Adaptability Analysis and Reform Path Research of Mechanism of the Development of Wisdom City

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Abstract: With the steady progress of China's new urbanization construction, a series of problems are becoming highlighted such as environment, resource and energy and urban operation. Traditional way of infrastructure and urban management are hard to solve the urban development probleFGms scientifically and effectively. The construction of wisdom city is an effective way to deal with these problems based on the advanced information and communication technology in Internet of Things, the Internet, big data and cloud computing. Wisdom city has basic functions such as wisdom government affairs, intellectual traffic, wisdom health care, wisdom education and wisdom environmental protection. The development of Chinese wisdom city construction should pay attention to the top-level design, set up the system of the comprehensive coordination mechanism, improve the network information security of the legal system and provide guarantees for the independent innovation development of information technology industry.Wisdom city effectively combines with the Internet of things, the Internet and mobile Internet these information network, data as the core element of the city, and then to achieve the wisdom of life and intelligent of implementation technology, industry, service and management. The aim is people-oriented, the pursuit of coordinated development of economy, social and environment.

1. Introduction

Along with the accelerating of urbanization process, all kinds of "urban disease" are all needed to be addressed in the process of urban development, which urges city managers to continue to strengthen urban management and operation ability. Since IBM put forward the concept and action plan of "smarter planet" in 2009, wisdom city as the integration product of informatization and urbanization provides a new way for the innovation and development of city, opens up a new perspective understanding of cities and urban development, becomes a new mode and new form of urban development. Under this background, the development of intelligent city in China has a tangible reality demand and important strategic significance. Seen from the innovation of the knowledge society, wisdom city is a support of new generation information technology, the urban morphology of the next generation innovation environment, is "based on a comprehensive understanding of the interconnection of perception, broadband ubiquitous, and the application of intelligent fusion, conducive to innovating.

2. The Concept and Achievement of Wisdom City

2.1 The Concept and Characteristics of Wisdom City

The concept of "wisdom city" is originated from the vision of "smarter planet". On January 1, 2008, in the council on foreign relations in New York, International Business Machines (IBM), the world's largest information technology and business solutions providers founded in 1911, announced the topic report: "smarter planet: the next generation of leaders agenda", which put forward the concept of "wisdom earth". In February 2009, "IBM BBS in 2009" held in Beijing,

IBM advertised "smarter planet" in the slogan of "delight the wisdom earth, construct wisdom China", caused the wide attention of all parties in society that you can see the figure 1 and 2.
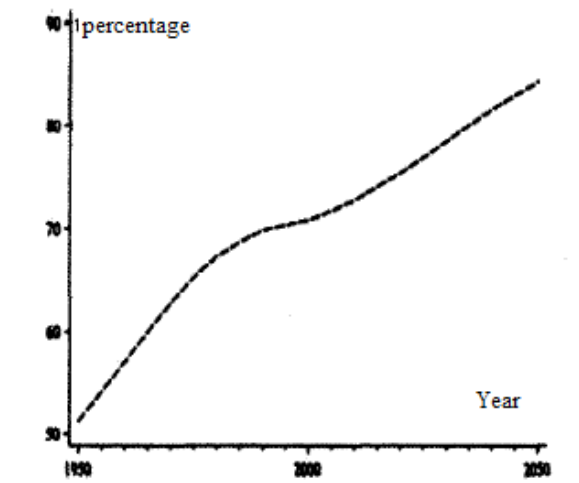

Fig.1 The Percentage of Urban Residential Population in European

	Japan	Korea	Europe	Malaysia	Singapore	China
Information basis network	#	#	#	#	#	#
Management platform	*	#			*	
Intelligent application	*	#			*	*
Innovation and technology field		*	#	#	#	*
Ecological improvement	*	*	#			*
Intelligent industry		*				#

Ps: # represents very important; * represents normal important

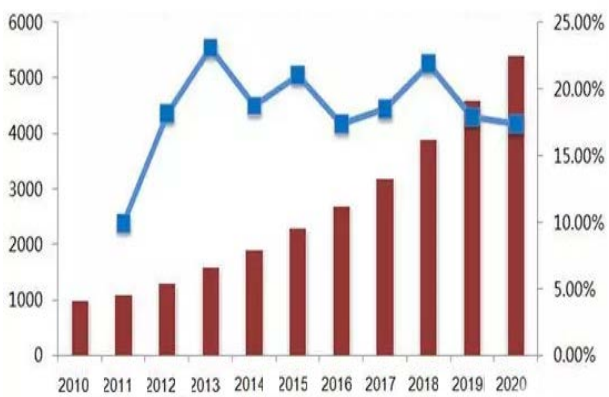Fig.2 Focus of Construction of Wisdom City in Different Countries and Regions

