and leisure. Though there are many challenges and uncertainty, we are optimistic on GBA development which is important for China's next stage of economic development. It should be a good story to follow.

#### Know more about opportunities emerging from Greater Bay Area, please contact



Tom Kwok
Deloitte Managing Partner of Southern Region
Mainland China
tokwok@deloitte.com.cn



#### 1. The Business Enabler between China and the World

Established in 2003, Deloitte's Global Chinese Services Group (GCSG) advises Chinese companies expanding their global presence and multinational companies operating in China. We have over 3,300 Chinese speaking professionals and local experts who understand Chinese business culture across the 6 continents. This dedicated network is committed

to providing professional advice and comprehensive solutions to Chinese companies going global and multinationals coming to China.

#### **Asia Pacific Americas Europe, Middle East & Africa** Australia Myanmar Austria Ireland Russia Argentina Brunei New Zealand Belgium Saudi Arabia Brazil Israel Cambodia Philippines Bulgaria Italy Serbia Canada India Singapore Caribbean and Bermuda Croatia Kenya South Africa Indonesia South Korea Spain Chile Cyprus Kuwait Thailand Japan Mexico Czech Republic Luxembourg Tanzania Malaysia Vietnam Denmark Malta Turkey Peru Mauritius North Africa **United States** UAE Egypt Norway Finland Uganda France Poland UK Germany Portugal Zambia Hungary Romania

#### 2. Our activities in the market

#### **Thought Leadership**

- Publish outbound and inbound investment guides
- Update by-country tax and investment guides based on market situations and tax reforms









#### **WeClasses**

- Organise online audio courses (in Chinese) on WeChat targeting at Chinese companies with overseas footprints
  - Responses to COVID-19: Combat COVID-19 with Resilience
  - Strategies for expanding into overseas markets



#### **Seminars & Delegation Visits**

- Hold regular seminars for Chinese clients in other countries
- Collaborate with Chinese embassies or chambers of Commerce in foreign countries on investment seminars
- Facilitate the Chinese clients' delegation visit to overseas markets





#### **WeChat Posts**

- Launch GCSG WeChat Series "Going Global"
  - Insights on market dynamics
  - By-country overseas investment guides
  - Invitations of seminars





#### 3. Global Belt & Road Initiative 2.0

A global initiative to service Chinese clients on the Belt and Road regions via cross-function and cross-geography corridors



