

## FEATURES OF THE CONSTRUCTION AND FUNCTIONING OF THE E-GOVERNMENT SYSTEM IN THE CHINESE PROVINCE OF ZHEJIANG

### ОСОБЛИВОСТІ ПОБУДОВИ ТА ФУНКЦІОНУВАННЯ СИСТЕМИ ЕЛЕКТРОННОГО УРЯДУВАННЯ В КИТАЙСЬКІЙ ПРОВІНЦІЇ ЧЖЕЦЗЯН

Since the official launch of the Internet government project in 1999, e-government has gone through about twenty years of exploration and practice in China. Although there are mixed joys and worries, the results are obvious and great achievements, especially in the construction of local e-government, such as in Guangdong Province, Shanghai Province, Shandong Province and other places. Although e-government focuses on government affairs, rather e-government is the prerequisite and foundation for the development of government affairs. Carrying out the infrastructure construction of e-government is conducive to reducing redundant costs and is conducive to solving the interconnection problems between government systems. This article reviews the inception, order and progress of Zhejiang Province's e-government infrastructure, expounds the role of infrastructure in promoting the e-government construction of Zhejiang Province in more detail and provides better cases for the construction of local e-government.

**Key words:** e-government, government systems, network, network construction, Zhejiang Province, China.

С моменту офіційного запуску електронного урядового Інтернет-проекту в 1999 г. електронного урядування про-

шло около двадцати лет исследований и практики в Китае. Хотя имеют место неоднозначные проблемные вопросы, имеют место очевидные результаты и соответствующие достижения, особенно в построении местного электронного правительства в таких провинциях как Гуандун, Шанхай, Шаньдун и др. Несмотря на то, что электронное правительство сосредоточено на государственных делах, электронное управление является необходимым условием и основой для развития государственных дел. Осуществление построения инфраструктуры электронного правительства способствует сокращению избыточных вложений и способствует решению проблем взаимосвязи между государственными системами. В статье исследуется начало, порядок и развитие инфраструктуры электронного правительства в провинции Чжэцзян, излагается роль инфраструктуры в содействии построения электронного правительства провинции Чжэцзян, а также приводятся лучшие аргументы для построения местного электронного правительства.

**Ключевые слова:** электронное правительство, государственные системы, сеть, построение сети, провинция Чжэцзян, Китай.

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З моменту офіційного запуску урядового Інтернет-проекту в 1999 році електронного урядування пройшло близько двадцяти років досліджень та практики в Китаї. Хоча мають місце неоднозначні проблемні питання, наявні очевидні результати та відповідні досягнення, особливо у побудові місцевого електронного урядування у таких провінціях як Гуандун, Шанхай, Шаньдун та ін. Незважаючи на те, що електронний уряд зосереджений на державних справах, електронне урядування є необхідною умовою та основою для розвитку державних справ. Функція електронного урядування, а саме реалізація спільного офісу, спільного використання ресурсів та надання послуг залежить від інфраструктури електронного урядування. А тому, здійснення побудови інфраструктури електронного урядування сприяє скороченню надмірних вкладень та сприяє вирішенню проблемам взаємозв'язку між державними системами. У статті досліджується початок, порядок та розвиток інфраструктури електронного урядування в провінції Чжецзян, викладається роль інфраструктури у сприянні побудови електронного уряду провінції Чжецзян, а також наводяться кращі аргументи для побудови місцевого електронного урядування. На даний момент уряд провінції Чжецзян має високі результати за всіма показниками, а спроможність урядових служб в Інтернеті посідає перше місце в країні. Застосування електронного урядування в провінції Чжецзян досягло певних результатів: реалізовано інтеграцію провінційних департаментів та органів місцевого самоврядування в онлайн-платформу урядових служб, реалізовано єдиний вхід, уніфіковані стандарти, уніфіковану декларацію, онлайн-затвердження та уніфікований зворотний зв'язок. У статті досліджуються заходи розвитку мережі урядових служб провінції Чжецзян: підвищення обізнаності, зміцнення організації, координації та загального планування, сприяння інтеграції ресурсів, сприяння скоординованому розвитку електронного урядування, активне просування державних послуг та створення мережевої системи гарантування інформаційної безпеки. Побудова електронного уряду провінції Чжецзян відіграватиме провідну роль у національному електронному уряді та матиме важливе керівне значення для інших провінцій.

