

OVERVIEW

We are the leader in China's telecom software product and related service market and are actively expanding our presence in China's non-telecom enterprise software product and related service market. We provide mission-critical, carrier-grade software products and services that enable Chinese telecom operators and large enterprises to improve business agility, efficiency and productivity and capture new revenue streams while optimizing costs, achieving greater success in the evolving digital era. Our products and services have been deployed by companies within the corporate groups of China Mobile, China Unicom and China Telecom, the world's largest telecom operators, their government and enterprise customers, as well as leaders in China's cable TV, postal and financial services industries.

We are the largest telecom software product and related service provider in China, with a market share of 25.3% as measured by revenue in 2017, according to Frost & Sullivan. According to the same source, we are also the largest provider of BSS software products and related services in the telecom industry in China, with a market share of 50.0% as measured by revenue in 2017. Our longstanding relationship with China Mobile, China Unicom and China Telecom can be traced back to the 1990s when we participated in the design and construction of numerous landmark information infrastructure projects. Leveraging this strong legacy, we became the provider of China's first-generation telecom software, and have developed an extensive portfolio of software products and services for telecom operators and accumulated deep insights into their IT and network environment and business and operational needs over the years, creating high barrier to entry. As of December 31, 2015, 2016 and 2017 and June 30, 2018, we had 176, 181, 193 and 212 telecom operator customers, respectively, including the headquarters, provincial, municipal and specialized companies and joint venture of China Mobile, China Unicom and China Telecom, with whom we negotiate and enter into contracts individually and directly. In 2015, 2016, 2017 and the six months ended June 30, 2018, revenue for the Software Business from telecom operators accounted for 87.0%, 88.9%, 93.9% and 96.6% of our revenue from continuing operations, respectively.

Having established our leadership in the technologically-demanding telecom software product and related service market with a full-spectrum, highly-specialized, carrier-grade product portfolio, we have tapped into and are actively expanding our presence in China's fast-growing non-telecom enterprise software product and related service market to address large enterprises' similar, fundamental needs in business transformation and digitalization. As of December 31, 2015, 2016 and 2017 and June 30, 2018, our enterprise customer base included 23, 26, 28 and 32 large enterprises across multiple industries, respectively. By serving both the telecom and non-telecom enterprise markets with shared resources, management, domain expertise and technology know-how, we are able to leverage synergies in winning new businesses and remain cost competitive.

Software Business. We are primarily engaged in the provision of mission-critical, carrier-grade software products and related services, as well as a variety of other services (collectively, the "Software Business"). Our products and services embrace a holistic approach to business transformation and digitalization:

- ***Software products and related services.*** We have launched an extensive portfolio of over 500 software products, ranging from CRM, charging & billing and big data to IoT and intelligent network products. Our full spectrum of software products are high-performance, highly-specialized and continuously-innovated and are designed to address the increasingly-complex, mission-critical business and operational needs of telecom

operators and large enterprises, serving as vital connections between telecom operators and their end users. Our software products can either add specific capabilities to upgrade a customer's existing systems as its business evolves or build new systems with local, provincial or nationwide coverage from the ground up. Such flexibility enables telecom operators and large enterprises to engage us at any stage of their customer lifecycle. We deliver our software products using the project-based, on-premise delivery model, as accompanied by end-to-end, professional deployment services, ranging from demand analysis, project design and planning, software development and sourcing, system installation and launch to trial operation and acceptance, which integrate our software products with our customers' existing IT and network infrastructure and maximize the value of our products. After the system is launched, customers typically engage us to provide ongoing operation and maintenance services to ensure the stable functioning of the system.

- ***Data-driven operation services.*** We are actively exploring new growth opportunities that diversify both ours and our customers' revenue streams, and have in recent years provided comprehensive data-driven operation services through data-driven operation platforms to telecom operators and their government and enterprise customers to help them increase sales, operational efficiency and customer value. These services primarily include real-time, in-depth analysis of user purchasing and consumption patterns, characteristics and lifecycles and design and implementation of marketing campaigns and management activities.
- ***Others.*** We also derive revenue from rendering a variety of other services, including procurement of third-party hardware and software for some of our projects, system integration services, business consulting services and corporate trainings.

Network Security Business. During the Track Record Period, our results from continuing operations also included results of the Network Security Business. Prior to late 2015, we carried out the Network Security Business in-house primarily through AsiaInfo Chengdu. In late 2015, we disposed of AsiaInfo Chengdu to AsiaInfo Cayman. Our Directors are of the view that the Network Security Business does not form part of our core businesses of the Group (which focus on the provision of integral software products and services primarily to telecom operators in the PRC with a focus on BSS / OSS systems). The disposal of the Network Security Business will allow the Company to focus on its core business and ensure our management and internal resources are best placed to serve the development of our core business. After such disposal, to accommodate our customers' project management schedules and business needs and as a transitional arrangement, we entered into project development contracts for the provision of network security software products and services with customers, and subsequently outsourced all tasks under these contracts at the same price to AsiaInfo Chengdu (the "**Network Security Transitional Arrangement**"). We recognized the contract prices of such project development contracts as revenue for the relevant periods based on their percentage of completion, and recorded the same amounts as cost of sales. In consideration for the services provided by us to AsiaInfo Chengdu under the Network Security Transitional Arrangement, such as contract management, customer relationship management and liaison, we charged AsiaInfo Chengdu service fees which amounted to 2% of the Network Security Transitional Arrangement revenue recognized for the relevant periods, which were offset against cost of sales. We have ceased to enter into any new contract with respect to the Network Security Transitional Arrangement starting 2018. However, some of the existing project development contracts under the Network Security Transitional Arrangement we entered into with AsiaInfo Chengdu prior to 2018 are still ongoing and continuing. We expect that

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these existing project development contracts under the Network Security Transitional Arrangement will be completed by the end of 2020. The Company was informed by the Controlling Shareholders and Dr. Tian that pursuant to a share transfer agreement entered into by China Cloud Tech as buyer (being a company controlled by Dr. Tian) and AsiaInfo Cayman as seller (the “**Transfer Agreement**”), AsiaInfo Cayman has conditionally agreed to transfer 70% of the total issued shares of AsiaInfo Securities held by it (the “**Relevant Shares**”) to China Cloud Tech. In September 2018, China Cloud Tech has acquired and AsiaInfo Cayman has disposed of the effective control and all economic interests over the Relevant Shares, although the legal completion of the Transfer Agreement is still subject to satisfaction of certain conditions precedent. As a result, Dr. Tian (through China Cloud Tech) obtained indirect control over AsiaInfo Chengdu. See “Connected Transactions—Partially Exempt Continuing Connected Transactions—2. Network Security Transitional Arrangement” and “—Our Products and Services—Others—Network Security Business” for more details.

Our business continued to grow during the Track Record Period. Our revenue from continuing operations increased from RMB4,764.9 million in 2015 to RMB4,856.0 million in 2016 and further to RMB4,948.3 million in 2017. Our revenue from continuing operations increased by 3.1% from RMB2,123.7 million for the six months ended June 30, 2017 to RMB2,189.7 million for the six months ended June 30, 2018. Our profit for the year from continuing operations was RMB309.8 million, RMB74.0 million, RMB335.2 million in 2015, 2016 and 2017, respectively. Our profit for the period from continuing operations was RMB86.8 million in the six months ended June 30, 2018, compared to loss for the period from continuing operations of RMB8.5 million in the six months ended June 30, 2017. During the Track Record Period, we generated all of our revenues from continuing operations in China.

Excluding the impact of share-based compensation, amortization of intangible assets resulting from acquisitions, one-off listing expenses, interest expenses for the Privatization Syndicated Loan and gain on disposal of a subsidiary, our adjusted profit for the year from continuing operations was RMB470.0 million, RMB204.3 million and RMB547.6 million in 2015, 2016 and 2017, respectively. Our adjusted profit for the period from continuing operations increased by 91.6% from RMB90.5 million in the six months ended June 30, 2017 to RMB173.4 million in the six months ended June 30, 2018. See “Financial Information—Non-HKFRS Measures” for more details.

Our revenue from continuing operations for the Software Business increased from RMB4,275.2 million in 2015 to RMB4,514.6 million in 2016, and further to RMB4,824.9 million in 2017. Our revenue from continuing operations for the Software Business increased by 6.6% from RMB2,043.6 million for the six months ended June 30, 2017 to RMB2,177.6 million for the six months ended June 30, 2018.

Through our active participation and leadership in China’s telecom software product and related service market for many years, we have built a large portfolio of advanced, proprietary technologies such as real-time data processing and distributed computing, and have consistently launched pioneering software products such as the largest telecom billing and settlement system worldwide by number of subscribers and China’s first and only BSS/OSS system with nationwide coverage. Our technology leadership has earned us numerous awards and accolades, including one of the “2018 Top 50 Most Innovative Enterprises in China’s Information Technology Service Industry”, the “2017 Science and Technology Contribution Award” in China’s information technology service industry and one of the “2017 Top 100 Most Competitive Chinese Software and Information Technology Service Providers”, and our AIF infrastructure platform earned the “2017 Telecom Sector

Outstanding Solutions Award.” As of June 30, 2018, we maintained a dedicated R&D team consisting of 3,482 personnel, representing 31.2% of our total headcount, and have built an extensive intellectual property portfolio.

We believe our first mover advantage, extensive industry knowledge and expertise and solid market leadership position will continue to set us apart from our competitors and facilitate future cooperation with our customers, driving sustainable, profitable growth. With Chinese telecom operators and large enterprises increasing their software spending as they continue their digital transformation, we endeavor to provide more intelligent software products and services and data-driven operation services that enable them to increase customer value, build broader ecosystem and stay competitive in the upcoming 5G era.

OUR COMPETITIVE STRENGTHS

We believe that the following competitive strengths have been the foundation of our strong performance and continued growth, and we expect that they will enable us to enhance our leadership position in China’s telecom software product and related service market and continue expanding our footprint in the non-telecom enterprise software product and related service market.

Largest Provider of Telecom Software Products and Related Services in China

We are the largest provider of telecom software products and related services in China, with a market share of 25.3% as measured by revenue in 2017, according to Frost & Sullivan. According to the same source, we are also the largest provider of BSS software products and related services in the telecom industry in China, with a market share of 50.0% as measured by revenue in 2017.

Telecom operators in China require highly-specialized, reliable and scalable software products that are able to support the world’s largest subscriber population across online and offline channels in real-time, which only a few suppliers in China are able to provide. Having collaborated with China Telecom since 1995 and China Mobile and China Unicom since 1999 and actively participated in the formulation of every generation of their BSS/OSS system technical standards, we have developed deep insights into their business and operational needs over the years, which enabled us to develop an extensive portfolio of over 500 software products, ranging from CRM, charging & billing and big data products to IoT and intelligent network products.

Leveraging our extensive product portfolio, as accompanied by end-to-end, professional deployment services, we have served telecom operators across China (including the headquarters, provincial and municipal companies and specialized companies of China Mobile, China Unicom and China Telecom and the headquarters and provincial companies of their joint venture, China Tower), supporting over one billion subscribers nationwide. Our telecom operator customers included, as of June 30, 2018:

- China Mobile’s headquarters, 31 (out of 32) provincial companies, 23 municipal companies and 41 specialized companies;
- China Unicom’s headquarters, 31 (out of 33) provincial companies, 1 municipal company and 14 specialized companies;
- China Telecom’s headquarters, 43 (out of 43) provincial companies, 2 municipal companies and 13 specialized companies; and
- China Tower’s headquarters, 3 provincial companies and 5 municipal companies.

Our long-term commitment to, and market leadership position in, China's telecom software product and related service market have effectively set us apart from our competitors. Our leadership position in the technologically-demanding telecom software product and related service market has also facilitated our expansion into the non-telecom enterprise software product and related service market, addressing similar needs of large enterprises in business transformation and digitalization.

Long-Term Customer Relationship and Loyal Customer Base

Our software products and services primarily target Chinese telecom operators and large enterprises. Over the past two decades, we have deployed a large number of large-scale, sophisticated and specifications-intensive software systems to our customers' satisfaction, through which we have accumulated deep industry understanding and expensive project management skills and technological competencies, establishing high entry barriers. As of June 30, 2018, we had built a large, nationwide customer base primarily comprising 212 telecom operators and 32 large enterprise customers in cable TV, postal and financial services sectors, with whom we negotiate and enter into contracts individually and directly.

As the software systems deploying our products serve as critical elements of the day-to-day operations of our customers, our customers generally prefer to maintain continuity and compatibility of these systems and minimize the risks and costs related to integrating disparate systems from multiple vendors, resulting in high customer stickiness. Our customers have demonstrated strong reliance on our products and services, which is evidenced by:

- our high customer retention rate, which was higher than 90% for all customers and 99% for our telecom operator and large enterprise customers in each of 2015, 2016, 2017 and the six months ended June 30, 2018; and
- the long-term framework cooperation agreements we have entered into with a number of our telecom operator and large enterprise customers, which designate us as their preferred provider of BSS/OSS systems.

In addition, our established relationship with our customers have favorably positioned us in addressing their additional software needs, creating opportunities for cross-selling and up-selling. For example:

- Once a system deploying our software products is launched, we are typically engaged by the customer to provide ongoing operation and maintenance services to ensure the stable functioning of the system. The provision of ongoing operation and maintenance services broadens our revenue streams while allowing us to remain in close contact with our customers and to secure more and higher-value engagements as our relationship with our customers matures over time;
- The software systems deploying our products require regular upgrade and expansion to enhance performance, stability and security in line with the growth of our customers' business, generating repeat purchases. In addition, we are poised to participate in our customers' ongoing business transformation and digitalization, and have developed next-generation software products for each of China Mobile, China Unicom and China Telecom to consolidate their disparate systems and migrate to cloud and future technology compliant IT platforms, while maintaining business and operational continuity throughout the transition. For example, as of June 30, 2018, we had been engaged by 19 of China

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Mobile's provincial companies and 5 specialized companies to transform their legacy IT systems pursuant to China Mobile's newly-adopted Third-Generation Business Support System General Architecture Specification;

- Our software products and services are also well suited to meet additional needs and demands created within our existing telecom operator customers' organizations. In recent years, each of China Mobile, China Unicom and China Telecom has also established specialized companies and divisions focusing on specific operational aspects or customer groups (such as their government and enterprise customers which exhibit higher purchase power and require more specialized services than other end users). We have developed various software products targeting these newly-established specialized companies and divisions, such as the Government and Enterprise Customers Self-Service Platform for the government and enterprise business division of China Telecom's Jiangsu subsidiary in November 2015; and
- Our established relationship with our customers also provides us opportunities to expand our cooperation with them and diversify both ours and our customers' revenue streams. Leveraging our industry expertise, we have in recent years provided data-driven operation services to telecom operators and their government and enterprise customers through data-driven operation platforms under a pay-as-a-result model.

The reputation and leading stature of our customers in their respective industries have also served as strong references that can be leveraged in marketing our software products and services to an increasing number of customers in additional industries. For example, we developed the CITIC cloud big-data platform for CITIC Industrial Cloud Co., Ltd. (a wholly-owned subsidiary of China CITIC Group Corporation Ltd.) in 2016 and the integrated CRM system for China Post, the state-owned enterprise operating the official postal service of China, in 2017.

We believe our long-standing, strategic relationship with this large and loyal telecom and large enterprise customer base will continue to favorably position us as their preferred partner in addressing their future needs in terms of system optimization and digital transformation, and enabling us to build strong references as we further expand our customer base.

Industry-Leading R&D Capabilities and a Full-Spectrum, Highly-Specialized, Continuously-Innovated Product Portfolio

We believe our industry-leading R&D capabilities and a full-spectrum, highly-specialized, continuously-innovated product portfolio are able to address Chinese telecom operators and large enterprises' business needs and effectively differentiate us from our competitors.

Industry-Leading R&D Capabilities. We believe our industry-leading R&D capabilities is one of our core competitive advantages and will continue to effectively set us apart from our competitors. Over the past two decades, we have built a large portfolio of advanced, proprietary technologies, such as real-time data processing and distributed computing, and are also receptive to the application of technologies such as docker and microservices in our products. These technological advances have enabled us to launch a wide variety of highly-specialized software products that consistently meet our customers' increasingly complex business and operational needs and deliver some of the world's largest telecom software projects. To stay abreast of the latest industry trends and developments, we have also invested in the integration of various new technologies, such as AI, machine learning & deep learning, IoT and SDN/NFV, into our software products.

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We conduct centralized R&D at our product R&D center, building an extensive knowledge base of core assets that can be shared among business divisions, ranging from key products, baseline products, universal components to development and operation tools. This centralized R&D has enabled us to develop highly-specialized, reliable and scalable software products quickly and cost-effectively. For example, we launched our award-winning AIF infrastructure platform in 2015, which is a cloud-based, universal PaaS platform that can be rolled out among our customers that enable them to develop, run and manage industry applications. Our R&D at business division level is more focused on customer-driven customization: the R&D personnel at the relevant business division conducts comprehensive assessment of the relevant customers' existing IT and network environment, and industry- and company-specific business challenges, objectives and opportunities for both the short- and long-term, which then translate into customized products and services catering to customers' specific needs and demands.

