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Digital State under Fire: Public Administration and Public Service Digitization Reform in Ukraine

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Digital State under Fire: Public Administration and Public Service Digitization Reform in Ukraine

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ABSTRACT

Ukraine has become one of the most visible contemporary cases of public sector digital innovation. This article examines how Ukraine's public administration and public service digitization reforms have evolved from a pre-war modernization agenda into a wartime resilience system. Using a qualitative documentary case-study design, the article synthesizes evidence from international organizations and Ukraine government reports. The analysis shows that Ukraine's reform is not simply a story of a mobile application. Its distinctiveness lies in a hybrid service delivery model that combines the Diia portal and application, the Administrative Service Centre network, mobile front offices, interoperable state registers through Trembita, registry-building through Diia.Engine, and transparent reconstruction tools such as DREAM.

The findings also show that wartime displacement, infrastructure damage, cybersecurity risks, digital inequality and civil service capacity constraints make digitization a public administration reform rather than a technical reform. The article argues that Ukraine's experience contributes to the literature on public sector innovation by demonstrating crisis-driven digital public infrastructure: a model in which digital services, interoperability and front-office accessibility are jointly used to preserve the citizen-state relationship under extreme pressure.

Key words: public administration reform, public services, digitization, public sector innovation, Ukraine.

Introduction

The full-scale Russian invasion of Ukraine created an extreme stress test for public administration. Public institutions had to continue registering citizens, paying benefits, providing documents, coordinating assistance, sustaining education and health services, supporting businesses, and communicating with society while critical infrastructure, records, offices and staff were under attack. In many settings, war produces administrative fragmentation. Ukraine's case is notable because wartime disruption accelerated rather than stopped several digital government reforms. The question is not whether Ukraine digitized services, but how digitization became part of the operating model of public administration.

Before 2022, Ukraine had already been building an ambitious digital state. The Ministry of Digital Transformation, the Diia portal and mobile application, the Trembita interoperability system, electronic public procurement, open data, and Administrative Service Centres (ASCs) formed the basis of a service-oriented reform agenda. After 2022, the same architecture began to

serve new functions: proof of identity when paper documents were unavailable, reporting of damaged property, access to assistance for internally displaced persons (IDPs), communication during information disruption, and continuity of basic administrative interactions. Thus, the digital state became not only a convenience reform but a resilience reform.

This article treats digitization as an institutional innovation that changes the relationship between the state, citizens and administrative organizations. The public good served by the innovation is practical and democratic: maintaining access to rights, benefits and official records for citizens and businesses despite security shocks; reducing opportunities for informal payments; improving transparency of reconstruction; and helping displaced or vulnerable groups reach services. At the same time, the article avoids a technology-deterministic interpretation. Digital tools do not automatically produce inclusion, trust or administrative capacity. In Ukraine, their value depends on legal safeguards, civil service skills, cybersecurity, service design, physical access points and integration with social and local governance systems.

The article develops a case-study analysis of Ukraine's public administration and public service digitization reform. The central argument is that Ukraine's model can be understood as a hybrid digital public infrastructure for public service resilience. This model has four mutually reinforcing components: citizen-facing platforms, interoperable back-office data exchange, physical and mobile front offices, and transparent data systems for recovery and reconstruction. The model has delivered important results, but it also faces several risks: exclusion of older, poorer and digitally less skilled citizens; uneven sectoral integration; overstretched civil servants; cybersecurity threats; and the need to align digital governance with European Union (EU) standards.

This article addresses three research questions. First, what are the main institutional and technological elements of Ukraine's public administration and public service digitization reform? Second, how has the digital service delivery model supported administrative resilience and citizen access during wartime displacement and reconstruction? Third, what lessons and risks does Ukraine's experience offer for public sector innovation in countries undertaking digital government reforms under conditions of crisis, limited resources or rapid institutional change?

These questions are deliberately broad. The aim is not to evaluate a single platform, such as Diia, as a software product. The aim is to analyze the reform as a public administration system that includes laws, administrative procedures, service centers, registers, interoperability, digital identity, data protection, human resources, public trust and inclusion.

Literature review

Public sector innovation is usually defined not only by novelty but by the creation of public value (Bokayev et al. 2024; 2025; Iskindirova et al., 2024; Tarman et al., 2026; Yskak et al., 2025). For The Innovation Journal, the novelty of a public sector innovation should be connected to a public good, such as improved quality, efficiency, accessibility, resilience or legitimacy of public administration. This article therefore treats Ukraine's digital public service reform not simply as an information technology project, but as a public sector innovation that reorganizes how the state maintains service access, communicates with citizens and coordinates administrative data under

conditions of war, displacement and fiscal pressure (Glor, 2021; Zyzak, Sienkiewicz-Malyjurek and Jensen, 2024).