**Ключові слова:** електронне урядування, державні системи, мережа, побудова мережі, провінція Чжецзян, Китай.

**Statement of the problem.** With the advent of computerization, informatization and networking of social life, information technology plays a central role in demonstrating the full penetration of science and technology into today's social culture and promoting the evolution and development of social culture. From a global perspective, it is the general trend to promote office automation, networking, electronic and comprehensive information sharing in government departments. E-government is ranked first among five application areas of the "information highway" actively advocated by countries around the world (the other four areas are e-commerce, distance education,

telemedicine, and e-entertainment). This change meets the requirements of contemporary government public service reforms for low-cost operations and high-efficiency public services. It has aroused in-depth and extensive attention in government public service reforms in other countries.

E-government mainly refers to the use of modern information and network technology by the government to build an electronic, digitized, and networked government information system based on a computer network environment to improve government organizations, realize management automation, and provide for the society through

the establishment of government information systems and other services, the connotation of e-government is to build an electronic "virtual government", and its extension covers all the functions of government management except for special circumstances stipulated by law. The establishment of e-government is not only to meet the needs of national informatization to drive industrialization, but at the same time, in turn, e-government has a positive significance in promoting the development of informatization. In recent years, China's e-government has made a certain degree of progress, but there are also some problems that restrict the development of China's e-government.

**Analysis of recent researches and publications.** An analysis of recent studies on e-government, its objective necessity, advantages, problematic issues indicates a significant interest of scientists from all over the world. So, the literature on strategic leadership, management of technology, and specific characteristics of the city's change process propose their importance in successfully implementing innovation by the city government. While these factors may indeed be important to enhance the city government and services performance, the existing literature contains limited empirical evidence supporting their relationship to successfully implementing innovation [2]. Trapero F., Parra J., García J. [8] accent attention that corruption is a serious problem for the Latin American region, which means that governments make great efforts to reduce this malaise afflicting their countries. It is therefore concluded that e-government can become a differentiator of corruption perceptions in this selection of countries. The work of Mohammed Amin Almaiah, Yacoub Nasereddin [1] aims to study effective factors that could play an important role in the decision of Jordanian citizens to adopt e-government services. Based on the results, 'website quality', 'trust of internet', 'trust in government', 'performance expectancy', 'effort expectancy' and 'facilitating conditions' factors were shown to have a positive effect on behavioural intention to use e-government services. The Estonian example suggests that online governance is most accepted in a small state, with a young population, trustworthy institutions and the need of technological renewal. Examined the development of e-governance usage (citizens interacting digitally with the government) during the last decade in Europe from a comprehensive cross-country perspective: size, age and trust are relevant for the usage of digital government services in Europe [6].

Thus, we can state that the problem of effective organization of the e-government system is very timely, relevant and needs additional research.

**Formulation purposes of article.** The aim of the

article is to study the system of building and functioning of e-government in the province of Zhejiang, as well as ways to improve the e-government system.

**The main material.** From a global perspective, as early as the 1970s and 1980s, some countries began to promote the construction of information systems in the administrative departments. Office automation was the first to be used in the administrative department, that is, the use of electronic computer technology to handle the daily business inside the office, mainly the production, transmission and storage of data [7]. After the rise of management information systems, this technology that can process and classify a large amount of information has also been applied to various government departments to meet managers' needs for timely and accurate information. Around 1995, the officials and individuals began to use the Internet in general. Governments of various countries surpassed the barriers between government departments and began to carry out information technology reforms in the administrative departments. It was at this time that e-government began to gradually emerge. It can be said that the e-government has been carrying the mission of administrative integration reform since its inception. Later, with the development of network technology, various network services appeared one after another [5].

The services of e-government are concentrated in two major areas: one is to disclose administrative information and issue administrative resolutions to citizens and enterprises in a convenient and efficient manner; the other is to provide efficient and convenient administrative services through the Internet. Recently, it has been suggested that the application of the Internet has brought new ways to realize democracy. They believe that online elections, electronic voting, etc. can be realized through the Internet, thereby shortening the distance between citizens and politics and promoting the process of electronic democratization [4].

To sum up, the essence of e-government is to promote government reform through modern information technology, use modern information technology to transform, optimize and improve the government's business processes, and continuously improve the government's work efficiency and the coordination of comprehensive decision-making. Judging from the situation in China, the transformation of government functions is the most basic starting and end point for the construction of e-government. The construction of e-government is a systemic innovation project that concerns the overall situation, so it inevitably has the characteristics of comprehensiveness, complexity and long-term nature. We must attach great importance to this work from the perspective of the times and strategy, effectively strengthen leadership, implement correct decisions, accelerate the process of e-government,

and drive the development of informatization of the entire society through government informatization.

