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## INDUSTRY OVERVIEW

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*The information and statistics set out in this section and other sections of this document were extracted from the report prepared by China Insights Consultancy, which was commissioned by us, and from various official government publications and other publicly available publications. We engaged China Insights Consultancy to prepare the CIC Report, an independent industry report, in connection with the [REDACTED]. The information from official government sources has not been independently verified by us, the Sole Sponsor, [REDACTED], [REDACTED], [REDACTED], [REDACTED], [REDACTED], any of their respective directors and advisors, or any other persons or parties involved in the [REDACTED], and no representation is given as to its accuracy.*

### CHINA’S DATA INTELLIGENCE SERVICE MARKET

Big data refers to datasets characterized by significant variety, large volumes, high velocity, and relatively low value density. Data intelligence is the process of extracting meaningful insights from these datasets by synthesizing information from multiple sources and employing advanced analytical tools and technologies, including AI. These insights drive predictive and prescriptive analytics, enhancing strategic decision-making. Through training on extensive datasets, data intelligence is adapted for various applications, facilitating its widespread implementation across multiple industries.

The data intelligence service industry in China has witnessed rapid expansion in recent years, fueled by a significant increase in data production and a rising demand for services to extract valuable information from big data. According to CIC, the size of China’s data intelligence service market grew from approximately RMB285.0 billion in 2019 to approximately RMB626.8 billion in 2023, representing a CAGR of 21.8% between 2019 and 2023. In the future, with continuous data generation and technological advancements, the size of China’s data intelligence service market is projected to reach approximately RMB1,479.4 billion in 2028, representing a CAGR of 18.7% between 2023 and 2028, according to CIC.

### CHINA’S TIME SERIES DATA SERVICE MARKET

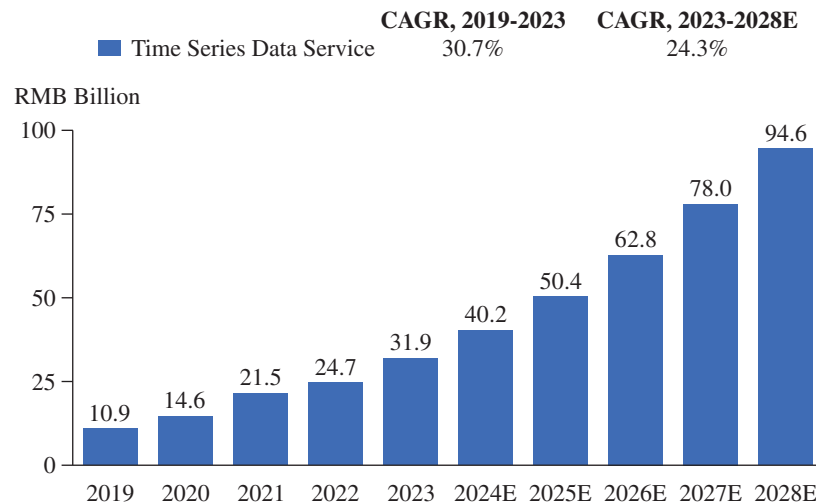
Time series data is a sequence of data points, each associated with a unique timestamp and generated over time. This type of data originates from diverse sources, such as readings and data from IoT devices, user interactions on digital platforms, and transaction data in financial markets. As the number of connected devices and the frequency of digital interactions and transactions increase, time series data has become increasingly vital within the global data intelligence ecosystem. The connected devices and sensors across various sectors continuously produce vast amounts of time series data. According to CIC, the annual volume of time series data in China has grown from 2.3 zettabytes in 2019 to 11.0 zettabytes in 2023, representing a CAGR of 47.2% between 2019 and 2023, and is expected to reach 49.9 zettabytes in 2028 at a CAGR of 35.3% between 2023 and 2028.

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Time series data services have evolved alongside the continuous increase in the volume of time series data. These services address the entire time series data processing cycle, from data ingestion to output of actionable information. Supported by advanced technologies such as big data analytics and AI, time series data service providers deliver both standardized products and customized services that enable deep data insights and support efficient business decisions. Enterprises in the public bus, renewable energy and industrial internet sectors have used time series data services to enhance their operating efficiency and expedite their digital and intelligent transformation.

