

Digital Government: Research on Digital Transformation and Optimization Path of Grass-roots Government

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Abstract: With the rapid development of digital technology, digital network is no longer just a medium for generating and disseminating information, but also goes deep into every field of human political and social life, has a profound impact on the political system and the political life of citizens in various countries, and also makes China's political development face new opportunities and challenges. Using digital technology to promote government data sharing and achieve cross-level, cross-regional and cross-departmental collaborative management is a key link in the construction of digital government. At present, grassroots township governance is facing a series of challenges, such as limited resources, asymmetric information, and cumbersome processes. These problems seriously restrict the improvement of governance efficiency and service quality. The application of digital technology provides new ideas and means to solve these problems. This paper will conduct an in-depth analysis of the digital status quo of grassroots township governance, encourage and support the exploration and practice of digital transformation and innovation in various fields, and comprehensively improve the governance capacity and modernization level of grassroots township governance.

1. Introduction

With the rapid development of information technology, digital transformation has become an important trend in the development of all fields of society. The digital transformation of grassroots township governance is of great significance, which can not only improve governance efficiency, optimize public services, promote information disclosure, enhance scientific decision-making, promote industrial upgrading, enhance public participation, strengthen social supervision, promote urban-rural integration development, but also improve emergency management capabilities. On the whole, the digitization of grassroots township governance has made some progress, but there are still shortcomings in infrastructure construction and service coverage. To further improve the digitization level of grassroots township governance, it is necessary to strengthen infrastructure construction, promote service innovation, and improve security capabilities. At the same time, facing the opportunities and challenges of digital transformation, grassroots towns and villages should actively embrace new technologies, strengthen the construction of digital infrastructure, and train digital talents to realize the modernization of governance capacity and governance level. This study aims to explore the path of digital transformation and optimization of grassroots township governance to provide a useful reference for related practices.

2. The main application of digitization of grassroots township governance

2.1 Information collection and arrangement

In the digitization process of grassroots township governance, information collection and arrangement are basic and crucial applications. The use of modern information technologies such as big data and the Internet of Things can achieve comprehensive, accurate, and real-time collection of various types of information at the grassroots level and provide a scientific basis for township governance through data collation and analysis [1]. It mainly includes the following aspects: First, with the help of digital technology, towns can achieve comprehensive coverage of public safety monitoring and management. Through the installation of monitoring equipment, real-time monitoring of township public security conditions, and timely discovery and disposal of various security risks, it effectively protects the township's public safety. Secondly, in areas with frequent natural disasters, the digitalization of disaster warning and emergency response is particularly important. The digital system can monitor meteorological, geological, and other information in real-time, issue disaster warnings in time, and effectively reduce the impact of disasters through a rapid response mechanism. Third, township ecological environment monitoring and protection is also one of the important applications of digital governance. Through the installation of environmental monitoring equipment, real-time monitoring of township air, water quality, and other environmental indicators will provide a scientific basis for environmental protection. At the same time, the digital platform can also accept reports from residents and deal with environmental violations promptly [1].

2.2 Online service for residents

Through digital means, the online handling of resident services can be realized. Residents can handle all kinds of affairs online, such as social security, medical insurance, and household registration, through the digital platform provided by towns and villages, which greatly improves efficiency and reduces residents' costs [2]. Village management and publicity are an important part of township governance. The digital platform can realize the real-time update and disclosure of village affairs information, let villagers know the dynamics of village affairs at any time, and increase the transparency of village affairs management. At the same time, the digital platform can also accept villagers' complaints and suggestions and promote villagers' participation in village affairs management. Digital platforms can provide residents' health records management, telemedicine, and other services and improve the level of township health services. Digital platforms can provide agricultural technical guidance, agricultural products sales, and other services to help farmers increase production and income [3].