The construction and development of e-government with the Internet as the infrastructure is one of the obvious characteristics of the development of e-government in the world. This is mainly because the rapid popularization and development of the Internet has made people see its great potential and its irreplaceable superiority in helping the government to achieve interaction with enterprises and residents. That is, the network foundation is the most basic condition for building an e-government. E-government basic network is the use of modern communication and computer technology by government departments, relying on the existing network system composed of communication lines and communication equipment in the telecommunications department, connecting government departments at all levels, and undertaking the transmission of voice, video, and data between government departments. Business dedicated network system is the foundation and fundamental guarantee for the implementation and development of e-government, and its pros and cons are directly related to the management of the entire e-government system and the realization of services [4].

Over the years, the “10-billion” informatization construction, engineering, the province’s e-government information system construction has organized and implemented 60 projects, completed a total investment of 4.145 billion yuan, and exceeded the planned target one year in advance. “Golden” series of projects such as “Golden Administration”, “Golden Shield”, “Golden Audit”, “Golden Water”, “Golden Tax”, “Golden Insurance”, “Golden Quality”, etc., a number of important provincial-level business information systems such as transportation e-government, industrial and commercial informatization, health informatization, agricultural informatization services, enterprise credit, digital certification, basic information exchange and application of provincial enterprises, and construction of digital archives have been completed and put into use; as well as Hangzhou, Ningbo, Wenzhou, Jiaxing, Shaoxing. The smooth implementation of disaster backup, digital communities, digital parks, digital TV conversion, and public services for citizens in cities such as Jinhua, Quzhou, and Taizhou has improved the administrative capacity and service efficiency of provincial governments at all levels, and promoted the overall development of informatization [9].

The government portal website is not only an external exchange platform for government office business, but also the main carrier and channel through which the government releases information and the public obtains information. It has functions such as information release, two-way processing of government affairs, integration of public services, and

transformation of government business processing. Therefore, the functional level of government portals represents the level of development of e-government and is a basic link in the construction of e-government.

Zhejiang is the province that promoted the “Internet + government services” earlier. Since 2014, leading by the reform of “four lists and one web”, Zhejiang has continuously deepened the construction of an integrated e-government platform with a unified structure and five-level linkage across the province, forming the “Internet + government service” system featuring the unified release of the province’s list of issues, one-stop gathering of online services, and centralized sharing of data resources specially since 2017, Zhejiang has targeted the masses and enterprises to “run at most once” for the government, and continues to expand online government functions, optimize service experience, promote model innovation, and strive to form a situation where data is used to replace human running errands and benign online and offline interactions.

After several years of hard work, a unified e-government network construction platform in Zhejiang Province has been built, and “three unifications” have been achieved: a unified e-government transmission network: established a 10G provincial-level core backbone bandwidth, and two 155M provincial, city, and county-level unified backbone transmission networks; on the basis of a unified backbone transmission network, the party committee, the people’s congress, the government, and the CPPCC have established a unified e-government intranet; unified e-government extranet. At the same time, through the implementation of three projects: the expansion of the e-government extranet, the transformation of the international Internet export and the security support platform. Basically realized the load balance of the provincial departments’ networks, solved the problem of provincial-level units accessing the Internet through the provincial government’s unified export, and assisted some provincial-level departments in network opening and application migration. This not only saves a lot of money but also guarantees network security, it also lays a foundation for the interconnection of e-government applications in various regions and departments.

Although Zhejiang Province has realized the simultaneous operation of offline window service centers and online virtual service centers according to the needs of different users. However, there are still some problems that need to be solved in the course of the operation of government services [3].

The overall service function needs to be improved urgently. Government services should be further promoted, and will be extended to townships (streets) and villages (communities). Most towns and villages in Zhejiang have built physical convenience service centers, and they should continue to deepen the

construction and extension to the village (community) level to realize all towns (sub-districts) and villages (communities) build corresponding service centers based on the characteristics of each region; to fully promote the online approval function in towns (streets) and villages (communities), it is necessary to extend the government affairs database at the village (community) level to cover the content of approval items at the village (community) level.