### Know more about investing in China, please contact



**Johnny Zhang Deloitte Global Chinese Services Group Partner**johnnyxzhang@deloitte.com.cn

## Meet our global team

#### Deloitte China



**John Hung** China Chairman



**Johnny Zhang**China
Partner

#### **Americas**



**Paulo de Tarso Pereira Jr.** Brazil



**Tan Ong**Canada/
Chile



**John Johnston**Caribbean and
Bermuda Countries



**Jorge Mesta**Latin American
countries



**Joe Guastella**United States

#### **Asia Pacific**



**Vera Ou-Young** Australia



**Sujit Parakh** India



**Satoshi Miura** Japan



**Sung Hoon Oh** Korea



**Jean Noel Wong**Mauritius



**Jenny Liu** New Zealand



**Wing Peng Yee**Southeast Asia



**Cheng Wei Lim** SEA – Brunei



**Kimsroy Chhiv** SEA – Cambodia



**Daniel Fitzgerald**SEA – Guam



**Claudia Lauw** SEA – Indonesia



**Tham, Lih Jiun** SEA – Malaysia



**Aye Cho** SEA – Myanmar



**Diane Yap**SEA – Philippines



**Senen M. Quizon** SEA – Philippines



**Tiong Heng Lee**SEA – Singapore



**Anthony Visate Loh** SEA – Thailand



**Bui Ngoc Tuan** SEA – Vietnam





**Herbert Kovar** Austria



**Lieven Verbrugge** Belgium



**Alexander Krylov** CIS/ Russia



**Ludek Hanacek** Czech Republic



**Zsolt Vajda** Hungary



Christis M.
Christoforou
Cyprus



**Jean-François Viat**France



**Dirk Haellmayr** Germany



Matthew Dolan Ireland



**Olderigo Fantacci** Italy



Yves Knel Luxembourg



**Francesca Messini** Luxembourg



**Chris Curmi** Malta



**Luis Miguel Belo**Portugal



Antonio Castaneda Ruiz Spain



**Jens Baes** Denmark



**Jan Soderholm** Finland



**Allan Glomlien** Norway



**Lay Boon Tan** Switzerland



**Han Kalfsbeek** Netherlands



**Richard McDonald**United Kingdom

### Africa & Middle East



**Alex Law** Middle East



**Eli Tidhar** Israel



**Brice Chasles**Francophone Africa



**Fatai Folarin** Western Africa



Martyn Davies Southern Africa/ South Africa

# Chapter V

# Acknowledgement

```
mirror_mod = modifier_ob.modifiers.new(*mirro
                                                   # set mirror object to mirror_ob
                                                        mirror_mod.mirror_object
iers.new("mirror_mirror","MIRROR")
                                                   if _operation == "MIRROR_X":
                                                       romi,"MIRROR")d.use_x
                                                         mirror_mod.use_y
                modifier ob.
  mirror_mod
                                                         mirror mod.use z
  object""
                                                                              "MIRROR_Y": "MIRROR"
     mirror object to mirror_ob
                                                    elif operation
  mirror mod.mirror_object = mirror_ob
                                                      emsproeumoduuserx
   operation ⊕ dMIRROR_XN:lifier ob.modi
                                                         mirror mod.use y
   mirror_mod.use_x = True
   mirror_mod.use_y = False
   mirror_mod.use_z = False
    operation == "MIRROR_Y":
                                                mirromirfor mod.use x
   ONE wod use x = False
   mirror mod.use y = True
   mirror_mod.use_z = False
rlif_operation == "MIRROR_Z";
mirror_mod.use_x = False
   mifror_mod.use_y = False
mirror_mod.use_z = True
    #selection at the end -add back the deselected migrof modifier object 1
                                                     bpy.context.scene.objects.active = modifier_ob
mirror_ob.select= 1
modifier_ob.select=1
    .context.scene.objects.active =
print("Selected" + str(modifier ob)) # modifier ob is the active ob ...

#mirror ob.select = 0 gets the modifier unless its not a mesh ;

#one = bpy.context.selected objects[0] e #one = bpy.cont
```

