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**Digital Adaptive Governance:
The Response to the Wartime Crises in Ukraine**

MA Thesis

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Authorship Declaration

I have prepared this thesis independently. All the views of other authors, as well as data from literary sources and elsewhere, have been cited.

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Abstract

The thesis presents research about adaptive digital governance as a response to the wartime crisis in Ukraine. The study aims to understand the patterns of adaptive governance and digital transformation in public governance and service delivery in Ukraine, and analyse their capabilities to respond to wartime crisis needs. The research purpose examines the extent to which digital services were associated with adaptive governance and the observable manifestations of potential wartime crisis resilience. The thesis employs qualitative research methods: document analysis, content analysis, and semi-structured interviews with experts in the field to answer the central research question: to what extent did wartime digital public services support adaptive governance and observable manifestations of crisis resilience in Ukraine from February 2022 to December 2025? The study utilises adaptive governance theory as its main theoretical framework, complemented by polycentric governance. The research analyses the combination of adaptive governance and digitalisation and its relationship to digital public services in challenging, non-ordinary circumstances. This study can be considered a contribution to the literature, aiming to enrich contemporary academic scholarship, as it addresses a topic that is underrepresented in the literature.

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Introduction

The Russia-Ukraine war is considered the most destructive and powerful conflict in Europe since the Second World War (Frederick et al., 2025, p. 1). This war has had significant consequences and influenced diverse domains of socio-political life, including international relations, alliances, technological developments, and more. The war began on 24 February 2022 when Russia started the aggressive invasion of Ukraine (Kirby, 2026). However, it is not the first time Russia has demonstrated its aggressive, imperialistic nature. For instance, Russia invaded Crimea in 2014, an officially recognised part of the sovereign Ukrainian territory and has been an author of a hybrid war against Ukraine. Currently, the conflict is still ongoing, and the potential end of the war is difficult to anticipate. The outcome of the ceasefire negotiations remains unclear; the first steps towards them were taken in August 2025 (Kirby, 2026).

The war damage has been significant. First and foremost, from the economic standpoint, the war has put Ukraine in severe economic distress (Rogoff, 2022, p. 2). The destruction has been tangible in terms of physical capital and infrastructure. Moreover, millions of people have left the country, and thousands have been killed (Rogoff, 2022, p. 2). The consequences have not only struck Ukraine but have also spread worldwide, triggering a global economic crisis. Therefore, the Russian invasion has caused countless problems, underscoring that this war has been one of the most influential events in recent history.

The war created problems in the public governance and administration domain as well. For instance, the full-scale aggression has forced Ukraine to pause the implementation of some progressing reforms related to the rule of law and public governance (OECD, 2022, pp. 23-24). Despite this impact during the period of martial law, public governance and administration entities continued to function and operate to fulfil their assigned tasks (Nehara et al., 2025, pp. 187-188). The full-scale war has also affected the public service delivery system. The communication infrastructure has been severely damaged, and the physical facilities have been undermined as well (OECD, 2022, pp. 17-18). These conditions revealed new needs, actions and ways to provide the services. It is important to note that during the first days of the invasion, the service delivery system was almost brought to a halt (OECD, 2022, pp. 26-27). Nevertheless, the system adapted, transformed and continues to function despite the extreme circumstances.

Despite the ongoing invasion, Ukraine continues to advance technologically and build a digital system, the so-called “state in a smartphone” (Curry, 2026). The digitalisation process has not only encompassed the public governance realm but has also been a significant part of military reforms, as Ukraine has begun its own military digitalisation (Bondar, 2025). Consequently, the examples mentioned emphasise that Ukraine is considering building a digital state in the future and is actively taking steps to transform the overall agenda. The digital transformation is not only anticipated for the future; it is also part of the present circumstances. These ideas address the significance of digital transformation.

It is true that the features of adaptive governance have been well presented in Ukraine during the war (Gustafsson et al., 2025, p. 9). These features comprise several dimensions and elements, which are further discussed in the thesis; nevertheless, adaptation is considered one of the key factors enabling the maintenance of the functionality of the service delivery system during wartime. The study acknowledges the significance of adaptive governance and digital transformation in the Ukrainian public service delivery system. Therefore, the study focuses on their relationship and presents the synthesis of these two components as digital adaptive governance.

Thus, the aim of the thesis is to analyse how wartime digital public services supported the adaptive governance of Ukraine and, through this process, crisis resilience during the full-scale war. Building on this aim, the research asks the following research question: **to what extent did wartime digital public services support adaptive governance and observable manifestations of crisis resilience in Ukraine from February 2022 to December 2025?** The question focuses on the mechanisms by which digital services emerged in empirical material, along with the practices of adaptive governance, and thus supports the observation of manifestations of crisis resilience. To answer this question, the study employs an embedded single-case study, drawing on document analysis, content analysis, and semi-structured interviews with experts. The first chapter emphasises the literature review and establishes a theoretical framework for the thesis. The second chapter addresses research design and data collection, and finally, the third chapter presents empirical analysis and research results, followed by the discussion and interpretation of research findings.

Chapter 1: Literature Review and Theoretical Framework

The chapter discusses the relevant literature in the fields of adaptive digital governance, digital public service delivery, and appropriate response bridges for addressing crises, relying on the aforementioned concepts. To grasp the features of adaptive digital governance and its practical implications, it is essential to analyse and review the relevant literature in depth. Hence, the chapter addresses those aspects, focusing on and covering the scope.

1.1. Adaptive Governance: Core Features

Adaptive governance is a comprehensive topic that can be perceived and examined from various perspectives and approaches. This breadth can be considered an advantage for this concept; however, some may argue that complexity renders adaptive governance incomplete. Nevertheless, the idea of adaptive governance is indeed profound and interesting, prompting us to delve deeper and draw certain conclusions. Thus, the subchapter discusses the ambiguities, characteristics, and digital aspects of the concept of adaptive governance.