To ensure the quality, reliability and security of our products and services, we have established a quality assurance system at the company level pursuant to ISO 9001 quality management system standards, ISO 27001 information security management system standards and CMMI Level 5 software process methodologies, the highest level in the industry, and based on our industry experience and best practices, and have formulated comprehensive processes and quantification and deployment standards spreading across all stages of product development and servicing.

As an investment in our long-term growth, we maintained a dedicated R&D team consisting of our headquarters' R&D center and our business divisions' 3,482 R&D personnel as of June 30, 2018, representing approximately 31.2% of our total headcount, located at our headquarters and across our 127 regional offices spanning 28 provinces, municipalities and autonomous regions across China. Among these engineers, approximately 93.0% of them held bachelors' degree or above and 60.6% had more than five years' of industry experience. Our R&D capabilities are evidenced by our broad portfolio of industry awards and certifications received over the years, including one of the "2018 Top 50 Most Innovative Enterprises in China's Information Technology Service Industry", the "2017 Science and Technology Contribution Award" in China's information technology service industry and one of the "2017 Top 100 Most Competitive Chinese Software and Information Technology Service Providers", and our AIF infrastructure platform earned the "2017 Telecom Sector Outstanding Solutions Award." We have also built an extensive intellectual property portfolio, consisting of 562 software copyright registrations in China and 34 registered patents in China and the United States as of the Latest Practicable Date, which helps ensure that our technologies are competitively differentiated and protected.

Full-Spectrum, Highly-Specialized, Continuously-Innovated Product Portfolio. With these technology strengths, we have developed a full-spectrum of highly-specialized, continuously-innovated software products. These products are purpose-built to address the most prevalent business challenges throughout a telecom operator or large enterprise's customer lifecycle, from rapid service launch, agile order management to efficient user acquisition and retention, serving as vital connections between our customers and their end users.

Full-Spectrum. With a full-spectrum of over 500 software products, we are able to provide products that either add specific features and capabilities to upgrade a customer's existing systems as its business evolves or build new systems with local, provincial or nationwide coverage from the ground up. Such flexibility enables our customers to engage us at any stage of their customer lifecycle, such as introducing their first offerings to market, scaling for growth and transforming their entire

operations, which eliminates the costs and risks of integrating disparate software products from multiple vendors.

Highly-Specialized. As compared to smaller entities with more basic business needs, telecom operators and large enterprises in China require carrier-grade software products and highly-flexible services from leading providers that are able to support the world's largest population and a massive amount of transactions and data across online and offline channels in real-time, which only a few suppliers in China are able to provide. Our software products are designed to be high-performance, highly-specialized, scalable and reliable. Powered by real-time data processing technologies, our products are able to support massive number of end users nationwide on a real-time basis across online and offline channels and handle a high volume of requests. Our products are designed with high-availability, disaster-recovery features, which enable fast recovery and effectively prevent data loss in the event of system downtime, ensuring business continuity.

Continuously-Innovated. Our products are continuously innovated in response to emerging technologies and market trends. For example, along with telecom operators' rapid transition toward more centralized, cost-effective operations, we have architected our software products using the multi-layer, cloud-enabled model, and have helped China Mobile, China Unicom and China Telecom to move certain aspects of their BSS/OSS systems into the cloud that can be accessed by provincial networks, achieving centralized management of resources and significant cost-savings. We have also launched Internet of Vehicle platforms for automobiles and automotive part manufacturers and car-sharing service providers, including one of the largest Internet of Vehicle platforms in China in terms of the number of smart terminals supported, which enable vehicle status monitoring, route planning, fleet management and integration with third-party products and services such as location-based services.

We believe our strong R&D capabilities and the full spectrum of highly-specialized, continuously-innovated product portfolio we have accumulated over the years will serve as a sustainable competitive differentiator for us and keep both us and our customers at the forefront of the industry. As our customers continue to reinvent their business models and end user experience to adapt to the digital world and expand their range of services, we remain their trusted technology partner on the path to a 5G, next-generation architecture.

End-to-End Professional Deployment Service Capabilities, Custom Development Service Capabilities and High-Standard of Onsite Services Rapidly Meeting Customer Demand

In order to meet the comprehensive, complex, continuously evolving and high-performance business needs of our customers and ensure the successful delivery of large-scale software systems, we deliver our products through the on-premise, project-based delivery model, accompanied by our end-to-end, professional deployment services. By taking responsibility for the entire project development process with high-standard onsite services, we help our customers achieve time-to-market advantages.

Dedicated teams and end-to-end professional deployment services. To meet the varying business and operational needs of our customers, we have formed dedicated business divisions targeting each of our customer groups—China Mobile, China Unicom, China Telecom, cable and media service providers and other enterprise customers—each composed of its own research & development, sales & marketing, project delivery, quality assurance and operation & maintenance

personnel with in-depth knowledge about their respective target markets and customer groups. Supported by our centralized R&D, consulting, quality assurance and in-house teams providing other core capabilities, these business divisions interact directly with their respective customer groups and are focused on designing, developing and deploying products and services tailored to customers' specific business and operational needs. For each project, we assemble a dedicated project development team within the relevant business division, the composition of which is tailored to specific customer needs and requirements, to provide end-to-end professional deployment services throughout project development process, from demand analysis, project design and planning, software development and sourcing, system installation and launch to trial operation and acceptance, rapidly meeting customer demand.

Custom development service capabilities. As a critical component of our end-to-end, professional deployment services, our project development team works closely with our customers onsite in terms of demand analysis, project design and planning and custom development. For example, the project development teams conduct comprehensive assessment of the customers' existing IT and network environment and business and operational needs, based on which they customize our products to the customers' individual requirements, growth strategies and budgets. Our custom development service capabilities enable us to deliver software products and services tailored to the specific standards and requirements of the respective customer groups, building stronger customer relationships.

High-standards of onsite services, localized support and fast response time. Our services extend beyond initial deployment. Once a system deploying our products is launched, we are typically engaged to provide ongoing operation and maintenance services for the system, including 24/7 system diagnosis, troubleshooting and support and maintaining a dedicated service hotline that responds to service requests within a prescribed time frame in order to minimize disruption to our customers' business operations. These services are provided by a dedicated operation and maintenance team based at the customers' premises or at one of our regional offices in close proximity of the customers across our 127 regional offices in close proximity of our customers across 28 provinces, municipalities and autonomous regions. As part of our operations and maintenance services, the dedicated operations and maintenance team also monitors the performance of the installed system to proactively identify potential issues and risks, based on which we periodically release new product version, features and functionalities in order to optimize system performance or respond to our customers' evolving business needs. In the six months ended June 30, 2018, we released an average of at least two to three key features or upgrades per month for our telecom operator customers.

Our end-to-end, professional deployment services has enabled us to build closer relationships with our customers, providing us with substantial opportunities to expand the scope and scale of our engagements as our customers' business needs evolve over time.

Data-driven Operation Capabilities Powered by AI, Machine Learning, Big Data and Other Technologies Increase Customer Value

We have in recent years provided comprehensive data-driven operation services to telecom operators and their government and enterprise customers through data-driven operation platforms under a pay-as-a-result model. These services, ranging from real-time, in-depth analysis of user purchasing and consumption patterns and characteristics and lifecycles to design and implementation of marketing campaigns and management activities, are designed to help telecom operators and their

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government and enterprise customers more comprehensively and accurately analyze market developments and customer trends, ultimately increasing their sales, operational efficiency and customer value.

We believe we are favorably positioned to provide data-driven operation services to telecom operators and their government and enterprise customers leveraging the extensive technical capabilities and industry insights we have accumulated over years of collaboration with telecom operators. With hundreds of in-house developed, big-data based models and algorithms that have been widely applied in various operational scenarios and continuously improved and upgraded, as well as emerging technologies such as AI and machine learning and telecom operators' existing big data capabilities, our data-driven operation services enable intelligent application of data across departments and domains and more effective data monetization, while allowing us to explore new cooperation opportunities with telecom operators and diversify revenue streams for both parties, achieving a win-win situation. For example:

- We have built a data-driven operation platform for China Mobile's Beijing subsidiary and have been providing data-driven operation services to one of its government and enterprise customers in the public security sector through this platform, primarily including (i) real-time analysis of population distribution, mobility and clustering patterns within the district, and (ii) real-time analysis of major traffic hubs and tourist attractions' passenger flow during the holidays. These services effectively strengthen the government and enterprise customers' capabilities in analysis, aggregation and visualization of massive amount of resident data, improve its operational efficiencies and achieve cost saving. For example, after using our data-driven operation services, it now receives over 30 types of up-to-date demographics statistics of the entire district every ten minutes, which eliminates the need to conduct annual household surveys to obtain the district's demographics statistics;
- We have built a data-driven operation platform for China Mobile Yunnan subsidiary and have been providing data-driven operation services through this platform, including technical support, sales channel management and upgrade and marketing campaign management and optimization. With our data-driven operation services, China Mobile's Yunnan subsidiary is able to conduct precise marketing through its online and offline sales channels, provide more personalized product and service recommendations to users and increase its sales, operating efficiency and market share; and
- We have built a data-driven operations platform for China Unicom's Tianjin branch, and have been providing data-driven operation services through this platform, including WeChat Store basic inquiry, payment and processing services, matrix management of multiple WeChat official accounts, message template publication, marketing event management, data analysis and operational support. These services are designed to making WeChat a major online sales channel of China Unicom Tianjin branch by increasing its WeChat official accounts' subscriber number and activity level and number of transactions. After using our data-driven operation services, China Unicom Tianjin branch's WeChat official accounts' number of new subscribers in the fourth quarter of 2017 increased by 180% compared to the same period in 2016.

We believe our innovative data-driven operation services will continue to strengthen our relationships with telecom operators, diversify revenue streams for both parties and differentiate us from our competitors.

Seasoned and Visionary Management with Proven Track Record

We benefit significantly from the extensive industry experience and commitment of our management team. All of our senior management members have over 10 years of work experience in telecom industries. Our founder and chairman, Dr. TIAN Suning, is a highly-regarded technology and software entrepreneur in China with over 23 years of experience in the industry. In addition to founding our company in 1993, Dr. TIAN has also served senior management position in China Netcom from 1999 to 2006, and PCCW, from 2005 to 2007, and founded China Broadband Capital Partners in 2006. Our chief executive officer, Mr. GAO Nianshu, has over 20 years of work experience as senior management in large telecommunications companies. Prior to joining us in 2016, Mr. GAO held senior management positions in China Mobile from 2002 to 2016. Our chief financial officer, Ms. HUANG Ying, has over 25 years of experience in accounting and finance. Prior to joining us in 2017, Ms. HUANG held senior finance positions in China Mobile from 2002 to 2017.

Under the leadership of our management team, we have been able to rapidly grow our product and service portfolio, customer base as well as industry and geographic coverage over the years. We believe that the extensive industry experience, in-depth product knowledge, strong strategic vision and proven execution capabilities of our management team will allow us to continue to execute our growth strategies to achieve further success.

OUR STRATEGIES

We endeavor to help telecom operator and large enterprise customers maintain and continuously increase their competitiveness by providing them with digital transformation-related software products and services, leveraging our product, service, integration and operation capabilities. We plan to actively employ advanced technologies (such as AI and related technologies) to improve the efficiency and quality of our product R&D and project delivery and enhance business efficiency and experience of our customers. With the continuous emergence of new technologies and business models, we believe customers will continue to invest significantly in both the traditional telecom market and the steadily expanding emerging business markets. As such, we plan to implement the following strategies and initiatives to achieve our goal:

Reinforce Our Leading Position in the Telecom Software Product and Related Service Market

China's telecom software product and related service market is forecasted to experience a higher growth at a CAGR of 11.5% from RMB19.7 billion in 2018 to RMB30.5 billion in 2022, according to Frost & Sullivan. Leveraging the breadth of our existing product portfolio and leadership position, we aim to continue to actively increase customer coverage and market share in this market. We strive to reinforce our leading position in China's telecom software product and related service market by implementing the following initiatives:

- We will continue to improve the standardization, efficiency and quality of software product development and software project deployment. For example, we have received CMMI Level 5 certification and plan to further standardize our software development and software project deployment process pursuant to the CMMI Level 5 software process methodologies. In addition, we have developed various key products, baseline products, universal components and development and operation tools that can be shared among business divisions. We believe these initiatives will enable us to lower costs, reduce lead time and improve quality, helping our telecom operator customers achieve their business goals;

- We believe that telecom operators' digital transformation will create substantial business needs, and our customer-centric product evolution strategy has enabled us to obtain more business opportunities during this transformation, including upgrading their existing systems and sell new software products and services. To this end, we will continue to proactively communicate with our existing telecom operator customers and direct our R&D efforts and formulate product roadmap based on industry trends and their evolving business challenges. For example, in order to help telecom operators achieve digital transformation across their online and offline channels, we have launched an open e-commerce platform (社會化電商平台) that integrates third-party products and services into telecom operators' own e-commerce platforms. It enables centralized channel management, supply chain management and sales support and enriches telecom operators' product and service offerings; and
- Telecom operators have established various specialized companies and divisions as part of their digital transformation process. We plan to proactively work with these specialized companies and divisions to assess their business and operation challenges and design their business model at an early stage, and provide them with products and services which accelerate their business growth in a timely manner.

We believe these efforts will accelerate our growth and solidify our stature as China's largest provider of telecom software products and related services.

Actively Expand Our Customer Base in the Non-Telecom Enterprise Software Product and Related Service Market

Along with the continued progress of business transformation and digitalization among China-based enterprises, China's non-telecom enterprise software product and related service market is forecasted to experience accelerated growth at a CAGR of 11.1% from RMB285.7 billion in 2018 to RMB435.3 billion in 2022, according to Frost & Sullivan. We believe this market is currently considerably underserved and our products and services for telecom operators can easily be adapted to address similar business and operational needs of enterprises.

We will focus on promoting our software products and services to large enterprises in non-telecom sectors using (i) our existing telecom software products, such as our universal PaaS platform product, or (ii) software products which are adapted from our existing telecom software products and are more aligned with the relevant industries' business scenarios, such as the enterprise editions of our CRM, charging and billing and big data products. These enterprises have large-scale operations, operate highly-complex IT and network environments and are under increasing pressure to serve an expanding user base and processing vast amount of transactions which creates increasing demand of business transformation and digitalization, and are likely to realize the greatest value from utilizing our products and services. We plan to expand our enterprise customer base through the following initiatives:

- We plan to promote some of our universal technology platforms and tools to enterprise customers, such as our DevOps integrated development and operation platform, AIF infrastructure platform and data governance tools. These technology platforms and tools are the results of our many years of experience in the telecom market and feature carrier-grade performance and stability. As new technologies including cloud computing, big data, AI, micro-services and DevOps evolve, more and more enterprise customers are

willing to apply these new technologies to optimize their business operations and IT support systems (such as the establishment of intelligent customer service systems by applying AI technologies to traditional customer services and formation of agile IT deployment systems through the introduction of micro-services and DevOps technologies to IT support systems). As such, we believe these carrier-grade technical platforms and tools can be widely used in the enterprise markets;

- We intend to promote some of our products developed for the telecom industry that can be used across industries to enterprise customers. For example, we have successfully introduced campaign management, channel management and fundamental CRM products into the postal industry;
- We plan to strengthen our marketing and promotion efforts for non-telecom industries and actively demonstrate our carrier-grade technologies and capabilities accumulated in the telecom market to non-telecom enterprises. For example, we plan to collaborate with third parties that have strong customer base and established sales channels in order to reach more potential customers and gain more sales opportunities; and
- We will actively complement our existing workforce with sales and marketing personnel who have extensive business relationship and service experience in our target industries, which we believe will help us effectively penetrate the large enterprise markets and build service capabilities in these markets.

We will focus on increasing our presence, customer base and market share in the postal, cable TV, banking, insurance, transportation and energy sectors: (i) as our CRM products gain wider market acceptance in the postal sector, we plan to further broaden our product offering in this sector to cover postal business intelligence and big data products; (ii) in the transportation sector, we intend to explore cooperation opportunities with transportation authorities in the areas of smart transportation planning and transportation operation, leveraging our sophisticated big data products and services; (iii) in the cable TV sector, we plan to cross-sell a wider variety of products and services to existing customers of our BSS/OSS systems, such as data-driven content operation and advertisement operation services, (iv) in the banking and insurance sector, we intend to promote our data-driven, scenario-based marketing services and agile development consultation and execution services using our “Smart Sharing” and DevOps integrated development and operation products, and (v) we plan to establish our presence in the energy sector by offering IT support systems for power grids, leveraging our sophisticated CRM, billing and big data products.

Through these efforts, we believe we can capture an increasing share of, and expand our customer base in, China’s fast-growing non-telecom enterprise software product and related service market.