Foundational e-government study provides the institutional basis for this interpretation. Bekkers and Homburg (2005) describe e-government as an ecology in which technologies, organizations, information domains and institutional arrangements co-evolve. Dunleavy et al. (2006) identify reintegration, needs-based holism and end-to-end digitization as central features of digital-era governance, while Heeks (2006) stresses that implementation outcomes depend on the fit between technological design, administrative capacity and local realities. More recent work defines digital transformation as a whole-organization process affecting services, structures, culture and stakeholder relations rather than as a narrow technology project (Mergel, Edelmann and Haug, 2019). These perspectives support an analysis of Ukraine's reform as an institutional architecture rather than a collection of digital tools.

Recent literature on digital transformation in government stresses that digital reform is a process of organizational and institutional change, not merely the conversion of paper forms into online forms. Haug, Dan and Mergel's systematic review shows that digitally induced public sector change is shaped by external pressure, internal administrative capacity and the interaction between incremental and transformative change (Haug, Dan and Mergel, 2024). This perspective is particularly useful for Ukraine because wartime digital services were not created in an institutional vacuum. They were built on earlier reforms in public administration, decentralization, interoperability, public procurement, open data, digital identity and administrative service centres.

Platform and service-delivery study further specifies the architecture of digital government. Janssen and Estevez (2013) show how shared platforms can simplify processes and enable coordination across public organizations and external stakeholders. The OECD Digital Government Policy Framework identifies six complementary dimensions: digital by design, data-driven, government as a platform, open by default, user-driven and proactive, which together shift attention from isolated services to whole-of-government capability (OECD, 2020). The United Nations E-Government Survey likewise places digital transformation within broader goals of sustainable, inclusive and resilient public institutions (United Nations, 2024). In the Ukrainian case, these perspectives direct attention to shared data infrastructure, assisted access, transparent recovery systems and the capacity to sustain services during disruption.

The crisis literature also helps to interpret Ukraine's experience. Eom and Lee argue that digital government transformation becomes especially urgent in turbulent times, when governments must sustain service delivery while responding to uncertainty and disruption (Eom and Lee, 2022). However, crisis-driven digitalization also produces dilemmas: speed can conflict with procedural safeguards, emergency innovation can deepen dependence on temporary funding, and data integration can create cybersecurity and privacy risks. Ukraine's case illustrates both sides of this argument. War accelerated the practical use of Diia, Trembita and remote service channels, but it also increased the importance of cyber resilience, continuity planning and trusted administrative procedures.

The public value strand of the literature is important because digital public services can succeed technically while still failing democratically or socially. Zyzak, Sienkiewicz-Malyjurek

and Jensen show that the relationship between digital transformation and public value management remains underdeveloped and that more attention is needed to how digital reforms generate, measure and protect public value (Zyzak, Sienkiewicz-Malyjurek and Jensen, 2024). Guenduez, Demircioglu, Mueller and Cinar add that public-sector digital innovation strategies differ depending on whether they focus on enhancement, adaptation, anticipation or broader transformation (Guenduez et al., 2025). In Ukraine, the public value of digitization lies not only in faster transactions, but in administrative continuity, simplified life-event services, reduced corruption opportunities, better access for displaced citizens and improved coordination between central and local authorities.

Public innovation is also relational. Osborne (2018) argues that public value is created through service relationships and co-production, while Sørensen and Torfing (2011) emphasize multi-actor collaboration as a source of innovation across organizational boundaries. Research on government use of social media makes a related point: digital channels can expand interaction and innovative capacity, but their effects depend on organizational culture and institutional adaptation (Criado, Sandoval-Almazan and Gil-Garcia, 2013). This is relevant to Ukraine because the hybrid model relies on coordination among ministries, local governments, service centers, technology providers, international partners and users, not on a single central platform.

The literature on digital public services in Ukraine confirms the importance of the Diia ecosystem while also warning against reducing the reform to one mobile application. Oliychenko, Ditkovska and Klochko analyze the digital transformation of Ukrainian public authorities during wartime and show how e-government development became part of the state's wider capacity to function during extraordinary conditions (Oliychenko, Ditkovska and Klochko, 2024). Gurzhii and Shevchenko emphasize that the development of electronic public services in Ukraine is connected with openness, accessibility, data integration, document automation, electronic queues and anti-corruption potential, while also pointing to the continued development of AI-enabled services (Gurzhii and Shevchenko, 2025). These studies support the present article's argument that Diia should be analyzed as the visible front office of a broader digital public infrastructure.