According to CIC, the size of China’s time series data service market has increased from approximately RMB10.9 billion in 2019 to approximately RMB31.9 billion in 2023 at a CAGR of 30.7% between 2019 and 2023, fueled by the rapid increase in the volume of time series data and technological advancements. With the rapid deployment of IoT devices and the widespread application of big data analytics and AI technologies, the size of China’s time series data service market is expected to grow from approximately RMB31.9 billion in 2023 to approximately RMB94.6 billion in 2028, representing a CAGR of 24.3% between 2023 and 2028. With time series data accumulated, more and more enterprises and organizations demand time series data services to derive valuable insights and information that facilitate their decision-making. The development of technologies for storing and processing large-scale time series data further promotes the acceptance and adoption of time series data services by these enterprises and organizations, driving the continuous growth of China’s time series data service market.

### China’s Time Series Data Service Market Size in Terms of Revenue (2019-2028E)



Source: CIC

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To meet diverse market demands, time series data service providers have developed multiple types of offerings that can be applied across a broad spectrum of scenarios for both businesses and individuals.

- *Offerings to businesses.* Time series data service providers typically offer the following three types of products and services to businesses, with corresponding revenue models:
  - *Databases.* Providers offer purpose-built time series databases to handle data storage and management and charge fees based on access and usage.
  - *Analytics software.* Providers offer analytics software that helps businesses make data-driven decisions and generate revenue through subscription fees.
  - *Scenario-based services.* Providers offer scenario-based services that are typically project-based and tailored to meet specific customer requirements, which are charged based on procedures and costs of customization needed.
- *Offerings to individuals.* Time series data service providers offer end-users platforms to generate actionable insights. They charge users subscription fees for access and use to platforms, or monetize through advertising services leveraging the large user base and high user traffic on user platforms.

### Technical Entry Barriers

Due to the inherent characteristics of time series data, processing large scale time series data necessitates strong technological capabilities of time series data service providers. Through high-performance data access system, sophisticated pre-processing technologies and well-designed data analytics methods, time series data service provider can help enterprises better manage and leverage large-scale and complex time series data.

- *High-performance data access system.* Plenty of time series data is generated every day, containing a huge number of time points and measurements to be written into storage quickly at low costs. Only time series data service providers with high-performance data access system that can efficiently and cost-effectively access substantial time series data will be able to exploit the underlying value of such data and maintain a competitive edge in the market.
- *Sophisticated pre-processing technologies.* Due to sensor errors and equipment failures, time series data is often interfered by noise and outliers. Time series data service providers utilize sophisticated pre-processing technologies to effectively detect and correct errors and inconsistencies in large datasets, enhancing data quality for further processing and improving the accuracy of data analytics results.
- *Well-designed data analytics methods.* Each data point in the time series datasets has multiple attributes or features and contains rich information, but such high-dimension characteristic increases the complexity for data processing. Time series data service providers are required to develop time series data analytics methods tailored to high-dimension time series data to help their customers extract valuable information. For instance, leveraging their predictive analytics capabilities, time series data service providers can make accurate predictions on future market demands, price fluctuations and potential risks for their customers’ decision-making.

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- *Deep understanding of temporal patterns.* Time series data has unique characteristics, such as temporal ordering, dependencies on previous data points, and repeating patterns over fixed intervals. With machine learning models such as recurrent neural networks, time series data service providers effectively identify various patterns in time series datasets, such as trends, seasonality and cyclic patterns. They utilize identified patterns to generate insights on the underlying dynamics of time series data, enabling their customers to make informed decisions and predictions.

### Key Drivers and Future Trends

Key drivers and future trends for China’s time series data service industry include:

- *Significant growth in time series data volume.* With the rapid development of mobile internet and IoT, the number of sensors and IoT devices has grown significantly. According to CIC, the number of IoT device connections in China increased from 5.5 billion in 2019 to 12.6 billion in 2023 and is expected to further increase to 26.0 billion by 2028. As the number of data-generating devices and sensors increases, the scale and diversity of time series data will continue to grow, providing abundant data resources for the time series data service industry.
- *Advancements in time series data analytics capability.* AI technologies have been widely applied in time series data analytics to efficiently process the massive time series data and generate valuable data insights. Particularly, the emergence of foundation models has led the evolution of AI technologies. Foundation models are a type of AI models that are pre-trained on a huge amount of data and can be adapted to many user scenarios with minimal fine-tuning. They can be deployed to complete a wide range of disparate time series data analytics tasks within a short time period while maintaining a certain degree of accuracy in their output of predictions, which further reduces the costs for data processing. Along with the application of foundation models under more scenarios, time series data analytics capabilities will further advance, driving the rapid growth of China’s time series data service market.
- *Increased demand for time series data analytics offerings.* As market competition intensifies, Chinese enterprises gradually recognize the importance of time series data for decision-making. They rely on time series data services to obtain valuable information of various aspects of their business operations, such as market trends, consumer behavior and supply chain management, to estimate future transaction price, predict consumers’ appetites, monitor device condition and obtain sales forecasts. The growing demand for real-time prediction as well as instant decision making has prompted the time series data service providers to diversify their product and service offerings for data analytics and decision support.