Actively Explore New Business Opportunities in the Areas of Data-Driven Operation Services, IoT and Intelligent Network

As China’s telecom operators and enterprises continue their digital transformation, we expect their spending in the areas of data-driven operation services, IoT and intelligent network to continuously increase over the next few years. We believe our core capabilities in these areas will help us secure new business opportunities during such transformation:

- We will focus on exploring growth opportunities in China’s data-driven operation service market. The market size of China’s data-driven operation service market by revenue is

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expected to grow rapidly at a CAGR of 14.7% from 2018 to 2022, reaching RMB138.3 billion in 2022. We endeavor to strengthen our collaboration with telecom operators and their government and enterprise customers with respect to data-driven operation services—on the one hand to provide data-driven operation services directly to telecom operators, and on the other hand, to collaborate with telecom operators to provide data-driven operation services to their government and enterprise customers across industries—helping telecom operators and their government and enterprise customers increase sales, operational efficiency and customer value and achieving a win-win situation. We have recently established a business division focusing on the provision of data-driven operation services, and plan to continue to organize our internal operations and allocate financial, human and other resources accordingly to facilitate the growth of this business;

- We will actively focus on China’s IoT market, which is expected to produce significant opportunities in the next few years. We have established an innovative “IoT platform + IoT industry application + IoT operation” business model: (i) “IoT platforms” refer to fundamental platform products we provide to telecom operator customers, such as connection management platforms, device management platforms and application enablement platforms; (ii) “IoT industry applications” refer to IoT related industry applications we deliver to enterprise customers across industries either directly or through our collaboration with telecom operators leveraging our competitive advantages in software development. We have developed sophisticated industry applications in the areas of smart community, smart town, smart firefighting, smart travel and Internet of Vehicles; and (iii) “IoT operation” leverages our data-driven operation capabilities to provide enterprises in different industries (such as smart terminal manufacturers) with IoT related capabilities that are required for their customer-facing operations, continuously increasing customer value. We are now exploring this business model in the field of Internet of Vehicles; and
- We also plan to participate in the construction of telecom operators’ intelligent network (including SDN/NFV and 5G networks) as an integrator and software developer. We believe that Chinese telecom operators will continue to invest significantly in SDN/NFV and 5G networks in the future. We plan to act as a vendor-neutral integrator and provide telecom operators with the most flexible solutions and most advanced third-party products in the industry. In addition, we plan to apply AI technologies and develop in-house the new-generation of intelligent network management platforms which enable planning, construction and operation in future network environment. We have formed alliance with various telecom operator customers in these areas.

Through these initiatives, we believe that we are able to embrace new business opportunities that are created by telecom operators and large enterprises’ digital transformation.

Maintain Technology Leadership and Continue to Innovate

We strive to continue to invest in the R&D of advanced technologies and selectively integrate advanced third-party technologies into our products and services in order to maintain our technology leadership in China’s telecom and non-telecom enterprise software product and related service

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markets, and continue to innovate together with our customers to expand our product and service portfolio. In particular:

- We will continue to introduce advanced technologies, such as AI, machine learning, deep learning, distributed computing and storage, docker, microservices and SDN/NFV and launch technologically-leading products and services in the industry. For example, by applying these technologies, our big data products help customers more efficiently use their data and optimize end user experience;
- We will further streamline our R&D efforts and strengthen our centralized R&D of universal products, product modules and components that can be rapidly rolled out across customers at company level to enhance our R&D efficiency and achieve greater cost savings. For example, we plan to further standardize the structure of our products leveraging our award-winning AIF infrastructure platform;
- We will continue to participate in the formulation of China Mobile, China Unicom and China Telecom's BSS/OSS system technical standards, which we believe will enable us to adapt to changes in their business models and organizational structure and direct our R&D efforts and product roadmap accordingly. For example, we will continue to upgrade our products and services to support telecom operators' business operations in future network environment; and
- We plan to participate in additional international standards organizations and industry associations for the telecom and related industries, in order to further amplify our influence in the industry. We are already a member of the TM forum and have strong influence in the BSS field. We also plan to join international standards organizations, industry associations and communities, including the Institute of Electrical and Electronics Engineers, the European Telecommunications Standards Institute, the Open Network Automation Platform, the Third Generation Partnership Project and Global System for Mobile Communications to increase our influence in other related fields in the future.

We currently have 17 major, ongoing R&D projects with development cycles ranging from one to three years (six of which are expected to be completed by the end of 2018 and the remaining 11 are expected to be carried over to 2019 and 2020). These projects focus on the R&D of new technologies (such as AI, information processing, high-performance computing, data processing and customer interaction technologies), and enable us to continuously introduce new functionalities to our CRM, billing, big data, intelligent network, universal technology platform, IoT and DevOps integrated development and operation products in response to latest industry development trends and customers' evolving needs.

We believe these initiatives will solidify our technology leadership in China's telecom and non-telecom enterprise software product and related service markets and enable us to capture more business opportunities.

Attract, Train and Motivate Key Talents

We believe our ability to effectively attract, train and motivate talent is critical to our business success. To remain competitive in the dynamically changing digital era, we endeavor to continue to invest in our people and expand our talent pool, and set up appropriate incentives to attract key talents.

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We have engaged in a number of initiatives to achieve this goal:

- We plan to recruit additional software engineers with the requisite skills and expertise and professionals with extensive experience in areas including industry applications or internet-based operations;
- We strive to continue to offer competitive remuneration packages to attract talents. We have established an employee share incentive scheme to further reward and motivate key employees and to better align their interests with ours;
- We will continue to offer employee ongoing training programs tailored for varied positions and skill levels of our employees in areas such as industry knowledge, software technologies and management capabilities;
- We plan to continue partnering with leading universities in China to offer their graduates internship opportunities and attractive career path that incentivize them to achieve or exceed our business objectives; and
- In order to retain talents, we will actively organize corporate events to cultivate a culture of caring, establish an employee honor system and further our employees' career development opportunities.

We believe these efforts will foster greater loyalty, job satisfaction, engagement and commitment of our employees and lead to our ability to grow in the future and maintain and enhance our standards of service and quality.

Selectively Pursue Strategic Alliances and Acquisitions

We believe that in today's technology landscape, it is a strategic imperative to work with a multitude of industry participants to build a robust, fully connected ecosystem that centers around and extends our core competencies. As such, we intend to selectively pursue strategic alliances and acquisitions that complement our existing technology portfolios and operational capabilities, broaden our customer base and product offerings and capture new revenue streams. For example:

- we plan to form synergistic strategic alliances with companies that have advanced technologies and products (with a focus on those in the areas of AI, machine learning, big data, cloud computing, geographic information systems, computer vision and edge computing), strong brand influence or extensive customer base, as well as complementary businesses within our ecosystem, in order to better serve telecom operator and large enterprise customers, strengthen our standing with existing customers while winning new ones; and
- we aim to invest in or acquire assets and businesses that complement our business and are consistent with our development strategies, such as developers of innovative software products (with a focus on those featuring advanced technologies such as AI, machine learning, big data, cloud computing, geographic information systems, computer vision and edge computing), in order to accelerate our expansion in new business areas and complement our software product and service capabilities in these areas.

Our growth has been fueled by a number of strategic mergers and acquisitions at different stages of our development. In particular, we became the largest China-based telecom software product and related service provider through our acquisition of Bonson BVI in 2002, and this leadership

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position was further solidified by our merger with Linkage Technologies International in 2010. We believe these extensive experiences will continue to help us identify and pursue strategic alliances and acquisitions when suitable opportunities arise. Our management plans to carefully evaluate any investment, acquisition or strategic cooperation opportunity that may arise from time to time in order to pursue optimal transaction structure, realize synergy and create significant value for our Company and shareholders.

OUR BUSINESS MODEL

We are the leader in the telecom software product and related service market and a pioneer in the non-telecom enterprise software product and related service market in China. We offer software products and services of varied scope and capabilities that are designed to meet the complex, mission-critical business and operational needs of Chinese telecom operators and large enterprises, enabling their business transformation and digitalization.

Our mission-critical, carrier-grade software products and services include:

- ***Software products and related services.*** We offer a full spectrum of software products, ranging from CRM, charging & billing and big data to IoT and intelligent network products, which can be deployed individually or as a suite, enabling our customers to quickly and cost-effectively upgrade, optimize or transform their business and operation architecture. The delivery of our products is accompanied by a comprehensive set of professional deployment services, from demand analysis, project design and planning, software development and sourcing, system installation and launch to trial operation and acceptance, that integrate our software products with our customers' existing IT and network infrastructure and maximize the value of our products. After a system is launched, customers typically engage us to provide ongoing operation and maintenance services to ensure the stable functioning of the system;
- ***Data-driven operation services.*** We have in recent years provided data-driven operation services to telecom operators and their government and enterprise customers through data-driven operation platforms under a pay-as-a-result model; and
- ***Others.*** We also render a variety of other services, including (i) procurement of third-party hardware and software for some of our projects, (ii) system integration services, (iii) business consulting services, and (iv) corporate trainings.

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The following table sets forth the breakdown of our revenue from continuing operations by product and service category, both in absolute amounts and as percentages of our total revenue from continuing operations, for the periods indicated:

	For the year ended December 31,						For the six months ended June 30,			
	2015		2016		2017		2017		2018	
	RMB'000	%	RMB'000	%	RMB'000	%	RMB'000	%	RMB'000	%
	(unaudited)									
Revenue from continuing operations										
Software Business:										
Software products and related services ¹	3,996,677	83.9	4,170,779	85.9	4,541,482	91.8	1,935,861	91.2	2,080,660	95.0
Data-driven operation services	18,066	0.4	31,383	0.6	41,745	0.8	13,816	0.7	27,119	1.2
Others ²	260,497	5.4	312,483	6.5	241,652	4.9	93,962	4.3	69,828	3.2
Total Software Business	4,275,240	89.7	4,514,645	93.0	4,824,879	97.5	2,043,639	96.2	2,177,607	99.4
Network Security Business³	489,631	10.3	341,308	7.0	123,445	2.5	80,011	3.8	12,108	0.6
Total	4,764,871	100.0	4,855,953	100.0	4,948,324	100.0	2,123,650	100.0	2,189,715	100.0

- Includes revenue from (i) provision of software products and related deployment services, and (ii) rendering of ongoing operation and maintenance services. In 2015, 2016, 2017 and the six months ended June 30, 2018, revenue derived from provision of software products and related deployment services was RMB3,216.6 million, RMB3,337.9 million, RMB3,680.5 million and RMB1,707.3 million, respectively, accounted for 67.5%, 68.7%, 74.4% and 78.0% of our total revenue from continuing operations for the respective periods. In 2015, 2016, 2017 and the six months ended June 30, 2018, revenue derived from rendering of ongoing operation and maintenance services was RMB780.1 million, RMB832.9 million, RMB860.9 million and RMB373.3 million, respectively, accounted for 16.4%, 17.2%, 17.4% and 17.0% of our total revenue from continuing operations for the respective periods.
- Includes revenue from (i) third-party hardware and software procurement, (ii) system integration services, (iii) business consulting services and (iv) corporate trainings.
- We have ceased to enter into any new contract with respect to the Network Security Transitional Arrangement since 2018. The Network Security Business will be discontinued after the existing projects under the Network Security Transitional Arrangement are completed by the end of 2020.

Our customers include China-based telecom operators and enterprises.

Telecom Operator Customers. Over the past two decades, we have provided software products and services to, and have negotiated and entered into contracts individually and directly with, telecom operators within the corporate groups of China Mobile, China Unicom and China Telecom, including:

- their headquarters,
- their provincial companies operating provincial telecom networks,
- their municipal companies,
- their specialized companies focusing on specific operation aspects or customer groups, such as China Mobile Online Services Co., Ltd., China Mobile's specialized subsidiary in charge of its online operations, and
- their joint venture, China Tower, including its headquarters and provincial companies (collectively, "telecom operators".)

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Enterprise Customers. Since 2010, we have also been providing software products and services to (i) China-based large enterprises in cable TV, postal and financial services industries, and to a lesser extent, (ii) small- to medium-sized enterprises in selected industries, such as mobile virtual network operators (“MVNOs”).

	For the year ended December 31,						For the six months ended June 30,			
	2015		2016		2017		2017		2018	
	RMB'000	%	RMB'000	%	RMB'000	%	RMB'000	%	RMB'000	%
	(unaudited)									
Revenue from continuing operations										
Software Business:										
Telecom operators	4,143,903	87.0	4,314,101	88.9	4,644,559	93.9	1,959,091	92.3	2,114,590	96.6
Large enterprises	53,133	1.1	87,329	1.8	112,465	2.3	48,141	2.3	48,175	2.2
Small- to medium-sized enterprises	78,204	1.6	113,215	2.3	67,855	1.3	36,407	1.6	14,842	0.6
Total Software Business	4,275,240	89.7	4,514,645	93.0	4,824,879	97.5	2,043,639	96.2	2,177,607	99.4
Network Security Business¹	489,631	10.3	341,308	7.0	123,445	2.5	80,011	3.8	12,108	0.6
Total	4,764,871	100.0	4,855,953	100.0	4,948,324	100.0	2,123,650	100.0	2,189,715	100.0

1. We have ceased to enter into any new contract with respect to the Network Security Transitional Arrangement since 2018. The Network Security Business will be discontinued after the existing projects under the Network Security Transitional Arrangement are completed by the end of 2020.

The telecom operators referred to in the above table include four major telecom operators’: (i) headquarters, (ii) provincial companies, (iii) municipal companies, and (iv) specialized companies, with whom we negotiate and enter into contracts individually and directly. These major telecom operators’ corporate groups contributed (1) RMB2,276.1 million, RMB1,159.7 million, RMB701.5 million and RMB6.6 million, or 47.9%, 24.3%, 14.7% and 0.1%, of our total revenue from continuing operations in 2015, respectively, (2) RMB2,364.3 million, RMB1,158.1 million, RMB787.2 million and RMB4.6 million, or 48.8%, 23.8%, 16.2% and 0.1%, of our total revenue from continuing operations in 2016, respectively, (3) RMB2,668.8 million, RMB1,152.8 million, RMB810.9 million and RMB12.1 million, or 54.0%, 23.3%, 16.4% and 0.2%, of our total revenue from continuing operations in 2017, respectively, (4) RMB1,122.8 million, RMB477.6 million, RMB357.2 million and RMB1.5 million, or 52.9%, 22.5%, 16.8% and 0.1%, of our total revenue from continuing operations in the six months ended June 30, 2017, respectively, and (5) RMB1,253.0 million, RMB471.7 million, RMB387.5 million and RMB2.3 million, or 57.3%, 21.5%, 17.7% and 0.1%, of our total revenue from continuing operations in the six months ended June 30, 2018, respectively.

During the Track Record Period, we operated software business serving telecom operators headquartered in South East Asia, Europe and other regions outside the PRC (the “**International Business**”), which was disposed of in June 2016. We recorded the results of the International Business as discontinued operations during the Track Record Period. Separately, we acquired AsiaInfo Big Data, which was mainly engaged in the provision of big data software products and services to telecom operators, in December 2017 (the “**Acquisition**”). AsiaInfo Big Data was also engaged in the provision of software products and services that enable government bodies and public institutions to provide e-public services, such as smart city and e-government services (the “**E-public Service Business**”). The major entities comprising the E-public Service Business had been disposed of in November 2017 prior to the completion of the Acquisition in December 2017. The few remaining contracts of E-public Service Business have been completed as of June 30, 2018. Given that our consolidated financial statements are required to present the results, cash flows and financial position of the companies now comprising the Group as if the current group structure had been in existence throughout the Track Record Period, we also recorded the results of the E-public Service Business as discontinued

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operations during the Track Record Period. Our Directors are of the view that the International Business and the E-public Service Business do not form part of our core businesses of the Group (which focus on the provision of integral software products and services primarily to telecom operators in the PRC with a focus on BSS / OSS systems). The disposals of the International Business and the E-public Service Business will allow the Company to focus on its core business and ensure our management and internal resources are best placed to serve the development of our core business. See “Relationship with the Controlling Shareholders”, “Financial Information—Description of Major Components of Our Results of Operations”, Note 12 to “Appendix I—Accountants’ Report” for more details.

OUR PRODUCTS AND SERVICES

We have developed a broad spectrum of software products for China-based telecom operators and enterprises, especially large enterprises. Our software products are accompanied by our end-to-end, professional deployment services and are deployed using the on-premise, project-based delivery model. To further complement our product and service portfolio and diversify our revenue streams, we have in recent years collaborated with telecom operators to provide data-driven operation services through data-driven operation platforms under a pay-as-a-result model.

Software Products and Related Services

We offer a comprehensive portfolio of mission-critical, carrier-grade software products to telecom operators and enterprises, especially large enterprises, in China. Our product portfolio currently consists of over 500 software products, ranging from CRM, charging & billing and big data products to IoT and intelligent network products. These products are designed to automate, streamline and improve the legacy business and operation infrastructure of telecom operators in China to achieve enhanced business agility, efficiency and productivity while optimizing costs.

