Dubbed the Billionaire Capital of the World, Beijing is an economic powerhouse. It is regarded as China’s political, business, cultural, entrepreneurship and education hub. The 2008 Olympics and Paralympics helped to transform the cityscape and improve transport networks. Iconic buildings such as the Bird’s Nest (Beijing National Stadium) and the Cube (Beijing National Aquatics Center) gave the city a new sense of pride. The events also had a significant impact on Beijing’s economic development and the growth of its service industry. In 2022, Beijing will host the Winter Olympics — making it the first city to host both Games. Increased wealth and improved healthcare mean that life expectancy in Beijing continues to grow, although there is concern about how the city will support a large elderly population. The goal of Beijing’s latest city plan is for it to become a “world-class harmonious and livable city”. Two of the major objectives in the plan are to remove non-capital functions and to solve big city diseases. The first objective is based on coordinating development in Beijing and its surrounding regions. To meet the second objective, the government is attempting to control the growth of the urban population along with other measures.

Rapid development has created significant challenges for Beijing. The city’s smog is infamous. The authorities report daily on the level of fine particle matter. Targets have been set for improved air quality and the government has ordered major heavy industries, such as steel and concrete, to reduce their emissions or leave the city. Recent research suggests that climate change and its influence on weather patterns may also hinder Beijing’s efforts to reduce the smog. In a bid to resolve its severe traffic congestion, Beijing has introduced traffic management controls, increased investment in the public transport network and encouraged people to use it. To enhance the city environment, there are plans for more parks, bike paths and green belts as well as water and wastewater infrastructure.

The Chinese Government’s thirteenth Five-Year Plan includes ambitious goals for social policy expansion with a focus on health, education, housing, pensions, disability and poverty. While these social issues are acknowledged, many others such as the widening wealth gap and gender disparity are not being addressed because of political sensitivity.

Will the forces at play in Beijing converge to shape this complex metropolis into a truly global city?
Policies on housing and urban/rural development are mandated by the Beijing Municipal Commission. The government provides different types of housing to fulfill different needs: commercial, limited price, shared property, public rental and self-occupied that can be sold after a specified period. The government also has several policies to regulate the price of housing.

PUBLIC REALM
SCORE: 7.0/10

Beijing celebrates history and culture within its city center but there’s a marked shortage of green space and a huge surplus of illegal construction. The municipal commission is tackling the problems through special measures that involve dismantling illegal structures and disposing of the construction waste to allow enough room for green space creation.

The city has so far demolished 40 million square meters of illegal construction. It will upgrade 615 backstreet alleys, strictly following street and lane design guidelines. The commission will continue to promote the central urban area, upgrade Tongzhou District back street lanes, transfer overhead lines to underground, and complete main and secondary trunk roads and associated street furniture within the core area.

URBAN GREEN SPACE
SCORE: 6.0/10

From this year, Beijing plans to build 3,872 hectares of park in and around the city center. This will include urban forest parks, cultural theme parks and micro green parks. The city will build another 2.4 million square meters of ecological corridor from the north of Laiguangying area, along the Xiaoqing River and east to Jingcheng highway. The ecological corridor will finally connect to South Fifth Ring Road. Most key roads will also have boulevards.

CLIMATE CHANGE
SCORE: 5.0/10

To control carbon dioxide emissions, the Ministry of Ecology and Environment has stipulated 12 key supervisory tasks from steel mills and oil refineries to construction sites and petrol stations. This year the Beijing Municipal Commission of Development and Reform is administering a carbon emission trading trial for 621 enterprises. The enterprises will submit their carbon dioxide discharge report to an online system and those with a discharge of more than 5,000 tons will be supervised by key discharge units.

SOCIAL INFRASTRUCTURE
SCORE: 5.0/10

As well as promoting economic and social development, China’s thirteenth Five-Year Plan (2016-2020) focuses on education, a theme that has been taken up with enthusiasm in Beijing. By 2020 the capital plans to have a fair, high-quality, innovative and open education system that will have fulfilled all the tasks set out in the Beijing Medium and Long-Term Education Reform and Development Plan 2010-2020. Attendance rate targets have been set at 95 per cent for pre-school, 100 per cent for compulsory, 95 per cent for high school and 60 per cent for higher education. Half of workplace employees will have higher education.

The capital has invested in building 843 new kindergartens, 200 new primary and secondary schools and 85 more integrated urban and rural schools.

Beijing is promoting itself as the capital of art performance by offering 30 to 40 per cent off ticket prices. Last year 24,000 art performances in the city attracted a combined audience of 10 million, each person paying an average of less than CAD20.

The thirteenth Five-Year Plan also is aimed at protecting original streets and the ambience of alleys while building 10 new national museums.

A Tale of Our Cities – 2018 WSP Global Cities Index
The first and most expensive category covers the area between the fifth and third ring roads, which is four times the area of the central business district. The second category is the area between the third and fifth ring roads, which is more than two times the area of the central business district, CuiWei business district and the rest of the area within the third ring road. The third category is the area outside the fifth ring road, which is more than five times the area of the central business district.