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- *Government policy support.* The PRC government has always been in support of the development of information technology and the data intelligence industry. It has introduced and adopted a series of supportive policies to create a favorable environment for the development of China’s time series data service industry. According to the 14th Five-Year Plan for National Informatization was issued by the State Council in 2021, the PRC government will foster and expand China’s data service industry and accelerate digital transformation and upgrading in Chinese enterprises. The NDRC also implemented policies aiming to fully tap the potential of data to accelerate the development of a digital economy and drive the digital transformation in production, lifestyles and governance methods. These policies are attracting more enterprises and capital to enter the time series data service industry, which promote the rapid development of this industry.

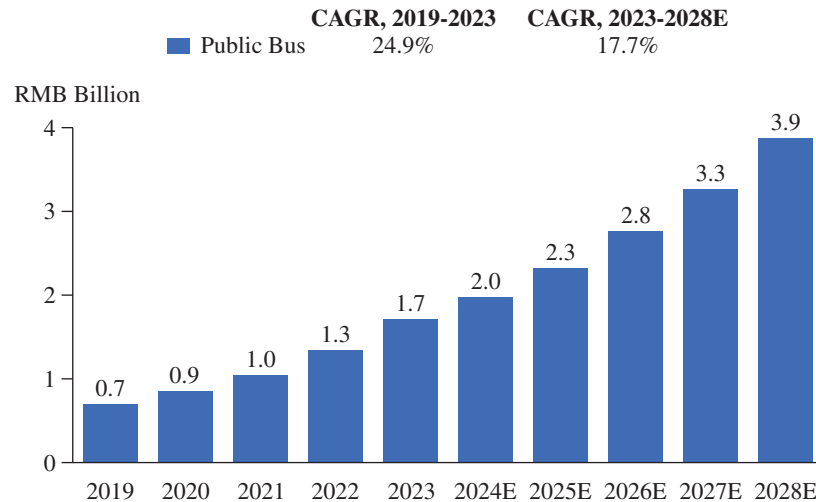
### TIME SERIES DATA SERVICE MARKET IN CHINA’S PUBLIC BUS SECTOR

Bus transit is an important component of the city mobility and public transportation network. Attributable to improved transportation infrastructure, expanding urbanization, digital advancements and supportive policies, the public bus sector has been experiencing remarkable growth in recent years. According to CIC, as of December 31, 2023, there were approximately 700,000 buses operating nationwide, with an average daily operating time of around 15 hours. These operating buses generated over 1,000 terabytes of time series data from their onboard sensors in 2023, with various information such as vehicle real-time location, passenger boarding time, stop duration and even unplanned detours. The extensive time series data streams demand effective analytics tools to empower commuters with pleasant travel experience, and optimize decision-making process and enhance operation efficiency for transportation entities, creating ample opportunities for time series data service providers to enter the public bus sector.

Improved data infrastructure and wide deployment of IoT devices in China has led to a surge in time series data volume. Government authorities in China attach great importance and have adopted a series of policies facilitating the development of smart transportation and smart cities. For example, according to the 14th Five-Year Plan, to build smart cities, the PRC government aims to provide digital and intelligent public services, facilitate the application of IoT and smart technologies, and improve the platforms for city operations and urban management. All these initiatives stimulate the demands for sophisticated time series data services and propel the steady growth of the time series data service market in China’s public bus sector. According to CIC, the size of the time series data service market in China’s public bus sector has grown from approximately RMB0.7 billion 2019 to approximately RMB1.7 billion in 2023, representing a CAGR of 24.9% between 2019 and 2023. With accelerated development of smart transportation and smart cities, transportation entities, including bus companies and transportation authorities, are increasingly pursuing digitalization by digging into the value underlying their bus data. The demand for time series data services is estimated to keep growing in the near future. According to CIC, the size of the time series data service market in China’s public bus sector is expected to reach approximately RMB3.9 billion in 2028, representing a CAGR of 17.7% between 2023 and 2028.