The literature on the Ukrainian state also highlights the importance of legal and institutional mechanisms behind e-services. Chukut and Karpenko's study of electronic service provision under war conditions points to the organizational challenge of maintaining services when administrative routines are disrupted (Chukut and Karpenko, 2023). Vintoniak's recent analysis argues that Ukraine should move from digitizing individual procedures toward life-situation-based digital services built on the principles of once-only data use, digital by default, human-centered design, accessibility, cyber resilience and performance evaluation (Vintoniak, 2026). This resonates with Ukraine's policy direction under the Ukraine Plan 2024-2027 and with OECD/SIGMA recommendations concerning administrative procedure, service quality standards and the capacity of Administrative Service Centres.

A separate but related strand concerns smart cities, local digital governance and the territorial dimension of reform. Serhiichuk's study of digitalization under martial law and Smart City Kyiv argues that digital transformation in Ukraine includes e-governance, cyber security, e-democracy, e-business, e-health, e-education, e-transport, digital skills and ubiquitous internet, and that these components require updated legislation, data protection and institutional coordination

(Serhiichuk, 2025). This local perspective matters for the Ukraine case because the national digital state depends on municipal and community-level implementation, including ASCs, Diia Centres, mobile service delivery and local recovery planning.

The inclusion literature adds another important lens. Digital government can widen access for citizens who are mobile, displaced or unable to visit offices, but it can also reproduce inequalities related to age, disability, income, connectivity, language, digital skills and trust. Recent work on digital tools for participation shows that digital platforms vary greatly in their functions and democratic effects; they can support information sharing, consultation and collective intelligence, but only when designed with participation goals and user capacities in mind (Shin et al., 2024). In Ukraine, this means that digital service reform should be evaluated together with hybrid service channels, assisted digital support and the needs of internally displaced persons, returnees, veterans, older citizens and people living close to the frontline.

Artificial intelligence is becoming a new frontier for the next stage of digital public administration. Ahn and Chen show that government employees' willingness to use AI depends on perceptions of its benefits, risks and implications for public work (Ahn and Chen, 2022). Schiff, Schiff and Pierson warn that government adoption of AI can produce public value failures when systems undermine due process, fairness, accountability or public trust (Schiff, Schiff and Pierson, 2022). These findings are relevant to Ukraine's emerging Diia.AI and AI-in-government agenda: AI may improve navigation, personalization and administrative efficiency, but it must be embedded in legal accountability, cybersecurity, human oversight and appeal mechanisms.

Finally, the broader public administration literature links digital services to trust, reform legitimacy and state capacity. Dimitrova and Mazepus' recent research on Ukraine suggests that public administration reforms matter for trust in government in transitional settings, but the relationship depends on citizens' expectations and perceptions of state performance (Dimitrova and Mazepus, 2026). This is important for the present article because digitization cannot substitute for public administration reform. Digital portals, registers and mobile applications become legitimate only when citizens experience them as reliable, lawful, inclusive and useful. The main gap in the literature is that studies often treat digital services, public administration reform, wartime resilience, smart city development, AI governance and citizen trust as separate topics. This article brings these strands together by conceptualizing Ukraine's model as a hybrid digital public infrastructure for resilient public service delivery.

Taken together, the literature yields four analytical expectations that structure the case analysis. First, citizen-facing platforms should be assessed through public value, user experience and inclusion. Second, interoperability and registers should be examined as institutional and data-governance arrangements, not merely technical back-office systems. Third, physical and mobile service centers should be treated as part of an omnichannel resilience model rather than as remnants of pre-digital administration. Fourth, transparent recovery platforms should be evaluated through accountability, collaboration and long-term administrative capacity. Existing studies illuminate individual parts of this architecture, but they rarely explain how these four layers operate together under wartime pressure. The article addresses that gap by using the hybrid digital public infrastructure model as the bridge between the literature review, the thematic coding and the findings presented below.

Methodology

The article uses a qualitative documentary case-study methodology. The case is Ukraine's public administration and public service digitization reform between 2014 and 2026, with particular attention to the period after the full-scale invasion in 2022. The case-study approach is appropriate because the reform is embedded in a complex institutional context: EU accession, martial law, decentralization, recovery planning, public administration reform, cybersecurity, population displacement and changing citizen needs.