The general understanding of adaptive governance is closely tied to environmental problems and social-ecological systems. Many scholars refer to natural, ecology-induced crises and cataclysms while addressing this concept. For instance, Chaffin, Gosnell, and Cosens (2014) state that “Adaptive governance is an emergent form of environmental governance that is increasingly called upon by scholars and practitioners to coordinate resource management regimes in the face of the complexity and uncertainty associated with rapid environmental change” (p. 1). Moreover, other scholars, such as Sharma-Wallace, Velarde, and Wreford (2018), agree with the aforementioned perception of adaptive governance and claim that: “Adaptive governance has emerged in the last decade as an intriguing avenue of theory and practice for the holistic management of complex environmental problems” (p. 174). It is evident that most academics analyse adaptive governance as a complementary framework for managing environmental governance. For example, other sources of literature also propose a similar understanding of adaptive governance. Hatfield-Dodds et al (2007) present the idea of adaptive governance from two perspectives. One point of view argues that adaptive governance is applied to ecological systems and natural resource management, while another perception encompasses the study of self-governing institutions (pp. 5-7). Consequently, the inference is

clear. The general emphasis of adaptive governance has emerged from environmental and ecological system governance procedures, challenges, and strategies for overcoming them. The most important feature in this field is that adaptive governance is regularly exploited to manage something unexpected, uncertain and complex.

It is crucial to mention that adaptive governance is designed to address not only environmental crises and issues. The academic literature on this framework is very abundant and contains examples, practices, and features of adaptive governance in many other fields of socio-political life. “Beyond environmental policy, examples of adaptive governance have emerged in other areas of policy” (Brunner, 2010, p. 315). This argument by Brunner supports the assumption mentioned at the beginning of this subchapter, that adaptive governance is a rather universal principle that can be applied with diverse management strategies and fields. Additionally, there is another crucial claim to address the complexity and universality of adaptive governance. Wyborn (2015, p. 57) indicates that adaptive governance interconnects the realms of politics, society, economy, and ecology. Thus, Chaffin et al. (2014, pp. 7-8) also claim a similar understanding of adaptive governance, arguing that it is not an exclusive concept and can therefore be used to explain resilience, stakeholder interactions, and organisational dynamics. As it is visible, adaptive governance can be utilised in different contexts. However, one domain in which adaptive governance has flourished and solidified its presence is policymaking and public governance. For instance, diverse scholars have studied the impact of adaptive governance in public governance. One of them, Brunner (2010, p. 303), has stated that the presence of adaptive governance is a response to comprehensive policy issues in our time. The author continues with it and argues that “Consider in turn information technology, national security, development aid, and health care policy” (Brunner, 2010, p. 315). Hence, adaptive governance is an essential and well-recognised mechanism in the policymaking field.

Thus, while adaptive governance has originated in environmental management, this academic literature review adopts the broader conceptualisation that applies its principles to public policy and digital governance.

Adaptive governance also has distinct features in the policy field. Academic literature suggests diverse approaches within its characteristics; however, the most notable consensus is that almost every scholar agrees on several elements of adaptive governance. For instance, one of the key characteristics of adaptive governance is that it differs from traditional top-down

hierarchical governance systems; on the contrary, it offers alternatives to governing (Juhola, 2023, p. 3). This idea is also highlighted by Janssen (2022) as the author articulates the following narrative: “Although governance might be associated with hierarchy and control, a broader and richer view should be taken to associate governance also with adaptability” (p. 7). Therefore, she also claims that adaptive governance promotes the existence and operation of diverse governance modes.

Another feature of adaptive governance is that it emphasises the involvement of different stakeholders and uncertainty (Nelson, Howden, & Smith, 2008, pp. 590-591). Response to uncertainty is one of the essential components of adaptive governance, as adaptive governance is a process of accepting uncertainty through proper preparation and readiness for change (Janssen & van der Voort, 2016, p. 3). Consequently, the framework of adaptive governance allows for alternative possibilities to tackle the crisis and uncertain situations. Readiness and preparation are also key. Uncertainty can occur in many ways in the contemporary world. Therefore, it is vital for the adaptive governance system to enhance eagerness and also contribute to empowering the learning environment in the face of uncertainty (Chaffin, Gosnell, & Cosens, 2014, pp. 5-6). Adaptation should result in some rigorous consequences to ensure the system is well-prepared for future unpredictable conditions. For this reason, adaptive governance intends to establish strong, resilient systems (Rijke et al., 2012, p. 80). Resilience can be promoted through decentralisation and shared rights and responsibilities for resource management (Rijke et al., 2012, pp. 80-81). This mechanism demonstrates how adaptive governance can contribute to the establishment of resilient systems.

The aforementioned analysis of academic literature suggests that resilience can be achieved by adaptive governance. Adaptive governance can contribute to the resilience of the system. Therefore, the resilience can be perceived as an outcome of well-established adaptive systems. Resilience refers to the ability of a governance system to defy external disturbances while maintaining its core functions and objectives (Keudel & Huss, 2025, p. 2). Resilience is a consequence of a trigger event, a crisis which uncovers the system’s vulnerabilities and rattles its functionality (Keudel & Huss, 2025, p. 2).

Adaptive governance also encompasses complexity. Nelson et al. (2008, p. 590) underscore this line of reasoning, emphasising the recognition of behavioural complexity and the importance of grasping local contexts in defining the features of adaptive governance.

However, it is essential to distinguish between complexity and uncertainty. According to Janssen and van der Voort (2016, p. 2), complexity refers to a context in which there are many interrelated aspects that need to be taken into account, and it is not possible to view all of them simultaneously. Uncertainty, on the other hand, is connected with the inability to consider all the requirements in advance due to the many changes that occur. Nevertheless, uncertainty often arises in conjunction with complexity. Consequently, many scholars who address adaptive governance often consider uncertainty and complexity as closely related aspects, which often cause one another and therefore frequently occur concurrently.

As an adaptive system entails robust responses and transformations for overcoming uncertainty, this concept also underscores the engagement of diverse stakeholders. For example, the involvement of many interest groups is a key component of adaptive governance, as noted by many authors. The cooperation and acknowledgement of the capabilities of multiple diverse stakeholders are essential aspects of adaptive governance (Janssen & van der Voort, 2016, p. 4). The operation of multiple stakeholders, the transformation of traditional top-down hierarchies, combating uncertainty, and overcoming complexities seem fairly comprehensive to conduct.

There is another core feature of adaptive governance which represents a crucial integrating element. Janssen and van der Voort (2016, pp. 3-4), drawing on Brunner and Lynch (2010), argue that decentralisation is a critical characteristic that highlights the idea that, during the adaptation process, decentralised organisations are more effective in addressing issues than traditional top-down systems. Hence, the effective functioning of all the aforementioned elements is key to relying on adaptive governance in uncertain and crisis situations. Successful exploitation of this approach can benefit in fostering public service delivery, due to the fact that: “adaptive governance can be fostered through collaborations between government and civil society in co-producing and delivering public services under crises conditions” (Gustafsson et al., 2025, p. 2).