The laws and regulations related to administrative services need to be improved, especially the laws on networked government services, such as the duties of staff to ensure data security, the implementation of online business processes, and the legal effects of electronic documents, all of which lack clear legal provisions. Laws and regulations have the functions of clarification, prevention and correction. Improving laws and regulations related to policies and government services can ensure the security of information during the operation of government services.

Raising awareness, strengthening organization, coordination and overall planning. Practice in various fields has proved that the main difficulty in implementing e-government is not technology, but ideological understanding, organization and coordination. Therefore, the construction of e-government affairs in all regions and departments in Zhejiang Province must conscientiously implement the scientific development concept, adhere to the correct outlook on political performance, vigorously pursue a truth-seeking and pragmatic style, and not pursue high standards that deviate from reality. It is necessary to establish a sound and powerful leadership organization, give it corresponding functions, increase the leadership and organization and coordination of the construction of e-government, and avoid multiple administrations and multiple management.

Promoting resource integration and coordinated development of e-government affairs. The construction of e-government affairs is a long-term and continuous improvement process as well as a continuous unified process. It is necessary to focus on deepening applications, information sharing, and business collaboration, and promote network integration, platform integration, data integration, and system integration, and strive to achieve practical results. It is necessary to make overall planning, rational layout, and build development projects in accordance with scientifically calculated data and work needs, so as to achieve "build on demand" and "change on demand" to improve the efficiency of the project; for existing facilities, take measures to improve service levels, enhance interaction capabilities, and realize data interconnection and information sharing. By breaking the information islands, the effective unity of government affairs can be realized so as to truly realize the basic goal of e-government "reducing costs

and serving the public", and promote the coordinated development of e-government.

Actively promoting public services. Government departments must accelerate the pace of government information disclosure, give full play to the enthusiasm of departments and local governments, promote governments at all levels to provide services to enterprises and the public, gradually increase service content, expand service scope, and improve service quality. Through direct, multi-channel, and two-way communication and interaction with the government, the public and enterprises should strengthen the authenticity, completeness, and timeliness of information collected by the government, and achieve scientific and rational decision-making, gradually form an environment that facilitates public access to information resources through multiple channels, multiple methods and terminals, strengthen the interactivity and applicability of government websites to attract the masses with a more friendly and convenient image.

Establishing a network information security guarantee system. In government departments, data security is very important. In the construction of e-government, data security is a part that must be considered. The following steps are also important: organization of the establishment of the Zhejiang e-government network and information security system framework, gradual improvement of the security management mechanism, establishing the e-government trust system, strengthening the research, developing and applying key security technology products, attaching importance to the security management of the introduction of information technology and new products, information security level protection system, establishing of emergency support center and data disaster backup infrastructure.

Strengthening training of civil servants across the province; realizing high-efficiency government management and services. The implementation of e-government is not only an important part of government informatization, but also an important part of administrative modernization. Civil servants are a relatively high-quality group, but it is undeniable that with the development of society and the advancement of science and technology, the knowledge of some staff members of government agencies and even some department leaders is far from being able to meet the requirements of the development of the situation. This requires them to continuously update their knowledge and comprehensively improve their own quality to meet the needs of the development of the network society, not only to improve the level of policy and business, but also to improve the level of computer operations and network applications. Adapt to the requirements of working in a network environment. Therefore, facing the challenge of

government informatization, it is necessary to strengthen the training of administrative personnel, improve their knowledge structure, expand their knowledge stock, and improve their application capabilities.

**Conclusion.** According to the capability survey and evaluation ranking of the provincial online government service, Zhejiang Province has high scores for all indicators, and its online government service capability ranks first in the country. The application of Zhejiang e-government has achieved certain results. It has realized the integration of provincial departments and local governments into the online government service platform, and realized unified entrance, unified standards, unified declaration, online approval, and unified feedback. Convenient for the people, efficient and fast. From the statistical data, it can be seen that the Zhejiang government service online has attracted the attention of the general public, and a large number of online approval items have been completed.

There are still many problems in the construction of e-government in Zhejiang Province that need to be improved: the overall service function needs to be improved urgently, system integration and data sharing are hindered, and the supporting guarantee system is incomplete. In response to these problems, this article studies the development measures of Zhejiang government service network: raising awareness, strengthening organization and coordination and overall planning, promoting resource integration, promoting the coordinated development of e-government, actively promoting public services, and establishing a network information security

guarantee system. The construction of Zhejiang Province's electronic government will play a leading role in the national electronic government and will have important guiding significance for other provinces.

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