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Colofon

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1. Brief introduction of the region

China's government has long recognized infrastructure development as a top priority, because a modern economy runs on services like reliable transportation, electricity, and telecommunications. An ambitious goal has been set by the new generation of leadership that both GDP and average individual income would double the current levels by 2020, to create higher-quality life for the citizens. Correspondingly, the demand in infrastructure is expected to increase as well. A part of the goal is to bring the entire nation's urban infrastructure up to the level of that in a middle-income country.

2. Infrastructure industry in China

To achieve sustainable and high-quality growth, it is vital to enhance infrastructure such as water, power, transportation, communication, etc., to support modern life. During the 12th Five-Year Plan (2011-2015), the National Development and Reform Commission (NDRC) approved the launch of 55 major infrastructure projects in 2012, including 10 in environmental protection, 7 in port construction and channel reconstruction, 13 in highway construction and 25 in rail transit and intercity railway. In terms of approved projects numbers, the eastern region still leads the central and western regions, while the projects in the western region has also increased dramatically, especially in environmental protection.

Infrastructure projects announced by NDRC in September 2012

Industry	Region			Total
	East	Middle	West	
Environmental protection	-	1	9	10
Port construction and channel reconstruction	5	2	-	7
Highway construction	4	3	6	13
Rail transit and intercity railway	16	3	6	25
Total	25	9	21	55

Attributed to the central government's focus on transportation infrastructure and construction, many provinces and cities have also launched their major construction plans in this area. Local governments pay more attention to environmental protection and new energy, to ensure long-term and sustainable development. In some western provinces, boasting most China's resources while facing serious pollution problems, potential investment demand is seen in both environmental protection and highway construction.

3. Chinese infrastructure players and development trends

The infrastructure industry in China is dominated by state-owned companies, which are government-controlled and supported by the country's state banks, like [China Communication Construction Co., Ltd](#), [China National Building Material Company](#), [China Railway Engineering Corporation](#), [China State Construction International Holdings Ltd](#), etc., and they are also ranked among the key players in the world by revenue.

- Increasing investment worldwide

For several decades after market-oriented reforms and opening up, China has also increased its overseas investment and ranks as the world's third largest outbound investor. One of the key investment sectors abroad is construction, and from energy and natural resources to infrastructure and now technology-intensive sectors, Chinese companies are making great strides in expanding footprint worldwide and building Brand China.

The active players are supported by the central government, the "Go Out/Go Global" policy, especially Chinese companies involved in transportation infrastructure and

construction, which are tremendously encouraged by the recent government initiatives, notably One Belt, One Road and the Asian Infrastructure Investment Bank.

- **Increasing involvement of foreign companies**

Since 2002, when the Ministry of Construction of the People's Republic of China issued the *Regulations on Administration of Foreign-Invested Construction Enterprises*, wholly foreign owned construction enterprises, not just joint ventures, are allowed to be established in China. However, they are only entitled to operate in certain business areas where either the projects are generated from overseas or when foreign construction technology is needed, whilst joint ventures can contract any local project according to their qualifications.

In 2014, China's State Council made the decision to allow private capital investment in infrastructure to spur the country's slowing economic growth. Some projects, previously dominated by state-owned enterprises, ranging from railway, port construction, IT infrastructure and clean energy projects, oil and gas pipelines and storage facilities, to coal chemical and petrochemical industries, will be open to public bidding. Private capital, including foreign capital, is encouraged to participate in the construction and operation through joint ventures, sole proprietorship and franchising. Some large SOEs such as Sinopec and Citic Group have announced plans to introduce private/foreign capital.

In the future, the government will further consider allowing private capital in other sectors, such as oil and gas exploration, public utilities, water conservancy projects as well as airport construction.

4. Key projects in China

At the end of 2014, China's State Council has approved over 420 infrastructure projects in 7 areas, totaling 10 trillion RMB, through 2014 to 2016. In 2015, around 300 projects will be or have been launched, with total investment of 7 trillion RMB, to shore up growth that's in danger of slipping below 7 percent. The projects will be funded by central and local government, state-owned enterprises as well as private sectors. The project packages cover 7 areas including food and water conservancy, transportation, environmental protection, health, key network (communication, electricity, oil and gas), clean energy and mining.

Among the projects in process or under consideration, some are very challenging and record-breaking, including

- **Yantai-Dalian Undersea Tunnel**

An ambitious high-speed railway to run beneath Bohai Sea may be taken into consideration when the National Development and Reform Commission (NDRC), China's economic planner, decides its 13th five-year plan (2016- 2020). The tunnel, connecting Dalian in Liaoning Province with Yantai in Shandong, will be over 100 kilometers, the longest undersea tunnel in the world, and shorten the travelling time from 7 hours by sea to 40-50 minutes by train. Due to the complex geographical factors such as geology and tides, as well as unverified effects on the environment and economic development, the project is still under consideration.

- **Hongkong-Zhuhai-Macao Bridge**

The Hong Kong-Zhuhai-Macao Bridge is an ongoing construction project which consists of a series of bridges and tunnels that will connect Hong Kong, Macau and Zhuhai, three major cities on the Pearl River Delta in China. As the most highly anticipated bridge project, the 50-kilometer six-lane bridge will reduce travel time from mainland China to Hong Kong from more than four hours to 40 minutes. Officially started at the end of 2009, the project is due for completion in late 2016.