Eventually, the abovementioned review of academic literature has outlined the key features of adaptive governance. It is evident that most scholars stress the importance of responding to uncertainty and complexity, decentralisation, engaging diverse stakeholders, empowering the learning environment, and resilience as core characteristics. These aspects contribute to the sophistication of an adaptive system, resulting in a crucial outcome: the establishment of a resilient system. Hence, the thesis defines adaptive governance as follows:

Adaptive governance is a public governance system that utilises decentralisation, engagement of diverse stakeholders, and an empowering learning environment to respond to uncertainty and complexity, thereby building a resilient system to face crises.

Characteristic	Substance	Importance
Response to uncertainty and complexity	Preparation and readiness towards complex, unpredicted issues	Results in the establishment of robust, resilient systems to face crises
Decentralisation	Different from traditional top-down hierarchical modes of governance. Offers diverse modes of governance	Allows for flexibility, consequently leading to more effective response
Engagement of diverse stakeholders	Involvement, cooperation and coordination of diverse interest-groups and stakeholders in the process of fighting crises	Involvement of many stakeholders makes easier to tackle crises
Empowering learning environment	Gathering knowledge from previous experiences	Comprehensive knowledge enables gradual, step-by-step development
Resilience	Well-preparedness of the system in the face of uncertainties and crises	Gives an outcome of a resilient system able to face unpredictable crises

Figure 1. The core features of adaptive governance

Source: created by the author

1.2. Digital Governance and Public Service Delivery

The relevance of digital governance encourages scholars to research this phenomenon, deepen their understanding, and provide analysis on how it actually functions. Thus, the subsection addresses academic literature in the realm of digital governance and its impact on public service delivery. Most scholars conceptualise digital governance in a similar way, for example: Digital governance is a mode that encompasses the significant exploitation of

information and communication technologies (ICTs) by administrators, enterprises, and citizens. The purpose of those is to enhance service provision quality, transparency, openness and also promotion of sustainable development (Charalabidis, Flak, & Viale Pereira, 2022, p. 13).

Before delving into the academic literature discussion, it is important to understand why digitalisation is a significant topic to discuss and whether it truly enhances public service delivery. Academics perceive and consider digitalisation as a highly influential factor on enterprises, upstream and downstream operators, consumers, ecosystems, and networks (Jacobides, Cennamo, & Gawer, 2018, p. 2257). Digitalisation has been successful in general. It has also enabled logistics enterprises to explore new possibilities and ideas (Li et al., 2022, p. 8). The authors also claim that several challenges are posed against digital governance, one of which is digital adaptive governance. As Li et al. (2022) react, the major function of digital adaptive governance is: “to monitor digital services and describe threats brought by digitalization so as to control digitalization risks through corresponding governance technologies, reduce losses caused by digitalization failures and effectively avoid digitalization paradox” (p. 4). According to the aforementioned authors, the dimensions of digital adaptive governance are elaborated upon, with three primary identifications. The first one encompasses the evaluation and gathering of knowledge with the intention of fostering scientific research on digital threats and risks. The second dimension addresses the enhancement of coordinated governance and the establishment of patterns of multi-faceted co-governance necessary for confronting systemic governance challenges posed by risk. The primary purpose of this dimension is to enhance the platform's accountability. The third and final dimension highlights preventive measures and actions essential for mitigating the severe consequences of emerging risks (Li, Feng, Han, Gupta, & Kamble, 2022, pp. 4-5). The aforementioned review showcases the essence of digitalisation, highlighting its relevance in various fields.

Furthermore, one of the main driving forces behind the popularity of digitalisation has been the global coronavirus pandemic (Milakovich, 2021, p. 9). This process encouraged the utilisation of ICTs even more. This kind of development established greater influence as: “ICT-enhanced changes in economic, political, and societal relationships are facilitated by the integration of less labor-intensive and more cost-effective digital internet communication systems” (Milakovich, 2021, p. 8). Hence, this transformation affected the political domain as well. For instance, the public governance systems shifted from hierarchy-driven, traditional,

centralised governments to more customer-oriented, decentralised systems (Milakovich, 2021, p. 14).

Ultimately, it is interesting to grasp how digital governance works in general. To address this concern, it is important to understand the substance of the matter. The scholars agree on a definition that digital governance refers to the exploitation of ICTs by the government with the purpose of governing (Wong & Chu, 2020, p. 46). Digital governance is the same as e-governance. Moreover, this mechanism also contains some crucial aspects. For example, Idzi and Gomes (2022) demonstrate the idea of Pollitt and Bouckaert (2011) regarding the core elements of digital era governance. Pollitt and Bouckaert (2011) draw on Dunleavy et al (2008) and suggest those dimensions, such as reintegration, which refers to the ability of digital technologies to support unification of fragmented government; needs-based holism, indicating the usage of technologies to basically simplify the relationship between governments and citizens; and digitisation, referring to electronic elements and channels used to substitute traditional ones (p. 429). Furthermore, there is a significant difference between e-government and e-governance according to Idzi and Gomes (2022): “The difference between e-government and e-governance is that the former deals with using ICTs to allow governments to communicate between bodies and society. Among them, e-governance refers to ICTs that are used to boost democratic participation” (p. 429).

Another significant aspect of digital governance is that it addresses institutional arrangements, regulatory frameworks, and the capabilities of citizens necessary for efficient management of digital systems (Chowdhury, 2022, p. 225). There is evidence that digital governance is tightly linked with state capabilities and citizens’ engagement in the policymaking process, as decentralisation and a bottom-up approach showcase this feature. The author also employed adaptive governance as a theoretical model to analyse the digital transformation (Chowdhury, 2022, p. 228), which highlights the close connection between adaptive governance and digital governance. The final implication of his paper underlines the essence of digitalisation in the context of crisis and uncertainty: “Rapid digitization of public services including e-health, digital identity, financial aid, and pandemic dashboards played a critical role in maintaining administrative continuity and public trust during COVID-19” (Chowdhury, 2022, p. 238).

Consequently, when it comes to the needs and demands of citizens, it is crucial to note that digital public services must be trustworthy and reliable, as citizens are the primary users

of these services and require a secure environment. Hence, Xanthopoulou, Antoniadis, and Avlogiaris (2023, p. 462) argue: “the quality of digital services has a strong positive impact on digital governance and safety-trust”. Thus, the quality of digital services and their delivery also play a crucial role in this context.

