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# Big Data for Smart Cities

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*As a key driver for industry development and the transformation of cities, urban Big Data systems help businesses improve their information processing capabilities. >>*

Massive amounts of data are impacting economic growth, the consolidation of industries, and patterns of urban construction. Big Data frequently plays a major role in the process of developing Safe Cities through prediction, analysis, and mining for future business development. The availability and consumption of open data is creating new opportunities for Big Data service providers poised to take the lead.

iSoftStone, a leading China-based global IT services and solutions provider, has created an architectural model for urban Big Data ecosystems that enables city management teams to change the mindset of local business leaders by pushing the revision of industry value chains and transforming organizations.

## Future-proof Industry Advantage

The strategic significance of Big Data is not merely the acquisition of large amounts of data. In fact, businesses reveal the true value of Big Data by the choices they make to improve their data processing capabilities. This strategy allows them to convert massive amounts of data into useful information for industry development. The full utilization of these resources is undertaken with the goal to boost government efficiency for the implementation of social programs.

The global Big Data market value is projected

to reach USD 48.3 billion in 2018 — an increase of nearly seven times compared to 2012 — with a Compound Annual Growth Rate (CAGR) of 40.5 percent. Industries that expect continued explosive growth in Big Data demand include telecommunications, finance, healthcare, retail, and education.

Given its huge potential to improve competitiveness, Big Data is considered a strategic resource by the many countries and international organizations that are incorporating it into their national and global development plans. The U.S., U.K., South Korea, Singapore, and China are among the countries that have begun to establish data analysis centers based on open data applications.

## Smart City Construction

Big Data is an indispensable cornerstone for Smart City ecosystems. For instance, governments collect

data from local industries to make decisions on future developments based on statistical science. This strategy enables citizen-focused services to be personalized from Big Data insights derived from critical economic development factors.

Smart City planners can focus on government data disclosure and market transactions to leverage the value of collected data to optimize city operations. Big Data platforms play a major role in integrating personal data for calculating population distribution and patterns of transportation and consumption, as well as industry data on estate, finance, manufacturing, and energy sectors.

In response to the proposal of the *Summary of China Urbanization Plan* during the 12<sup>th</sup> Five-Year Plan (2011 to 2015), iSoftStone has driven the combining of public Big Data platforms with Smart City cloud applications to construct innovative information ecosystems that cover the entire industry chain. From 2011 to 2015, Smart City deployments in China exceeded USD 102.6 billion, and by 2015, the number of cities piloting Smart City programs reached four hundred.

Given the promotion of national policies and Internet development, as well as efforts by telecom operators, Internet enterprises, and technology companies, Smart City projects are expected to climb to USD 586.82 billion during the 13<sup>th</sup> Five-Year Plan (2016 to 2020).

## The Transformation

In this rapidly developing market, the most important prerequisite for having useful data is accessibility (or data openness). Government-mandated disclosure policies are changing the isolated information environments of legacy databases to a world of innovation that is being led by advanced data mining applications.



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Open access and the exploitation of data provide continued improvements throughout the data transaction market, creating new development opportunities. City planners and administrators provision public service, public safety, smart transportation, and water resource management via Smart City operation centers. These municipal officials are applying Big Data technology for social governance, civil service, and economic development activities.

The following two factors are vital to the improvement of working conditions and quality of life for people living in Smart City-equipped municipalities:

- Social governance innovation requires a comprehensive understanding of the impact of Big Data and associated requirements. Providing accurate, timely, and comprehensive statistics are key to improving the quality, authenticity, reliability, and credibility of public information services. Based on geographic distribution, the Big Data platform plays a vital role in analyzing the local population structure, history, trends, relationships, and living habits.

- Precise plans and budgets are crucial for developing personalized and smart civil service systems. For economic development, city planners and administrators must combine the power of Big Data with local conditions to leverage their advantages in tourism, eCommerce, agriculture, energy,

manufacturing, and other industries. This move will subsequently drive smart industry upgrades by applying insights revealed using data analytics.

## Big Data Practices

iSoftStone provides Big Data consulting, solutions, business intelligence analysis, and data integration. As a leading supplier of innovative Smart City and Industrial Internet solutions and services in China, iSoftStone is committed to a strategy of collaborative development. Their ‘One Center + Four Platforms’ Big Data architecture is designed to realize real-time data display for eGovernment and city management to monitor economic operations and civil services. The ‘One + Four’ architectural model lays the foundation for an urban Big Data ecosystem by implementing the unified processing of basic eGovernment data and including the extensive convergence of business data, deep mining of application data, and interdepartmental data sharing.

iSoftStone values common development with partners like Huawei to help governments and enterprises promote the practical applications of Big Data and provide customers with solutions based on Big Data services. By relying on their combined experience in Big Data centers, enterprise cloud services, smart communities, and other Smart City developments, the partnership with Huawei over the past decade has established a stable foundation for further collaboration. A number of programs have been implemented together, including the Smart Mall/Square joint solution and Energy Efficiency Management joint solution. iSoftStone and Huawei leverage each other’s strengths to optimize a shared strategy in the areas of digital communications, Big Data, and smart industry to build Smart City ecosystems. ▲