Our software product portfolio consists of the following product lines:

CRM products. Customer relationship management (CRM) products are widely-implemented for managing an enterprise’s interactions with existing and potential end users. Our CRM products provide comprehensive functionalities, covering an enterprise’s full customer lifecycle (such as user profile management, order management and campaign management), helping our customers provide high-quality, fully-integrated customer services to end users at every point of interaction, from retail stores, call centers and websites to mobile apps and social media platforms. These products help enterprises conduct comprehensive analysis on the needs and preferences of their end users, enabling them to improve the efficiency of their sales and marketing and customer services, attract, serve and retain end users, build stronger customer relationships and increase value of their end users. For example,

- our customer service products enable our customers to provide a broad range of services (voice services, multi-media messaging services, Internet services and other services) to a massive number of end users;
- our campaign management products enable our customers to conduct integrated advertisement, sales, marketing, promotion and public relations activities, improve sales and marketing efficiency and enhance end user satisfaction; and
- our fundamental CRM products are a suite of standardized products with universal business capabilities which are developed based on telecom operator and large enterprise

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customers' common needs in the CRM area, including customer center, product center, channel center, activation center, order center and marketing resources center. Our fundamental CRM products help customers build up enterprise-grade CRM capabilities cost-efficiently and rapidly.

The following table sets forth details of our CRM products:

Major product categories	Functionalities	Key products
Customer services products	<p>Supports a broad range of customer services (including, among others, voice services, multi-media messaging services and Internet services) and both the active and passive service models</p> <p>Customer service center product supports tens of thousands of call center consoles and centralized PC access, decentralized mobile access, home access and other access methods</p>	<ul style="list-style-type: none"> • Nine o'clock Super Care Product • Knowledge Base System
Campaign management products	<p>Helps enterprises more efficiently organize their business operations and campaign activities, drive end user participation and achieve cross selling</p> <p>Helps enterprise create a brand new marketing model powered by our campaign management products' brand marketing, customer-relation marketing and data marketing capabilities, which enables integrated advertisement, sales, marketing, promotion and public relations activities, improves sales and marketing efficiency and enhance end user satisfaction, brand influence and media attention</p>	<ul style="list-style-type: none"> • Marketing Support Platform • Grid Marketing Management Platform • Network-wide Care Platform • Integrated Operation Platform • Enterprise Customer Sales Center
Channel management products	<p>To meet the around-the-clock shopping needs of consumers, our channel management products handle all types of services across all channels (including offline channels, e-commerce channels and mobile e-commerce channels) in a smart manner</p> <p>Our channel management products are consumer centric and take a holistic view of consumer, product, time and location to provide personalized services and enhance customer experience, which in turn help enterprises improve operating efficiency</p>	<ul style="list-style-type: none"> • Self & Social Channel Management System • Channel Consumption Management Platform • Channel Lifecycle Management Product • Star-rating Management System
E-channel products	<p>Help enterprises build integrated operation platforms for all online and offline channels, integrating supply and demand across the supply chain (such as suppliers and consumers)</p> <p>Enhances channel efficiency, lowers customer service costs while providing end users with one-stop-shop experience</p>	<ul style="list-style-type: none"> • Online Self-Service Center • Distribution Platform—Platform Business Portal • Distribution Platform—Distributor Portal • Distribution Platform—Supplier Portal
Fundamental CRM products	<p>A suite of standardized products with universal business capabilities which are developed based on telecom operator and large enterprise customers' common needs in the CRM area</p>	<ul style="list-style-type: none"> • Order Center • Customer Center • Product Center • Activation Center

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Major product categories	Functionalities	Key products
	Help customers build up enterprise-grade CRM capabilities cost-efficiently and rapidly	<ul style="list-style-type: none"> • Marketing Resources Center
AIF Infrastructure platform products	Basic frameworks support elastic computing Supports formulation of cloud-based architecture for application services and management of services	<ul style="list-style-type: none"> • Technology Foundations • IPU Mobile Application Development Platform • Application Foundations

Charging & billing products. Charging & billing products are essential components of BSS/OSS systems and are widely used by enterprises to monetize services ranging from traditional telecom to modern digital services. We offer a complete portfolio of charging & billing software products providing all major charging and billing functions including billing, rating, charging and settlement. These products enable real-time management of the charging & billing related activities of all end users, regardless of user types (individual, family or business), payment methods (prepaid, postpaid or hybrid), network technologies (fixed, IP or wireless) or service types (voice, data, messaging or video), providing valuable, consolidated customer insights. Our charging & billing products also feature a unified rating engine that provides flexible pricing mechanisms and a memory database technology that supports complex rating and billing activities, enabling our customers to offer innovative and personalized service bundles that attract new end users and build loyalty among existing end users.

The following table sets forth details of our charging & billing products:

Major product categories	Functionalities	Key products
Billing management products	Supports customer bill generation, electronic invoice generation and settlement management for third-party business partners	<ul style="list-style-type: none"> • Account Center • Payment Center • Settlement Center • Integrated Reporting System
Fundamental billing products	Enables centralized management of all fundamental billing processes	<ul style="list-style-type: none"> • Cloud-based Billing Product • Convergent Billing Product
Accounting management & revenue assurance products	Supports business accounting management, product accounting management and revenue assurance	<ul style="list-style-type: none"> • Financial Data Center • Revenue Assurance System
Mediation & service provisioning products	Enables mediation, pre-processing and monitoring of metadata and other billing sources Enables service provisioning and configuration of network resources	<ul style="list-style-type: none"> • Integrated Mediation System • Unified Provisioning System
Billing platform products	Enables formulation of cloud-based architecture for billing application services	<ul style="list-style-type: none"> • Billing Distributed Stream Framework Platform

Big data products. Our big data products collect, process and analyze massive amounts of data scattered across many different online and offline channels in real time, and help our customers extract value and intelligence from these data to make more informed business decisions, better serve end users, promote products and services, design products, services and business processes and reduce risks. These products feature advanced analytics technical, algorithms and machine learning techniques and enable real-time analysis, visualization and management of complex data, assisting our customers in solving increasingly prevalent information-related challenges.

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The following table sets forth details of our big data products:

<u>Major product categories</u>	<u>Functionalities</u>	<u>Key products</u>
Big data application products	<p>Applications powered by data convergence and data mining technologies improve enterprises' overall operating capabilities and efficiency</p> <p>Provides innovative big data application solutions that enable enterprises across industries to monetize data and transform business operations in a smarter manner</p>	<ul style="list-style-type: none"> • Marketing Management Center • Intelligent Recommendation Center • Decision Support Center • Geographical Label Data Management Platform
Big data processing & management products	<p>Data-oriented management platforms covering the entire data lifecycle (planning, definition, model design, data development, data collection, data creation, data consumption, data filing and data retention)</p> <p>Build standardized, process-oriented, automated and integrated data management systems that enable integrated management of data, applications and systems, ensuring appropriate data structure, clear data organization, well-controlled process and rapid data accumulation</p> <p>Enable full-process, full lifecycle, 360 degree comprehensive data management</p>	<ul style="list-style-type: none"> • Content Analysis Center • Tag Management Center • Data Governance Product • Data Security Center
Big data platform products	<p>Help enterprises build big data platforms adopting internationally accepted standards and industry standards and featuring unified open source component database and software tool database</p> <p>Deliver core big data capabilities including data channel establishment, data storage, machine learning and platform security, suitable for telecom operators and large enterprises' business operations</p>	<ul style="list-style-type: none"> • Machine Learning Platform

Other products. We offer a variety of other software products that address a broad spectrum of needs and specifications of telecom operators and large enterprises, spanning DevOps integrated development and operation products, IoT products to intelligent network products.

The following table sets forth details of our other products:

<u>Major product categories</u>	<u>Functionalities</u>	<u>Key products</u>
DevOps integrated development and operation products	<p>Products that manages the communication, cooperation and process among the software development, technical operations and quality assurance departments</p>	<ul style="list-style-type: none"> • Software Lifecycle Management Product • Continuous Integration and Continuous Delivery Product • Automated Testing Product • Operation & Maintenance Optimization Product
IoT products	<p>Enables IoT industry applications and platform capabilities</p>	<ul style="list-style-type: none"> • IoT Application

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Major product categories	Functionalities	Key products
Intelligent network products	<p>Supports dynamic monitoring of virtual networks; using AI technologies to establish and train intelligent network optimization models and provide dynamic tuning functions to help customers prevent network failures, improve application experience and enhance network operation quality</p> <p>Supports dynamic monitoring, analysis and O&M management of business operation systems</p>	<ul style="list-style-type: none"> • SDN/NFV Product • Business and Operation Network Management Product

Our software products are deployed using an on-premise, project-based delivery model, and are accompanied by our end-to-end, professional deployment services. See “—Deployment services” for more details.

We have also launched a line of operations products for rendering of our data-driven operation services, such as our Smart Operations platform and Smart Sharing platform. See “—Data-Driven Operation Services—Our Operations Products” for more details.

Deployment services

The delivery of our products is accompanied by a comprehensive set of professional deployment services, from demand analysis, project design and planning, software development and sourcing, system installation and launch to trial operation and acceptance. These deployment services integrate our software products with our customers’ existing IT and network infrastructure and maximize the value of our products.

Our deployment services are provided together with our products pursuant to project development contracts with our customers, and the estimated costs of these services are reflected in the contract prices of the project development contracts, which are typically fixed amounts. See “—Agreements with customers—Project development contracts” for more details.

Operation and maintenance services

Customers of our software products and related services generally engage us to provide ongoing operation and maintenance services to ensure the stable functioning of the installed system. We provide comprehensive operation and maintenance services ranging from system monitoring, maintenance and recovery, performance management, software and hardware repair and replacement, specified system upgrades and handling of customer inquiries and complaints, with the specific scope of services agreed upon between our customers and us on a project by project basis pursuant to operation and maintenance service agreements with our customers. See “—Agreements with customers—Operation and maintenance service agreements” for more details. Our operation and maintenance services are chargeable services provided in addition to product warranties for our software products, which are generally for a term of 12 months and are limited to product repair and maintenance and are provided free-of-charge.

We assemble a dedicated operation and maintenance team for each system, composed of, among others, a specified number of highly-trained software engineers, who are able to quickly

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diagnose and resolve system performance problems. Each software engineer is subject to the customer's assessment, training and approval before the provision of services, and is subject to the customer's ongoing evaluation in terms of technical expertise and service quality.

Our operation and maintenance teams are located in our regional offices in close proximity to our customers or on-site at our customers' premises. Each operation and maintenance team maintains a dedicated service hotline that responds to customer's service requests within a prescribed time frame and provides on-site or remote diagnosis, troubleshooting and support on a 24/7 basis. Our operation and maintenance teams also conduct continuous system monitoring to optimize their availability and performance and proactively identify potential issues and risks.

Software products and related services case studies

The following table sets forth examples of projects deploying our software products and related services:

<u>Name of project</u>	<u>Project description</u>
Integrated CRM system for China Mobile Online Service Limited (中移在線一體化客服系統)	<ul style="list-style-type: none">• China Mobile's integrated BSS/OSS system with nationwide coverage• Supports the operations of China Mobile's 10086 customer service hotline for 31 provinces and certain dedicated consoles• Features customer services products from our CRM product line
Open e-commerce platform for China Mobile Jiangxi (江西移動社會化電商平台)	<ul style="list-style-type: none">• China Mobile's first system that enables integration of online and offline sales channels• A landmark project for the new generation of telecom operators' e-commerce business• Enables unified sales and marketing and supply chain, inventory and order management across online and offline channels• Features e-channel products from our CRM product line
Internet of Vehicles T platform for China Mobile's Government and Enterprise Branch (中國移動政企分公司車聯網T平台)	<ul style="list-style-type: none">• One of the largest Internet of Vehicles platforms in China in terms of the number of smart terminals supported• Delivers core Internet of Vehicle capabilities such as unified data, device and operation management, collection of massive data by smart terminals and big data analytics• Features our IoT products
Precision marketing platform for China Unicom Guangdong (廣東聯通精準營銷平台)	<ul style="list-style-type: none">• China Unicom Guangdong's first precision marketing platform which is highly recognized by China Unicom Guangdong• Enables telecom operators to conduct precision marketing• Convenient text message ordering and one-click purchase enhances user experience• Features campaign management products from our CRM product line
Online and offline integration for China Unicom Shanxi (山西聯通線上線下一體化平台)	<ul style="list-style-type: none">• China Unicom's first system that enables integrated order and payment management across online and offline channels• Features channel management products from our CRM product line

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<u>Name of project</u>	<u>Project description</u>
Intelligent CRM system for China Mobile (中國電信智慧CRM)	<ul style="list-style-type: none">• The first system implemented according to China Telecom's intelligent BSS technical standards• Enables emerging technologies such as big data analytics• Features fundamental CRM products from our CRM product line
Cloud-based billing system for China Telecom Sichuan (四川電信計費雲化系統)	<ul style="list-style-type: none">• The first cloud-based billing system for China Telecom's provincial companies• Convergent billing system that supports universal management of all online and offline billing services• Features fundamental billing products from our charging & billing product line
CRM system for China Post (中國郵政集團客戶關係管理系統)	<ul style="list-style-type: none">• One of the largest and most sophisticated CRM systems in the industry• Enables integrated management and support of customers, products, channels, sales and marketing and big data analytics across multiple industries, including postal, logistics and financial services• Features fundamental CRM products from our CRM product line

Agreements with customers

Project development contracts

We enter into project development contracts with our customers for the provision of our software products and related deployment services. These agreements are usually based on our customers' standardized form of agreements and include the following key terms:

- *Duration.* The terms of our project development contracts with our customers generally range from six months to two years, depending on the complexity of the projects and the software products to be deployed.
- *Scope of work.* The project development contracts specify our responsibilities throughout the project development process, the software products to be developed and a specified level of deployment services we will provide throughout the project development life cycle.
- *Delivery milestones.* The project development contracts provide for several delivery milestones, generally including system launch, initial acceptance and final acceptance. We generally grant our customers a trial operation period ranging from three to six months after the completion of initial acceptance. Final acceptance is conducted upon the expiration of the trial operation period by the customer or third-party acceptance agencies appointed by the customer. We may be subject to penalties or a corresponding contract price reduction for failure to adhere to the prescribed delivery milestones caused by us.
- *Pricing, credit and payment terms.* The contract price for our project development contracts is typically a fixed amount consisting of: (i) estimated costs for project execution and delivery, and (ii) estimated procurement costs for third-party hardware and software, if applicable. We generally require a deposit that ranges between 10% to 50% of the contract price upon signing the project development contracts, with the remaining contract price paid in installments pursuant to delivery milestones. We generally grant a credit term of 30 days to our customers.

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- *Intellectual property.* In general, we own the intellectual property rights of the baseline of the software products that we have developed in-house, while intellectual property rights related to the custom designed part of the software products are jointly owned by us and the customer or solely owned by the customer.
- *Termination.* Our project development contracts may be terminated by either party upon the occurrence of certain specified events, such as a force majeure event or a material breach that cannot be rectified within a prescribed time period.

Operation and maintenance service agreements

We enter into operation and maintenance service agreements with our customers for the provision of our operation and maintenance services, which are generally based on the customers' standardized form and include the following key terms:

- *Duration.* Our operation and maintenance service agreements with our customers generally have a one-year term and are renewable upon mutual agreement.
- *Scope of work and performance targets.* The operation and maintenance service agreements specify our responsibilities throughout the service period, the composition of the operation and maintenance teams and the level and scope of operation and maintenance services we will be providing. The agreements provide for monthly, quarterly and/or annual performance targets, including (i) the length of scheduled and unscheduled system downtime, system failures or interruptions, (ii) the time to handle system failures or interruptions, and (iii) quality and responsiveness of services. Failure to meet these performance targets will result in monetary penalties or a corresponding price reduction for the following year, based on a prescribed formula in the agreements.
- *Pricing, credit and payment terms.* We generally charge a fixed amount for our operation and maintenance services, which is based on the estimated costs to be incurred by the relevant operation and maintenance team. The contract price is generally paid in quarterly installment, and we sometimes require a deposit that ranges between 10% to 25% of the contract price upon signing the operation and maintenance service agreements. In some circumstances, we are paid every quarter based on the actual number of days our operation and maintenance team has worked pursuant to an agreed day-rate. We generally grant credit terms of 30 days to customers of our system operation and maintenance services.
- *Termination.* Our operation and maintenance service agreements may be terminated by either party upon the occurrence of certain specified events, such as a force majeure event or a material breach that cannot be rectified within a prescribed time period.

Data-Driven Operation Services

We have in recent years provided comprehensive data-driven operation services to telecom operators and their government and enterprise customers. Through the data-driven operation platforms we have developed, these services enable telecom operators and their government and enterprise customers to conduct real-time, in-depth analysis of user purchasing and consumption patterns, characteristics and lifecycles and design and implement marketing campaigns and management activities accordingly, which in turn help them increase sales, operational or management efficiency and customer value and build innovative big-data oriented business ecosystems.

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We believe we are well-positioned to provide data-driven operation services to telecom operators and their government and enterprise customers leveraging the extensive technical capabilities and industry insights we have accumulated over years of collaboration with telecom operators. We have developed hundreds of big-data based models and algorithms, including cluster analysis, customer behavior prediction, critical factor analysis and semantic recognition that have been widely applied in various operational scenarios and continuously improved and upgraded. These advanced models and algorithms, combined with emerging technologies including AI and machine learning, as well as telecom operators' existing big data capabilities, enable intelligent application of data across telecom operators' or their government and enterprise customers' various departments and domains.

