

Research on Improving Public Service Efficiency in the Context of Digital Transformation

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Abstract: In light of the continuous deepening of the Digital China strategy and its intertwining with the modernization of the national governance system, profound changes have been witnessed in the field of public services. Digital transformation, as a core driving force, provides critical impetus for enhancing public service efficiency and breaking through supply bottlenecks. The support of public services is essential for maintaining people's well-being and social equity, with their operational efficiency significantly influencing citizens' experiences and government management effectiveness. In China's public services, the enabling mechanisms of digital transformation have been revealed through the technology-organization-environment framework and collaborative governance theory. Multiple practical cases demonstrate that such transformation can substantially improve service efficiency, yet current public service transformations face multiple obstacles, particularly issues like inefficient processes, isolated information, and technological disparities. Digital transformation opens new avenues for enhancing service efficiency, necessitating the construction of solutions that integrate technology-driven approaches, process reengineering, multi-party collaboration, and security assurances. Digital technologies are aiding government departments in innovating their service models.

Keywords: Digital transformation; Public services; Efficiency improvement; Collaborative governance; Digital divide

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1. Introduction

Digital technological innovations are reshaping the landscape of public services. Big data analytics and intelligent algorithms optimize service processes, blockchain technology ensures transparent and credible information, and cloud computing platforms enable flexible resource allocation. These technological breakthroughs have brought about qualitative changes in traditional service models, with precision services gradually replacing past extensive management practices. In the 2026 government work deployment, "efficiently accomplishing tasks" has been identified as a core focus for administrative service reform. The simultaneous advancement of government process optimization and digital government construction has led to substantial improvements in public service quality. This strategic layout provides a clear path for

digital transformation in the public service sector, with administrative agencies at all levels continuously exploring digital processes for public services. Models such as one-stop online services and cross-provincial services have been widely implemented, with specific practical examples like the Yunzongchuang Smart Platform in Subei County emerging. Meanwhile, new paths for cross-regional collaborative services, exemplified by the Yangtze River Delta region, are beginning to take shape, significantly enhancing public service efficiency. Today, the construction of a digital public service system increasingly relies on widespread digital penetration. However, regions' utilization of technology remains superficial, and inter-departmental collaboration mechanisms are inadequate, resulting in a poor match between services and needs. Technological advantages have not effectively driven substantial improvements in public service efficiency, with bottlenecks persisting in the public service system, and citizens frequently encountering process blockages when handling affairs.

2. Practical dilemmas in improving public service efficiency in the context of digital transformation

2.1. Fragmented technology application and insufficient enabling efficiency

In the process of advancing public service transformation, technology application exhibits fragmentation, hindering the overall progress of digitalization and impacting service efficiency and user experience. Specific regions only employ digital tools in administrative service sectors, neglecting synchronous follow-up in people's livelihood services such as education, healthcare, and social security, preventing full-process digital coverage of public services. Digital cultural products primarily provide services through digital forms such as video, audio, text, images, and hyperlinks. However, in practical use, various methods often lack unified standards, resulting in inconsistent resource supply quality ^[1]. Digital service systems in different regions operate under their own standards, making docking collaboration difficult and leading to isolated data. Regarding inter-departmental collaboration, mismatched technical specifications and interfaces hinder the effective flow of information, with cross-regional process blockages persisting in matters such as cross-regional medical settlement and enterprise cross-regional relocation.

2.2. Poor data sharing, inadequate collaborative governance efficiency

The digital transformation of public services relies on information interchange. Currently, domestic government data circulation faces multiple obstacles, with some institutions adopting a defensive mindset of "refusing to provide, fearing supply", primarily due to concerns about unclear data ownership or potential joint responsibilities from information leaks. This resistance to data sharing hinders the openness and sharing of core information. The lack of a comprehensive institutional framework, insufficient emphasis on data security, and numerous institutional flaws prevent the formation of standardized management norms covering the entire data lifecycle ^[2]. Data information held by government departments such as public security organs, civil affairs systems, and social security institutions has not been fully integrated and linked, directly constraining the speed and effectiveness of public affairs processing.

2.3. Prominent digital divide and inadequate service equity

While digital transformation improves public service efficiency, it also widens regional service disparities, making the digital divide more apparent. Due to differences in the characteristics and types of public

cultural digital resources among institutions and their self-contained resource construction standards, there are difficulties in achieving consistent terminology and unified standards when describing different types of public cultural digital resources uniformly ^[3]. From a group perspective, populations such as the elderly, disabled individuals, and rural residents face challenges in using digital service platforms proficiently due to insufficient digital literacy and a lack of smart device operation skills, preventing them from fully enjoying the conveniences of digital public services. Processes such as social security certification and medical insurance reimbursement cannot be completed online by some elderly individuals, necessitating in-person visits, which contradicts digitalization goals.