Moreover, as mentioned above, digital governance enhances and fosters several aspects of public administration; however, the most important question is whether this also applies to the enhancement of public service delivery. The academic literature regarding this idea suggests some evidence and findings which demonstrate the efforts of digital transformation with regard to public service delivery. Chen (2017, pp. 9-10) states that digital governance contains multiple dimensions that should be considered by public managers and administrators. Those dimensions can be understood by distinguishing the traditional concept of digital governance and e-government, especially in the contemporary Web 2.0 era. The cornerstone of digital governance involves efficiency and effectiveness, with transparency, inclusiveness and sustainability. The author continues with an example: “efficiency in service provision, such as electronic filing of tax returns that interfaces directly with citizens, is a core value promoted by e-government. Digital governance extends the list of core values to transparency, which further promotes citizen participation in generating and evaluating policy ideas” (Chen, 2017, p. 9).

Additionally, it is crucial to understand how digital service delivery contributes to overall crisis resilience. Resilient information technology (IT) strategies and operations can be seen as a foundation for effective governmental response and crisis management (Pemmasani & Nasaruddin, 2022, p. 154). The authors also emphasise the key elements for maintaining a secure posture and mitigating risks. They mention collaboration and public-private partnerships. Those aspects are also features of adaptive governance, consequently suggesting an assumption that robust, appropriate digital public service delivery can also stress adaptive governance elements as necessary means. Hence, this kind of connection is even tangible after the following idea: “Resilience in IT is an ongoing process that requires continuous adaptation, investment, and learning” (Pemmasani & Nasaruddin, 2022, p. 157).

Digital public service delivery can enhance crisis resilience and facilitate adaptive governance. There are diverse approaches that attempt to establish powerful systems while facing risks; however, many scholars focus on digital public service delivery. For instance, Casalegno et al (2023) state: “resilient configurational approaches necessarily stem from the

adaptation of existing knowledge and resources, even knowledge and resources originally thought to serve other scopes” (p. 9). Thus, adaptation and constant learning ensure resilience.

Nonetheless, there are certain elements and approaches that are primarily significant in terms of ensuring resilience. For instance, Szymaniec-Mlicka (2024, pp. 585-586) in her paper suggests that digitisation (a component of digitalisation) enables a more effective response to crises, adaptation to changing environments, and maintenance of continuity in the public service delivery sphere. This idea underscores that digitalisation can foster service delivery and ensure more resilience. This is very important for the long-term process, which is evident in the following argument: “Ultimately, digitization not only supports the immediate recovery and adaptive resilience of public organizations but also enables their long-term transformative resilience, positioning them to thrive in an increasingly complex and dynamic world” (Szymaniec-Mlicka, 2024, p. 587).

Another paper addressing the significance of digital public service delivery in relation to crisis resilience draws a striking inference. The study by Salam and Rosalin (2025, p. 35) outline the role of digitalisation in Indonesian public sector and thus state, that technology based governance systems and digital platform operation Indonesian public institutions enhanced their capabilities to maintain services, adapting to crises, and providing effective response to crisis-induced demands, due to the nature of technologies in terms of improved transparency, quick decision-making, and inter-agency collaboration, serving as central features of organisational resilience. Additionally, when it comes to the role of digitalisation during crises, Hamed (2025, p. 32) demonstrates key findings of his study on the continuity of public services during crises. The author emphasises institutional resilience, claiming that the institutions capable of adapting under pressure are more likely to sustain service delivery. He also argues that decentralisation and adaptive leadership are core elements for enhancing responsiveness. He draws on evidence from Ukraine and Rwanda to support his argument that technology facilitates continuity of service during disruptions and that digital tools are crucial for maintaining operations during periods when physical services are unavailable.

Moreover, digitalisation can truly enhance crisis resilience and incorporate adaptive governance elements in this process; however, the central point of the thesis is to determine if this approach also applies to war crises and specifically war-induced crises in Ukraine after Russia’s full-scale invasion. Mamediiieva and Moynihan (2023, pp. 1512-1513) argue that the Ukrainian government tried to launch digitalisation reforms even prior to the war, but the war

itself made it more relevant to move towards digital technologies, not only for the country to defend itself, but also to anticipate the future. The crisis resilience and digitalisation during wartime are very specific; nevertheless, according to the authors, they pose outcomes that can become critical in this complex period. The key inference contains the following emphasis: “While we focus on digital resilience in the context of a military conflict, the concept has clear relevance for the functionality of the administrative state when residents face other extreme situations, such as natural disasters, environmental crises, mass migration flows, or major public health events” (Mamediiieva & Moynihan, 2023, p. 1516).

Ultimately, crisis resilience can be achieved with digitalisation. Digital public service delivery can play a significant role in establishing strong, robust, and resilient systems that can anticipate future risks, respond rapidly to crises, and act according to citizens’ demands and needs, even during periods of war.

To summarise, according to the literature, digital governance has emerged as a crucial mode of governance in the contemporary world. The past experience with the COVID-19 pandemic crisis underlines the ability of digital governance to tackle crises and maintain public service delivery. Thus, the thesis views digital governance as a mode of public governance that entails the widespread use of ICTs and digital tools in the governance process, transforming traditional public service delivery into a technology-based condition. It follows that the integration of digital governance into the public governance system can result in the following progression: Digital governance enables digital public service delivery, ultimately making the system generally strong and resilient.