The evidence base consists of official and international analytical sources. Key sources include the OECD/SIGMA assessment of public administration in Ukraine, the OECD Economic Survey of Ukraine, the OECD Public Governance Review of Ukraine, the Ukraine Plan 2024-2027, the UNDP/Ministry of Digital Transformation survey on public opinion regarding state electronic services, UNDP Ukraine's 2025 annual report, IOM Displacement Tracking Matrix materials, and World Bank reports on service delivery and employment services. These sources were selected because they combine institutional analysis, user data, service delivery evidence and reform commitments. More specifically, core documentary sources were included when they (1) directly addressed Ukraine's national or subnational public administration, digital government or public service delivery; (2) were issued by an official Ukrainian body or an established international organization; (3) contained empirical data, a documented institutional assessment or explicit reform commitments for the 2014-2026 period; and (4) contributed evidence to at least one research question. Peer-reviewed studies were used to frame concepts and interpret findings rather than as substitutes for case evidence. Duplicate summaries, promotional materials without a transparent evidentiary basis and sources outside the study period were excluded. The final evidence base comprised 12 core documentary sources that were reviewed in full and met the inclusion criteria; all 12 were retained for thematic analysis.

The analysis applies thematic coding to the documentary evidence. The main themes were: strategic reform architecture; service delivery channels; interoperability and registries; inclusion and displacement; transparency and anti-corruption; sectoral digitalization; civil service capacity; and risks. The article does not present new interviews or a statistical model. Its contribution lies in synthesis and interpretation of recent evidence for the public administration and public sector innovation literature. Coding was conducted manually without specialized qualitative-analysis software. A first deductive pass applied the research questions and the four infrastructure components as organizing categories; a second, inductive pass recorded recurrent themes and risks, including inclusion gaps, cybersecurity exposure, staffing constraints and financial sustainability. Evidence was then compared across source types to identify convergence, discrepancies and changes over time.

The limitations are also clear. Wartime data are incomplete, rapidly changing and sometimes not comparable across sources. Some service usage data are based on surveys and should be interpreted with their reported margins of error. The analysis also focuses on national-level reform architecture and cannot capture all local variations across hromadas, regions and frontline territories. Nevertheless, the combination of international assessments, official planning

documents and user surveys provides a credible basis for identifying the central features of Ukraine's reform.

Findings

Public administration reform created the institutional frame for digital service delivery

Ukraine's digitization reform is embedded in a broader public administration reform (PAR) agenda. OECD/SIGMA's assessment shows that Ukraine improved its overall public administration performance compared with the 2018 baseline, with the strongest progress in service delivery and digitalization. The 2023 SIGMA assessment describes Ukraine as a frontrunner among EU enlargement countries in service delivery, while also noting setbacks in public service and human resource management caused partly by extraordinary COVID-19 and martial law measures (OECD/SIGMA, 2024).

This matters because digital service delivery depends on administrative legality and capacity. The adoption of the Law on Administrative Procedure in 2022 was an important step towards standardized and rights-based administrative decisions. It introduced safeguards such as the right to be heard, access to files, reasoned decisions and appeal. These principles are essential for digitalization because a digital decision without procedural safeguards can simply accelerate poor administration. Conversely, clear procedures make it easier to automate, simplify and monitor services.

The Ukraine Plan 2024-2027 reinforces this institutional interpretation. It treats public administration capacity as necessary for EU accession, recovery, reconstruction and business climate improvement. It explicitly links service delivery digitization with civil service reform, remuneration, merit-based recruitment, the Law on Administrative Procedure and digital HRM. The Plan therefore recognizes that 'State in a Smartphone' cannot be separated from the internal functioning of the state (Government of Ukraine, 2024).

The OECD Public Governance Review of Ukraine reaches a similar conclusion. It argues that Ukraine continued to prioritize PAR during the war and that the Public Administration Reform Strategy 2022-2025 and Public Finance Management Strategy 2022-2025 remained important frameworks. The Government Priority Action Plan also became a central instrument for wartime prioritization, bringing together response, recovery and EU integration tasks (OECD, 2026). Digitalization is thus part of the coordination architecture of the state, not merely a front-office innovation.

Ukraine's core innovation is a hybrid service delivery model

Ukraine's most visible digital public service innovation is Diia, the Unified State Web Portal of Electronic Services and its mobile application. Diia provides access to digital documents, e-services and citizen interactions through a user-friendly interface. Before the full-scale invasion, Diia already supported digital identity and end-to-end services. During the war, it expanded to

damaged property reporting, IDP-related services, social benefits, war bonds, information services and other wartime needs (OECD/SIGMA, 2024).

However, the evidence suggests that Ukraine's model should not be described as digital-only. Its strength is hybridization. Digital platforms are combined with Administrative Service Centres, territorial units, remote workplaces, mobile ASCs and Diia Centres. SIGMA reports that the number of ASCs grew from 882 in 2020 to 1,110 by April 2023, with remote workplaces expanding from 356 to 2,082 over the same period. The same assessment emphasizes that ASCs continued to operate during the war and expanded their portfolios to address IDP and humanitarian needs (OECD/SIGMA, 2024).