2.3 Community communication and mutual assistance platform

Community communication and mutual assistance is an important means to enhance community cohesion. The digital platform can provide community forums, online activities, and other functions to promote exchanges and mutual assistance among residents. Through the platform of community communication and mutual assistance, residents can jointly solve problems in their lives and enhance mutual understanding and trust. In the field of township culture, digital governance contributes to cultural inheritance and innovation. Digital platforms can record and display local history and culture and promote cultural exchange and dissemination. At the same time, digital technology can also be used to develop cultural and creative products and promote the development of local cultural industries [4].

3. Analysis of the significance of the digital transformation of grassroots township governance

3.1 Improve governance efficiency and optimize services.

Digital transformation can significantly improve the governance efficiency of grassroots towns. Traditional governance methods often rely on manpower, which is cumbersome and inefficient. Digital technologies, such as cloud computing, big data, artificial intelligence, etc., can realize the rapid processing and analysis of massive data and greatly improve governance efficiency. In addition, digital technology helps to optimize public services and improve people's quality of life. Through the digital platform, people's needs and feedback can be collected and processed more quickly, and more accurate and convenient services can be provided. For example, online service, smart medical care, smart education, etc. Moreover, digital transformation can promote information disclosure and enhance the transparency of the government. Through the digital platform, the government can release all kinds of information in time, and the people can easily obtain all kinds of public information, thus enhancing the information exchange between the government and the people [5]. (As shown in Figure 1)

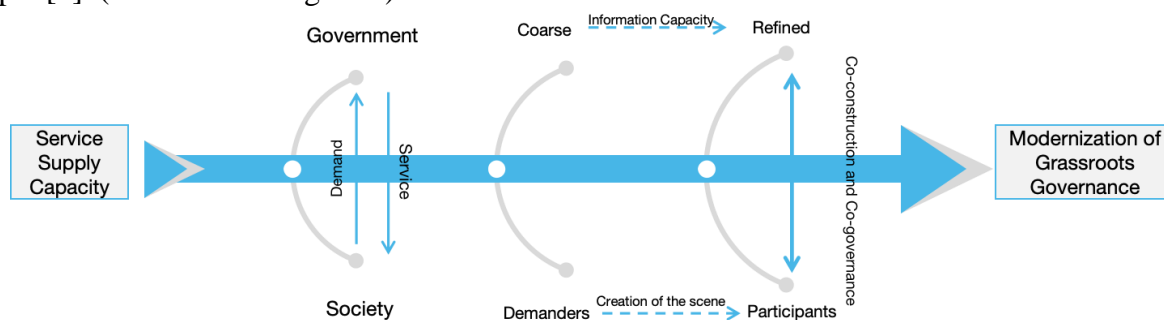


Figure 1: Schematic diagram of modernization process of grass-roots governance

3.2 Scientific Decision-making to Promote Industrial Upgrading

On the one hand, digital technology can provide powerful data support for government decision-making and enhance the scientific nature of decision-making. Through in-depth analysis and mining of data, we can grasp the essence of the problem more accurately and provide a more reliable basis for decision-making. On the other hand, digital transformation can promote the industrial upgrading of grassroots towns and villages. Digital technology can transform traditional industries and improve industrial efficiency, and at the same time, it can also give birth to new industrial forms and inject new vitality into the development of the township economy.

3.3 Enhance public participation and strengthen supervision.

Digital technology can provide more convenient channels for people to participate and enhance people's political participation. Through the network platform, people can easily express their opinions and suggestions and participate in the management of public affairs. Therefore, digital technology provides a new means for social supervision. Through the network platform, people can easily supervise government work, thus strengthening its supervision and enhancing its credibility.

3.4 Promote urban-rural integration

Digital technology helps break the information barrier between urban and rural areas and promotes the integrated development of urban and rural areas. Through the digital platform, information sharing, and resource flow between urban and rural areas can be realized, and the gap between urban and rural areas can be narrowed. In addition, digital technology helps improve the emergency management ability of grassroots towns. In case of emergency, digital technology can quickly collect and transmit information and provide timely and accurate information support for emergency disposal. At the same time, digital technology can also improve the efficiency of emergency management and reduce disaster losses [6].