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### Time Series Data Service Market Size in China’s Public Bus Sector in Terms of Revenue (2019-2028E)



Source: CIC

### Pain Points

All stakeholders in the public bus sector, including commuters and transportation entities, are facing challenges caused by the complexity and scale of bus operation.

- Commuters.** Bus commuters have long been suffering unpredictable waiting time. Rush hours, congestions and other complex road conditions could lead to significant deviations from original bus schedules, rendering it challenging for commuters to accurately anticipate their arrival time. Moreover, the extensive bus route networks and inaccurate bus stop information can make it difficult for commuters to select the right route and increase their time costs. Commuters demand accurate real-time bus location information to plan their trips in advance and improve their travel experience.
- Transportation entities.** Transportation entities encounter significant challenges that hamper their efficiency, safety and sustainability. For example, bus companies need to constantly adjust their route planning and scheduling strategies to adapt to city changes and ensure efficient operations, while transportation authorities focus on reducing the traffic congestions brought by the ever-increasing number of vehicles and progressively complex traffic flows in cities. Furthermore, transportation entities also need to oversee and manage bus operations to ensure the bus travel safety and service quality. All of the above is inseparable from effective real-time bus location monitoring and necessitates innovative product and service offerings to ensure seamless transportation services to the public.

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The pain points in the public bus sector have given rise to numerous market opportunities for application of time series data services to improve travel experience, optimize route planning and enhance operation efficiency. Service providers who have established strong time series data analytics capabilities and can quickly adopt emerging technologies, are expected to play an important role in improving the quality, efficiency and sustainability of the bus transit system in cities.

### Key Drivers and Future Trends

Key drivers and future trends for the time series data service market in China’s public bus sector include:

- *Rise in data volume.* Sensors and monitoring devices deployed on each bus collect plentiful time series data every day. Along with the steady rise in the number of public buses in China, the volume of time series data in the public bus sector will increase correspondingly. According to CIC, the volume of time series data generated from sensors of buses in operation in China has increased from 665 terabytes in 2019 to 1,004 terabytes in 2023 and is expected to reach 1,565 terabytes in 2028. Such rise in time series data volume fuels the demand for time series data services to effectively manage large-scale data and optimize bus operations.
- *Technology advancements.* Leveraging their strong data analytics capabilities and advanced AI algorithms, time series data service providers can deliver real-time insights and seamless travel experiences to bus commuters and empower informed choices and optimized transport management for transportation entities. Advancements in big data analytics and AI technologies as well as adoption of other cutting-edge technologies in the public bus sector will further enable time series data service providers to roll out innovative offerings to meet evolving market demand.
- *Increasing demand.* The growing number of time series data generated from buses has brought challenges in data processing and management for transportation entities. Such entities are looking for professional time series data services for real-time intelligent decision-making and predictive maintenance, which will create significant opportunities for the time series data service market in the public sector.
- *Smart city development.* In recent years, there is an increased emphasis on interconnectivity and data-driven management along with the smart transportation and smart city development. Smart city development entails the deployment of a vast array of IoT devices that generate large volumes of time series data, driving the demand for sophisticated time series data services. Moreover, the government plans to improve the digital infrastructure in smart cities, including promoting the connectivity among public service platforms, devices and terminals, and building data sharing facilities. These initiatives will make data more accessible and easier to collect, creating huge potential for time series data service providers to deliver advanced services cost-effectively.



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### TIME SERIES DATA SERVICE MARKET IN CHINA’S OTHER VERTICALS

In addition to the public bus sector, time series data services have been widely applied in other industries to provide comprehensive and accurate information support for decision-makers in such industries. For example, electricity prices and operating status of industrial equipment all fluctuate over time, similar to bus data in the public bus sector. Both power suppliers and purchasers in the electricity trading sector demand for time series data services to leverage the changes in electricity prices to increase their earnings and optimize operational strategies. Equipment operators in the industrial internet sector need the insights into equipment health, battery life prediction and failure probabilities estimation to promptly adjust their operation plans to improve efficiency. Along with advancement in digital and intelligent transformation, the demand for time series data services in the electricity trading and industrial internet sectors is expected to increase and will bring significant market opportunities.