PARKING PROVISIONS

In 2015, parking in the city was divided into three categories:

- Category A covers the central business district, CuiWei business district and the rest of the area within the third ring road.
- Category B covers the area between the third and fifth ring roads.
- Category C covers the area outside the fifth ring road.

Parking fees also vary per the time of day. Of the 3.82 million parking spaces in the city at the end of 2016, 2.19 million were in residential areas. The parking resources census report divided the city’s 16 districts into 66,000 basic units according to parking availability and zoned them as sufficient, basic balance, insufficient, serious insufficient or non-residential.

The city recently began the testing of electronic toll collection for parking on 4,086 lots in 37 streets. The municipal government will expand the electronic toll collection system to the whole city by the end of next year.

FUTURE MOBILITY: SERVICES

In Beijing, the private sector develops point-to-point, on-demand, ride-share and car-share services under policies decided on by the government. Since 2016, the Beijing Traffic Commission has managed the internet booking of taxis. Last year, the Ministry of Transport and the Ministry of Housing and Urban-Rural Development issued a joint guidance policy on the sustainable development of mini-car rentals. In 2016, the popularity of bicycle-sharing was in full swing, with the total number of bicycles reaching 2.35 million.

NARROWBAND IOT

China began testing 5G technology in January 2016, completed the first standard version in June 2018 and will complete a full version in September 2019 ready for it to be available commercially by 2020.

OPEN DATA

China has issued a summary of government information disclosure every year since 2014. This year’s summary lists 16 additional items in these areas: credit, health, safety, quality, finance, medical, culture, resources, education, geography, statistics, employment, agriculture, environment, meteorology, transportation, social security, enterprise registration and science and technology.

INFORMATION AND DATA SECURITY

China has nearly 40 laws, 30 ordinances and 200 regulations on personal information protection, but they’re not found in any one place. There are many inadequacies in the realm of personal privacy, and the sale of personal data is common in the big underground data market.

Last year, the National Information Security Standardization Technical Committee released the second draft of the Information Security Technology—Guidelines for Cross-Border Data Transfer Security Assessment for public comment. It includes a Personal Information Security Standard.

PLANNING AND POLICY

Last year, the Ministry of Industry and Information Technology submitted a recommendation for the development and sharing of telecommunications infrastructure. It will explore innovative methods to speed up the construction and sharing of telecom infrastructure in Beijing.
China aims to increase renewable energy to 15 per cent of total energy consumption by 2020, 20 per cent by 2030 and 60 per cent by 2050. By that date it hopes to be generating 2.7 gigawatts a year from solar power, a 90 per cent improvement on the 29 megawatts of 2014.

Renewable energy projects are also being built in 2017 in Chengde, Chifeng, Zhangjiakou and Wulanchabu (Inner Mongolia) to supply additional power to the Beijing-Tianjin-Hebei region. After modification of smart grid infrastructure in the Chaoyang district in 2017, the electric equipment will automatically distribute power to most of Beijing’s households. The power supply reliability within the fourth ring area will be 99.9 per cent. The whole smart grid infrastructure will be completed by 2020, extending the automatic power distribution to the fifth ring area.

Between 2012 and 2016, Beijing installed the smart metering system for 6.3 million resident users who can download an app to pay for their electricity. Since 2013, households have been encouraged to install solar panels to generate their own electricity under the National Energy Administration’s Interim Measure for the Management of Distributed Photovoltaic Power Generation Project. Their excess generated electricity could be connected to the electricity grid and sold to the electricity company. Now households with solar power will be financially rewarded by the local government, as stipulated by the National Development and Reform Commission.

In 2016, the government restricted total water use within semi-arid Beijing to 4.3 trillion liters, which represented a cut of 20 to 30 per cent.

To bolster the limited water supply, the Beijing Municipal Government embarked on a three-year action plan to accelerate the sewage treatment of a black and smelly river and to discover potential sources of renewable water. As a result, 108 kilometers of sewage pipeline will be built or replaced, 14 sewage treatment plants will be upgraded or relocated into parks, 472 kilometers of recycled water pipeline will be built, and 27 recycled water treatment plants will be built. The historical practice of sewage being dumped from 760 villages will be strictly prohibited as the black smelly river gradually reverts to a clear fragrant river.

A city management meeting last year decided that to eliminate dumping into landfills of the 30,000 tons of waste generated in Beijing each day, 24,250 tons would be incinerated and 6,350 tons would be treated with biochemicals every day. Six garbage incineration towers will be completed this year. At the same time, a garbage classification and recycling system will be promoted. By the end 2020, each community will establish a garbage classification center.

The existing landfills in China are mostly used for greenwood, not for construction materials or multipurpose waste. During their 20- to 30-year design life, greenwood landfills settle less than construction or multiwaste landfills because greenwood degrades less. With comparatively favorable soil mechanical properties, previous greenwood landfill sites may serve as multistory permanent building sites in the future.

Since 1 June 2008, supermarkets and other retail store stopped providing free plastic shopping bags to customers. But nine years later, the campaign has been judged as largely unsuccessful. There isn’t any sustained or enforced waste reuse framework in Beijing.

**WATER TREATMENT AND DISTRIBUTION**

**SCORE: 8.0/10**

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**WASTE MANAGEMENT**

**SCORE: 5.3/10**

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**SOURCES**