
INDUSTRY OVERVIEW

Certain facts and statistics presented in this section and elsewhere in this prospectus have been derived, in part, from various publicly-available government and official sources, industry statistics and publications. We also commissioned an independent industry consultant, Frost & Sullivan, to prepare the F&S Report on the global and PRC telecommunications tower infrastructure markets for use in this prospectus. We have agreed to pay Frost & Sullivan a total fee of RMB880,000 for the preparation of the F&S Report.

Frost & Sullivan is a global consulting company. Frost & Sullivan's services include independent market research, economic research and other relevant consultancy services. The key assumptions made by Frost & Sullivan in preparing the F&S report include (i) the social, economic and political conditions in China and the world will remain stable during the forecast period; (ii) the industrial policies of the PRC government on the telecommunications tower infrastructure industry will remain unchanged during the forecast period; and (iii) the 5G technology will come into commercial operation in China in 2020 and the main frequency of China's 5G technology will be above 3.0 GHZ.

In preparing the F&S report, Frost & Sullivan has relied on the relevant information obtained through primary and secondary data research. Primary data research includes interviewing industry insiders, competitors, downstream clients and recognized third-party industry associations. Secondary data research includes reviewing corporate annual reports, databases of relevant official authorities, independent research reports and publications, and Frost & Sullivan's own database.

While we have taken all reasonable measures to ensure that the relevant facts and statistics are accurately reproduced from the sources, such information has not been independently verified by us or the Joint Sponsors, the Joint Representatives, the Joint Global Coordinators, the Joint Bookrunners, the Underwriters or any other party involved in the Global Offering. Although we have no reason to believe that such information is false or misleading in any material respect, or that any fact has been omitted that would render such information false or misleading in any material respect, we also make no representation as to the accuracy or completeness of such information, which may not be consistent with other information available. Accordingly, you should not place undue reliance on such information.

The Directors confirm that, after making reasonable enquiries, there is no material adverse change in the market information since the date of the F&S Report which may qualify, contradict or have an impact on the information in this section.

OVERVIEW OF THE TELECOMMUNICATIONS TOWER INFRASTRUCTURE INDUSTRY

Overview of the Global Telecommunications Tower Infrastructure Industry

The telecommunications tower infrastructure industry refers to the market for the provision of site resources and relevant services by telecommunications tower infrastructure service providers to TSPs and other customers. TSPs require sites for installation of their telecommunications equipment in order to provide services to their wireless communications users. To alleviate the burden of capital

INDUSTRY OVERVIEW

expenditures and operating costs, TSPs are increasingly opting to spin off their sites and related assets or sell to telecommunications tower infrastructure service providers. According to the F&S Report, as of December 31, 2017, telecommunications tower infrastructure service providers in the PRC operated 1.94 million sites, more than any other major countries in the world. Currently in the telecommunications tower infrastructure industry, sites consist primarily of tower sites. According to the F&S Report, as of December 31, 2017, approximately 91.1% of the sites operated by telecommunications tower infrastructure service providers in the world were tower sites. Please see “*Business — Our Sites — Types of sites*” for details of site classification.

The following table sets out the data of key operating and financial performance indicators as of December 31, 2017 or in 2017 for us and certain listed telecommunications tower infrastructure service providers in the world, each of which owned more than 30,000 sites.

	The Company	American Tower Corporation	Crown Castle International Corp. ⁽¹⁾	Bharti Infratel Limited ⁽²⁾
Number of sites ('000)	1,872	150	90	162
Total revenue (US\$ million)	10,264	6,664	4,356	3,760
Number of TSP tenants ('000)	2,669	285	88	381
TSP tenancy ratio ⁽³⁾	1.43	1.90	2.20	2.35
EBITDA margin	58.8%	61.4%	57.0%	43.3%

Notes:

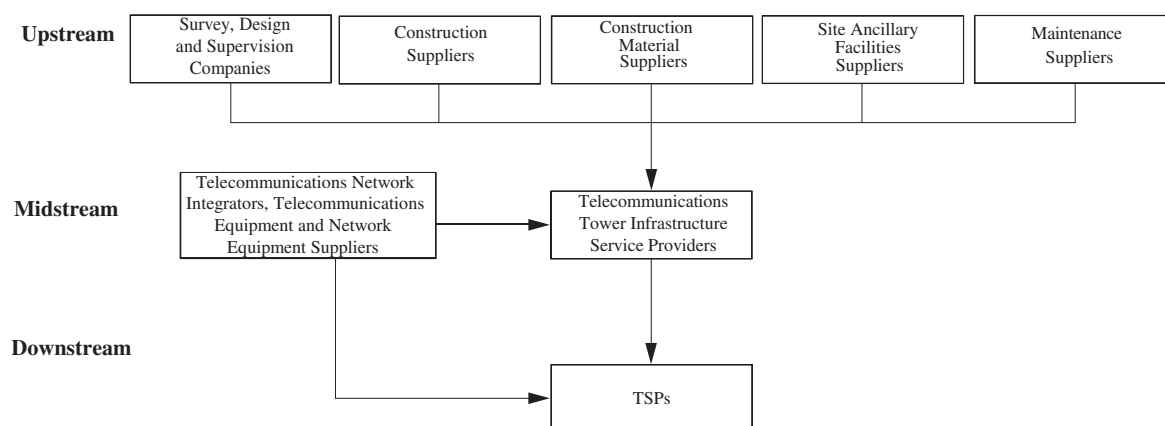
- (1) The number of TSP tenants and the TSP tenancy ratio of Crown Castle International Corp. only covered the TSP tenants of its macro cell business, as the number of TSP tenants of its other business was unavailable.
- (2) The presented business and financial data were prepared on a pro forma basis, assuming the merge transactions between Bharti Infratel Limited and Indus Towers Limited as announced on April 25, 2018 were completed as of the Latest Practicable Date.
- (3) Calculated by dividing the number of TSP tenants by the number of sites occupied by such tenants.

Source: F&S Report

According to the F&S Report, in and as of December 31, 2017, we ranked first among global telecommunications tower infrastructure service providers in terms of the number of sites, the number of tenants and revenue.

Industry Value Chain and Business Characteristics

The following diagram shows the roles of major participants in the value chain of the telecommunications tower infrastructure industry.



INDUSTRY OVERVIEW

Compared to TSPs, telecommunications tower infrastructure service providers generally have more expertise in acquisition, construction and operation of sites. The telecommunications tower infrastructure business generally has the following features:

Stable business relationships with customers and high renewal rate. According to the F&S Report, in the global market, service contracts entered by major telecommunications tower infrastructure service providers with their TSP customers generally have terms ranging from five years to 15 years. The telecommunications tower infrastructure service business has a high renewal rate, primarily due to (i) the difficulties faced by customers in securing alternative sites, (ii) the additional costs and expenses to be incurred for replacing the occupied sites, and (iii) the potential impact on quality of network coverage during the relocation from the occupied sites.

Stable cash inflow. Substantially all of the revenue of telecommunications tower infrastructure service providers derives from regular service fees paid by customers pursuant to long-term contracts. In addition, the customers of telecommunications tower infrastructure service providers mainly are TSPs, who generally have strong creditworthiness and payment capacity.

Operating profit margin and operating cash flows improved by enhancing co-location level. A single site can be used to serve multiple tenants. The incremental operating revenue derived by the telecommunications tower infrastructure service provider is generally larger than the corresponding incremental operating expenses incurred from an additional tenant at the same site.

Gradual decline in capital expenditures for construction of new sites. Telecommunications tower infrastructure service providers primarily incur capital expenditures for the construction of new sites, while the amount of capital expenditures incurred on site maintenance and augmentation is relatively low. Upon the site coverage reaching a certain level, certain incremental demand from TSPs for sites can be met by co-location of existing sites. The demand for the construction of new sites will gradually decline, and the capital expenditures incurred by telecommunications tower infrastructure service providers for construction of new sites will decline accordingly.