**Electricity Trading.** The rising electricity consumption in China drives increased demand for precise predictions of key operating metrics, such as electricity load, electricity generation and capacity utilization, to ensure a proper electricity distribution and stable operation of the national power system, which would guarantee a reliable power supply. Endorsed by government policies, the power system in China is experiencing a market-oriented reform. Electricity spot market pilots are underway in multiple provinces in China with remarkable results achieved, and certain provinces have officially introduced electricity spot markets and started the operations. Medium- and long-term electricity trading has also landed in most provinces in China, providing market participants with more diversified trading options. Businesses involved in electricity trading thus need time series data analytics tools to analyze and predict electricity supply and demand as well as the trends in electricity prices, so that they can identify the best trading timing and price in the volatile power market and formulate strategies that brings them the biggest commercial benefits. According to CIC, the size of the time series data service market in China’s electricity trading sector was approximately RMB1.6 billion in 2023 and is expected to further increase to approximately RMB6.3 billion in 2028 at a CAGR of 31.4% between 2023 and 2028.

**Industrial Internet.** China’s prospering industrial internet sector has led to a sharp increase in the number of intelligent devices, triggering a surge in demand for device maintenance. Traditional maintenance relies heavily on industry experts and their experience, which incurs high time and economic costs. Using time series data analytics, enterprises in the industrial internet sector monitor devices in real time and conduct predictive maintenance, which substantially reduces maintenance costs and improves operation efficiency and service quality. According to CIC, the size of the time series data service market in China’s industrial internet sector was approximately RMB6.3 billion in 2023 and is expected to increase to approximately RMB21.6 billion in 2028, representing a CAGR of 27.8% between 2023 and 2028.



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### COMPETITIVE LANDSCAPE OF CHINA’S TIME SERIES DATA SERVICE MARKET

#### Competitive Landscape

China has a large time series data service market, with a market size of approximately RMB31.9 billion in terms of revenue in 2023. However, this market is highly competitive with numerous players providing offerings tailored to diverse scenarios. The major market participants include time series database service providers, analytics software providers, scenario-based service providers and terminal application providers. According to CIC, our Group was among the top 20 time series data service providers in China in terms of revenue in 2023, and the aggregate market share of the top 20 time series data service providers in China in terms of revenue was approximately 50.4% in 2023. Leveraging their strong technology innovation ability, massive datasets and valuable industry insights, the leading players are expected to continue to enrich their offerings and expand into new scenarios to capture more opportunities in the evolving market and meet varying customer demands.

In the public bus sector, our Group was the third largest time series data service provider in China in terms of revenue from time series data services in 2023. The following table sets forth the competitive landscape of the top five time series data service providers in China’s public bus sector in terms of revenue from time series data services in 2023.

#### Top Five Time Series Data Service Providers in China’s Public Bus Sector in Terms of Revenue in 2023

Ranking	Company	Background	Revenue from time series data services in 2023	Market Share in 2023 <sup>(1)</sup>
<i>(RMB in millions)</i>				
1. . . . .	Company A	A subsidiary of a leading multinational technology company based in China and listed on the Stock Exchange and NYSE, providing digital map, navigation and local lifestyle services in China	325.3	19.0%
2. . . . .	Company B	A subsidiary of a leading AI company based in China and listed on the Stock Exchange and NASDAQ, providing digital map, navigation and travel-related services	188.1	11.0%
3. . . . .	Our Group	A data intelligence company based in China, focusing on harnessing the power of time series data to detect and predict trends, patterns and fluctuations over time	174.5	10.2%

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Ranking	Company	Background	Revenue from time series data services in 2023	Market Share in 2023 <sup>(1)</sup>
(RMB in millions)				
4 . . . . .	Company C	A subsidiary of a leading multinational technology company based in China and listed on the Stock Exchange and NYSE, providing comprehensive cloud services	147.3	8.6%
5 . . . . .	Company D	A private technology company based in China, providing a mobile app for real-time bus information, route planning, navigation and map services	69.0	4.0%

Source: CIC

According to CIC, bus riders took approximately 38.0 billion bus rides in China in 2023. Their demand for products and services that improve their travel experience has created substantial market opportunities. Accordingly, some time series service providers in China have developed mobile apps and mini programs to deliver real-time bus information and other travel-related services for bus commuters. The following table sets forth the competitive landscape of the real-time bus information platforms in China in terms of city coverage in 2023.