As we accumulate more data-driven operation experience, we are also actively exploring collaboration opportunities with enterprise customers, such as automobile manufactures, in this area. In August 2018, we entered into a strategic cooperation agreement with China Merchants Bank Co., Ltd. to provide financial service sector-oriented data-driven operation services to China Merchants Bank Co., Ltd., further expanding the enterprise customer base of our data-driven operation services.

We provide data-driven operation services through data-driven operation platforms we have developed according to telecom operators or their government and enterprise customers' operational or management needs. Telecom operators or their government and enterprise customers' staff can conveniently access our data-driven operation services through a user-friendly web interface anytime, anywhere. We also provide onsite, 24/7 operational support when needed.

Our data-driven operation services generally adopt a pay-as-a-result model, under which our customers pay us based on business results, such as increase in monthly data usage and number of new subscribers every month. See “—Operational Support Agreements” for more details. As a provider of data-driven operation services, we deploy our data-driven operation platforms on telecom operators' private clouds and conduct data authority control and data security audits in strict compliance with the relevant laws, regulations, data security management protocols and processes to ensure the legality and security of user data privacy. We have taken various measures to ensure the security of the customers' user data which we have access to during the provision of our data-driven operation services: (i) we strictly comply with confidentiality clauses in our agreements with customers, (ii) each of our employees working onsite at our customers' premises have signed confidentiality undertakings to keep confidential of the personal information they have access to, (iii) each of our employees have signed confidentiality and non-compete undertakings, which provide that they shall strictly adhere to confidentiality policies of our customers when working at their premises, (iv) all user data are processed at our customers' premises or locations authorized by our customers, (v) we have desensitized all user data we use when providing data-driven operation services, and (vi) we strictly comply with data security related laws and regulations as well as telecom operators' data/information security protocols.

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Our operations products

Our data-driven operation services are typically provided through data-driven operation platforms we develop for telecom operators. These platforms are developed by adding specific features or functionalities to products from our operations product line. The following table sets forth details of our operations products:

<u>Major product categories</u>	<u>Functionalities</u>
Smart Sharing (智享)	Data-driven operation platform products that enable real-time analysis of demographics statistics, abnormal event monitoring, financial statistics analysis and emergency response services and other functionalities
Smart operations (智營)	Supports scenario-based marketing, enables users to quickly design and implement marketing campaigns through a user-friendly web interface, improves sales staff and sales channels' operating efficiency
Smart store (智店)	Enables retail operations using data mining technologies
Smart Info (智信)	Supports a complete WeChat integration for telecom operators and enterprises' businesses to provide various digital services to end users, such as inquiry, payment, processing and redemption
Smart Connection (智聯)	Enables Internet of Vehicles data monetization, including establishing connections between vehicles and the Internet, connects enterprises and customers and customers and services, closing the loop of Internet of Vehicles ecosystem

Operational support agreements

We generally enter into one-year operational support agreements with our customers for our data-driven operation services, which are generally based on the customers' standardized form and include the following key terms:

- *Duration.* Our operational support agreements with our customers generally have a one-year term and are renewable upon mutual agreement.
- *Scope of work and performance targets.* The operational support agreements specify our responsibilities throughout the contract period, the composition of our project development teams and the level and scope of data-driven operation services we will provide (for example, whether we will be developing new operations platforms or provide any onsite operational support). The agreements typically provide for monthly or quarterly performance targets, such as (i) number of new subscribers, (ii) number of transactions, and (iii) quality of onsite operational support services. Failure to meet these performance targets will result in a corresponding price reduction for our contract price, based on a prescribed formula in the agreements.
- *Pricing, credit and payment terms.* The contract price of our operational support agreements is generally paid in quarterly installment, with around 60% of the contract price paid to us as a fixed rate and around 40% of the contract price paid to us based on our completion of the monthly and/or quarterly performance targets. We generally grant credit terms of 30 days to customers of our data-driven operation services.
- *Termination.* Our operational support agreements may be terminated by either party upon the occurrence of certain specified events, such as a force majeure event.

Data-driven operation services case studies

Case study one:

Customer: China Mobile’s Beijing subsidiary

End User: A government and enterprise customer of China Mobile Beijing subsidiary in the public security sector in a district of Beijing

End User’s Primary Needs: To analyze passenger flow, monitor traffic hubs and manage floating population and resident population within district, facilitate interaction between the police and the public.

Our Data-Driven Operation Services: We have built a public security-sector data-driven operation platform for China Mobile’s Beijing subsidiary using “Smart Sharing” platform product from our operations product line. Leveraging China Mobile Beijing subsidiary’s big data capabilities, we provide data-driven operation services to the end user through this platform, primarily including (i) real-time analysis of the population distribution, mobility and clustering patterns within the district, provides data support for deployment of police resources and investment in public security and improve the end user’s internal operation efficiency, and (ii) real-time analysis of major traffic hubs and tourist attractions’ passenger flow during the holidays.

Results of Data-Driven Operation Services: Our data-driven operation services effectively improve the end user’s capabilities in the analysis, aggregation and visualization of massive amount of resident data, help the end user conduct more effective administrative management (such as floating population management) and abnormal event monitoring, provide smart community services, improve operational efficiencies and achieve cost saving. For example, after using our data-driven operation services, the end user receives over 30 types of up-to-date demographics statistics of the entire district every ten minutes, which eliminates the need to conduct annual household surveys to obtain the district’s demographics statistics.

Screenshot of the Data-Driven Operation Platform’s User Interface:



Case study two:

Customer: China Mobile’s Yunnan subsidiary

End User: China Mobile Yunnan subsidiary’s subscribers

Our Data-Driven Operation Services: We have built a data-driven operation platform for China Mobile Yunnan subsidiary using “Smart Operations” platform product from our operations product line, which is integrated with China Mobile Yunnan subsidiary’s big data platform. We have been providing data-driven operation services through this platform, including, among others, technical support, sales channel management and upgrade and marketing campaign management and optimization, to provide more personalized product and service recommendations to end users.

Results of Data-Driven Operation Services: With our data-driven operation services, China Mobile’s Yunnan subsidiary is able to conduct precise marketing through its online and offline sales channels to, on the one hand, provide personalized product and service recommendations to end users and on the other hand, adjust products and services’ target end user groups in real-time based on user feedbacks, ultimately increasing its sales, operating efficiency, market share and customer satisfaction.

Screenshot of the Data-Driven Operation Platform’s User Interface:



Case study three:

Customer: China Unicom’s Tianjin branch

End User: China Unicom Tianjin branch’s subscribers

Our Data-Driven Operation Services: We have built a data-driven operations platform for China Unicom’s Tianjin branch using our “Smart Info” platform product from our operations product line, which is integrated with China Unicom Tianjin branch’s big data decision center. We provide data-driven operation services through this platform, primarily including WeChat Store basic inquiry, payment and processing services, matrix management of multiple WeChat official accounts, message template publication, marketing event management, data analysis and operational support. These services are designed to increase the WeChat official accounts’ number of subscribers, subscriber activity level and number of transactions, making WeChat a major online sales channel of China Unicom Tianjin branch.

Results of Data-Driven Operation Services: Our data-driven operation services has increased China Unicom Tianjin branch’s number of new subscribers and transaction volume. For example, after using our data-driven operation services, China Unicom Tianjin branch’s WeChat official accounts’ number of new subscribers in the fourth quarter of 2017 increased by 180% compared to the same period in 2016.

Screenshot of the Data-Driven Operation Platform’s User Interface:



Others

We also derive revenue from (i) the procurement of third-party hardware and software to be integrated into the software systems deploying our products for some of our projects, (ii) system integration services, (iii) business consulting services, and (iv) corporate trainings. In 2015, 2016, 2017 and the six months ended June 30, 2018, other revenue amounted to RMB260.5 million, RMB312.5 million, RMB241.7 million and RMB69.8 million, respectively, accounting for 5.4%, 6.5%, 4.9% and 3.2% of our revenue from continuing operations for the respective periods.

Network security business

During the Track Record Period, our results from continuing operations also included results of the Network Security Business. Prior to late 2015, we carried out the Network Security Business in-house primarily through AsiaInfo Chengdu. In late 2015, we disposed of AsiaInfo Chengdu to AsiaInfo Cayman. Our Directors are of the view that the Network Security Business does not form part of our core businesses of the Group (which focus on the provision of integral software products and services primarily to telecom operators with a focus on BSS / OSS systems). The disposal of the Network Security Business will allow the Company to focus on its core business and ensure our management and internal resources are best placed to serve the development of our core business. After such disposal, in order to accommodate our customers' project management schedules and business needs and as a transitional arrangement, we entered into project development contracts for the provision of network security software products and services with customers, and subsequently outsourced all tasks under these contracts at the same price to AsiaInfo Chengdu (the "**Network Security Transitional Arrangement**"). We recognized the contract prices of such project development contracts as revenue for the relevant periods based on their percentage of completion, and recorded the same amounts as cost of sales. In consideration for the services provided by us to AsiaInfo Chengdu under the Network Security Transitional Arrangement, such as contract management, customer relationship management and liaison, we charged AsiaInfo Chengdu service fees which amounted to 2% of the Network Security Transitional Arrangement revenue recognized for the relevant periods, which were offset against cost of sales. We have ceased to enter into any new contract with respect to the Network Security Transitional Arrangement starting 2018. However, some of the existing project development contracts under the Network Security Transitional Arrangement we entered into with AsiaInfo Chengdu prior to 2018 are still ongoing and continuing. We expect that these existing project development contracts under the Network Security Transitional Arrangement will be completed by the end of 2020. The Company was informed by the Controlling Shareholders and Dr. Tian that pursuant to a share transfer agreement entered into by China Cloud Tech as buyer (being a company controlled by Dr. Tian) and AsiaInfo Cayman as seller (the "**Transfer Agreement**"), AsiaInfo Cayman has conditionally agreed to transfer 70% of the total issued shares of AsiaInfo Securities held by it (the "**Relevant Shares**") to China Cloud Tech. In September 2018, China Cloud Tech has acquired and AsiaInfo Cayman has disposed of the effective control and all economic interests over the Relevant Shares, although the legal completion of the Transfer Agreement is still subject to satisfaction of certain conditions precedent. As a result, Dr. Tian (through China Cloud Tech) obtained indirect control over AsiaInfo Chengdu.

See "Connected Transactions—Partially Exempt Continuing Connected Transactions—2. Network Security Transitional Arrangement" and "Financial Information—Description of Major Components of Our Results of Operations—Continuing Operation" for more details.

Other miscellaneous services***Procurement of third-party hardware and software***

The systems deploying our software products typically also use a variety of third-party hardware (such as servers) and software (such as database and middleware software). These third-party hardware and software are primarily sourced by our customers, and in a few cases, by us. For projects that we are responsible for sourcing third-party hardware and software, we purchase these hardware and software from third-party suppliers in accordance with our customers' requirements and specifications. We enter into supply agreements with third-party hardware and software suppliers

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against back-to-back orders from our customers. These supply agreements, typically with a contract term of one year, provide for the third-party hardware or software to be provided, the contract price and payment terms, among others. The third-party hardware and software suppliers generally grant us credit terms of 90-180 days. See “—Our Suppliers—Third-party hardware and software suppliers” for more details.

Business consulting services

We provide comprehensive business consulting services. In the process of providing business consulting services, we are able to accurately assessing the customer’s medium- to long-term business trends, business challenges and specific business needs, which have allowed us to promote products and services that are best aligned with their growth strategies when appropriate. We have recently established a new business division dedicated to the provision of business consulting services.

We provide business consulting services pursuant to consulting service agreements we enter into with telecom operators and large enterprises, the term of which generally ranges from two months to one year. The contract price for our consulting service agreements is typically a fixed amount based on the estimated costs to provide the business consulting services, calculated at the day or hourly rates of the relevant business consulting personnel. We generally require a deposit upon signing the project development contracts, with the remaining contract price due upon completion of the project.

PROJECT DEVELOPMENT PROCESS

We deliver our products and services as well as our data-driven operations services through the on-premise, project-based delivery model, and maintain a dedicated workforce comprised of:

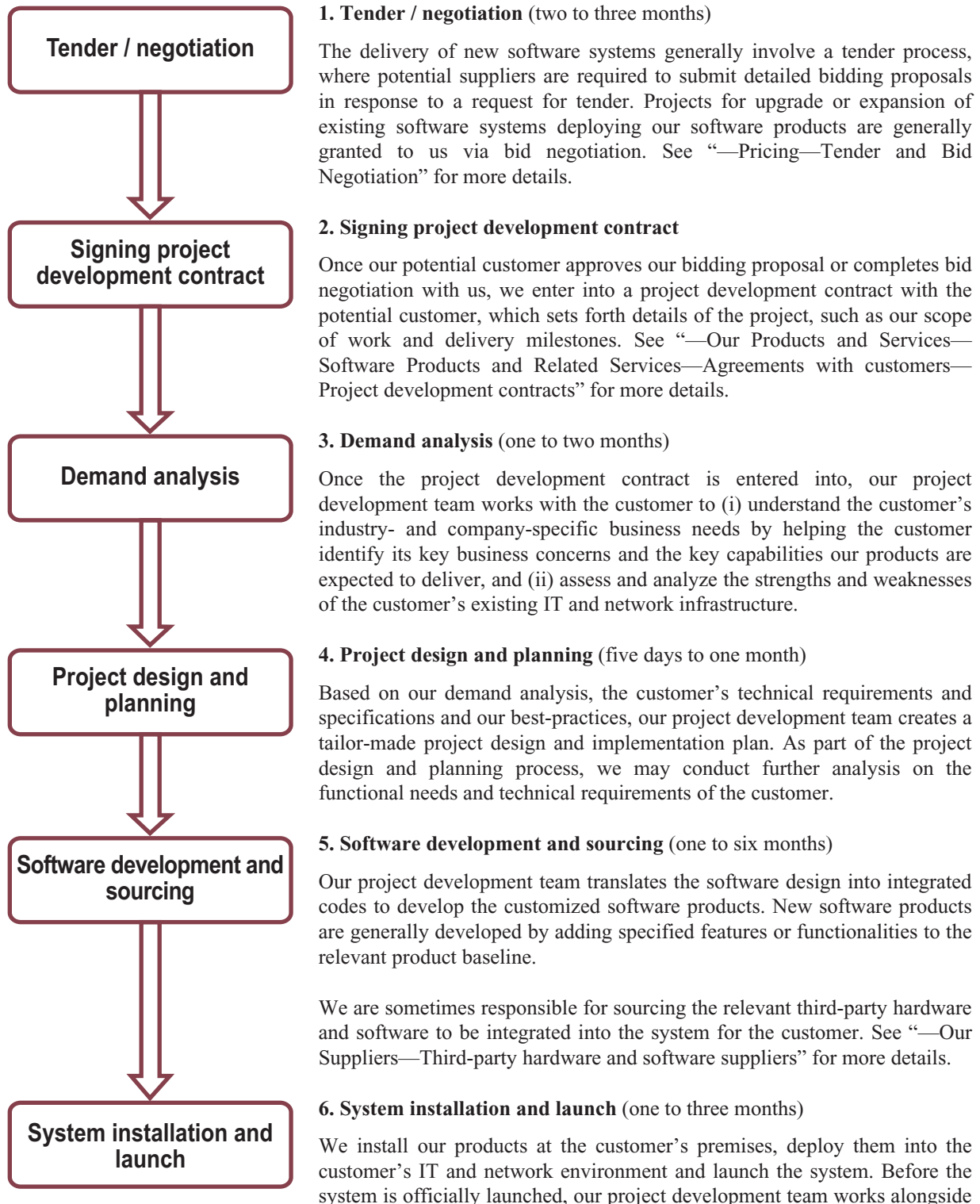
- ***Business divisions.*** We maintain dedicated business divisions targeting different customer groups—China Mobile, China Unicom, China Telecom, cable and media service providers and other enterprise customers. Each business division comprises its own R&D, sales, project delivery, quality assurance and operation and maintenance personnel with extensive experience in software and IT, and is responsible for the design, development and delivery of products and services for its target customer groups. We have recently established two new business divisions dedicated to the provision of business consulting services and data-driven operation services, respectively.
- ***Project development teams.*** At the beginning of the project development process, a dedicated project development team is formed within the relevant business division, which typically includes a project manager and a specific number of R&D, sales, project delivery and quality assurance personnel. The composition of the project development team is tailored to the requirements of the customer and complexity of the project. The project development team works closely with the customer throughout the project development process to develop a detailed project design outlining project requirements and identifying a comprehensive set of scenarios that will ensure a successful delivery.
- ***Operation and maintenance teams.*** Once we are engaged by the customer to provide operation and maintenance services for the systems deploying our products after system launch, a dedicated operation and maintenance team is assembled to provide operation and maintenance support around the clock.