2.4. Shortage of professional talent and inadequate transformation support capacity

Optimizing public service efficiency requires cross-disciplinary experts proficient in handling people's livelihood affairs, administrative process operations, and the use of intelligent tools. Some financial personnel lack digital processing and analysis capabilities, unable to extract key information from massive data generated by financial sharing systems using methods such as data pivoting, function operations, and visualization tools, limiting them to basic data statistics ^[4]. These experts must bridge traditional service experiences with cutting-edge technological means, operate digital platforms, and excel in data analysis and process improvement.

2.5. Lagging process optimization and weak service adaptability

The core of the digitalization process involves combining "technological empowerment with process optimization." Currently, the introduction of digital technologies has overshadowed the optimization of public service processes, leading to a disconnect between technology and processes. Traditional service models face pain points such as complex approval processes, long processing cycles, and repeated submission of materials. Some regions merely migrate existing processes online during digital transformation, lacking deep-level optimization and reorganization, resulting in equally cumbersome online and offline processes, failing to truly reduce the cost of citizens handling affairs or improve service efficiency.

3. Innovative paths for improving public service efficiency in the context of digital transformation

3.1. Construct a comprehensive digital empowerment system and unleash technological efficiency

To overcome the dilemma of fragmented technology application, a comprehensive digital empowerment system covering all areas and processes of public services must be established promptly, achieving deep integration of digital technologies and public services. Digital technologies are comprehensively integrated into people's livelihood aspects such as administrative services, education, healthcare, social security, and employment, aiming to create an integrated digital public service platform. Focusing on the goal of "one-stop online services, full online processing", Subei County has constructed a "1+N+X" administrative service architecture, promoting "one-door access, one-window service, and completion of all affairs" for citizens, laying the foundation for improving public service efficiency. The construction of digital platforms requires the joint efforts of various organizations, enterprises, and governments to provide complementary data, technologies, or services, enabling the exchange of digital resources among service or product providers and

consumers, as well as among providers, to create value ^[5]. Standardization of technical specifications and data interaction methods for digital service platforms is urgently needed to promote system compatibility and resource sharing among institutions at all levels, eliminate data barriers, construct a multi-party collaborative linkage system, break resource barriers, promote information interchange and cross-departmental collaboration, and substantially improve the overall efficiency of public services.

3.2. Improve data sharing mechanisms and enhance collaborative governance efficiency

Data sharing mechanisms require institutional safeguards, with collaborative governance efficiency relying on management innovation to improve public service levels by removing obstacles. On the one hand, clarify data sharing responsibilities, establish a “who generates, who is responsible, who shares” accountability mechanism, encourage departments to proactively open core public service data, eliminate resistance to “unwilling to supply, afraid to supply”, and formulate a unified standard data sharing directory to standardize data collection, storage, and use processes, thereby improving data quality and accuracy.

3.3. Bridge the digital divide and ensure service equity

Adhere to fairness and inclusivity, adopting multiple measures to overcome information gathering gaps, enabling all members of society to enjoy the tangible benefits of digital public services. The construction of digital facilities urgently needs strengthening, with a focus on tilting towards central and western rural areas. New business formats and models in the digital economy era have higher requirements for supporting facilities for digital public services, with “last-mile” logistics services, digital life application scenarios, and service demands of diversified consumer groups posing more requirements for the forms of public service facility supply ^[6]. Simultaneously promote network coverage and device configuration to effectively bridge regional disparities, enabling rural populations and remote area residents to smoothly access the conveniences brought by digital public services.

3.4. Cultivate composite professional talent and strengthen transformation support

Innovate talent cultivation mechanisms, adopting a dual approach of internal development and external recruitment to construct a comprehensive incentive framework, thereby assisting public departments in optimizing service processes. Firstly, strengthen internal training for current public service personnel in digital technology applications, including digital service platform operation, data interpretation, and process optimization, to improve their digital application capabilities. Cross-cultivation of professional knowledge and digital skills is needed in public services. The effective integration of digital technologies and public culture has revolutionized traditional public cultural service behavior models, requiring public cultural service personnel to change traditional work methods, expand and enhance occupational qualities and skills in the digital era, and break free from digital-era constraints on public culture ^[7]. The cultivation of composite talent requires collaborative improvement of traditional business capabilities and modern technological means. The public service team urgently needs fresh blood, particularly the recruitment of cross-disciplinary talent with both digital skills and professional service knowledge. Universities and research institutes have become important partners, engaging in collaborative cultivation to produce versatile individuals adapted to new era demands, conducting targeted cultivation, and delivering professional talent to assist in achieving digital transformation. It is essential to strengthen the construction of rural digital cultural talent teams around talent strengthening, adopting multiple measures to provide strong intellectual support and talent guarantees

for digital transformation ^[8].