The OECD Public Governance Review updates this picture. By the end of 2024, Ukraine had 1,337 ASCs, 32 mobile ASCs and 82 Diia Centres; the ASC network served more than 20 million citizens in 2024. The review also states that Diia provided access to more than 150 services through the website and 60 services through the mobile application, while reaching around 20 million users (OECD, 2026). These figures show a dual reform logic. Digital channels increase speed and scale, while physical and mobile centers preserve access for citizens who need assistance, lack devices or live in areas where connectivity is unstable.

This hybrid model is important for public value. First, it reduces administrative burden by allowing citizens to use services where and when they need them. Second, it preserves territorial access through ASCs and mobile service points. Third, it enables assisted digital service delivery: a citizen can receive support in using digital services rather than being excluded by a lack of skills. Fourth, it maintains redundancy. If one channel is unavailable because of infrastructure damage or personal circumstances, another can be used. In wartime, redundancy is not inefficiency; it is resilience.

Interoperability and registries are the hidden architecture of service innovation

The Diia front end is only one layer of Ukraine's digital public infrastructure. The back-office layer is equally important. Trembita, launched in 2020, enables data exchange between state bodies and local self-government bodies. According to the OECD Public Governance Review, more than 290 government institutions and organizations were connected to the system and 14 billion transactions had been made by 2024 (OECD, 2026). Earlier Ukraine Plan data reported that 115 electronic information resources were registered in Trembita's industrial environment by the end of 2023 and that transactions had already exceeded four billion (Government of Ukraine, 2024). The difference between these figures also illustrates the rapid acceleration of interoperability.

Interoperability matters because many public services require verification across agencies. Without trusted data exchange, citizens must carry certificates between institutions, and civil servants must manually check data. With interoperable registers, the state can ask once, reuse information legally and deliver services with fewer administrative contacts. This is particularly relevant in wartime, when paper records may be destroyed, offices may be closed, and citizens may be displaced from their registered locality.

Diia.Engine adds another layer by helping ministries and agencies create and manage registers. The Ukraine Plan explains that Diia.Engine is intended to provide orderly and secure storage of register data and to accelerate automation of public services. It reports that one of the most important registers developed with Diia.Engine is the Register of Damaged and Destroyed Property, which has been used for the eRecovery program and contained more than 520,000 reports at the time of the Plan. It also notes that over 400 state registers exist in Ukraine, many of them technologically outdated or vulnerable to cyberattacks (Government of Ukraine, 2024).

The reform implication is significant. Modern public service digitization is less about putting forms online than about rebuilding the state's data foundations. If registers are outdated, duplicated or insecure, digital services remain fragile. If registers are interoperable, secure and legally governed, digital services can become faster, more reliable and more transparent. Ukraine's experience therefore confirms a broader lesson from digital government literature: the most important innovation is often invisible to the user.

Digitalization supported wartime service continuity and reconstruction transparency

Ukraine's digital public services became emergency governance tools after 2022. Diia supported applications related to damaged housing, IDP status and assistance, social benefits, war bonds and public information. These services transformed a digital government platform into a wartime public administration interface. Citizens could interact with the state without needing to visit the original place of residence or a physical office that might be inaccessible.

The same logic applies to reconstruction. DREAM, the Digital Restoration EcoSystem for Accountable Management, is designed to make recovery projects visible, traceable and accountable. The OECD Economic Survey reports that more than 8,700 planned or proposed projects were registered in DREAM by the end of 2024 and that the government launched a Single Project Pipeline in September 2024. It also reports that by the end of 2024, 787 public investment projects worth more than USD 60 billion were registered in DREAM (OECD, 2025). In public administration terms, DREAM links digitalization to transparency, donor coordination and anti-corruption in reconstruction.

Digitalization has also supported public services in specific sectors. In employment services, recent World Bank analyses emphasize the need for digitized case management, better outreach to vulnerable groups, integration with other registers, performance monitoring and automation of business processes. The Client Walk-Through assessment of Ukraine's State Employment Service identifies strengths such as a dense office network and high degree of digitalization for data collection, but it also notes that many processes remain paper-based and that case management is not yet strong enough to serve IDPs, veterans and persons with disabilities effectively (World Bank, 2026a). Related analysis of active labor market programs similarly calls for skills development aligned with labor demand, tailored services for jobseekers with special needs and stronger pathways to sustainable employment (World Bank, 2026b).