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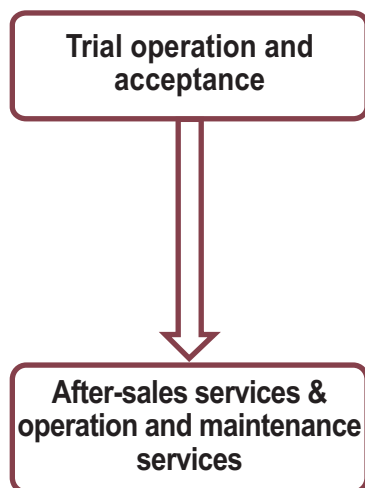
Throughout the project development process, our dedicated project development and operation and maintenance teams are supported by our R&D, pre-sales consulting, quality assurance and other in-house teams, which provide core capabilities to ensure successful delivery of the projects. We have adopted stringent quality assurance processes and procedures throughout the project development lifecycle to ensure the quality, reliability and security of our software products and services. See “—Sales, Marketing and Our Customers—Pre-sales services” and “—Our Technology, Research and Development—Quality Assurance” for more details.

Project Development Process for Software Products and Related Services

The project development process for our software products and related services varies in length, typically ranging from six months to two years, depending on the size, complexity and customer requirements and specifications provided in the project development contract, and involves the following key stages:



our customer to conduct user acceptance tests to make sure the installed system can handle required tasks in real-world scenarios according to specifications. See “—Our Technology, Research and Development—Quality Assurance” for more details.



7. Trial operation and acceptance (three to six months)

After the system is launched, we coordinate with the customer to conduct the system’s initial acceptance. After the initial acceptance is completed, the project enters into the trial operation period typically ranging from three to six months, during which period we focus on resolving issues discovered during initial acceptance and continue to enhance and optimize the system. Upon the expiration of the trial operation period, the customer or a third-party acceptance agency appointed by the customer conduct final acceptance of the system.

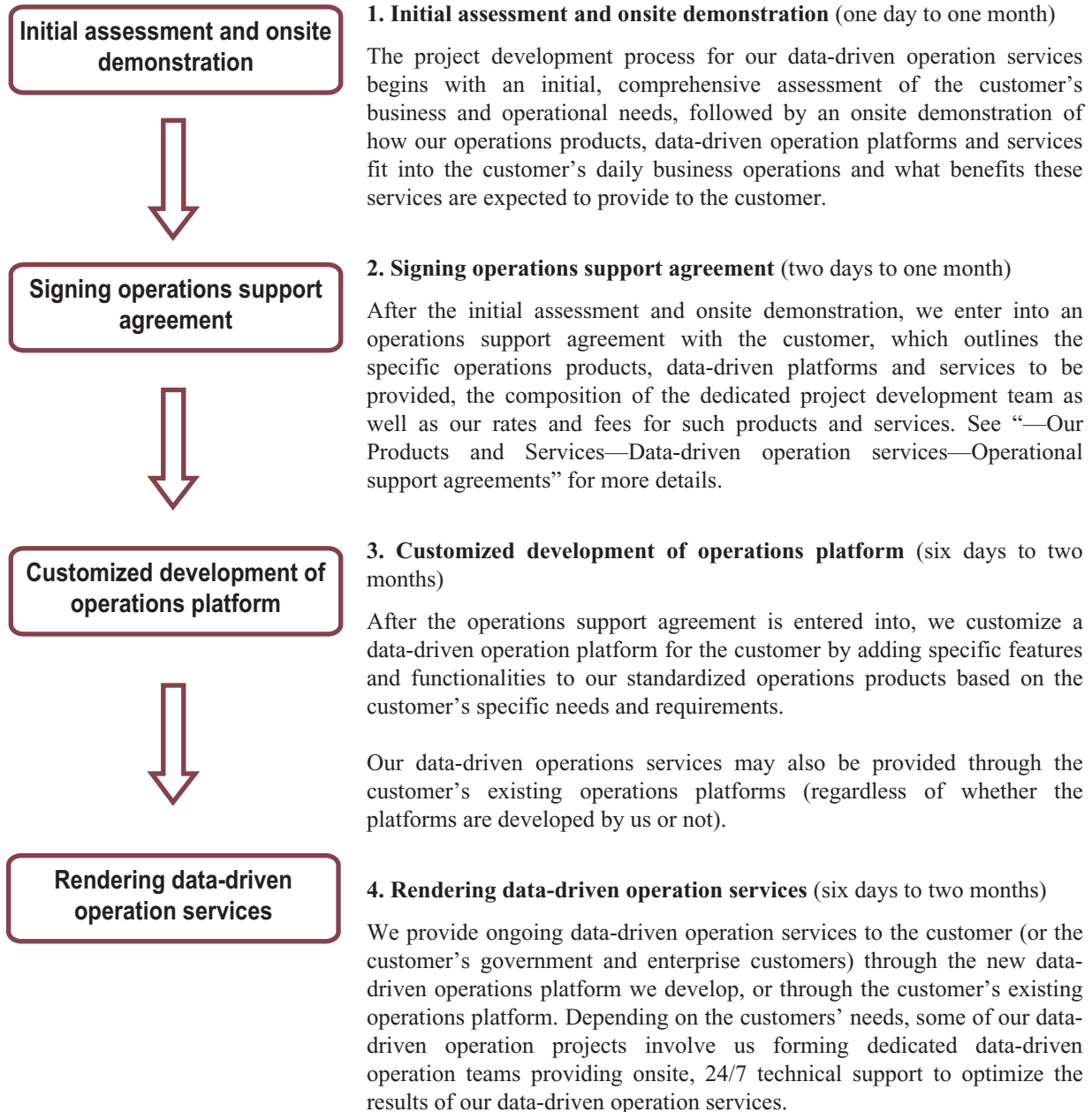
8. After-Sales Services (typically one year) **and Operation and Maintenance Services** (ongoing)

We provide a range of after-sales services to our customers, including (i) project training, and (ii) product warranties. See “—Warranties and After-Sales Services” for more details.

In addition to product warranties, once a system is implemented, we are usually engaged by the customer to provide comprehensive ongoing operations and maintenance services pursuant a separate operations and maintenance service agreement. See “—Our Products and Services—Software Products and Related Services—Operation and maintenance services” for more details.

Project Development Process for Data-Driven Operation Services

The project development process for our data-driven operation services typically ranges between 15 days to six months, depending on the size, complexity of the project and customer requirements and specifications, and typically involve the following key stages:



SALES, MARKETING AND OUR CUSTOMERS

Our Sales and Marketing Activities

Our sales force

We primarily acquire customers through our in-house sales force. We have sales and marketing teams and regional offices at our key customers’ locations to directly interact with our existing and

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prospective customers to promote our products and services and establish long-term, stable business relationship, identify and gain new business from prospective customers and initiate brand building and other company-level marketing efforts to increase market awareness of our brand, products and services. See “—Project Development Process—Project Development Process for Software Products and Related Services” for more details.

Pre-sales services

Our selling cycle typically begins with the generation of a sales lead through our sales efforts or word-of-mouth referrals. In addition to proactively seeking new customers, our sales and solution consulting teams maintain ongoing dialogs with our existing customers to explore additional cooperation opportunities. As part of our pre-sales services, our sales and solution consulting teams work together to provide comprehensive solution consulting services. These services include assessing the customers’ business needs, operational challenges and IT system capabilities, helping them formulate business plans, growth strategies and tailored IT solutions and demonstrating the advantages of our products and services. These comprehensive pre-sales efforts have given us significant insights into our customers’ IT infrastructure construction and decision making processes with respect to our products and services, and have enabled us to keep pace with customers’ evolving demands and specifications and direct our R&D efforts and product roadmap accordingly, securing more and higher-value engagements as their businesses grow and the competitive landscape evolves.

Our marketing initiatives

Our strong brand recognition has been an important driving force for our sales. We have been promoting our products and services and increase our brand awareness among existing and potential customers through the following initiatives:

- sponsoring and participating in various industry events, exhibitions, trade shows, seminars and conferences, such as the Mobile World Congress;
- utilizing the online social media to promote our products and services, such as through Sina Finance and our WeChat official account;
- display of our products and demonstration of our services to visitors and business partners at our showrooms and through our website; and
- participating in various training events held by our customers, such as senior executive trainings and technical trainings to facilitate interactions with our customers.

Our Customers

Our customers mainly comprise telecom operators, including the headquarters, provincial, municipal and specialized companies and joint venture of China Unicom, China Mobile and China Telecom, each having autonomy to make its own operational and financial decisions. As of June 30, 2018, we had 336 customers, including 212 telecom operator customers and 124 enterprise customers, which we negotiate and enter into contracts with individually and directly:

- (i) one of the major telecom operators’ headquarters, 31 provincial companies, 23 municipal companies and 41 specialized companies, which contributed an aggregate of 53.2%, 52.6%, 55.3% and 57.3% of our total revenue from continuing operations in 2015, 2016, 2017 and the six months ended June 30, 2018, respectively, relationship since 1999;

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- (ii) one of the major telecom operators' headquarters, 31 provincial companies, 1 municipal company and 14 specialized companies, which contributed an aggregate of 26.3%, 25.0%, 23.7% and 21.6% of our total revenue from continuing operations in 2015, 2016, 2017 and the six months ended June 30, 2018, respectively, relationship since 1999;
- (iii) one of the major telecom operators' headquarters, 43 provincial companies, 2 municipal companies and 13 specialized companies, which contributed an aggregate of 17.6%, 18.1%, 17.1% and 18.1% of our total revenue from continuing operations in 2015, 2016, 2017 and the six months ended June 30, 2018, respectively, relationship since 1995;
- (iv) one of the major telecom operators' headquarters, three provincial companies and five municipal companies, which contributed an aggregate of 0.1%, 0.1%, 0.2% and 0.1% of our total revenue from continuing operations in 2015, 2016, 2017 and the six months ended June 30, 2018, respectively, relationship since 2015;
- (v) 32 large enterprise customers, including 28 cable and media service providers and 4 large enterprises in the postal and financial service sectors, which contributed an aggregate of 1.1%, 1.8%, 2.3% and 2.2% of our total revenue from continuing operations in 2015, 2016, 2017 and the six months ended June 30, 2018, respectively, relationship since 2010; and
- (vi) 92 small- to medium-sized enterprise customers, including 20 MVNOs and 72 enterprises in other selected industries, which contributed an aggregate of 1.7%, 2.5%, 1.4% and 0.7% of our total revenue from continuing operations in 2015, 2016, 2017 and the six months ended June 30, 2018, respectively, relationship since 2013.

We have established long-standing, strategic relationship with our customers, as evidenced by:

- **Customer retention rate.** We maintain high customer retention rate, which was higher than 90% for all customers and 99% for our telecom operator and large enterprise customers in each of 2015, 2016, 2017 and the six months ended June 30, 2018; and
- **Framework cooperation agreements.** We have entered into long-term framework cooperation agreements with a number of our telecom operator and large enterprise customers, which reaffirm our strategic partnership with the respective customers in the R&D of BSS/OSS systems and designate us as their preferred provider of these systems. These framework cooperation agreements are generally based on our customers' standardized form and include the following key terms:
 - **Duration.** The term of our framework cooperation agreements generally range from one year to three years.
 - **Future cooperation.** The framework cooperation agreements provide, among others, the specific business areas in which our customers intend to cooperate with us and the types of products and services we will provide in such cooperation. The framework cooperation agreements reaffirm our strategic partnership with the respective customers in the R&D of BSS/OSS systems and designate us as their preferred provider of BSS/OSS systems. Pursuant to the framework cooperation agreements, we enter into fixed-price project development contracts with customers on a project-by-project basis.
 - **Exclusivity.** The framework cooperation agreements are non-exclusive and we are free to serve other customers during the term of the agreements.

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- *Intellectual property.* In general, we own the intellectual property rights of the baseline of the software products that we have developed in-house, while the intellectual property rights for the custom designed part of the software products will be owned by the customer. Details of the intellectual property rights are typically provided in the project development contracts we enter into with our customers on a project-by-project basis.
- *Termination.* Our framework cooperation agreements may be terminated with mutual consent. Our customers may terminate the agreements upon the occurrence of certain specified events, such as our failure to enter into specific project development contracts with our customer within a certain period of time.

In 2015, 2016, 2017 and the six months ended June 30, 2018, revenue from our five largest customers (on an individual entity basis), with whom we negotiate and enter into contracts with individually and directly, which included China Mobile’s provincial subsidiaries and China Unicom and China Telecom’s headquarters, contributed an aggregate of 24.1%, 24.9%, 20.1% and 22.0% of our total revenue from continuing operations, respectively. Revenue from our largest customer contributed 6.7%, 6.6%, 4.6% and 6.0% of our total revenue from continuing operations during the same periods, respectively. All of our top five customers during the Track Record Period were Independent Third Parties. None of our Directors or their respective associates or any Shareholder (whom to the knowledge of our Directors owns more than 5% of the Offer Shares) had any interest in any of our five largest customers during the Track Record Period.

We are exposed to risks related to our dependence on telecom operators. See “Risk Factors—Risks Relating to Our Business and Industry—Our dependence on Chinese telecom operators subjects us to events that may cause material fluctuations or declines in our revenues” for more details.

PRICING

Our Pricing Policies

The prices of our software products and services are determined taking into consideration a number of factors, including, as applicable: estimated project execution and delivery costs, estimated procurement costs for third-party hardware and software products (if applicable), complexity of the projects and other factors such as target customer groups, customers’ acceptable price ranges and prices of competing products and services. For projects that involve a tender process, we also take into consideration our competitors’ prices in order to succeed in the tender process.

During the Track Record Period and up to the Latest Practicable Date, there has not been any material fluctuation in the prices of our products and services.

Tender and Bid Negotiation

Our contracts with our customers sometimes involve a tender process. We take into consideration our competitors’ prices in pricing these contracts in order to succeed in the tender process. The prices of our remaining contracts with our customers are determined based on a bid negotiation between us and our customers.

Tender

Contracts for the delivery of new software systems generally involve a tender process, where potential suppliers are required to submit detailed bidding proposals in response to a tender offer. The

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tender offer typically sets out the technical requirements and specifications of the project, as well as other details such as payment terms and delivery deadlines.

Once we receive the tender offer, we conduct research and analysis of such project. Various factors, including but not limited to budget, pricing, project complexity and specifications, payment terms, timetable, competitive landscape and requirements on bidders such as industry experience and track record will be taken into account when we analyze the feasibility of the project.

After feasibility studies are completed, our management will consider whether a detailed bidding proposal shall be prepared for such potential project based on the results of the feasibility studies. If we decide to proceed with the tender, we will formulate a preliminary project design plan, based on which the detailed bidding proposal will be prepared and submitted.

It generally takes two to three months from the opening of submission of tender bids and the announcement of tender results. In 2015, 2016, 2017 and the six months ended June 30, 2018, approximately 20%, 23%, 25% and 22% of our contracts with our customers went through a tender process, and the success rate of our tender bids was approximately 96%, 94%, 96% and 91%, respectively.

Bid negotiation

In general, if the telecom operators or enterprises' existing software systems deploy our software products, the relevant system upgrades or expansion projects will be granted to us by bid negotiation instead of tender. In addition, system operation and maintenance projects related to software systems deploying our products will typically be awarded to us by bid negotiation. The bid negotiation process generally takes two to three months. Whether a project can be granted through tender or bid negotiation is ultimately determined by our customers case by case in accordance with the relevant laws and regulations and their internal policies.

WARRANTIES AND AFTER-SALES SERVICES

Product Warranties

We typically provide 12-month product warranties for our software products, which are generally limited to product repair and maintenance. As part of our after-sales services, we offer free upgrades to new versions of our software products, such as new versions that address compatibility or security issues. We also operate a dedicated customer service hotline that provides technical support to our customers and answers to customer queries.

The repair and maintenance of third-party hardware (which generally have one- to two-year product warranties) and software (which generally have 12-month product warranties) that are procured by us and integrated into our customers' software systems are handled by the relevant third-party suppliers, with the repair and maintenance costs borne by these suppliers.

During the Track Record Period and up to the Latest Practicable Date, we did not experience any material product liability claims from our customers. As a result, we did not record any provision for product warranty during the Track Record Period.

Product Training

Once a software system is launched, we provide a range of professional training related to system operation and maintenance on-site or at our training centers in Beijing or Nanjing to the

customer's employees. These training courses primarily cover the technologies, functionalities, day-to-day operations and troubleshooting techniques, which are designed to ensure the proper function of the implemented systems.

OUR TECHNOLOGY, RESEARCH AND DEVELOPMENT

We have established a product and technology committee, which is chaired by our Chief Technology Officer and is comprised of senior executives from our product R&D center, quality assurance team, pre-sales consulting team and business divisions. This committee is responsible for formulating our technology strategies and direct our R&D activities accordingly. The key responsibilities of this committee also include: reviewing technology development strategies, approving product and R&D projects establishment applications, managing product R&D projects' schedule and quality, promoting technical standards and managing the qualification and competence of technical talents.

Our technology strategy is to focus on providing technologically-advanced products that have business value for specific sectors primarily through in-house R&D, while integrating advanced third-party technologies. We have always believed that technology not only serves business operations, but also enables innovative business architecture and models. The key to our technology strategy is to make technology easier, so that more industrial customers have access to advanced IT technologies more conveniently and at lower costs, and in turn can be more focused on their business operations. As such, we have established a three-tier "platform + application + operations" technology structure, which has served as our competitive differentiator as well as a key driver that keeps us at the forefront of the industry.