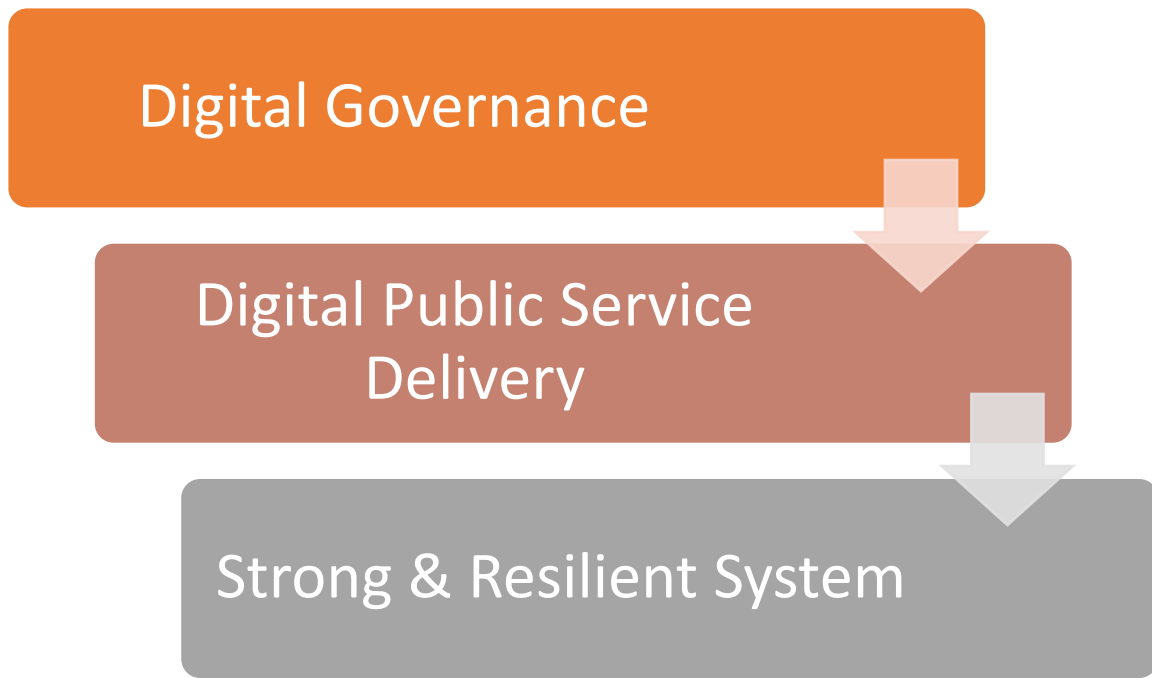


Figure 2. The influence of digital governance on public service delivery and public administration

Source: created by the author

1.3. Digital Adaptive Governance: Digital Aspects of Adaptive Governance

The focal point of the thesis is not merely the concept of adaptive governance, but rather its digital features, that is, digital adaptive governance. The concept of adaptive governance has gradually evolved and expanded with various dimensions (Wang, Medaglia, & Zheng, 2018, pp. 307-308). The contemporary world order somehow urges adaptation. The argument by Janssen (2022) justifies this claim as: “Also, innovating and dealing with new technology developments like artificial intelligence (AI) and Internet of Things (IoT) results in the need to adapt by governments” (p. 3). The author highlights the demands and perspectives of modern society by referencing innovations and crises, such as the COVID-19 pandemic and the forging of AI. Thus, in the contemporary socio-political system, adaptive governance has been complemented with digital components as well. Janssen and van der Voort (2016, p. 3) propose an idea for comprehending adaptive governance in a digital governance context: “a principle providing strategies for dealing with uncertainty and adapting to changes originating from the

environment”. While Wang et al (2018) argue that there is yet to be a universal definition for digital adaptive governance invented, they still draw on the paper of Janssen and van der Voort (2016) and suggest the following: “transferring the concept of adaptive governance to the digital government context requires bringing to the foreground the need to achieve flexibility and responsiveness, while at the same time maintaining the attributes of stability and accountability required in public action” (pp. 306-308).

There is an additional key principle necessary for digital adaptive governance, which involves efforts to mobilise external and internal proficiencies, decentralised decision-making, and wider participation, crucial for spotting and internalising developments and making constant longitudinal adjustments to cope with uncertain situations (Janssen & van der Voort, 2016, p. 4). The inference is clear – adaptive digital governance is a rather comprehensive objective. Furthermore, Oldman (2025) suggests that adaptive digital governance extends beyond the scope of industrial governance to encompass cornerstone institutional mechanisms. The author states this approach as follows: “The empirical results confirm that adaptive system maturity and participatory cycles are decisive drivers of resilient, inclusive digital transformation” (Oldman, 2025, p. 38). This presents a new possibility for policy architects, as adaptive digital governance emphasises the readiness, usability, adaptability, and auditability of every lesson, scenario, and benchmark, underscoring the resilience of governance and sustainability, as well as the inclusiveness of innovation, both present and future (Oldman, 2025, pp. 34-35).

The first subchapter emphasised the ability of adaptive governance to tackle crises across several governance alternatives; Therefore, this cannot be accomplished without appropriate instruments. Hence, due to the mentioned concern, Janssen (2022, p. 7) affirms that: “Adaptive governance requires the embracing of a diversity of governance instruments. There should be a sufficient variety of governance instruments to deal with the variety of uncertainties”. The presence of a variety of governance instruments can be leveraged through digitalisation, as the diversity of digital tools can be utilised to establish diverse governance instruments.

The role and degree of performance of adaptive digital governance have been well showcased during the COVID-19 pandemic. This was an era of uncertainty, crisis management, and the need for rapid decisions and adaptation. That’s why the authors, Gewald and Wagner (2022, p. 32), provide insights into COVID-era adaptive digital governance based on their

research. The authors discuss the potential recommendations for organisations moving to adaptive IT governance and thus assert the following: “it is possible to move to an adaptable IT governance system that incorporates formal and relational governance. Such a system will ensure adherence to regulatory requirements and risk mitigation while simultaneously enhancing flexibility and enabling better decision-making” (p. 33-35). Hence, we can anticipate that the future of adaptive governance will primarily include digital technologies. This is a central inference for Wang et al. (2018, p. 319), as they foresee the role of digital technologies as the vanguard regarding empowering governance configurations that can secure adaptiveness.

Ultimately, adaptive governance is indeed a comprehensive concept that can be applied to different contexts; however, the core characteristics of adaptive governance emphasise its importance and degree of capabilities. From my perspective, the aforementioned literature review revealed the core value of adaptive governance, which lies in its robust response potential towards complexity, uncertainty and crises. Contemporary issues require not only relevant actions but also readiness and resilience in anticipation of future threats and risks. The aforementioned examples of the COVID-19 crisis also underscore the importance of system robustness in the face of unanticipated crises and the urgency of future steps necessary for overcoming future crises. Hence, modern public policy challenges can be unpredictable and comprehensive, and in addition to that, we now live in a world where technology is flourishing and is involved in almost every aspect of social life on a daily basis. Consequently, the characteristics of digital adaptive governance make it a suitable governance option for the contemporary agenda.

Digital adaptive governance incorporates the use of digital tools in the adaptation process. Decentralisation, along with a response to uncertainties, remains a key aspect; however, the integration of digital tools enhances the system's flexibility, robustness, and preparedness for both anticipated and unpredictable risks. Thus, the thesis conceptualises digital adaptive governance as a governance system which features decentralisation, is able to withstand uncertainty, complexity and crises via digital governance mechanisms.