Health services provide another example of the same pattern. The World Bank's Service Delivery Indicators health survey includes a specific section on digital health and shows that digital integration is now a component of primary health care reform (World Bank, 2025). The broader

lesson is that whole-of-government digital transformation must be complemented by sector-specific redesign. The platform state can provide common components, but ministries and agencies still need to redesign their workflows, data standards, staff roles and user support mechanisms.

Citizen use of e-services is rising, but inclusion remains uneven

The UNDP/Ministry of Digital Transformation survey on state electronic services provides important user-side evidence. The field phase took place from 19 September to 5 October 2025 and included 2,015 interviews. It found that 81 percent of Ukrainians were regular Internet users, while seven percent did not use the Internet at all. The level of state e-service use increased from 55 percent in 2024 to 59 percent in 2025. Diia remained the dominant channel: 48 percent of respondents reported using Diia, up from 42 percent in 2024 (UNDP and Ministry of Digital Transformation, 2026).

The survey also shows high satisfaction among users. Eighty-five percent of respondents who used state electronic services assessed their experience as rather or very positive. Fifty percent considered online service receipt the most convenient and effective channel; 12 percent preferred visiting an ASC; and 32 percent considered both methods convenient and effective. These findings support the argument for a hybrid model. Most users appreciate online services, but a large share of citizens still value or need physical service points (UNDP and Ministry of Digital Transformation, 2026).

At the same time, inclusion gaps remain visible. Among younger respondents aged 18-29, 75 percent used at least one state e-service, compared with 37 percent among respondents aged 70 and older. Respondents with low material security also used e-services less often than those with average or high income. The reasons for non-use included lack of need, but also lack of skills, distrust, lack of a device with Internet access, and lack of knowledge about service availability. The positive finding is that some barriers declined from 2024 to 2025, especially lack of skills and lack of knowledge. The policy challenge is to continue reducing these barriers without abandoning non-digital channels.

The survey is particularly important for wartime inclusion because several special attention groups are heavy users of digital services. State electronic services were used by 81 percent of veterans, 76 percent of single parents and 72 percent of IDPs. Diia use was 61 percent among IDPs and 52 percent among veterans. These data suggest that digital services can be especially valuable for mobile and administratively vulnerable groups. However, older people and persons with disabilities remain less likely to use Diia and e-services, which confirms the need for accessibility, assisted digital support and outreach.

Displacement turns digital public services into a mobility infrastructure

Population displacement is central to the Ukrainian service delivery challenge. IOM's Displacement Tracking Matrix (DTM) is designed to collect and disseminate data on population flows, internally displaced persons, returnees and their needs. Round 23 of IOM DTM's General Population Survey estimated that 3.856 million de facto IDPs and 4.247 million returnees resided in Ukraine in 2026 (IOM, 2026a; IOM, 2026b). These numbers are not only humanitarian indicators. They are also public administration indicators because displaced and returning citizens

need identity documents, benefits, housing support, employment services, health care, school access, legal aid and local registration.

Displacement challenges the traditional territorial model of administration. A citizen's needs may arise in one locality, official records may remain in another, the physical office may be damaged, and the citizen may not know which agency is responsible. Digital identity, interoperable registers and national service platforms help overcome this fragmentation. Diia-based services for IDP status, IDP assistance, address changes and related services show how digital tools can reduce the administrative cost of mobility.

However, digital services cannot replace place-based support. IDPs and returnees often need housing, employment, psychosocial support, social protection and community integration. These services require local governments, social workers, employment counselors, health providers and civil society organizations. The World Bank's employment service assessments underline the importance of case management, referral protocols and proactive outreach to vulnerable groups. In other words, displacement requires a digital-plus-social model: national digital infrastructure must be connected to local human support systems.

The migration dimension also creates a future-oriented challenge. Ukraine's recovery depends on the return and reintegration of displaced people, including those abroad. Digital public services can help by allowing citizens to maintain administrative links with the state, access information about jobs, confirm qualifications, register property claims and receive documents. Yet return decisions depend on security, housing, employment, schooling and trust. Digitalization can reduce friction, but it cannot solve the social and economic conditions of return by itself.