Our R&D activities are carried out under the guidance of our technology strategies. We have focused our R&D efforts on continuous innovation based on advanced technologies and driven by customer demands, and conduct substantially all of our R&D activities in-house. Our R&D activities primarily include: product planning according to customer needs, R&D on new products, expanding and enhancing the capabilities of existing products, improving the quality of our delivering services, quality assurance and increasing operating efficiency.

We incurred research and development expenses of RMB629.6 million, RMB636.6 million, RMB430.2 million and RMB181.1 million in 2015, 2016, 2017 and the six months ended June 30, 2018, respectively, accounting for 13.2%, 13.1%, 8.7% and 8.3% of our total revenue from continuing operations, respectively. We expect to continue to incur research and development expenses in the areas of data-driven operation services, IoT, intelligent networks, as well as other areas as our R&D strategy evolves.

The following table set forth a summary of our major R&D events and developments:

Year	Major events and developments
1999-2005	Consecutively launched data billing product AIOBS, convergent billing product AICBS, integrated network management system AISerBase, e-email system AIMC, business analysis and decision-making system AIOmniVision and other products
2003	Launched APP frame infrastructure platform, our in-house developed J2EE platform with SOA structure, which replaces the traditional C/S structure
2003	Joined TMF

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Year	Major events and developments
2004	Launched the Open product series for large-scale BSS/OSS systems
2010	Started to launch new versions of BSS/OSS system software that comply with telecom operators' new generation of technical standards
2014	Introduced the concept of data asset for the first time and launched the industry-leading data asset management platform DACP; completed the first nationwide centralized BSS system in the industry
2015	Launched AIF infrastructure platform, a cloud-based, universal PaaS platform that can be rolled out among all of our customers that enable them to develop, run and manage applications; joined the international open data platform ODPi
2016	Launched cloud-based big data management platform OCDP
2016	Launched the first financial computing platform that complies with IFRS15
2017	Launched brand-new CRM product, smart terminal application development framework, smart customer service product, billing product, smart testing management platform product, providing telecom operators and enterprise customers with BSS/OSS products that featured leading technologies and cover customers' entire business operations process
2017	Launched a new suite of big data products, including five main products: AI, big data, visual recognition, intelligence data labeling system and intelligent operating system
2017	Actively expand our IoT business, providing customers with industry application solutions such as smart community, smart firefighting, smart travel and Internet of Vehicles

As a result of our R&D efforts, we have received numerous industry awards and recognitions. See “—Qualifications, Awards and Recognitions” for more details. Our R&D capabilities are also evidenced by our broad portfolio of intellectual property rights. See “—Intellectual Property” for more details.

Quality Assurance

We strive to ensure the quality, reliability and security of our products and services. We have established a quality assurance system at the company level pursuant to ISO 9001 quality management system standards, ISO 27001 security management standards and CMMI Level 5 software process methodologies and based on our industry experience and best practices. Our quality assurance system primarily involves, among other things, software development process management, R&D qualitative management, deployment management, tests and regular internal quality audits.

We have received international certifications for our quality assurance systems and security management systems. The following table sets forth a summary of certifications that we have received and major standards that we have satisfied:

Certification/Standards	Description
ISO 9001:2015	Certification for our quality management system in connection with (i) the design, development and maintenance of application software; and (ii) computer information system integration design, development and service
ISO 27001	Internationally accepted standards for information security management systems, which demonstrates that we have established a comprehensive information security management system
CMMI Level 5	Internationally accepted Software Capability Maturity Model for evaluation of software development capabilities, CMMI Level 5 represents the highest level

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Our R&D Team

As of June 30, 2018, we had a dedicated R&D team consisting of 3,482 personnel, representing approximately 31.2% of our total staff, including our centralized R&D team at our headquarters (accounting for approximately 1/3 of our total R&D personnel) and R&D teams at business-division level focusing on specific projects. Our R&D staff are located at our headquarters and regional offices spanning 28 provinces, municipalities and autonomous regions, including Beijing, Nanjing, Hangzhou, Changsha, Guangzhou and Chengdu. As of the same date, approximately 93.0% of our R&D staff held bachelors' degree or above and 60.6% had over five years' experience in the software industry.

Our centralized R&D team is based at our headquarters' R&D center, which focuses on centralized R&D of core products that can be shared among our business divisions, forward looking R&D of new technologies that align with our strategies, as well as quality management and quality assurance during the R&D process.

Our centralized R&D efforts are complemented by R&D initiatives for specific projects at the business division level. Each of our business divisions is also equipped with its own R&D personnel, who are responsible for developing products catering to customer needs for specific projects using the key products, universal platforms and tools centrally developed at our headquarters, and supporting the delivery of products they develop in the context of specific projects.

INTELLECTUAL PROPERTY

Our success depends, in part, on our ability to maintain and protect our proprietary technology and to conduct our business without infringing the proprietary rights of others. As of the Latest Practicable Date, we held 562 software copyright registrations in the PRC. We owned 252 registered trademarks in the PRC, Hong Kong, the United States, Singapore, Malaysia, Thailand, Japan, Australia and the European Union and had applied for 245 trademark registration in the PRC and Hong Kong. In addition, we owned 34 registered patents in the PRC and the United States, and had applied for the registration of 34 patents in the PRC. As of the same date, we owned 124 domain names.

We rely primarily on a combination of copyright, trademark, patent, domain name and trade secret protection laws as well as confidentiality and non-compete agreements and provisions with our employees, dispatched workers and other business partners to safeguard our intellectual property. We cannot assure you that the protection afforded for our intellectual property will be adequate.

During the Track Record Period and up to the Latest Practicable Date, we did not experience any infringement of our intellectual property rights having a material adverse effect on our business; nor had we subject to any material intellectual property rights claims by third parties. Third parties may appropriate our intellectual property rights without our knowledge or consent. Unauthorized use of our intellectual property rights by third parties, and the expenses incurred in protecting our intellectual property rights may adversely affect our business. We may also be subject to litigation involving claims of patent infringement or violation of intellectual property rights of third-parties. See "Risk Factors—Risks Relating to Our Business and Industry—Our intellectual proprietary rights may be inadequately protected and there is a risk of poor enforcement of intellectual property rights in China" and "—We may be subject to intellectual property infringement claims, which may be expensive to defend and may disrupt our business and operations" for more details.

OUR SUPPLIERS

Our suppliers include outsourcing service providers and third-party hardware and software suppliers. In 2015, 2016, 2017 and the six months ended June 30, 2018, purchases from our five largest suppliers, which included hardware suppliers and outsourcing service providers, in aggregate accounted for 7.3%, 21.5%, 11.6% and 7.7% of our cost of sales, respectively, and purchases from our largest supplier, which included outsourcing service providers, accounted for 2.4%, 10.7%, 3.7% and 3.5% of our cost of sales, respectively.

Other than AsiaInfo Chengdu, which was one of our outsourcing service providers during the Track Record Period, all of our other top five suppliers during the Track Record Period were Independent Third Parties. See “Connected Transactions—Partially Exempt Continuing Connected Transactions—1. Technological Services Provided by AsiaInfo Chengdu to Our Group” and “—Partially Exempt Continuing Connected Transactions—2. Network Security Transitional Arrangement” for more details. Other than AsiaInfo Chengdu, none of our Directors or their respective associates or any Shareholder (whom to the knowledge of our Directors owns more than 5% of the Offer Shares) had any interest in any of our five largest suppliers during the Track Record Period.

Outsourcing Service Providers

In line with industry practice, we outsource various non-core IT services at different stages of our project development process to our outsourcing service providers, such as certain aspects of our operations and maintenance services which do not require extensive software and IT expertise. Such practices enable us to focus on key stages of the project development lifecycle, such as system design, system planning and software development. Our outsourcing service providers are providers of professional IT services with the requisite qualifications. We enter into technical support agreements or project outsourcing service agreements with our outsourcing service providers or place orders with them under long-term framework agreements on a project by project basis, which provide for, among others, the types of IT services to be provided, the contract price and the credit and payment terms. Our outsourcing service providers generally grant us a credit term of 30 days. Our outsourcing service providers are responsible for complying with our quality standards for the IT services provided and to provide maintenance and warranty to our customers.

In 2015, 2016 and 2017 and the six months ended June 30, 2018, we engaged 45, 47, 58 and 25 outsourcing service providers, respectively. We have been working with our outsourcing service providers for an average of approximately 3 years, and believe that we have a good working relationship with our outsourcing service providers. In 2015, 2016, 2017 and the six months ended June 30, 2018, purchases of outsourced services from outsourcing service providers accounted for 7.5%, 11.3%, 8.9% and 7.8% of our cost of sales, respectively.

We employ various criteria in selecting our outsourcing service providers, including industry experience and track record, technical expertise, service quality and quality control effectiveness, prices, financial condition and ability to meet our customers’ delivery timeline. Each potential outsourcing service provider must undergo a rigorous process, including background checks, interviews and site visits, which typically takes one month to complete, in order to qualify as our designated outsourcing service provider.

We closely monitor and evaluate the performance of our outsourcing service providers. We conduct annual inspections to re-evaluate the overall performance of our outsourcing service providers

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and may terminate our business relationship with those failing our annual inspections. The evaluations are based on several factors, including the outsourcing service providers' technology and industry expertise, quality of services, quality assurance procedures as well as their compliance with our policies and guidelines.

Third-Party Hardware and Software Suppliers

We are responsible for sourcing third-party hardware and software for some of our projects. For these projects, we purchase hardware and software from third-party suppliers in accordance with our customers' requirements and specifications. We enter into supply agreements with third-party hardware and software suppliers against back-to-back orders from our customers. These supply agreements, typically with a contract term of one year, provide for the third-party hardware or software to be provided, the contract price and payment terms, among others. The third-party hardware and software suppliers generally grant us credit terms of 90 to 180 days. See “—Our Products and Services—Others—Other Miscellaneous Services—Procurement of third-party hardware and software” for more details.

As of December 31, 2015, 2016 and 2017 and June 30, 2018, we had 176, 91, 98 and 115 hardware and software suppliers, respectively, all of which were Independent Third Parties. We have been working with our hardware and software suppliers for an average of approximately 3 years. In 2015, 2016, 2017 and the six months ended June 30, 2018, our purchases from third-party hardware and software suppliers accounted for 4.0%, 5.4%, 3.5% and 1.6% of our cost of sales, respectively.

We seek third-party hardware and software suppliers with sound industry expertise, track record and operating and financial conditions. We source third-party hardware and software exclusively from designated suppliers who have passed our background checks as well as ongoing performance evaluations.

We believe we have sufficient alternative suppliers for third-party hardware and software that can provide us with substitutes of comparable quality and prices. During the Track Record Period, we had not encountered any disruption to our business as a result of shortage of third-party hardware and software.

INVENTORY MANAGEMENT

Our inventory includes third-party hardware and software products we procure for some of our projects, which will be integrated into the software systems deploying our products. For the projects where we are responsible for procuring third-party hardware and software, we procure these hardware and software from third-party suppliers against back-to-back orders from our customers according to their requirements and specifications. See “—Our Suppliers—Third-Party Hardware and Software Suppliers” for more details.

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QUALIFICATIONS, AWARDS AND RECOGNITIONS

The following table sets forth details of our major certificates and qualifications:

<u>Certificate/permit</u>	<u>Issuing Entity</u>	<u>Date of Issuance</u>	<u>Date of Expiration</u>
Computer Information System Integration Qualification Certificate (Large Scale Level 1) held by AsiaInfo China	China Electronics Information Industry Federation Information System Integration Qualifications Office	December 13, 2017	December 12, 2018
Computer Information System Integration Qualification Certificate (Level 1) (信息系統集成及服務一級資質) held by AsiaInfo China	China Electronics Information Industry Federation	December 21, 2015	December 20, 2019
Computer Information System Integration Qualification Certificate (Level 1) held by AsiaInfo Nanjing	China Electronics Information Industry Federation	October 8, 2015	October 7, 2019
Computer Information System Integration Qualification Operation Maintenance Certificate (Level 1) held by AsiaInfo China	China Electronics Information Industry Federation	July 1, 2016	June 30, 2020
High and New Technology Enterprise Certificate held by AsiaInfo China	Beijing Municipal Science & Technology Commission, Beijing Municipal Finance Bureau, Beijing Municipal National Taxation Bureau and Beijing Municipal Local Taxation Bureau	October 25, 2017	October 24, 2020
High and New Technology Enterprise Certificate held by AsiaInfo Nanjing	Jiangsu Provincial Science & Technology Department, Jiangsu Provincial Finance Department, Jiangsu Provincial National Taxation Bureau and Jiangsu Municipal Local Taxation Bureau	December 7, 2017	December 6, 2020
Software Enterprise Certificate held by AsiaInfo Nanjing	Jiangsu Software Industry Association	July 30, 2018	July 29, 2019

The following table sets forth our recent awards and recognitions:

<u>Year</u>	<u>Awards and Recognitions</u>	<u>Issuing Authorities</u>
2018	2018 Top 50 Most Innovative Enterprises in China's Information Technology Service Industry	China Information Technology Industry Federation
2018	2018 Top 50 Enterprises for Social Contributions for China's Electronic Information Industry	China Information Technology Industry Federation
2018	2017 China's Most Influential Software and Information Service Enterprise	China Software Industry Association
2018	Our CEO, Mr. GAO Nianshu, received the Outstanding Entrepreneur in China's Electronic Information Industry Award	China Information Technology Industry Federation
2018	Our CEO, Mr. GAO Nianshu, received the 2017 Outstanding Entrepreneur in China's Software Industry Award	China Software Industry Association

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Year	Awards and Recognitions	Issuing Authorities
2017	2017 Top 50 Most Innovative Enterprises in China's Digital Information Industry	China Information Technology Industry Federation
2017	2017 Top 100 Most Competitive Chinese Software and Information Technology Services Providers	China Information Technology Industry Federation
2017	No. 19 of the 16 th Top 100 Income of China's Software Enterprises	Ministry of Industry and Information Technology
2017	Most Valuable Brand of China's Software and Information Service Industry	China's Software and Information Service Network/ China's Brand Research Unit of Capital University of Economics and Business's
2017	AIF received the 2017 Telecom Sector Outstanding Solution Award	China Information Technology Service Industry Alliance
2017	Strongest Investment Potential Software Enterprises	China Software Industry Association
2017	Science and Technology Contribution Award for China's Information Technology Service Industry	China's Information Technology Service Industry Alliance / Ministry of Industry and Information's Software and Integrated Circuit Center
2017	Chinese Software and Information Services Providers AAA Credit Ratings	China Software Industry Association
2016	No. 25 of the 15 th Top 100 Income of China's Software Enterprises	Ministry of Industry and Information Technology
2016	Top 100 Enterprise for Comprehensive Competitiveness of China's Software and Information Technology Services	China's Information Technology Industry Federation / China's Software Industry Association
2015	New Innovation Award	Beijing Communications and Information Association
2015	2015 Top 100 Zhongguancun High Growth Enterprises	Beijing Zhongguancun High-tech Enterprise Association / 2015 Zhongguancun High Growth Enterprise Committee
2015	No. 24 of the 14 th Top 100 Income of China's Software Enterprises	Ministry of Industry and Information Technology

COMPETITION

The telecom and non-telecom enterprise software product and related service markets in China are competitive and are characterized by rapid technological changes, frequent introduction of new products and fast changing customer demands and rapidly evolving industry standards. Our major competitors include Huawei (limited to its software business targeting telecom operators and large enterprises), ZTE Corporation (limited to its software business targeting telecom operators and large enterprises), Shenzhen Tianyuan DIC Information Technology Co., Ltd. and Business-intelligence of Oriental Nations Corporation Ltd.

The most significant factors that affect our competitiveness are:

- the performance, quality, reliability and cost-effectiveness of our products and services relative to those of our competitors';

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- our ability to supply products and services, on a timely basis and at competitive prices;
- our ability to accurately identify and respond to emerging technological trends and demand for product features and performance characteristics;
- our ability to successful and timely develop new products and services;
- our ability to retain and incentivize our senior management team and qualified personnel;
- our ability to develop and maintain customer and supplier relationships; and
- our service capabilities.

We believe we compete favorably on the basis of these factors because we have accumulated a deep understanding of China’s telecom and non-telecom enterprise software product and related service markets through our extensive industry experience and have developed a comprehensive suite of products and services tailored to the unique characteristics of these customers. However, our existing and potential competitors may have greater financial, technical, manufacturing, marketing, sales and other resources than we do. We also compete with emerging start-up companies which may be able to innovate and provide products and services faster than we can. We cannot assure you that we will be able to compete successfully against our current or future competitors. See “Risk Factors—Risks Relating to Our Business and Industry—The markets in which we operate are competitive, and we cannot assure you that we will be able to compete successfully against our competitors, grow at a rate comparable to our growth rate in the past or successfully maintain or enhance the awareness of our brand” for more details.