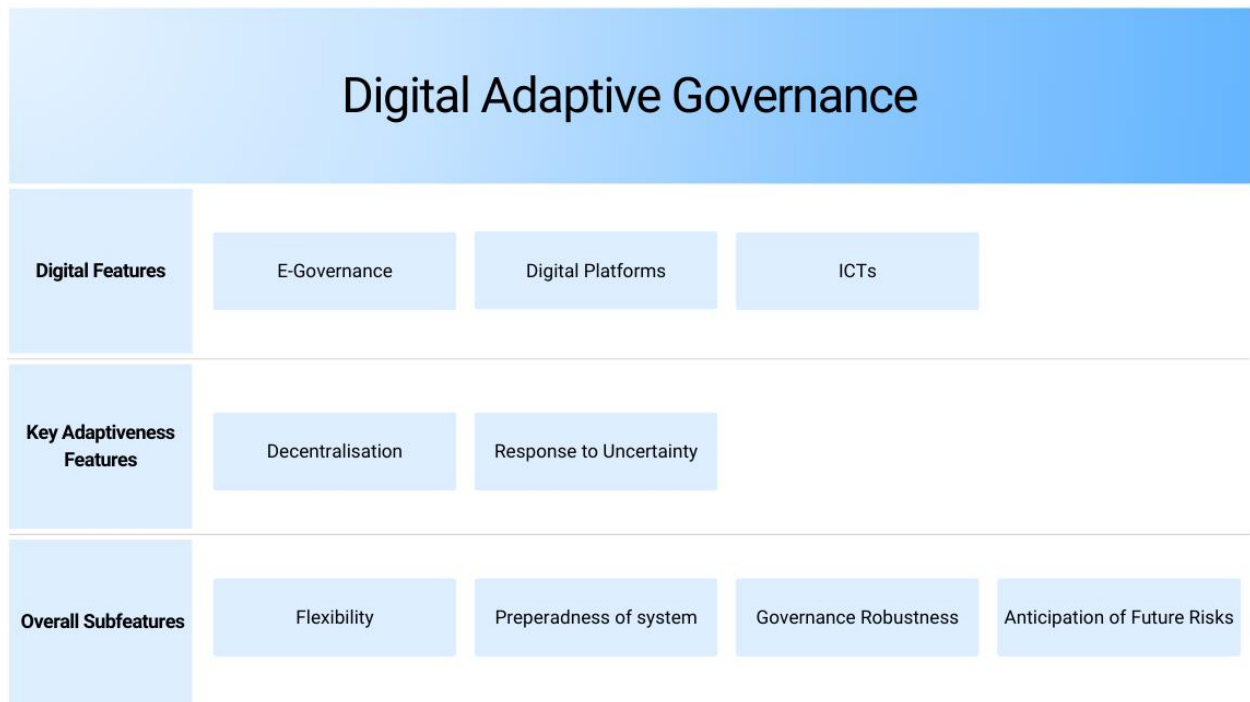


Figure 3. The digital components of adaptive governance

Source: created by the author

1.4. Digital Adaptive Governance as a Tool for Crisis Resilience

The previous subchapters reviewed relevant academic literature regarding adaptive governance elements, their digital aspects, and their role in public service delivery. Nonetheless, another crucial component of the thesis pertains to the concept of crisis, particularly war-induced crises in general. Consequently, this section reviews academic literature related to crisis response through digital adaptive governance.

As the previous sections indicate, some academics consider adaptive digital governance to have a strong ability to tackle crises. Hence, the following evidence supports this statement. One of the distinguished scholarly works on adaptive digital governance analysis by Gustafsson et al. (2025, p. 6) highlights the presence of various unpredictable and unstable situations induced by the war in Ukraine. War makes each context completely distinct; therefore, digital public service delivery is affected by it and requires a contrasting approach. For instance, the stakeholders involved in digital public service delivery behave differently compared to those in the normal public governance system. The war crisis compelled new

obligations, roles, and actions. Thus: “The institutional critical juncture that is posed by the war crisis affects the actors, their positions and actions in the action arena, forcing them to reinterpret existing rules and improvise emergency modes of service delivery” (Gustafsson et al., 2025, p. 8). This examination by the authors suggests that crises, and most importantly, war crises, create a unique situation that necessitates emergent measures. This is the central finding behind the mentioned research: digital transformation and adaptation enabled rapid, straightforward, and appropriate measures and decisions in this specific context (Gustafsson et al., 2025, pp. 9-10).

Hence, digital transformation can play a significant role in crisis management at the national and local levels (Bilan et al., 2023, pp. 2-3). Therefore, digitalisation and adaptation can be perceived as effective mechanisms while overcoming crises. The scholars Gavkalova, Akimova, and Akimov (2023, p. 189) uphold this idea by providing examples from their research, such as the ability of digital platforms to track demographic shifts, enabling regional authorities to inform resident policies. Those digital solutions can boost service delivery, enabling more efficient, accessible service. Technologies can be used to access government services, pursue online education initiatives, and engage in digital job seeking, demonstrating the capabilities of technology-based governance to underscore the crisis.

Nevertheless, one of the components of the adaptation is decentralisation, which, as mentioned above, constitutes an opposite system to the traditional top-down hierarchy (Janssen & van der Voort, 2016, p. 3). However, when the crisis strikes, decentralisation can be an issue, as the crisis-induced circumstances require rapid decisions, which may be perceived as non-manageable in a decentralised system (Janssen & Van Der Voort, 2020, pp. 4-5). On the contrary, Hong and Lee (2018, pp. 301-302) suggest an adequate response to this claim, arguing that decentralisation facilitates adaptation to local circumstances, while centralisation supports coordination, which may also facilitate adaptation. The best way to choose is to consider the circumstances and context. This idea has been even strengthened by the conclusions of Janssen and van der Voort (2020, p. 4), who observed and studied adaptation during the COVID-19 crisis and inferred that adaptive governance needs to utilise both decentralisation and centralisation mixture, and the pivotal idea is that these conflicts to be productive for governance and not pose damaging risks to it. Ultimately, it is clear that adaptation accepts risks of surprises, uncertainty and therefore faces crises as this governance model: “assumes the inevitability of dynamics” (Janssen & van der Voort, 2016, p. 3).