Table 1: Ukraine's hybrid digital service delivery architecture

Layer	Key instruments	Public administration function	Risks if weak
Citizen interface	Diia portal and app; digital documents; online services	Access, identity, applications, notifications, user experience	Exclusion, low trust, poor accessibility
Assisted front office	ASCs, mobile ASCs, Diia Centres, remote workplaces	Territorial access, assisted digital use, service advice	Urban-rural gaps, overload, uneven quality
Data exchange	Trembita, ID.gov.ua, eIDAS alignment	Interoperability, verification, cross-agency services	Manual checks, duplicated data, delays
Registers	Diia.Engine, damaged property register, sectoral registers	Legal record, evidence base, service automation	Cyber vulnerability, outdated data, inconsistent decisions
Transparency and recovery	DREAM, open data, Single Project Pipeline	Reconstruction accountability, project tracking, donor coordination	Corruption risks, fragmented aid management
Administrative capacity	Digital HRM, civil service training, process redesign	Sustainable operation, service quality, EU alignment	Dependence on individuals, burnout, non-merit staffing

Digital reform is linked to integrity, trust and anti-corruption

Ukraine's digitalization agenda has a strong integrity dimension. The OECD Economic Survey notes that public digitalization began partly as an effort to improve integrity and reduce corruption risks, including online asset declarations and the Prozorro e-procurement platform, and later expanded into registries and broader digital transformation (OECD, 2025). This sequence is important: digital government emerged not only as a service convenience but also as a transparency and anti-corruption strategy.

The Ukraine Plan explicitly connects digital public services with anti-corruption, judicial reform, social stability and business conditions. It argues that digitalization simplifies interactions between citizens and the state, curbs corruption, improves electronic payments and supports tax and customs administration. The planned personal-data access monitoring subsystem in Trembita is also relevant to trust because citizens should be able to see access to their data through the Diia ecosystem (Government of Ukraine, 2024).

DREAM is the clearest example of digital transparency applied to reconstruction. Reconstruction is a high-risk area because it involves large funds, urgent needs, many donors and many subnational projects. A digital project pipeline can make priorities, financing, implementation and results more visible. Yet the existence of a platform is not sufficient. Transparency requires data quality, clear responsibilities, independent audit, public oversight and consequences for misuse. Public sector innovation must therefore be evaluated not only by the number of digital tools created but by the accountability routines attached to them.

The main constraints are capacity, cybersecurity, interoperability, finance and inclusion

The achievements of Ukraine's digital reform should not obscure the constraints. First, civil service capacity is under pressure. OECD's Public Governance Review notes that Ukraine's civil servants have shown outstanding commitment, but merit-based recruitment was suspended under wartime conditions, skills shortages are acute, and tens of thousands of posts remained unfilled. Digital transformation increases rather than reduces the need for skilled public servants because systems must be designed, procured, governed, secured and continuously improved (OECD, 2026).

Second, cybersecurity and infrastructure resilience are permanent risks. The Ukraine Plan emphasizes that Russia's attacks on digital and electronic communications infrastructure created a need not only to repair damaged networks but to improve resilience, stability and cybersecurity. It notes that digital infrastructure losses and reconstruction needs are significant, and that vulnerable populations in de-occupied, front-line and border areas are disproportionately affected by loss of connectivity (Government of Ukraine, 2024).

Third, interoperability remains unfinished. Ukraine has made remarkable progress with Trembita, but the existence of more than 400 state registers, many outdated or vulnerable, shows that modernization is a long-term task. The next stage requires common data standards, semantic interoperability, secure cloud and data center capacity, register modernization and EU eIDAS alignment. These issues are technical, but they are also administrative because they require governance, financing and legal authority.

Fourth, inclusion must remain central. Survey evidence shows rising use and satisfaction, but also persistent gaps by age, income, disability and access to devices. A digital-only state would risk excluding some citizens. A hybrid model with ASCs, mobile units, assisted digital services, accessible websites and targeted digital skills programs is therefore a condition of legitimacy.

Fifth, financial sustainability matters. Ukraine relies heavily on international assistance for macroeconomic stability and reconstruction. Digital systems require continued investment in cybersecurity, maintenance, cloud infrastructure, staff training and service redesign. Donor support can help, but durable reform requires domestic budgeting, procurement capacity and institutional ownership. Long-term sustainability therefore requires a distinction between one-off capital investment and recurrent operating costs. Donor financing may be appropriate for accelerated register modernization, cybersecurity upgrades and infrastructure reconstruction, but routine maintenance, cloud and data-center services, software renewal, user support, staff retention and security monitoring must progressively enter domestic medium-term budgets. A sustainable model also requires lifecycle costing, interoperable standards that limit vendor lock-in, shared government components, transparent procurement and clear institutional ownership. Without this transition, externally financed pilot systems may fragment or deteriorate after project funding ends. Official recovery forecasts and international program evidence also indicate that fiscal uncertainty and continuing reconstruction needs will force careful prioritization of core registers, high-volume services and resilience functions (Ministry of Economy of Ukraine, 2025; UNDP Ukraine, 2025).