3.5. Reconstruct public service processes and enhance service adaptability

The tide of digital transformation drives the reshaping of the public service system, with technological upgrades and process improvements closely integrated. Continuous knowledge and information exchange and sharing among public service supply entities should be promoted, forming a collaborative work approach and fully releasing the dividends of a multi-governance model led by the government, featuring government-enterprise cooperation, social participation, and market-oriented operations ^[9]. The optimization of public service processes should start with existing links, focusing on addressing issues such as lengthy approval chains and repeated submission of materials. By redesigning operational mechanisms, approval steps can be simplified, processing cycles significantly shortened, approval requirements streamlined, and comprehensive service models such as “single form declaration, unified material submission, centralized special window reception, and full online processing” implemented. The Yangtze River Delta region has reconstructed multi-link processes for cross-departmental businesses such as enterprise cross-regional relocation and newborn registration, advancing processing and enhancing synergistic effects. Secondly, promote digital reconstruction of processes, breaking traditional departmental barriers, integrating cross-departmental and cross-domain service processes according to the requirement of “efficiently accomplishing tasks”, achieving intensification and standardization of public service processes, and driving the transformation of public services from “passive response” to “proactive perception and service.” Provincial comprehensive archives should fully leverage their institutional organizational advantages, prioritizing public needs and satisfaction, and providing high-quality, inclusive archive public cultural services to society ^[10].

4. Conclusion

The digital wave has swept across the globe, and technological innovations have reshaped service models, gradually resolving the dilemmas faced by traditional public services. By implementing process reengineering and optimizing collaborative mechanisms, new possibilities have been unlocked, enabling efficiency improvements. Optimizing public service processes reduces the burden on citizens when handling affairs and enhances administrative operational efficiency. However, the transformation of public services faces multiple constraints, including fragmented technological applications, barriers to data flow between departments, significant disparities in digital capabilities among different groups, insufficient supply of skilled personnel, and delays in adjusting and optimizing traditional service processes. These factors collectively impact the improvement of service effectiveness. The digital transformation strategy involves integrating cross-departmental resources, bridging information silos, narrowing gaps in technological applications, cultivating cross-disciplinary talent, reshaping service delivery models, promoting collaboration among multiple stakeholders, and providing systematic solutions to real-world challenges. As digital technologies penetrate deeper into public services, they drive continuous optimization and gradually establish a fair, efficient, and convenient service system.

Disclosure statement

The author declares no conflict of interest.

References

- [1] Chen MZ, 2023, Research on the Path to Enhance the Efficiency of Community Public Cultural Service Supply in the Context of Digital Transformation, thesis, Shanghai University of Engineering Science. <https://doi.org/10.27715/d.cnki.gshgj.2023.000065>
- [2] Zhang WL, 2026, Research on Enhancing Local Government Public Service Capabilities in the Context of Digital Transformation. *China Management Informationization*, 29(6): 198–200.
- [3] Ren Y, Yuan LH, 2024, Trends, Dilemmas, and Practical Strategies for the Digital Transformation of Public Cultural Services in Archives under the National Cultural Digitalization Strategy. *Archival Science Research*, 2024(4): 63–66 + 70.
- [4] Lv J, 2026 Research on the Path to Enhance the Efficiency of Enterprise Financial Shared Service Centers in the Context of Digital Transformation. *Tianjin Economy*, 2026(1): 55–57.
- [5] Lu WT, 2023, Research on Enhancing the Operational Efficiency of Elderly Care Service Institutions in the Context of Digital Transformation, thesis, Shanghai University of Engineering Science. <https://doi.org/10.27715/d.cnki.gshgj.2023.000020>
- [6] Wei XH, 2021, Reflections on Optimizing Shanghai’s Public Service Facility System in the Context of Life Digital Transformation. *Shanghai Urban Management*, 30(6): 20–26.
- [7] Xiang SL, Yang B, 2024, Research on Enhancing the Digital Literacy of Public Cultural Service Personnel in the Context of Digital Transformation. *Library Theory and Practice*, 2024(2): 107–113 + 122. <https://doi.org/10.14064/j.cnki.issn1005-8214.2024.02.004>
- [8] Li YJ, 2025, Digital Transformation Strategies for Rural Public Cultural Services in the Context of Rural Revitalization. *Shanxi Agricultural Economy*, 2025(9): 103–105. <https://doi.org/10.16675/j.cnki.cn14-1065/f.2025.09.031>
- [9] Wang JD, Dou Y, Ren JX, et al., 2023, From “Holistic Services” to “Agent Services”: Research on Innovation in Government Public Service Models in the Context of Digital Transformation. *E-Government*, 2023(1): 12–22. <https://doi.org/10.16582/j.cnki.dzzw.2023.01.002>
- [10] Zhang YT, 2024, Research on Public Cultural Services in Provincial Comprehensive Archives in the Context of Digital Transformation, thesis, Liaoning University. <https://doi.org/10.27209/d.cnki.glniu.2024.001661>

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