INDUSTRY OVERVIEW

OVERVIEW OF THE PRC TELECOMMUNICATIONS TOWER INFRASTRUCTURE INDUSTRY

Our Major Competitors in the PRC Telecommunications Tower Infrastructure Industry

According to the F&S Report, as of December 31, 2017, there were over 200 companies providing telecommunications tower infrastructure services and competing in the PRC telecommunications tower infrastructure industry, in which less than ten companies each owned more than 1,000 sites. The following table sets out the ranking of the top five participants in the PRC telecommunications tower infrastructure market as of December 31, 2017.

	Company	Number of sites	Revenue in 2017 (RMB million)	Market share in terms of revenue
1	The Company	1,872,154	68,665	97.25%
2	Company A	17,260	545	0.77%
3	Company B	4,200	72	0.10%
4	Company C	4,300	57	0.08%
5	Company D	1,900	27	0.04%

Source: F&S Report

According to the F&S Report, as of December 31, 2017, we possessed a substantial market share in the PRC telecommunications tower infrastructure market. In comparison with other participants in the PRC telecommunications tower infrastructure market, we have the largest site resources with a strategic site distribution, and possess comprehensive service capabilities for providing integrated services to customers. In addition, we benefit from a number of favorable government policies. Our position as the coordinator of the co-location of telecommunications tower infrastructure in the PRC was specified in the documents jointly issued by the MIIT and the SASAC, including Circular [2014] No. 586, Circular [2016] No. 142, Circular [2017] No.92 and Circular [2018] No. 82. As of the Latest Practicable Date, we entered into strategic cooperation agreements with 28 provincial governments in the PRC, under which we received various policy supports in relation to site planning, construction and protection and sharing of infrastructure resources. Please see “*Business — Competitive Strengths*” for details of our competitive strengths. Other companies providing telecommunications tower infrastructure services in the PRC market primarily participate in market competition by leveraging their site acquisition capabilities in particular regional markets. According to the F&S Report, in the foreseeable future, the competitive landscape of the PRC telecommunications tower infrastructure market is expected to remain stable.

The Historical Price Movement of Telecommunications Tower Infrastructure Service

Prior to 2015, substantially all of the telecommunications tower infrastructure in the PRC market was constructed and operated by TSPs. The size of the PRC telecommunications tower infrastructure market was insignificant. According to the F&S Report, from 2015 to 2017, the average annual price per tenant in the PRC telecommunications tower infrastructure market increased from RMB25.3 thousand to RMB25.6 thousand without experiencing significant fluctuations.

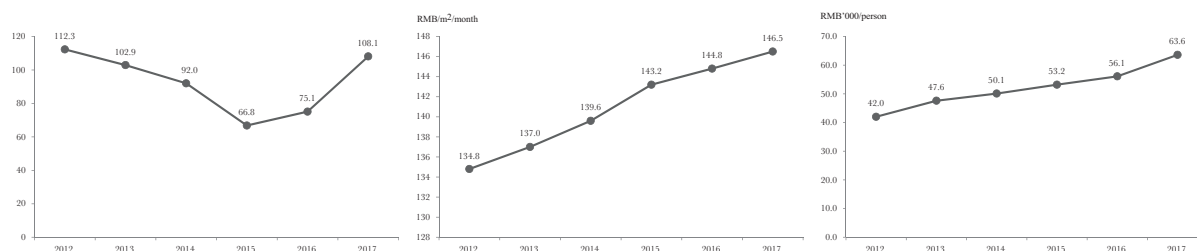
INDUSTRY OVERVIEW

The Historical Price Movement in Major Operating Expenses for Telecommunications Tower Infrastructure Service

In the PRC market, the major operating expenses of telecommunications tower infrastructure service providers include depreciation and amortization, ground lease charges and maintenance expenses, of which (i) depreciation and amortization mainly originates from the towers and is therefore affected by steel prices; (ii) ground lease charges are mainly affected by the rental cost of ground space, the price movement of which can be indicated by the trend of the average rental of office buildings; and (iii) maintenance expenses are mainly affected by the salary level of the professional maintenance technicians, which is in line with the salary level of the professional technicians in the construction industry.

