Analysis on Development and Problems of Smart Cities in China

Guangrong Wu

Xi'an Medical University, Shaanxi, China

Abstract:

The concept of "smart city" was explained, which was come up with in 2008. In China, it begun to be paid attention to in 2013.The characters of national smart city, was put forward, which the domestic researchers selected and analyzed relevant data and news in 2019.All kinds of regional evaluation index systems of smart city in China are built, especially focusing on different rich areas or different angles ever since 2013. The paper finds the shortcomings of existing systems, tries to put forward an evaluation index system, which is built on the people's behalf. They are the ultimate accepters. To analysis the smart city system, the paper is researched in six aspects, including "development level, people's satisfaction, management mode, data resource management, environment governance and digital technology", and raises the policy suggestions on the development of new smart city.

Keywords: Smart city, Urban governance, Top-level design, Government data resources.

I. INTRODUCTION

Smart city, was known early in 2008. It has been widely paid attention in the world. People have continuously triggered the development upsurge of smart city around the world [1]. Smart city has become a strategic choice. People can live better urban life, enjoy better urban governance and public services, solve some problems, improve the and develop the digital economy [2]. In recent years, smart cities in China have developed rapidly and achieved remarkable results. With the development of Internet technology, big data, AI and other technologies, smart city evolution is moving from simple internet connection to data interconnection in China [3].

In recent years, the working group office of healthy development of city is located for in the National Development and Reform Commission (NDRC) for high technology industries, urban development research center of state information center, a wisdom concrete bear the secretariat office. In December 2015, according to the leadership of the State Council directives, coordination team to upgrade the original department bureau class level by ministerial leading comrades as members of the working party coordination mechanism, the working group changed its name to "new smart city construction inter-ministerial coordination working group", by the central network unit as a team leader. in different fields, gradually improving the policy system of new smart city construction in China.

Active progress was made at the local level [4]. More than 89% of these cities, sub-provincial level and above, have built smart cities. Different provinces and cities in China have different priorities and development paths for smart city construction. While releasing and implementing the overall action plan for smart city, they continue to promote the practice in specific areas such as "smart education", "smart

medical" and "smart transportation" to explore the priorities and development paths suitable for local smart city construction. Third, we will continue to evaluate new smart cities. In 2017, the National Development and Reform Commission, the Cyberspace Administration of China (CAC) and the National Standards Commission jointly formulated the New Smart City Evaluation Index (2016), with 220 cities participating in the evaluation. In 2019, the existing evaluation system based on the revision to form the new evaluation indicators (2018), smart city, evaluation work aims to investigate the smart city development present situation, provide a reference for the country's decision-making, for local new smart city construction direction, promoting new smart city construction experience sharing provide strong support and promotion. National new smart city construction evaluation by the new city construction inter-ministerial coordination group office secretariat (urban development research center of state information center, wisdom) to assist the National Development and Reform Commission and the central net letter for the specific organization, by deploying around outside the national e-government network evaluation system, provided new smart city evaluation index based on the 2018 version,

II. THE DEVELOPMENT OF NEW SMART CITIES IN CHINA

In recent years, the construction of new smart cities in China has achieved remarkable results through departments coordinating, continuous innovating and urban operating. Urban services, governance and operation has been greatly improved. People get happy, safe and satisfied. New smart city construction in January 2020, which is prevent and control an outbreak of COVID - 19, has played a positive role, more precise control through the grid management, data analysis, precision analysis.

2.1 A Large Number of New Smart Cities in China

Smart city is being chosen as the development strategy and work focus by more and more cities [5]. According to statistics, China has launched more than 500 pilot cities related to smart city, information benefit to the people, and information consumption. More than 89% of cities at prefecture-level and above and 47% of cities at county-level and above have proposed the construction of smart city, which has initially formed the development trend of smart city clusters (belts) in the Yangtze River Delta and pearl River Delta[6].