4. Analysis of the current situation of digitalization of grassroots township governance

4.1 Digital infrastructure construction needs to be improved

In grassroots towns and villages, the construction of digital infrastructure is the foundation to realize the digitalization of governance. At present, most towns and villages have established relatively complete network infrastructure, including broadband networks and mobile communication networks, which provide the necessary support for government services, public safety, environmental protection, and other fields. At the same time, the digitalization of government services is an important part of the digitalization of grassroots township governance. At present, many towns and villages have implemented online government services, such as online applications, online audits, and online payments, which greatly improve the efficiency of government services. However, there are also some problems, such as low level of digitalization and incomplete service coverage, which need to be further strengthened. In addition, digitalization of environmental protection is an important application direction of digitalization of grassroots township governance. However, at present, the digital application of environmental protection is still limited, and it needs to be further promoted and applied. Digitalization of agriculture and rural areas is one of the important areas of digitalization of grassroots township governance. However, the overall development level is still low, and it is necessary to increase investment and promotion further [7].

4.2 Low degree of digital application

At present, the technical level of the application of digital governance in grassroots towns is relatively low, which makes it difficult to meet the actual needs. Many systems have imperfect functions and complicated operations, which leads to low efficiency. In addition, due to the lack of professional technicians, some equipment cannot be maintained and updated in time, which further affects the effect of digital governance. At the same time, data security is one of the core issues of digital governance. In the digital governance of grassroots towns, the risk of data leakage, tampering, or abuse is high. This not only involves the protection of personal privacy but also may cause harm to the public interest. Therefore, it is very important to strengthen data security protection measures. At present, the digital governance of grassroots villages and towns lacks unified standards and norms, which makes it difficult to achieve data sharing and collaborative work among regions. This increases the communication cost and restricts the overall effect of digital governance. Therefore, it is essential to formulate unified standards and norms to promote the healthy development of digital governance.

4.3 Lack of funds and insufficient training

Digital governance requires specific technical knowledge and operational skills. However, grassroots township workers often lack training in this field, which leads to difficulties in actual operation. Therefore, strengthening training and guidance and improving the skill level of staff are the key links to promote digital governance. At the same time, the digital governance of grassroots towns needs to invest much money in equipment purchases, system construction, and maintenance. However, due to limited funds, comprehensive coverage and sustainable development cannot be achieved in many places. Therefore, raising funds and optimizing resource allocation are urgent problems.

5. Digital transformation and optimization path of grassroots township governance

5.1 Strengthen the construction of digital infrastructure

First of all, the construction of digital infrastructure is the basis for realizing the digital transformation of grassroots township governance. It is necessary to strengthen the construction of network infrastructure, improve the coverage and speed of broadband networks and mobile communication networks, and ensure the stability and efficiency of digital governance. At the same time, we should pay attention to the update and maintenance of hardware equipment to ensure the sustainability of digital governance. Secondly, in constructing digital infrastructure, intelligent decision support systems can improve the decision-making efficiency and scientificity of grassroots township governance. It is necessary to use big data, artificial intelligence, and other technologies to establish an intelligent decision support system, conduct in-depth analysis and mining of data, and provide strong support for decision-making. At the same time, it is necessary to strengthen the continuous optimization and upgrading of the decision-making system to improve its adaptability and reliability. Finally, information system integration and data sharing are the keys to realizing the digital transformation of grassroots township governance. It is necessary to establish a unified information system, integrate data resources of various departments, and realize data sharing. Through data sharing, information islands can be avoided, and governance efficiency and scientific decision-making can be improved. At the same time, it is necessary to strengthen data security management to ensure the confidentiality and integrity of data.

