



# On the transformation of digital government governance

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**Abstract.** The construction of digital government is an inevitable requirement to promote the modernization of national governance system and governance capacity, but also a practical need to give full play to the potential of digital development and solve the new problems caused by the development of digital economy; it is also an urgent need to accelerate the precision of social governance, efficient public service, social interaction and trust; and the strategic fulcrum of comprehensive, full field, full space and space, and the digital reform of government itself. But with the continuous development of new information technology, the original digital government governance system is no longer able to meet the needs of social development, so this paper will through the existing digital government construction research and discussion, find the root of the problem, to analyze the solution to the problem, so as to promote the innovation of digital government governance transformation in our country.

**Keywords:** Digital government; digital transformation; data sharing; structural innovation

## 1 Introduction

From the second half of the 20th century, digitization began to rise around the world, gradually covering all fields, but also profoundly affecting the reform in the field of government governance. In 1998, the concept of digital government was first proposed in the Western world; in 2000, the United States established the digital Government Association; and in 2012, the United Kingdom issued the Government Digital Strategy. In October 2017, General Secretary Xi Jinping pointed out in his report to the 19th CPC National Congress that we should speed up the construction of a "digital China", develop the digital economy, the sharing economy, foster new growth points, and promote new drivers of production. In October 2020, the Fifth Plenary Session of the 19th CPC Central Committee in October further proposed to "strengthen the construction of digital society and digital government, and improve the level of digital intelligence such as public services and social governance"<sup>[1]</sup>.

For the understanding of the concept of digital government, the domestic and foreign academic schools are also relatively different cognition. Hu believes that digital government combines advanced information technology to form a new form of government

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organization and promotes the operation of the whole economy and society<sup>[2]</sup>. Gil-Garcia proposed that digital government is a process in which the public sector uses modern communication and information means to improve the supply of public information and services, so as to encourage citizens to participate in decision-making<sup>[3]</sup>. Scholta Hendrik believes that digital government is a governance approach in which public organizations use digital technology to improve the efficiency of their internal processes and improve interactions with social entities<sup>[4]</sup>.

## **2 Current status of digital government governance in China**

Chinese academic circles generally believe that the development of digital government has mainly gone through three stages: "government informatization" stage, "e-government" stage and "digital government" stage<sup>[5]</sup>. After more than ten years of development, China's theoretical system of digital government governance has gradually improved, and the governance model has been updated, more in line with the life needs of the people. Although China's digital government construction is relatively fast, but due to China's digital government construction started late, the overall development direction has not been finalized, but also facing a series of difficulties<sup>[6]</sup>. (show in Fig. 1.).

### **2.1 There are defects in the top-level design, and the structure restricts information sharing**

China's digital government overall coordination and linkage mechanism construction is not sound enough. Although the central government has clarified the responsibilities and functions of various departments from the macro level, there are still some problems such as cognitive deviation of department positioning, lack of autonomy, lack of mutual linkage mechanism and lack of coordination channels. Due to the influence of China's government structure, it is more difficult to exchange and share information between different levels of departments and between different departments at the same level, which aggravates the formation of information islands. Cause the digital government construction resources cannot be shared. At the same time, the lack of legislation on data in China also causes problems such as unclear government data right confirmation and unclear responsibility.

### **2.2 The innovation capacity of local governments is uneven**

Different levels of economic development between different regions, resulting in the different construction of digital government governance, which aggravates the imbalance of the construction level of digital government in different regions. Economic issues can lead to insufficient innovation capacity of local governments, resulting in weak innovation in theory, application, technology, and other aspects, thereby hindering the digitalization process of local governments.

### **2.3 The absence of technical support makes the resource development inefficient**

The absence of technology makes the cost of resource integration increase and more difficult; the absence of technology limits the data sharing among government departments and levels, resulting in the efficient utilization of high value and high level government resources; the absence of technology increases the difficulty of information processing.

### **2.4 The data security guarantee system is not perfect**

Data is the foundation of digital government construction and the core element to drive the development of digital government. In recent years, the data fraud, abuse, leakage problems emerging, although our country law on data security data security law of the People's Republic of China (draft) has been promulgated in 2020, which clearly put forward the "data security and promote open data use" requirements, however, the lack of unified management standards, causing the problem of government data security, restricted the process of digital government construction in China.

### **2.5 The internal structural system of the government limits the sharing of data and information**

The Chinese government adopts a management system that combines different vertical hierarchical structures with the same horizontal hierarchical structure. In the vertical structure, the higher the position of the department, the easier it is to control more information; In a horizontal structure, the information held by different departments is acquired at a certain cost, making it easy for departments to form highly fragmented information and information barriers. It is precisely the influence of the government structure in our country that has increased the difficulty of information exchange and sharing between departments at different levels and between departments at the same level, exacerbating the formation of information silos.