According to the F&S Report, the following diagrams set forth the relevant indicators which reflect the historical price movement of the major operating expenses of PRC telecommunications tower infrastructure service from 2012 to 2017.

Composite Steel Price Index of the PRC from 2012 to 2017⁽¹⁾ **Average Rental of Office Buildings in Major Cities of the PRC from 2012 to 2017⁽²⁾** **Average Annual Salaries of Professional Technicians in the Construction Industry in the PRC from 2012 to 2017**



Notes:

- (1) The weighted average price in April 1994 was adopted as the index of 100.
- (2) Since various types of ground space are used for site construction and not all sites are constructed in the districts of office building, the trend of the average rental of office buildings only serves as an indicator of the historical movement of the rental costs of ground space.

Source: F&S Report

From 2012 to 2017, except for steel prices, there was no significant fluctuation in the relevant indicators which reflect the historical prices of major operating expenses of telecommunications tower infrastructure services. Since most upstream suppliers operate in a highly competitive market with numerous participants, telecommunications tower infrastructure service providers commonly have more bargaining power, which can be leveraged against the effects of increases in market prices of raw materials. In addition, according to the F&S Report, during the period from 2012 to 2017, in the PRC market, the average price level of steel, the average rental level of office buildings and the average salary level of professional technician in the construction industry were constantly lower than the average levels in developed economies globally.

INDUSTRY OVERVIEW

Capital Expenditure Plans in respect of the Number and Type of Sites subject to Demands from TSP Customers

In the PRC market, the operations and business expansions of telecommunications tower infrastructure service providers are primarily driven by demands from their TSP customers. A telecommunications tower infrastructure service provider commonly decides and adjusts the number and type of sites to be constructed or augmented pursuant to the specific demands made by its TSP customers during the course of their daily operations. The exact number and type of sites are also subject to adjustment as part of the demand undertaking process. A telecommunications tower infrastructure service provider may address the TSPs' demands through different approaches, including augmenting the existing sites for co-location and building new sites. Therefore, in the PRC market, telecommunications tower infrastructure service providers, particularly those with large operations and extensive site distributions, may not be able to estimate the number and type of sites to be constructed or augmented, or the detailed capital expenditures to be incurred by number and type of sites for a period of time in the future at a reasonably accurate level.

Market Barriers

The market barriers for entering the PRC telecommunications tower infrastructure market and achieving scalable business mainly include: (i) difficulties in acquiring and constructing sufficient number of sites as substantial site resources have already been occupied and provided to TSPs by the existing telecommunications tower infrastructure service providers in the market, and the costs for relocation of base stations by TSPs are relatively high; (ii) substantial capital expenditures and working capital required for the construction and operation of a large number of sites; (iii) site acquisition and site maintenance capabilities constrained and affected by factors such as policy, administration, geography, environment, population and practitioners' experiences; (iv) the capabilities, channels and opportunities required to qualify for TSPs' requirements and become a supplier to TSPs; (v) the opportunities to establish a long-term business relationship with TSPs; and (vi) comprehensive service capabilities for effectively operating and maintaining numerous and dispersed sites, and providing integrated services to customers.