EMPLOYEES

As of June 30, 2018, we employed 11,176 full-time employees, all of which were based in the PRC. The following table provides a breakdown of our employees by function as of that date:

<u>Functions</u>	<u>Number of Employees</u>
R&D	3,482
Project deployment, operation and maintenance	6,788
Sales and marketing	360
Data-driven operations	134
Operations management and IT services	109
General administration and others	303
Total	<u>11,176</u>

We recruit primarily through job search websites, social media and employee referrals programs for our recruitment needs. Our employees typically enter into standard employment contracts with us. The remuneration packages for our employees include base salary, bonuses and allowances. We set performance targets for our employees based on their position and periodically review their performance. We provide orientation programs for new employees and continuous training to enhance our employees’ industry, technical and product knowledge, as well as their familiarity with industry quality standards and work safety standards.

As required by PRC laws and regulations, we participate in social insurance schemes operated by the relevant local government authorities and maintain mandatory pension contribution plans and medical and work-related injury insurance schemes for our employees. We also contribute to unemployment insurance plans as well as housing accumulation funds for our employees.

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We believe that we maintain a good working relationship with our employees, and during the Track Record Period, we did not experience significant problems in our relationship with our employees or disruption to our operations.

As of June 30, 2018, we also engaged a small number of dispatched workers from independent third-party employment agencies to provide administrative, system operation and maintenance and other auxiliary work. These dispatched workers are employed by the relevant employment agencies. Pursuant to our labor-dispatching agreements with the employment agencies, the employment agencies are responsible for making social insurance and housing funds contributions for these dispatched workers and we are responsible for interviewing and training these dispatched workers. We had not experienced any business interruption due to such arrangements during the Track Record Period and up to the Latest Practicable Date, and we do not foresee any difficulty in finding any replacement employment agencies.

PROPERTIES

According to section 6(2) of the Companies (Exemption of Companies and Prospectuses from Compliance with Provisions) Notice (Chapter 32L of the Laws of Hong Kong), this prospectus is exempted from compliance with the requirements of section 342(1)(b) of the Companies (Winding Up and Miscellaneous Provisions) Ordinance in relation to paragraph 34(2) of the Third Schedule to the Companies (Winding Up and Miscellaneous Provisions) Ordinance, which require a valuation report with respect to all of our Group's interests in land or buildings. This is because as of June 30, 2018, none of our properties had a carrying amount of 15% or more of our consolidated total assets.

Owned Properties

As of the Latest Practicable Date, we owned two parcels of land with an aggregate land area of approximately 11,538 square meters. Our owned properties are primarily used as our R&D center and for administrative purposes. We have obtained the land use rights certificates for this parcel of land.

We owned one building with an aggregate gross floor area of approximately 36,335 square meters for our R&D center. We have obtained all the requisite certificates and permits for this building, including its ownership certificate.

Leased Properties

We lease certain properties in China in connection with our business operations, with a total gross floor area of 75,500 square meters as of June 30, 2018. These properties mainly include premises for our regional offices and dormitories, all of which are leased from Independent Third Parties.

As of June 30, 2018, (i) we failed to register the lease agreements for 126 leases (with a gross floor area of 75,114 square meters, accounting for 99.5% of the total gross floor area we leased), primarily due to the relevant lessors' failure to cooperate, which expose us to potential fines of up to RMB1,260,000, (ii) the lessors of 13 of our leased properties (with a gross floor area of 3,019 square meters, accounting for 4.0% of the total gross floor area we leased) failed to provide us with valid property ownership certificates or authorization from the property owners for the lessors to sub-lease such properties, which may render us unable to continue to use these properties, and (iii) 13 of our leased properties (with a gross floor area of 5,793 square meters, accounting for 7.7% of the total gross floor area we leased) are subject to registered mortgages, and we may be forced to vacate such

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properties in the event that the mortgagees foreclose such properties. See “Risk Factors—Risks Relating to Our Business and Industry—Defects related to certain of our leased properties may adversely affect our ability to use these properties” for more details.

Our Directors believe that the defective leased properties set out above are not crucial to, and will not have a material adverse effect on, our business, financial condition and results of operations primarily because (i) we do not rely on any of these properties for our business operations, (ii) there is sufficient supply of alternative properties and we can easily lease properties with valid title certificates in the event that we are no longer able to use any of the defective leased properties, (iii) in the event that we are forced to relocate from any of our leased premises, our headquarters and other regional offices can adequately support the functioning of our business operations and our employees, and (iv) as of June 30, 2018, no third party or government authorities had challenged our use of the defective leased properties. In addition, our Directors confirmed that they were not aware of any material potential safety hazards associated with these leased properties, and that the safety conditions of these properties were not negatively impacted by reasons of their defective titles. As such, we do not believe a contingency relocation plan is necessary.

INSURANCE

We maintain limited insurance coverage such as property insurance. We do not carry any business interruption insurance or product liability insurance, which we believe is consistent with industry practice in China. During the Track Record Period and up to the Latest Practicable Date, we had not made, neither had we been the subject of, any material insurance claims.

Our insurance premiums amounted to RMB0.1 million, RMB0.1 million, RMB0.1 million and RMB58 thousand in 2015, 2016, 2017 and the six months ended June 30, 2018, respectively.

Our Directors confirmed that the insurance coverage for our operation was adequate and was in line with industry practice as of the Latest Practicable Date.

Our insurance coverage may not be sufficient to cover all potential losses related to our business and operations. See “Risk Factors—Risks Relating to Our Business and Industry—Our insurance coverage may not completely cover the risks related to our business and operations” for more details.

LICENSES AND PERMITS

Our Directors and PRC Legal Advisor confirmed that, during the Track Record Period and as of the Latest Practicable Date, we have complied with all relevant PRC laws and regulations in all material aspects and has obtained all material licenses, approvals and permits from appropriate regulatory authorities for our business operations in China since the commencement of the Track Record Period. As of the Latest Practicable Date, these licenses, approvals and permits had not been revoked, canceled or otherwise expired.

Our PRC Legal Advisor has confirmed that we are not required to obtain or hold any mandatory industry-specific licenses, approvals or permits for our business operations in China.

LEGAL PROCEEDINGS AND COMPLIANCE

We have been, and from time to time in the future may, become a party to various legal proceedings and claims that arise in the ordinary course of business, which include business disputes

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brought by our suppliers, customers or other business partners we cooperate with. In September 2015, Cong Xing Technology Co., Ltd. (從興技術有限公司) (“**Cong Xing**”) filed a claim against AsiaInfo China and 12 other defendants (eight of whom are currently our employees but none of whom is our Directors or senior management), alleging that the defendants collectively infringed upon its trade secret by using source codes for five software systems developed in the course of providing services to an independent third party telecom operator (the “**Telecom Operator**”). Cong Xing demanded the defendants to cease all use of the relevant source codes and claimed for economic losses in an aggregate amount of RMB100 million as well as reasonable costs of RMB2 million. As advised by King & Wood Mallesons, our PRC legal advisor representing us in this lawsuit, Cong Xing’s infringement claim lacks factual or legal basis and the litigation risk for the defendants to compensate Cong Xing is remote for the following reasons:

1. Cong Xing’s claim of sole ownership of the legal rights of the source codes for the referenced software systems has no factual basis, and Cong Xing’s right to sue is fundamentally flawed because, pursuant to the agreements between Cong Xing and the Telecom Operator, (i) the intellectual property right of the source codes for four out of the five referenced software systems belong to the Telecom Operator but not to Cong Xing, and (ii) the intellectual property right of the source codes for the remaining software system is jointly owned by the Telecom Operator and Cong Xing; and
2. Cong Xing failed to provide any evidence in the course of legal proceedings to demonstrate that AsiaInfo China had accessed to, or had used, the source codes, and was therefore not able to prove that AsiaInfo China has conducted any infringement activity.

In September 2018, Beijing Intellectual Property Court (“**BIPC**”) rendered judgement for the case, dismissing all of Cong Xing’s claims. In the judgment, the BIPC found that:

1. Although Cong Xing was the developer of the five software systems for which it is alleging trade secret infringement, three of such systems were jointly owned by Cong Xing and the Telecom Operator, therefore Cong Xing had no right to make any trade secret infringement claims for these three systems unilaterally; Cong Xing may make trade secret infringement claims for the other two software systems, which are found to be exclusively owned by Cong Xing; and
2. Cong Xing failed to provide evidence to prove the alleged infringement.

Therefore, the BIPC dismissed all of Cong Xing’s claims against AsiaInfo China and the 12 other defendants.

As such, our Directors are of the opinion that the case will not have a material adverse impact on us.

Save as disclosed above, we were not the subject of any ongoing litigation, arbitration, claims or proceeding which could potentially have a material and adverse effect on our business or results of operations. Our Directors are not involved in any actual or threatened material claims or litigations. However, future legal proceedings, disputes and claims may divert our management’s attention and result in costs and liabilities. See “Risk Factors—Risks Relating to Our Business and Industry—If we become a party to litigations, legal disputes or claims, such involvement may result in costs and liabilities” for more details.

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We are subject to a wide variety of laws, rules and regulations in the ordinary course of our business operations. See “Regulatory Overview” for more details. As advised by our PRC Legal Advisor, other than as disclosed in this section and in the section headed “Risk Factors”, we are in compliance with all relevant PRC laws, rules and regulations in all material aspects during the Track Record Period and up to the Latest Practicable Date.

AsiaInfo (Guangzhou) Software Service Ltd. (“**AsiaInfo Guangzhou Software**”) and AsiaInfo Software (H.K.) Limited (“**Software HK**”), being former indirect subsidiaries of our Company and now indirect subsidiaries of Skipper Holdings, are involved in a shareholder dispute lawsuit brought by an indirect minority shareholder of AsiaInfo Guangzhou Software. As both AsiaInfo Guangzhou Software and Software HK do not form part of the Group, we are not a party in this lawsuit. The lawsuit has been dismissed by the court of first instance and the minority shareholder has appealed to the appeal court. We believe that such claims are without merit, and given we are not a party in the lawsuit, we believe such claims, are not expected to have a material adverse impact on our business, financial condition or results of operations. In any event, Skipper Holdings Limited has agreed to indemnify the Group against (i) all losses that may be incurred by the Company arising out of or in connection with any dispute with such minority shareholders, and (ii) any losses that any member of the listing group may suffer as a result of any tax liabilities (including but not limited to any unpaid/underpaid taxes, late charges and tax penalties) in connection with AsiaInfo Guangzhou Software.

Social Insurance Contribution Shortfalls

During the Track Record Period, due to misinterpretation of the relevant regulations and local practices, we have failed to make full social insurance contributions for our employees. See “Risk Factors—Risks Relating to Our Business and Industry—We may be subject to additional contributions of social insurance and late payments and fines imposed by relevant governmental authorities” for more details.

Our Directors are of the opinion that such social insurance contribution shortfalls will not have a material adverse impact on us for the following reasons: (i) each of our PRC subsidiaries with business operations have obtained confirmations from local social insurance authorities stating that no administrative penalty had been imposed and/or the relevant subsidiary was in compliance with the relevant laws and regulations, (ii) during the Track Record Period and as of the Latest Practicable Date, we had not received any notification from the relevant authorities requiring us to pay the shortfalls, nor had we been subject to any fines or administrative penalties with respect to such shortfalls, (iii) during the Track Record Period and as of the Latest Practicable Date, we had not received any major claim from our employees or involved in any major labor disputes in this regard, (iv) as advised by our PRC Legal Advisor, Han Kun Law Offices, the likelihood that we would be required to pay any shortfall for social insurance is low, and the likelihood that we would be subject to any administrative penalties by the relevant authorities is extremely remote, and (v) we have made provisions in connection with this non-compliance of RMB45.5 million, RMB18.4 million, RMB17.6 million and RMB6.9 million in 2015, 2016 and 2017 and the six months ended June 30, 2018, respectively.

We have taken the following rectification measures to prevent future occurrences of such non-compliances:

- *Training.* Strengthen legal compliance training to our human resources department, including by engaging our PRC Legal Advisor to provide training to our human resources department on the relevant laws and regulations;

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- *Policy.* Formulate and distribute to our employees an internal control policy with respect to social insurance contribution in compliance with relevant PRC laws and regulations;
- *Review and record-keeping.* Designate our human resources staff to monitor the payment status and prepare monthly reports of salary and contribution amounts, which shall be reviewed by our human resources department head and our finance department head to ensure that we make these payments in full and on time in accordance with relevant laws and regulations; and
- *Increasing awareness of developments in the law.* Regularly keep abreast of latest developments in PRC laws and regulations in relation to social insurance.

We are actively communicating with the relevant government authorities, and have started to rectify the social insurance non-compliance in certain cities. However, we have not fully rectified such non-compliance as of the Latest Practicable Date, as we are waiting for the relevant local government authorities to provide guidance, including the implementation of the new national policies and rules regarding social insurance contribution, before we could complete the adjustment of our employees' social insurance contribution base rate and rectify such non-compliance. Due to the foregoing reasons and the large number of cities involved, we expect to begin making full social insurance contributions in accordance with the relevant PRC laws and regulations in or around late 2019. We have also made provisions for the historical social insurance contribution shortfall.

RISK MANAGEMENT AND INTERNAL CONTROLS

It is the responsibility of our Board to ensure that we maintain sound and effective internal controls to safeguard our Shareholders' investment and our assets at all times. We have adopted a series of risk management and internal control policies, procedures and programs designed to provide reasonable assurance for achieving objectives including effective and efficient operations, reliable financial reporting and compliance with applicable laws and regulations. Highlights of our risk management and internal control system include the following:

- *Board of Directors.* Our Board of Directors is responsible for our overall risk management and internal control system and has delegated the supervision of our risk management and internal control to our audit committee. We have adopted Board procedures and audit committee charter which set forth the responsibilities of the Board and the audit committee.
- *Audit committee.* We have adopted audit committee charter which provide for the objectives and responsibilities of our audit committee, including providing guidance on the maintenance of comprehensive risk management and internal control policies, supervising our risk management and internal control system and monitoring implementation of our internal control policies through our internal audit department.
- *Internal audit department.* We have established an internal audit department which is under the supervision of our audit committee. The internal audit department is responsible for monitoring our risk management and internal control policies and independently assessing the effectiveness of our risk management and internal control system. The internal audit department independently reports to the audit committee on a quarterly basis.
- *Management team.* Our management team is responsible for establishment of our risk management and internal control system, overall implementation of our risk management and internal control policies and management of all risks related to business operations.

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- *Professional ethics committee.* We have established a professional ethics committee to oversee that our employees' behaviors comply with our code of professional ethics. Our code of professional ethics explicitly communicates to each employee our values and code of conduct and standards related to their professional activities. We have also implemented a whistle-blower system to encourage our employees and others to report any violations or non-compliance of the code of professional ethics.
- *Compliance with the Listing Rules.* Our various policies aim to ensure compliance with the Listing Rules, including but not limited to aspects related to corporate governance, connected transactions and securities transactions by the Directors.

Information Risk Management

In the provision of our products and services to our customers, we have access to certain personal information and data of the relevant telecom operator customers' subscribers and the relevant enterprise customers' users, such as name, ID number, contact information and address. Although these data are collected, used and processed by our customers and are stored on our customers' private clouds, and our customers are responsible for protecting the safety and privacy of these data, if we or our employees fail to protect end users' personal data against security breaches or loss, intrusion or theft of personal data, our customers may file claims against us and demand for monetary damage, and our relationship with such customers may also be adversely affected. As such, we are committed to adhering to applicable PRC laws and regulations relating to the collection, use or processing of personal information and data when we provide products and services to our customers.

We have taken various measures to ensure the security of personal information we have access to in the provision of our products and services: (i) we strictly comply with confidentiality clauses in our agreements with our customers, (ii) each of our employees working onsite at our customers' premises has signed confidentiality undertakings to keep confidential the personal information they have access to, and (iii) each of our employees has signed confidentiality and non-compete undertakings, which provides that they shall strictly adhere to confidentiality policies of our customers when working at their premises. Employees who violate such confidentiality provisions will be subject to warnings, termination of employment contracts and legal liability.

In addition, each of our employees working onsite who has access to any end users' personal data is required to follow the following data security protocols: (i) each employee must have a separate account and password for accessing our customers' systems and user data; (ii) such user data can only be accessed in our customers' intranet or virtual private network, and (iii) any access to user data by our employees is recorded in our customers' systems and can be traced.

We have also implemented various internal control procedures to ensure the safety and privacy of personal data which we have access to, including:

- each business division is equipped with its own information risk management personnel, who are responsible for monitoring the relevant business divisions' compliance with data security protocols;
- we have established a dedicated information security department comprised of employees with the relevant qualifications, such as the CISP (Certified Information Security Professional) certification, and extensive experience in information security. This department is responsible for formulating and implementing company-level information

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security policies and protocols and providing information security related trainings to new employees as well as continuous trainings to all employees; and

- we have formed an information security management team at the company level, which is comprised of our information security department and information risk management personnel from different business divisions, and is responsible for, among others: (i) establishing, implementing and monitoring our information security management system, and (ii) holding information security management meetings on a regular basis to evaluate the soundness and effectiveness of our information security management system and provide recommendations for identified problems.