5.2 Continuous Optimization and Long-term Mechanism Construction

Continuous optimization and long-term mechanism construction are important supports for the digital transformation of grassroots township governance. It is necessary to establish a sound evaluation mechanism and conduct regular evaluations and feedback on the effect of digital governance. According to the evaluation results, timely adjustments and optimizations of the strategies and measures of digital governance are needed. At the same time, it is necessary to strengthen system construction and form a long-term mechanism of digital governance to ensure its sustainability and stability. In addition, citizen participation and digital literacy improvement are important components of the digital transformation of grassroots township governance and also the key to continuous optimization and long-term mechanism construction. It is necessary to strengthen citizens' digital literacy education and improve citizens' digital awareness and ability. At the same time, it is necessary to broaden the channels of citizen participation and encourage citizens to participate in the management and supervision of public affairs by using digital platforms. Through citizen participation, the transparency and fairness of governance can be enhanced, and the governance effect can be improved.

5.3 Pay attention to policy guarantee

On the one hand, the protection of laws, regulations, and policies is an important guarantee for the digital transformation of grassroots township governance. It is necessary to formulate and improve relevant laws and regulations and clarify the power and responsibility relationship and normative requirements of digital governance. At the same time, it is necessary to strengthen the guidance and support of policies to provide a strong guarantee for the digital transformation of grassroots township governance. In addition, we should pay attention to the publicity and implementation of laws, regulations, and policies to ensure that they take root. On the other hand, security and privacy protection are important links in the digital transformation of grassroots township governance. It is necessary to strengthen network security and guard against network attacks and data leakage risks. At the same time, it is necessary to establish a sound privacy protection mechanism to protect citizens' privacy from infringement. In the process of promoting digital governance, we should always adhere to the principles of security and privacy protection to ensure the safety and reliability of digital governance [8].

5.4 Strengthen the application and innovation of digital technology

In the process of digital transformation of grassroots township governance, advanced and applicable digital technologies, such as cloud computing, big data, and artificial intelligence, should be actively introduced. Through technological innovation and application, the integration and sharing of governance data can be realized, and the automation and intelligence level of the governance process can be improved. In the process of application and innovation of digital technology, we should pay attention to the following points: first, we should deeply understand the actual needs of villages and towns to ensure that the application of technology is in line with the governance objectives; Second, we should strengthen data integration and sharing across departments and fields, and break the information island; Third, combining the characteristics of villages and towns, innovating the digital application mode according to local conditions; Fourth, we need to pay attention to the maturity and scalability of technology to ensure the sustainability of digital transformation. In addition, data integration and sharing are the key link in the digital transformation of grassroots township governance. Unified data standards and management norms should be established to break the information island and realize data sharing. At the same time, data security measures should be strengthened to ensure data safety and reliability. Finally, in the process of digital transformation, we should comprehensively sort out and rebuild the governance process and optimize the workflow and organizational structure. Through the application of digital technology, the automation and intelligence of business processes are realized, and governance efficiency and service quality are improved.

5.5 Personnel training and technical support

To promote the digital transformation of grassroots township governance, it is necessary to strengthen the construction of talent teams and technical support. In addition, to test the actual effect of digital transformation on grassroots township governance, it is necessary to carry out practical case studies and effect evaluation. Through comparative analysis of digital transformation practice cases in different regions and modes, we can sum up experiences and lessons, optimize the transformation path, and improve governance efficiency.

6. Conclusion

Under the background of digital governance, it is particularly important to construct the governance system of grassroots towns. At present, many towns and villages have initially established a digital governance system, integrated digital technology into their daily governance work, and realized the innovation of governance methods. But at the same time, there are also problems, such as imperfect systems and poor coordination among departments. The digital transformation of grassroots township governance is a systematic project that needs to be promoted and optimized from many aspects. It is necessary to strengthen digital infrastructure construction, information system integration and data sharing, intelligent decision support system construction, citizen participation and digital literacy improvement, laws, regulations and policy protection, security protection and privacy protection, and continuous optimization and long-term mechanism construction. Through the implementation and enforcement of these measures, we can promote the smooth digital transformation of grassroots township governance, improve governance capacity and service level, and provide strong support for promoting urban-rural integration and economic development.

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