Discussion

Ukraine's experience contributes to public sector innovation theory in three ways. First, it shows that crisis can accelerate innovation when pre-existing reform capacity exists. Ukraine did not invent digital public administration in 2022. The war accelerated and repurposed a reform architecture that had already been created through Diia, Trembita, ASCs, Prozorro, open data and public administration reform strategies. This supports the idea that public sector innovation is path-dependent. Crisis creates pressure, but institutions need prior capabilities to respond productively.

Second, Ukraine shows that digital government becomes public sector innovation when it changes administrative relationships. Diia is not important only because it is a mobile application. It is important because it changes how citizens prove identity, submit applications, receive documents, report damage, access benefits and interact with the state. Trembita is not important only because it exchanges data. It is important because it changes the distribution of administrative burden: the state, not the citizen, becomes responsible for moving data across agencies. DREAM is not important only as a project database. It is important because it potentially changes the transparency of reconstruction decisions.

Third, Ukraine demonstrates the value of hybrid service delivery. Many digital government strategies implicitly treat physical channels as outdated. Ukraine's experience suggests the opposite. Physical and mobile service centers are not remnants of the old administration; they are part of a modern resilience architecture. They assist users, compensate for connectivity gaps, support vulnerable groups and provide redundancy when online channels are unavailable. The

most innovative feature of Ukraine's model may therefore be not digitalization alone but the combination of digital and physical channels around shared data and procedures.

The case also has practical implications for countries such as Kazakhstan and other reforming states. First, digital public services should be built as public infrastructure rather than as isolated applications. This means investing in digital identity, interoperability, base registers, data standards, accessibility and cybersecurity. Second, public service digitization should be linked to administrative procedure reform. Simplifying and standardizing decisions is a precondition for meaningful automation. Third, digital reform should explicitly include vulnerable groups. Surveys, user testing and assisted service delivery should be routine, not optional. Fourth, transparency tools should be linked with audit, evaluation and civic oversight. Fifth, civil service reform and digital reform should be planned together because the state needs people who can manage digital systems, data risks and service design.

For lower-resource settings, the principle that "data moves instead of citizens" can be implemented incrementally rather than through an immediate national super-app. A feasible sequence is to identify one or two high-burden life events, establish legal authority and minimum data standards, connect a limited set of authoritative base registers through reusable interoperability services, pilot a high-volume transaction, retain assisted and offline access, and scale only after measuring errors, exclusion and operating costs. Shared identity, payments, notifications and data-exchange components can then be reused across agencies, reducing duplication and procurement costs (Heeks, 2006; Janssen and Estevez, 2013; OECD, 2020). This staged approach transfers the governance logic while allowing each country to match scope to institutional capacity, fiscal space and connectivity.

At the same time, Ukraine's model should not be copied mechanically. It emerged from a specific combination of factors: strong political leadership in digital transformation, an active IT sector, decentralization, EU integration incentives, war-induced urgency, international support, and a highly mobilized society. Other countries may not have the same conditions. The transferable lesson is therefore not the exact Diia model but the governance logic behind it: make services user-centered, make data move instead of citizens, preserve assisted access, protect trust, and treat digital systems as a shared public capability.

Conclusion

Ukraine's public administration and public service digitization reform is one of the most important contemporary cases of digital public sector innovation. It is important not because it offers a simple success story, but because it shows how digital infrastructure, administrative reform and service delivery can be combined under extreme pressure. The reform has allowed Ukraine to maintain access to many services, support displaced citizens, continue administrative communication, collect data for recovery and increase transparency in reconstruction.

The article's main conclusion is that Ukraine's public service digitization should be understood as a hybrid digital public infrastructure for resilience. The Diia portal and application provide a visible gateway; Trembita and registers provide back-office data exchange; ASCs and

mobile service units provide assisted and territorial access; DREAM and open data support transparency; and PAR provides the institutional frame. The public value of this model lies in continuity, accessibility, integrity and adaptability.

The second conclusion is that digitization is not a substitute for public administration reform. It requires legal procedures, competent civil servants, secure infrastructure, reliable financing, data governance, service redesign and inclusion policies. The weakest parts of the system - outdated registers, cyber vulnerabilities, low digital skills, staffing gaps or inaccessible service points - can limit the value of even the best digital interface.

The third conclusion is that Ukraine's experience broadens the meaning of innovation in the public sector. Innovation is not only the creation of a new tool. It is the capacity to reorganize the state around public value under changing conditions. Ukraine has shown that a digital state can be a wartime service channel, a reconstruction transparency system, a citizen trust mechanism and a platform for future EU integration. The challenge for the next stage is to consolidate these gains into sustainable, inclusive and legally grounded public administration after the war.

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