THE SIZE AND DRIVERS OF THE PRC TELECOMMUNICATIONS TOWER INFRASTRUCTURE MARKET

According to the F&S Report, from 2017 to 2022, the size of the PRC telecommunications tower infrastructure market is expected to increase steadily from RMB70.6 billion to RMB109.1 billion, representing a CAGR of 9.1%. In addition, the number of tenants in the PRC telecommunications tower infrastructure market is expected to increase from 2.8 million in 2017 to 4.9 million in 2022, representing a CAGR of 11.9%, among which, the number of TSP tenants is expected to increase from 2.8 million in 2017 to 4.5 million in 2022, representing a CAGR of 10.2%.

We believe that the major drivers for the future growth of the PRC telecommunications tower infrastructure market include the following four factors.

INDUSTRY OVERVIEW

Growth in the Number of Users and Data Traffic of Wireless Communications will Drive the Increase in Demand for Network Coverage

According to the F&S Report, from 2012 to 2017, the nominal GDP of the PRC increased from US\$8,570.3 billion to US\$11,937.6 billion, representing a CAGR of 6.9%, which is higher than any other major economy in the world. The significant economic growth in the PRC and national strategies drove the rapid growth in both consumption and investment in the PRC wireless communications market. The growth in the PRC wireless communications market was also driven by the growth in demand for mobile applications and wireless communications data traffic. In recent years, the demand for mobile applications, particularly for e-commerce, online games and video streaming services, has grown exponentially in the PRC, resulting in substantial growth in wireless communications data traffic in the PRC market. According to the F&S Report, the following table sets out the historical and forecast data of the relevant indicators in the PRC wireless communications industry.

	Unit	2012	2017	2018 (Estimate)	2019 (Estimate)	2020 (Estimate)	2021 (Estimate)	2022 (Estimate)	CAGR (2012-2017)	CAGR (2017-2022)
Numbers of wireless communications user	million	1,112.0	1,417.5	1,433.1	1,435.9	1,463.7	1,529.4	1,560.0	5.0%	1.9%
Wireless communications data traffic	billion GB	0.9	24.6	35.0	48.2	66.4	93.2	125.5	93.8%	38.5%
Average annual wireless communications data traffic per user	GB	0.8	17.4	24.4	33.6	45.4	60.9	80.5	85.5%	35.9%

Source: F&S Report

Compared to certain major wireless communications markets in the world, there is still growth potential in the penetration rate of wireless communications users and the consumption of data traffic in the PRC market. According to the F&S Report, the following table sets out certain relevant indicators of the PRC wireless communications market against certain major wireless communications markets in the world in and as of December 31, 2017.

	Penetration rate of wireless communications users	Penetration rate of 4G users	Average annual wireless communications data traffic per user (GB)
PRC	101.9%	71.7%	17.4
United States	130.4%	97.0%	69.4
Japan	130.9%	83.9%	58.1
South Korea	123.5%	96.7%	54.3

Source: F&S Report

INDUSTRY OVERVIEW

According to the F&S Report, given the expected future growth in the coverage size of PRC wireless communications market, TSPs need to improve the range and the density of their base stations, which is expected to in turn boost the demand for telecommunications tower infrastructure services.

Coverage Range and Density of 4G Network can be Further Enhanced

Since the commercial operation of 4G network, it has gradually become the mainstream telecommunications network in the PRC market. Currently, the PRC government is encouraging the expansion of 4G network coverage, particularly in rural areas. In December 2016, the NDRC and the MIIT issued the Three-Year Action Plan for Construction of Substantial Information Infrastructures (《信息基礎設施重大工程建設三年行動方案》), which promotes the comprehensive and in-depth coverage of 4G network in towns and densely populated administrative villages.

In addition, the density of 4G base stations in the PRC market can be further enhanced. According to the F&S Report, even though the Big Three TSPs have largely completed the extensive coverage of their 4G network in the PRC, they still need to optimize the coverage of areas with a high demand for wireless communications services or weak signals.

According to the F&S Report, from 2014 to 2017, the number of 4G base stations in the PRC market increased from approximately 843 thousand units to approximately 3,280 thousand units, representing a CAGR of 57.3%. It is expected that the number of 4G base stations will further increase to approximately 4,529 thousand units in 2022, representing a CAGR of 6.7% from 2017 to 2022.