Additionally, the study by Toleikienė et al. (2025, pp. 4-6) also outlines the connection between digitalisation and crises-related issues, arguing that the interlinkage of adaptation, consistency, and transformation, and linking them to organisational resilience, can be exploited to overcome crises. This analysis underscores that careful and gradual implementation of digitalisation and adaptation can result in the establishment of a proper instrument which will guarantee resilience even during a robust crisis and uncertainty. However, achieving crisis resilience is a complex process. The valuable instance which underlines this comprehensiveness can be found in the research conducted by Park and Choi (2026, pp. 5-6). The study provides the distinction that digital resilience entails a combination of the following elements: Absorbing the shock, adapting to disruptions, and transforming to a new stable state. Thus, it is evident that the process of facing a crisis and attempting to resolve the crisis requires consistent steps and actions. Eventually, digitalisation can be found as an approach that can navigate this complexity and combat crises. Political systems can use digital governance tools to foster resilience (Pashentsev & Kolotaev, 2025, p. 13). But also, the primary benefit of digitalisation usage in this process is the intriguing argument by the authors: “Resilience in political crisis management extends beyond ‘bouncing back’ to a pre-crisis state; it often involves ‘bouncing forward’ through transformative processes, highlighting its potential as a long-term tool for crisis forecasting and prevention” (p. 5). This idea highlights another feature of digitalisation, encompassing not only coping with present crises but also emphasising resilience in the face of future uncertainties. Ultimately, the central finding by the authors urges political systems to integrate digital governance mechanisms in their public policy domain to ensure and predict crises - “For public policy and crisis management it becomes urgent to integrate resilience as a core principle, acknowledging its value in fostering governance systems that prioritize adaptability and preparedness. ICT solutions like predictive analytics, blockchain, and AI-driven tools enhance anticipatory capacities and foster systemic learning, aligning with resilience’s goals of adaptability and preparedness” (Pashentsev & Kolotaev, 2025, p. 12).

Moreover, the process of digital transformation can be used to build a state which will be characterised by readiness and resilience while facing anticipated crises. This is the idea which is discussed by Raieste, Rebane, Tapupere, and McBride (2024, pp. 15-16). The authors argue that it is crucial for a state to develop robust and resilient digital infrastructure during the digital transformation process. Hence, they offer seven recommendations and suggestions to facilitate smooth transformation and build a resilient system. The first one addresses the

adoption of a digital-first approach to critical public services and registries, as digital registries are more reliable and efficient, particularly during crises. The second suggestion involves transitioning to remote-first and remote-enabled public sector jobs, which would enhance national resilience. Another recommendation is to secure the digital infrastructure and services, indicating that this process will empower cyber resilience through the establishment of obligatory security standards. The fourth idea is to ensure widespread, affordable access and redundant connectivity, which requires a state to explore all possible technological opportunities, thereby resulting in a boost in resilience. Additionally, the next recommendation emphasises building redundancy, potentially extending beyond territorial borders to digital public infrastructure and services, ensuring that the safeguarding process of digital public services is guaranteed by the state. Thereafter, another suggestion is connected to managing third-party risks while preserving technological innovation. This is crucial because those procedures can undermine the risks that threaten a state's digital sovereignty. The final proposed idea emphasises the creation of institutional capacity for developing government resilience. In this process, decentralisation plays a central role; however, a well-coordinated traditional top-down approach is also necessary to prevent cascading failures.

The phenomenon of crisis in the context of governance is understood as a circumstance that transforms traditional, regular conditions and poses risks and challenges to the usual functionality of governance. Therefore, this situation requires a response. This is a case that perfectly illustrates the essence of digital adaptive governance, as this model allows for apparent adaptation, rapid response, and coordinated actions that undermine the disruption and uncertainty produced by a crisis. Ultimately, the core idea of the aforementioned analysis is to empower the state's features and capabilities to withstand a crisis and achieve total resilience.

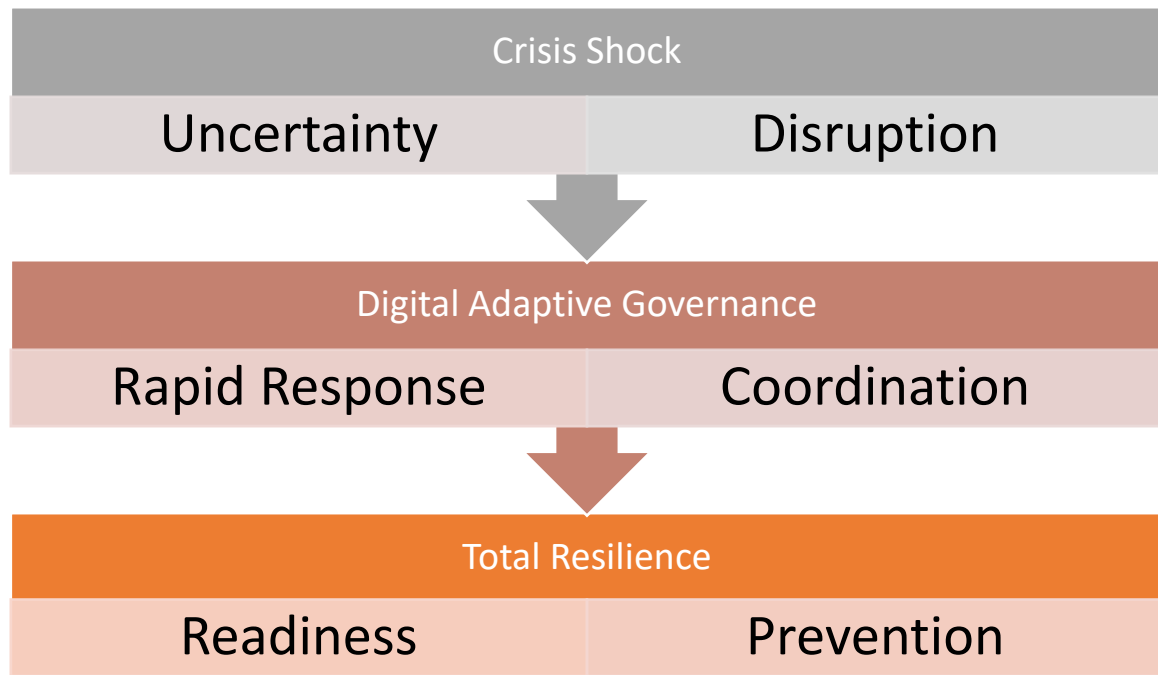


Figure 4. The relationship of digital adaptive governance with crisis

Source: created by the author

1.5. Theoretical Framework

The above-discussed literature review enables drawing conclusions regarding significant findings, gaps, the analytical part, and the relevance of particular phenomena. Thus, the literature review serves as a solid theoretical foundation that guides the thesis in developing its own theoretical framework. The review of academic literature includes several vital contributions, namely the conceptualisation of certain concepts and relationships between the aforementioned approaches and frameworks, as well as features, procedures, and practical implications. Hence, the thesis establishes a theoretical framework which is crucial in terms of further analysis and research credibility.