#### **Bai, Khalid Yongliang**

Senior Manager Global Chinese Services Group

#### Chen, Rebecca Yumeng

Senior Consultant Tax

#### Fang, Debbie Yue Qiong

Director Tax

#### Gao, Viola Fei

Associate Director Financial Advisory

#### **Huang, River He**

Partner Financial Advisory

#### Ji, Lily Fang

Counsel Qin Li

#### Jiang, Sunny Ying

Senior Manager National Industry Program

#### Kwok, Tom

Partner Managing Partner Office

#### Liu, Ping

Partner Qin Li

#### Liu, Rachel Jiangxizi

Legal Assistant Qin Li

#### Ma, Rachel Yun Yun

Senior Manager Tax

#### Meng, Star Chengwei

Senior Specialist National Industry Program

#### Qian, Christine Jingyi

Specialist Global Chinese Services Group

#### Qu, Jill Qianru

Senior Manager Deloitte Research

#### Rao, Claire Wen Qiu

Senior Specialist Deloitte Research

#### Sun, Eric Haopeng

Legal Assistant Qin Li

#### Sun, Susan Shu

Manager Tax

#### Wang, Gigi Dingzhe

Assistant Manager National Industry Program

#### Wang, Nickie Hui Chun

Senior Manager National Industry Program

#### Wu, Zoe Yanzi

Manager Deloitte Research

#### Yan, Eddie Qing Le

Partner Tax

#### Yang, Chris Xiao Lan

Program Manager National Industry Program

#### **Zheng, Darryl Xing**

Associate Director Financial Advisory

#### Zhou, Annie Fei

Manager Deloitte Research

#### Zhu, Kevin Zheng Cui Fang

Partner Tax

#### Zou, Phoebe

Manager Managing Partner Office

#### Zhang, Yinan

Manager Global Chinese Services Group Manager

## **Endnotes**

- 1. Apart from the rates depicted in this table, 0% generally applies to goods export and certain service export; the levy rate of 3% applies to small-scale taxpayers; and 3%/5% that applies to certain special taxable supplies.
- 2. https://news.pedaily.cn/202003/452166.shtml
- 3. Announcement about Continuing to Implement Preferential Corporate Income Tax Policies for Western Development, Ministry of Finance, State Taxation Administration, 2020-04-30, http://shanghai.chinatax.gov.cn/zcfw/zcfgk/qysds/202005/t453507.html
- 4. Catalogue of Industries Encouraged to Develop in the Western Region, China Briefing, 2020-5-6, https://www.china-briefing.com/news/china-extends-15-percent-profits-tax-qualifying-investors-western-regions-january-1-2021/
- 5. Guiding opinions on promoting shared manufacturing, MIIT, 2019-10 http://www.miit.gov.cn/n1146295/n7281315/c7491339/content. html
- 6. China Economic Zone Assessment Publication 2018; China National High Tech Zone Innovation Assessment Report 2019
- 7. Ye Wang, Director of Zhangjiang Science City, 21 Century News 2016/06/07
- 8. Gang Wan, Minister of Science and Technology, 2014/12/30
- 9. WIND public companies data 2019



## 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

Tel: +9/6 /010 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

#### About Deloitte

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited ("DTTL"), its global network of member firms, and their related entities (collectively, the "Deloitte organization"). DTTL (also referred to as "Deloitte Global") and each of its member firms and related entities are legally separate and independent entities, which cannot obligate or bind each other in respect of third parties. DTTL and each DTTL member firm and related entity is liable only for its own acts and omissions, and not those of each other. DTTL does not provide services to clients. Please see www. deloitte.com/about to learn more.

Deloitte is a leading global provider of audit and assurance, consulting, financial advisory, risk advisory, tax and related services. Our global network of member firms and related entities in more than 150 countries and territories (collectively, the "Deloitte organization") serves four out of five Fortune Global 500® companies. Learn how Deloitte's approximately 312,000 people make an impact that matters at www.deloitte.com.

Deloitte Asia Pacific Limited is a company limited by guarantee and a member firm of DTTL. Members of Deloitte Asia Pacific Limited and their related entities, each of which are separate and independent legal entities, provide services from more than 100 cities across the region, including Auckland, Bangkok, Beijing, Hanoi, Hong Kong, Jakarta, Kuala Lumpur, Manila, Melbourne, Osaka, Seoul, Shanghai, Singapore, Sydney, Taipei and Tokyo.

The Deloitte brand entered the China market in 1917 with the opening of an office in Shanghai. Today, Deloitte China delivers a comprehensive range of audit & assurance, consulting, financial advisory, risk advisory and tax services to local, multinational and growth enterprise clients in China. Deloitte China has also made—and continues to make—substantial contributions to the development of China's accounting standards, taxation system and professional expertise. Deloitte China is a locally incorporated professional services organization, owned by its partners in China. To learn more about how Deloitte makes an Impact that Matters in China, please connect with our social media platforms at www2.deloitte.com/cn/en/social-media.

This communication contains general information only, and none of Deloitte Touche Tohmatsu Limited ("DTTL"), its global network of member firms or their related entities (collectively, the "Deloitte organization") is, by means of this communication, rendering professional advice or services. Before making any decision or taking any action that may affect your finances or your business, you should consult a qualified professional adviser.

No representations, warranties or undertakings (express or implied) are given as to the accuracy or completeness of the information in this communication, and none of DTTL, its member firms, related entities, employees or agents shall be liable or responsible for any loss or damage whatsoever arising directly or indirectly in connection with any person relying on this communication. DTTL and each of its member firms, and their related entities, are legally separate and independent entities.

© 2020. For information, contact Deloitte China. Designed by CoRe Creative Services. RITM0508079