Development of New Technologies will Bring a New Round of Demand for Large-scale Network Build-out

The 5G network is expected to be put into commercial operation in the PRC market commencing from 2020, which will bring a new round of demand for large-scale network build-out by TSPs. According to the F&S Report, in the early stage of commercial operation of the 5G network, the 4G network and the 5G network will co-exist. TSPs may prefer to utilize tower sites which currently host macro cells for the installation of 5G base stations to provide basic coverage. As both the rate and the frequency increase, the transmission distance for 5G signals will reduce when compared with 4G signals. It is expected that the coverage radius for a single 5G base station will be substantially smaller than a 4G base station with the same power in the same environment. Therefore, TSPs will need a denser deployment of 5G base stations. To this end, other than improving the density of 5G macro cells, TSPs may also utilize small cells and DAS as supplement. According to the F&S Report, China is expected to invest a total amount of RMB1.2 trillion for 5G network build-out within the next five to 10 years. As of December 31, 2022, it is expected that the number of 5G base stations in the PRC market will be approximately 2,432 thousand units.

Site Co-location will Drive Accelerated Network Deployment of TSPs

In the PRC market, TSPs are capable of achieving network coverage and conducting business in a desired region in a cost-efficient and timely manner through co-location of the existing sites by taking advantage of co-location discount. Therefore, as the network coverage and base station density

INDUSTRY OVERVIEW

of the 4G network can be further enhanced and the commercial application of the 5G network will bring a new round of large-scale network build-out, site co-location helps TSPs deploy more base stations in a faster manner at the same level of expenditure, which in turn drive the growth in the size of the telecommunications tower infrastructure market.

According to the F&S Report, the TSP tenancy ratio (calculated by dividing the number of TSP tenants by the number of sites occupied by such tenants) in the PRC telecommunications tower infrastructure market increased from 1.23 as of December 31, 2015 to 1.42 as of December 31, 2017, and is expected to further increase to 1.62 as of December 31, 2022.

INDUSTRY DEVELOPMENT TRENDS

Sharing Being Further Diversified

“Sharing” is currently one of the leading industrial policies in the PRC telecommunications tower infrastructure industry. The PRC government has promulgated policies from time to time to encourage sharing of telecommunications tower infrastructure. Site co-location can help TSPs reduce the costs of occupying a site, and expand network coverage in shorter time. In addition, site co-location can also save resources required for site construction, including land and steel. With further expansion of the 4G network coverage and the application of the 5G network, especially the application of small cells, the deployment of base stations will be denser, and the demand for sharing will increase. Beyond providing tower and shelter space in a site to multiple tenants for co-location, services offered by telecommunications tower infrastructure service providers, including ancillary facilities, power access, ducts and pole lines, site acquisition service, maintenance service and construction service, are optional and can be packaged together, thereby further diversify the approach of sharing.

Furthermore, it is expected that the demand for site resources service and site-based information service from customers other than the Big Three TSPs will increase in the future. Site resources service and site-based information service may also be provided through sharing that would further enhance the co-location of sites. According to the F&S Report, as of December 31, 2017, the tenancy ratio (covering TSP tenants and tenants of site resources service and site-based information service) of the PRC telecommunications tower infrastructure market was 1.43, and is expected to increase to 1.72 as of December 31, 2022.

Site Acquisition Being Further Diversified

Due to the further expansion of the 4G network coverage and denser base station deployment in build-out the 5G network, customers’ demands on the number and density of sites will increase, and the site acquisition capacity of the telecommunications tower infrastructure service providers will face higher requirements. According to the F&S Report, against the backdrop of the PRC government’s implementation of the national strategy of building strength in cyberspace, the local governments are managing the sites in more standardized manners, while vigorously encouraging inclusion of sites into local urban-rural development planning. Major state-owned enterprises with extensive site distribution and comprehensive capabilities are the principal driving forces for inclusion of the demand for site grounds into local governments’ planning.