## **3 At the present stage of the digital government transformation focus**

In order to achieve the long-term goal of digital government governance construction in 2035 formulated by China, the Chinese government must reform the problems encountered in the digital government construction at the present stage, improve the data integration and sharing among government departments, and strengthen data legislation, so as to promote the transformation of China's digital government in China. The transformation should be conducted from the following points: (show in Fig. 1.)

### **3.1 We will strengthen top-level design and the overall linkage mechanism among departments**

First, we should strengthen the integration of data and information resources among various government departments. Improve data integration and concentrate government information resources, so as to promote the sharing and utilization of data among governments. Second, we need to establish a digital government pooling center. The internal structure of the government should be readjusted, the data barriers between departments should be broken, the cross-regional and cross-departmental linkage mechanism should be established, and the responsibilities of each subject should be clarified to adapt to the construction of digital government. At the same time, utilizing modern information technology such as 5G communication, cloud computing, and the Internet of Things, we will strengthen collaborative governance among local governments, improve government efficiency, and form a governance pattern of "sharing, co construction, and co governance". Third, we will strengthen the security of government data. It is necessary to accelerate the legislative process of government data and standardize the use of data; meanwhile, establish data security department to classify and manage all kinds of government data and combat data fraud and abuse.

### **3.2 Promoting the digital innovation and construction of local governments**

First, promote the transformation of innovative ideas and promote overall innovation transformation. We will promote the digital transformation of the government, strengthen the application of new information technologies, and lay a solid foundation for the transformation of the Chinese government. Second, promote the opening up of government data and promote data sharing. Through the continuous improvement and development of the data factor market, it is possible to confirm the data right and cultivate a complete data industry chain, so as to develop new industries, new business forms and new models of the digital economy, so as to promote the continuous improvement of the innovation ability of data application.

### **3.3 Cultivate digital talents and the atmosphere**

To enhance the digital awareness of civil servants, so that professionals can provide support for the digital transformation of the government, let more experts know about the government, and give suggestions for the construction of digital government. Establish partnerships with professional digital agencies to provide training for civil servants to ensure that future government leaders have received digital training to effectively manage digital government organizations. Establish cooperation with schools to cultivate a large number of new data talents for society. The government establishes a public data department, establishes a data talent reward mechanism, provides a path for data talent cultivation, and provides employment opportunities for data talents trained by schools, thereby driving the rise of the big data industry in the whole society and providing a good social atmosphere for the transformation of digital government governance.

### 3.4 Learn from the mature cases of developed countries

Due to the late construction of digital government in China, the relevant knowledge is not comprehensive enough. Through the study of the experience of digital government governance in developed countries, we can avoid detours and achieve the goal more quickly. For example, the Government Transformation Strategy (2017-2020) proposed by the UK pointed out to promote the development of government data business and analysis capabilities, so that data can support government decision-making<sup>[7]</sup>; The Smart Country 2025, released by Singapore, proposes to build a nationwide data collection, analysis and processing platform to promote intelligent and efficient government public services<sup>[8]</sup>.

### 3.5 Breaking the inherent structure of the government and promoting flattened development

With the advent of the digital information age, the original bureaucratic management structure of the government is no longer able to better respond to sudden situations and occasional events. The rapid dissemination of information requires the government to respond quickly, which requires the government to make reforms on its own.

The government should establish internal channels for information dissemination, reduce excessive procedural steps and barriers to data transmission between departments; The government's management structure is transitioning towards a flat structure to avoid distortion and slow dissemination of information due to going through too many levels; Improve the speed of government response to information, and be able to make corresponding changes according to the needs and suggestions of the public.

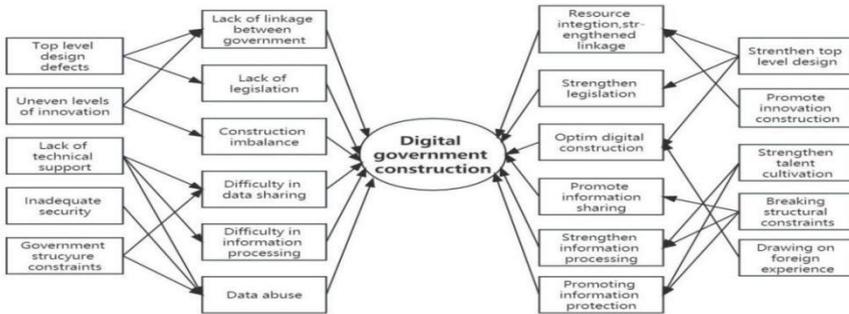


Fig. 1. Policy Conceptual Map

## 4 Conclusions

The transformation of digital government is a multidimensional and complex process, which not only requires the government itself to reform its fixed structure, establish corresponding policy systems, laws and regulations, and response mechanisms; It is

also necessary to cultivate and form an environment and atmosphere for digital construction and reform in society, providing a corresponding foundation for the transformation of digital government governance. If digital governance is to be achieved, then the government must first make changes. However, it is not enough for the government itself to make changes, because we need to see the driving force of the social environment. Only by effectively integrating the government with the social environment can we better promote the realization of digital governance and the transformation of digital government.

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