After several years, many features and innovative applications such as urban brain, "run at most once", urban operation and management center, data asset registration. Our good hospitals begin to raise Internet treatments. Online service, which is providing model, has emerged in some areas for global smart city construction [7]. In 2019, a total of 531 innovative practice cases of new smart city construction were submitted by various regions. The evaluation results of new smart city show, 8.36% of Chinese cities turn mature and some truly reach the standard of demonstrative smart city construction in next three years or so [8].

2.2 Service Effect by Our Best Kind Departments

Carrying out new local smart city construction process, people are closely around the reform of government governance and public service needs, to maximize the profit for the convenience of enterprises, make enterprise and masses running errands, good things, is not difficult for the construction of the starting point and the foothold, to "Internet + e-government service" for the gripper [9]. By changing the role of the

government and improving the way the government provides services, we have made it as easy for businesses and the public to go online to do business with the government. This has greatly increased the people's satisfaction of. Service mode realizes the transformation from decentralized service to collaborative service [9]. Local governments have intensified efforts to streamline administration and delegate power, and vigorously promoted the application of electronic certificates and licenses that are only marked by citizens' ID numbers or unified social credit codes of legal persons and other organizations. The widely criticized "bizarre certificates" have basically disappeared. We have changed the practice of "people running back and forth" to "collaboration between government departments", and the practice of "passive services" to "active services", so that government services can be provided only through one door, in different places or in nearby places.

2.3 Governance Mode

The governance mode turns more and more. In the past, smart cities were managed unidirectional interactive, relying on the masses, digital urban management, everyone's participate, the technical environment, simple government supervision and conditions of city governance [10]. New smart city construction focuses on bidirectional interactive and ecological environment improvement.

The ideas of two-way interactions, between government and local residents are more diversified to promote the transformation, from urban management to urban governance. It is necessary to give important roles to local residents. The governor should pay attention to the subjective initiative of urban dwellings. The patency and ease of use of two-way interactive channels will directly affect urban governance. In June 2019, 297 prefecture-level administrative governments used new media communication channels for the public, including WeChat, Weibo and mobile apps, in addition to traditional hotlines and portal websites, with an overall coverage rate of 88.9%. Mobile Internet has become a more extensive, more convenient, more quick way to collect and grasp the social situation and public opinion, listen to people's voice, know the people's feelings, solve the people's worries and gather people's wisdom of the new front. The scope of information gets more tensive. The system of new smart city accelerates the continuous bidirectional mapping and deep coupling between virtual network space and physical space. Internet integrates city. The governors realize the scientific decision-making of through digital perception of urban infrastructure. For example, in Male Ann district, digital city and urban reality synchronous planning, synchronous construction, through the twin cities digital planning design, and simulation, will be the negative effects of cities, conflict and potential dangers of intelligent early warning for the future perspective of intelligent urban original trajectory and running, to guide and optimize entity city planning, management, to improve the supply of citizen services. People's sense of security has increased from 88.2 percent in 2013 to 98.5 percent in the second quarter of 2019. During COVID-19 prevention and control, community grid management has built a "sky and earth network" for grassroots prevention and control, improving the precision of personnel control.

III. SHORTCOMINGS AND DEFICIENCIES IN EVOLUTION SYSTEM OF SMART CITIES IN CHINA

Taken together, the positive achievements of new smart city construction have been made in our country, but the achievements are not strong. We always face data fusion, urban governance linkage, urban

and rural difference, regional development imbalances, and ecological problems, etc. Urban development, it needs to go on to look after the consummation of targeted, promoting sustained and healthy development of the new smart city construction in China.