INDUSTRY OVERVIEW

Some telecommunications tower infrastructure service providers are actively utilizing the public utility tower and pole resources, such as lamp poles, traffic light poles and video surveillance poles, to mount the equipment of customers, which will assist telecommunications tower infrastructure service providers to ease the burden of site acquisition, reduce the capital expenditures required for constructing new sites and increase their operational efficiency. In particular, as the proportion of small cells in the 5G network build-out will increase, using the public utility towers and poles to mount 5G small cells will allow telecommunications tower infrastructure service providers to have a competitive advantage. According to the F&S Report, the public utility tower and pole resources in the PRC are public facilities and generally be considered to be open for use by state-owned enterprises or other qualified entities with priority. The telecommunications tower infrastructure service providers need to maintain favorable cooperations with the local governments in order to gain the opportunities to use the public utility tower and pole resources.

Business and Revenue Sources Being Further Diversified

Technologies such as IoT, big data and artificial intelligence have been developing rapidly in the PRC and led to a rapid growth in the demand for informatization in all industries. Leveraging their existing site resources and comprehensive solution capabilities, certain PRC telecommunications tower infrastructure service providers diversify their business lines and revenue sources by offering site resource services and information services to meet information technology buildup in many industries. Currently, telecommunications tower infrastructure service providers in the PRC primarily provide site resources service and site-based information service to customers other than the Big Three TSPs. The market covered by such services primarily include the government and enterprise private communications network market, the video surveillance market and the environment data collection market.

Telecommunications tower infrastructure service providers in the PRC provide site resources to customers who need to install certain equipment to build out government and enterprise private communications networks or conduct data collection. In addition to provision of site space and ancillary services, the telecommunications tower infrastructure service providers can further integrate resources such as data collection devices, transmission networks and data platforms to provide site-based information services such as data collection, backhaul, aggregation, analysis and application to customers who need to conduct video surveillance or environment data collection.

According to the F&S Report, with the continuously increased investment in telecommunications networks by the PRC government, utilities as well as industrial and commercial sectors such as oil and electricity, the promotion of “Safe Cities” and “Smart Cities” by the PRC government and the stricter environmental policies in the PRC, it is expected that in the foreseeable future, demand for site resources service and site-based information service by customers in the government and enterprise private communications network market, the video surveillance market and the environment data collection market in the PRC will continue to grow rapidly.

INDUSTRY OVERVIEW

The following table sets out the historical and forecasted market sizes of the government and enterprise private communications network market, video surveillance market and environment data collection market in the PRC in relation to site resources service and site-based information service (excluding purchases of relevant equipment of government and enterprise private communications network, video surveillance and environment data collection).

Unit: RMB billion

	2012	2013	2014	2015	2016	2017	2018 (Estimate)	2019 (Estimate)	2020 (Estimate)	2021 (Estimate)	2022 (Estimate)
Government and enterprise private communications network ⁽¹⁾ market	1.3	2.3	3.8	4.8	5.3	6.0	7.2	8.2	9.4	10.7	12.3
Video surveillance market	73.4	89.2	119.0	158.1	200.9	213.7	242.5	277.4	316.6	357.7	392.4
Environment data collection market	5.1	5.8	6.3	6.9	7.9	10.0	11.2	12.9	14.8	16.6	18.5

Note:

- (1) Government and enterprise private communications network means the communications network used for proprietary telecommunications of government, utilities and industrial and commercial enterprises.

Source: F&S Report

In addition, with the emergence of various new application scenarios, more types of demand for telecommunications tower infrastructure service may emerge, which will further enrich the business and revenue sources of telecommunications tower infrastructure service providers. For example, charging point operators may also utilize the sites of the telecommunications infrastructure service providers to install their equipment in the future.