### Top Five Real-time Bus Information Platforms in China in Terms of City Coverage as of December 31, 2023

Ranking	Platform	Description	Number of cities <sup>(2)</sup> covered
1 . . . . .	Chelaile	An online platform designed to provide commuters with real-time bus information and route planning services, which is designed by our Group	264
2 . . . . .	Platform A	An online platform designed to provide navigation, map and local lifestyle services, which is developed by Company B	254
3 . . . . .	Platform B	An online platform designed to provide real-time bus information, route planning, navigation and map services, which is developed by Company D	229
4 . . . . .	Platform C	An online platform designed to provide navigation, map and local lifestyle services, which is developed by Company A	163

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Ranking	Platform	Description	Number of cities <sup>(2)</sup> covered
5 . . . . .	Platform D	An online platform designed to provide navigation, map and local lifestyle services, which is developed by a subsidiary of a leading multinational technology company based in China and listed on the Stock Exchange	17

Source: CIC

Notes:

- (1) The market share is calculated based on the size of the time series data service market in China’s public bus sector of approximately RMB1.7 billion in 2023.
- (2) This includes tier-1 cities, emerging tier-1 cities, tier-2 cities and tier-3 and below cities.

### Key Success Factors for China’s Time Series Data Service Providers

- *Value creation for customers.* Through in-depth market research and close collaboration with customers, time series data service providers can fully comprehend the unique characteristics and current challenges in different industries and verticals. Such insights enable time series data service providers to precisely identify the pain points of customers and address their needs with tailored solutions. Aiming for mutual long-term success, time series data service providers also strive to analyze industry trends, exploit potential opportunities and work diligently to enhance customers’ satisfaction and loyalty.
- *Sophisticated data analytics capabilities.* The ability to process large volumes of time series data and derive useful insights is vital for the success of time series data service providers. As a solid foundation of later data analytics, time series data service providers need to build extensive data acquisition channels for rapid and complete data collection and establish high-performance data access systems for data ingestion and storage. Such providers also desire effective data pre-processing mechanisms and data labeling tools to achieve high-quality datasets for predictive analytics and model training. Utilizing data analytics algorithms and AI models, time series data service providers identify patterns in the time series datasets and can make accurate predictions, delivering valuable information to target users and customers to meet their personal or business needs.

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- *Technological advancement and continuous innovation.* The essence of time series data services lies in technical prowess and innovation capabilities. In the rapidly evolving industry, time series data service providers must continuously adopt cutting-edge technologies and innovate their products and services to maintain competitive. The relentless pursuit of technological innovation and product upgrades is key for time series data service providers to maintain a leading position in the fiercely competitive market and achieve sustainable business growth.
- *Building an excellent talent pool.* In the time series data service market, talent, as the driving force behind technological advancement and data resource exploration, are essential resources for all time series data service providers. A team with robust technical capabilities and diverse backgrounds can better adapt to industry demands and excel in research, data analytics and model design. Such a team can also continuously provide competitive customer support and services, fostering the continuous business growth.

## SOURCE OF INFORMATION

CIC was commissioned to conduct research, provide an analysis of, and generate a report on China’s data intelligence service industry at a fee of approximately RMB742,000. The commissioned report has been prepared by CIC independent of the influence of the Company and other interested parties. CIC’s services include, among others, industry consulting, commercial due diligence and strategic consulting. Its consultant team has tracked the latest market trends across various industries, where it has relevant and insightful market intelligence.

CIC conducted both primary and secondary research using a variety of resources. Primary research involved interviewing key industry experts and leading industry participants. Secondary research involved analyzing data from various publicly available data sources, such as the National Bureau of Statistics of China, Chinese government releases, annual reports published by relevant industry participants and industry associations and CIC’s internal databases. The market projections in the commissioned report are based on the following key assumptions: (i) the overall global social, economic, and political environment is expected to remain stable over the next decade; (ii) related key industry drivers are likely to continue driving growth in China’s data intelligence service industry during the forecast period; and (iii) there is no extreme force majeure or unforeseen set of industry regulations in which the market may be affected either dramatically or fundamentally.

Unless otherwise specified, all data and forecasts contained in this section are derived from the CIC Report. The report has also incorporated actual and potential impact of the COVID-19 outbreak on our industry. The Directors have confirmed that there has been no occurrence of adverse change in the overall market information that would subject the data to significant restrictions, contradiction or negative effects since the date of the consultancy report.