Fig.3 The Analysis and Prediction of Investment on Wisdom City Form 2010-2020

As shown in figure 3, under the wisdom city model, the city is composed of six core systems. And these six core system can also be further classified: human social network and government regulations of business belong to the "social network", the former is between the person and the organization system, the latter is city business system (government and business). Transportation,

communication, water and energy form the infrastructure of the city, the first two are infrastructure, human activity, the later two acquire infrastructure and environment resources. City is a big macro system composed of six core systems with mutual coordination, urban participants (the government, enterprises, organizations and individuals) are embodied in the city in the macroscopic system based on the urban infrastructure for environmental resources and engaged in various social activities. "Wisdom city" means in the process of urban development.For the exercise of local government economic regulation, market supervision, social management and public service function, make full use of Internet and information communication technology, such as the Internet, intelligently governed by perception, analysis and integration of city environment, resources, infrastructure, public security, urban services, public welfare undertakings, and operation condition of the citizens, enterprises and other social organizations, and their effect on the demand of the government function, and make the corresponding government behavior. Wisdom is the purpose of city form the virtuous circle of the urban system work to create a better life, work, rest and entertainment city environment. Wisdom city for each core system reach the level of intelligence operation, six core system under a specific subsystem; The construction of the core system and its subsystems, are not isolated, but interrelated.

2.2 The Characteristics of Wisdom City

Wisdom city encourages government, enterprises and individuals to innovate the business applications in the wisdom city above the infrastructure for science and technology, for the city to provide a steady stream of momentum.

3. The Architecture Construction and Ways of the Wisdom City

(1) service wisdom services in accordance with the specific problems faced to the city intelligence solution is put forward.Look at the picture (1) wisdom city traffic and figure. Intelligent urban traffic system integration bus, taxi system, urban rapid transit system (the MRT), urban light rail transit (LRT) system, urban expressway monitoring information system (EMAS) were used as references, the speed of information system (TrafficScan), electronic toll collection system (ERP), road information management system (RIMS), optimization of traffic signal system (GLIDE), electronic communications systems and in-car navigation system information, provides integrated real-time information service, and to forecast the traffic flow and intelligent judgment. If there are any emergency contingency plans can be optimized and mobilize relief resources.Intelligent urban traffic can also through the perception of traffic and to predict and model, to provide intelligent charge system, parking management fee "congestion charge" system, through the guidance of "fees" leveraged traffic, effectively alleviate the urban traffic pressure, relieve congestion and pollution problems.Stockholm, Sweden, established the intelligent traffic system, for example, according to the degree of congestion charging for intelligent transportation, automobile usage reduced 25%, the city's carbon emissions by 14%, as shown in figure.4-6.
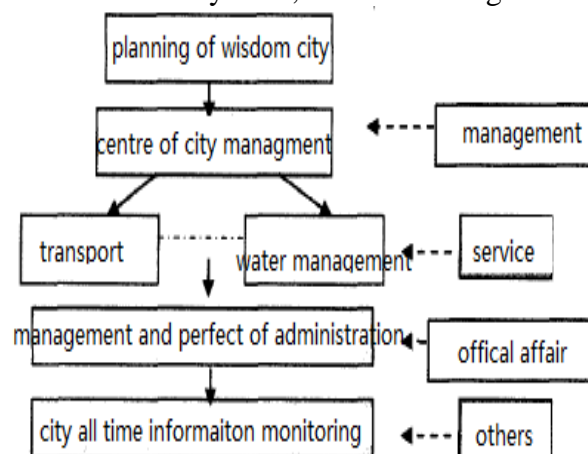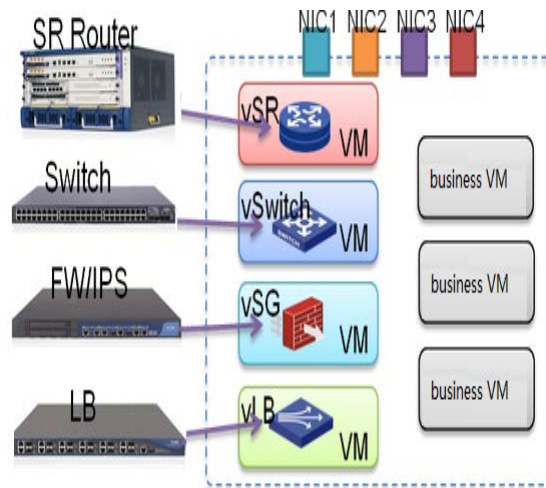