- **South–North Water Transfer Project**

The North of China is home to almost 50% of China's population, but it only has near 20% of water resources. Three of the China largest rivers will be supplying water to the North area by the construction of three water canals, each one of them with a longitude of more than 600 miles. It is a 48 year project, that will require the relocation of several hundreds of thousands habitants, but there are great concerns regarding flooding potential and water quality issues. By 2014, more than 79 billion USD had been spent, making it one of the most expensive engineering projects in the world.

- **High-speed Rail Project**

High-speed rail (HSR) in China refers to any railway in China with commercial train service at the speed of 200 km/h (124 mph) or higher. By that measure, China has the world's longest HSR network with over 19,369.8 km (12,035.8 mi) of track in service as of December 2014, which is more than the rest of the world's high speed rail tracks combined. Since high-speed rail service in China was introduced on April 18, 2007, daily ridership has grown from 237,000 in 2007 to 2.49 million in 2014, making the Chinese HSR network the most heavily used in the world, covering 28 of the country's 33 provinces and regions.

- **Civil Aviation Airport Project**

Investment in the aviation sector continues to grow. By the end of 2013, there were 193 civil airports in China. According to the 12th Five-Year Plan for Chinese Aviation Development, by 2015 there will be more than 230 airports in China.

A new airport is planned in Daxing District, Beijing, along the border with Hebei Province. The new airport is expected to serve Beijing, Tianjin and Hebei. The airport will cover an area of 2,680 hectares. The master plan has been designed by airport consulting firm NACO and will feature a ground transportation centre providing the airport with public transportation links. Other consulting firms are competing to design the terminal building. The projected completion date for the new airport is October 2018.

5. Opportunity and Competitiveness

In China, over half of the population lives in urban areas, and as the urbanization continues, the demand for infrastructure will increase. Currently, opportunities for Dutch companies are seen not only in big cities, but also in Western China and North Eastern China, regions supported by strong economic growth and central government preferential policy.

Opportunities for Dutch business include but are not limited to,

- Architectural and structural design services in residential or commercial buildings, transportation network and terminals, including airport, port, metro and light rail, as well as public facilities, like hospitals, cultural centers, etc.
- Project management.
- Environmental management expertise, e.g. solid waste/waste water treatment, air pollution control and soil remediation.
- Direct investment in some infrastructure projects is encouraged by the Chinese government, especially in environmental protection projects, renewable and alternative energies.

Opportunities also exist for foreign players with high-tech capabilities and for those willing to look beyond China's borders to take on projects in the emerging economies of Asia and Africa. In 2014, China undertook projects in 190 countries and regions, with newly signed contract of 191.8 billion USD, including 84.2 billion USD in Asia and 75 billion USD in Africa. Chinese contractors are more actively searching for international partners to cooperate in financing, design, procurement,

construction and operation, so that they can jointly explore a practical and efficient PPP cooperation pattern, to integrate resources, share risk and realize mutual benefit.

Market is vast and competition is also fierce. Various foreign companies are already active in China, like US, Germany, Singapore, Japan, etc., and there will be more in the future. First tier cities, including Beijing, Shanghai, Guangzhou and Shenzhen, are still attractive, but they are well developed with less land for new projects and stronger domestic and foreign competition.

6. Barriers and regulations

Although China's economy has become increasingly open, the infrastructure industry remains relatively protected, with most construction activity undertaken by state-owned enterprises. And traditionally, China had tight foreign investment restrictions and approximately 85 percent of infrastructure investment in China is undertaken by the State. Foreign companies are not permitted to have a controlling interest in the construction or operation of some key infrastructure projects, like railway network or passenger service. However, to spur the slow economic growth, the government has announced reforms to its regulatory regime. In 2014, the government opened up a number of planned infrastructure projects to foreign investment, including railways, gas pipelines, telecommunications and clean energy.[24]

China's regulatory regime allows the government much discretion in selecting investment or project partner and in restricting foreign player which competes with state-owned enterprises or favored domestic companies. Some foreign companies which have already experience in China reported that some local protection policies, equity and other restrictions on foreign companies are still challenges for them to get involved in infrastructure project in China.

In early 2015, the Chinese government announced that some major reforms to foreign investment laws would be worked out in one or two years. For example, it proposes to remove case-by-case approval for foreign investment for each project and allow foreign investment in any industry sector, provided the investment is not on a preclusion list and that there is regular reporting to government. The reform, when implemented, should increase investment opportunities and reduce approval delays. Foreign investors will enjoy more equality as domestic players. [2]

In addition, the government does not allow foreign companies to undertake design, construction or consultation independently within China. To participate in projects subsidized by the Chinese government or by domestic banks, foreign companies are required to form joint ventures or corporations with domestic ones. Therefore, profiting from China's ongoing infrastructure construction boom is essentially a question of partnership.

Another difficulty or risk facing by both foreign and Chinese construction companies in China is to collect payment. As the infrastructure market has been undergoing dramatic changes in China, with more diversified investors, cooperation patterns and larger scale projects, companies should take measures to avoid payment delay.

7. Government and Business Recourses

Some links of relevant government, associations, fairs and business websites are as below,

Type	Website	Note
Government	National Development and Reform Commission (NDRC)	CN & EN
	Ministry of Housing and Urban-Rural Development	CN only

	(MOHURD)	
	China Economic Information Network	CN only
Associations	China Infrastructure Associations	CN only
	China Association of Construction Enterprise Management	CN only
	China Project Mangement Association	CN only
Business	2015 Shanghai International Architectural & Engineering Design and Urban Planning Exhibition	CN & EN Nov.4-6, Shanghai
	China Oil & Gas Infrastructure Conference	CN & EN Oct. 10 Beijing
	Chinabidding.com	CN only

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