3.1 The First-Class Structure of New Smart City is Urgently Needed

Smart city is looked after by people, which is a large system with complex indicators. People diverse applications, interaction and continuous evolution, which requires overall planning and design. Although local governments have enough autonomy and initiative for the construction of new smart cities, and have achieved certain practical experience and results, it is urgent to strengthen integrated design at the national and provincial levels, guide cities to make good planning connections according to local conditions, and avoid resource waste caused by unscientific and blind planning. According to system science methodology, further establish and improve to adapt to the new smart city, the top design methodology, the wisdom of the city to solve smart city at all levels, data fusion, information sharing between each system and business synergy mechanism, the key to solve the system of cohesion between cooperation and associated constraints, We will guide the planning and design of the complex giant system of smart cities with systematic scientific methods, and make the top-level design more scientific, standardized and operational. In terms of laws and regulations, there are no clear provisions on the ownership, management rights, use rights and pricing mechanism of data resources, and the fuzzy boundary between rights and responsibilities of government data restricts the flow, sharing and opening of data resources. At the same time, with the development of new technologies, new applications, new scenarios and new formats of digital economy, the demand for data sharing across levels, regions, industries and businesses is increasing gradually. It is urgent to formulate a unified rule framework and make the standard system perfect, which can include all needs in online and offline technology, efficient governance, strict supervision and real-time security.

3.2 Standardization is not Formed

Standardizations has not yet formed the new wisdom to build urban ecological new city construction and development is a government guidance, the whole people to participate in government and enterprises, cooperation, and build the system engineering, plays a decisive role, encourage social resource allocation in multiple participation become the key to the sustainable development of the new smart city, therefore, play a role of market allocation of resources of decisive, encourage social participation, Building a new type of smart city ecology has become a key direction in the future.

At present, the following problems need to be solved urgently: First, insufficient participation of social capital in smart city construction. According to the evaluation results of new smart cities in 2019, one-third of China's cities have not yet introduced any third-party organization to carry out smart city operation and management. Second, PPP model in smart city field is not mature yet. PPP projects in smart city construction often lack clear return time, return standard and acceptance standard, resulting in uncertain returns, high risks and low enthusiasm of enterprises.

IV. CONCLUSION

The paper tries to research the information from yearbooks, news and primary data in order to build new evaluation index system of smart cities in China, from Fig1.
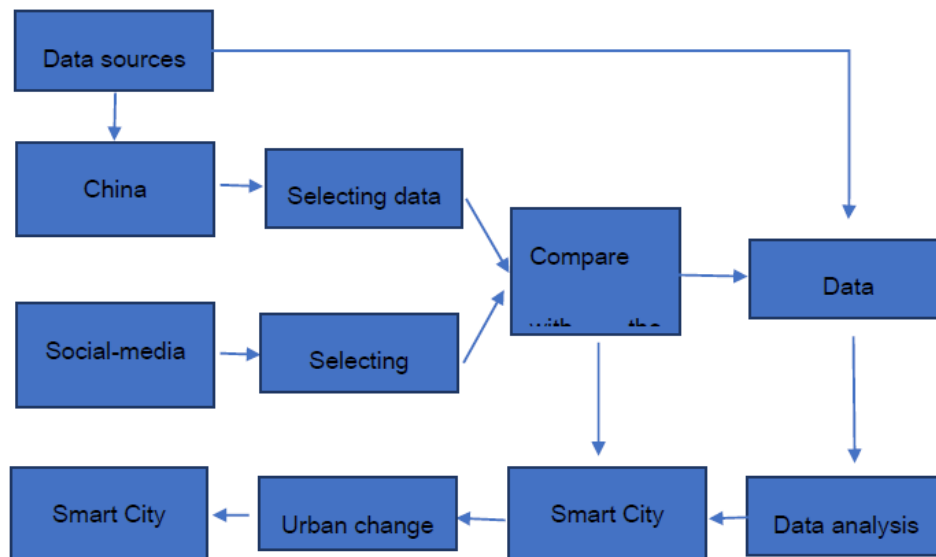
Fig 1: Analysis on data

Using these relevant and real data, the author visited some communities, which belongs to high and low neighborhoods. In deeply selecting relative data and benefit news, there are 6 indicators, including "development level, people's satisfaction, management mode, data resource management, environment governance and digital technology", which are the evaluation system. By the system, the author can get smart city diagnosis. It will bring significative suggestions on the development of new smart city. Through its guidance, the cooperation of government, enterprise and social organization make construction and operation modes of smart city best.

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