Fig.4 The Architecture Structure of Wisdom City

Fig.5 The Construction Planning of the Electronic Affairs

Fig.6 The Chart of Wisdom Traffic

(2) Urban medical wisdom, urban medical wisdom can also solve the problem of city characteristics.

(3) geography, population, transportation of the history and status quo of the mass information, scientific projections for the future trend of intelligent traffic layout, logistics hub, the central business district, industrial park, satellite town, police, commercial outlets, hospitals, Banks and bus stations, schools, recreational facilities, stylistic facilities, museums, parks, such as urban planning project, to achieve the requirement of the green, environmental protection, people-oriented.Smart urban planning adjustment and the optimization solution can make city at the same time, such as outsourcing of the old industrial area and upgrade, the upgrading of the old commercial and residential area and function reorientation, urban village reconstruction, etc, as shown in figure.7.
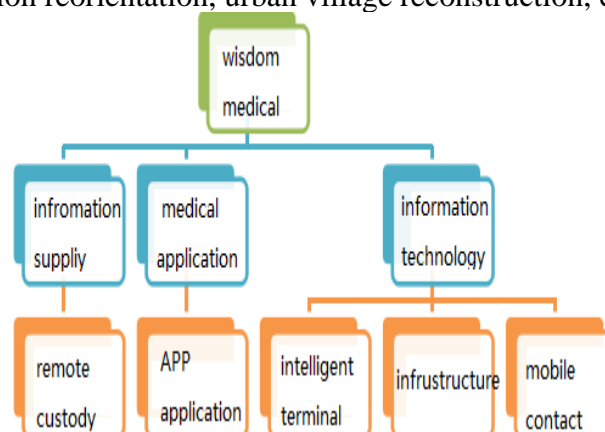

Fig.7 The Construction of Wisdom Medical Service

4. The Wisdom of the City (1) Daily Operation Management of Operation and Management. Wisdom City.

4.1 The Construction Ways to the Wisdom City

So that the government and related institutions to make decisions in time and take appropriate measures. Modern city is usually composed of people, business, transportation, transportation, water, energy and other core system, as shown in figure 8.
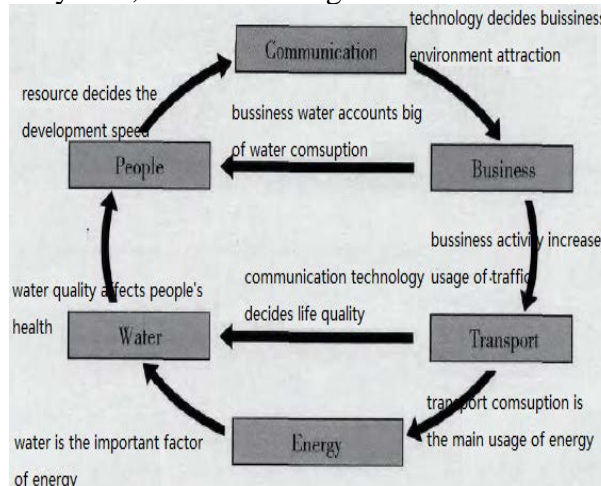

Fig.8 the Relationship between the Core System of the City.

5. Conclusions

Wisdom city is the application of city informatization developed to a certain stage of intelligent. Wisdom city takes full advantage of a new generation of information technology to make the city management, production and life more thoroughly awareness, more comprehensive connectivity and more intelligent. More thorough perception refers to collect data and information through the sensors all around the city, effective awareness and detection involving citizens in the city operation and various important aspects of life; more comprehensive connectivity is to connect the city's perception tools into a large system through the Internet and communications systems to integrate collected data into useful information, provide which to urban management institutions and citizens making their management and life convenient in the wisdom city. Also, the Internet of things technology can be applied to the area and city of almost all industries and products, and encourage the growth of what the past can not achieve, the formation of a variety of intelligent system for quality of people's living environment, food and drug safety, traffic safety in real-time monitoring, crucial for the emergency ability of a major incident.

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