The general framework of adaptive governance (AG) serves as the theoretical framework of the thesis. As the aforementioned literature review has showcased, adaptive governance is a fairly comprehensive concept; consequently, the thesis employs an understanding of adaptive governance that is connected to public governance and service delivery.

In the realm of public governance and service delivery, the concept of adaptive governance refers to addressing uncertain and complex issues that involve a diversity of stakeholders (Nelson, Howden, & Smith, 2008, pp. 591-592). A crucial characteristic of this mode of governance is the establishment of resilient systems (Rijke et al., 2012, p. 80); thus, it is especially productive in the face of crises, uncertainty, and complexity. It has the capability to resolve ambiguity, unpredictability and crisis-induced risks. Another core value lies in decentralisation, which is an outcome of adaptive governance, transforming top-down governance models into more diverse and decentralised systems with the intention of enhancing effectiveness in the governance process (Brunner & Lynch, 2010, p. 307). Through the engagement of different stakeholders, decentralised decision-making, wide participation and mobilisation of internal and external capabilities, it becomes a well-prepared, robust system while facing crises and uncertainty (Janssen & van der Voort, 2016, p. 1).

The aforementioned analysis highlights the value of the adaptive governance framework and its relevance to the thesis topic. As the thesis focuses on war-induced crises in Ukraine, this framework serves as a relevant contributor to understanding the local context of Ukraine. This is primarily due to the fact that Ukraine has been using adaptive strategies on several occasions throughout the years. For instance, the decentralisation reform, launched in 2014, has played a crucial role in tackling war-related crises (Keudel & Huss, 2023, p. 16). It is essential to mention that the full-scale invasion of Russia in Ukraine created new challenges (Morze, Makhachashvili, Zvonar, Ilich, & Boiko, 2025, pp. 1-2). This situation posed unique calls for action and a need for transformation. Consequently, Ukraine had to adapt and implement various reforms (including digitalisation) in order to achieve crisis-resilience. Moreover, Gustafsson et al (2025, pp. 1-2) note: “The ongoing war in Ukraine has severely disrupted traditional public service delivery, undermining the capacity of both central and local governments to meet citizens' daily needs. Destruction of infrastructure strained public finances, and the escalation of new societal demands — from internally displaced persons, veterans, and families of fallen soldiers — have rendered conventional governance approaches insufficient.” Therefore, it is evident that war-induced crises in Ukraine necessitated adaptation, which has been facilitated by public governance reforms, primarily through digital transformation. The academic literature suggests that there have been prior studies on digitalisation in Ukraine, which can offer valuable insights into the tendencies of the Ukrainian system. For example, Navumau, Gustafsson, and Matveieva (2025, p. 130) suggest: “In Ukraine, technology-mediated citizenship practices enabled the fulfilment of a set of vital

functions amid Russia's invasion". In this process, the first step was to enhance the speed of individual response to a collective threat. Then, they instilled a sense of individual and collective responsibility by teaching Ukrainian citizens to refrain from publicly sharing the locations and photos of missiles. Moreover, they paid attention to the urgency of monitoring the ongoing situation online using diverse sources. Additionally, they encouraged active participation within the community and provided practical solutions to specific needs. Another aspect was the inspiration to share best practices on social media and provide updates about the current situation. They also created sustainable networks based on virtual communication to expand the coverage of initiatives that have been launched. And eventually, they facilitated volunteering in almost every sphere of activity (Navumau, Gustafsson, & Matveieva, 2025, pp. 130-131). This fact emphasises that Ukraine has significant experience in terms of digitalisation. Additionally, Ukraine is not only experienced in digitalisation but also in addressing the features of AG. For instance, another adaptive digital governance feature that has been present in Ukraine is decentralisation. Rabinovych et al. (2024, pp. 1124-1125) suggest that the decentralisation reform in Ukraine made local government units less dependent on the centre and helped enhance preparedness, ultimately fostering resilience. It is essential to mention that decentralisation can play a crucial role in overcoming crises. Rabinovych and Gawrich (2023) conducted research regarding decentralisation in Ukraine during previous conflicts, such as the 2014 Russian annexation of Crimea. The authors argue that the case of Ukraine showcases that decentralisation can be utilised in a conflict situation as a strategy applicable to improve governance, rather than to resolve the conflict (Rabinovych & Gawrich, 2023, p. 1152).

To continue the discussion, adaptive governance circles several characteristics that are also featured in other governance modes. In this thesis, the polycentric governance model is employed as a supplementary theoretical framework. Polycentric governance refers to having multiple centres of authority, both sectoral and territorial (Keudel & Huss, 2025, p. 13). This concept contains three mechanisms: knowledge circulation, resource mobilisation, and experimentation and innovation. Polycentricity has diverse aspects; however, the most significant among them is that this mode entails diverse decision-making centres with limited and autonomous prerogatives that function under an overarching set of rules (Aligica & Tarko, 2011, p. 237). Hence, decentralisation is a core component of polycentrism. Diverse decision-making centres, cooperation, and accountability are necessary for polycentric governance (Stephan, Marshall, & McGinnis, 2019, pp. 32-33). There is no doubt that decentralisation is a

key for a polycentric approach; nevertheless, the relevance of this mode of governance is also underlined by the fact that those essential aspects of polycentricity, such as interlinked cooperation, coordination, conflict and diversity, can also contribute to achieving resilience in the face of a certain crisis (Behnke, 2024, pp. 5-6).

The polycentric governance model is also relevant to Ukraine, given several polycentricity-related reforms that have been implemented in the country over the years. For instance, the 2014 decentralisation reform created a basis for a system of self-governed local units, which proved critical for wartime resilience (Keudel & Huss, 2025, p. 16). Additionally, the autonomy of self-governing authorities has increased significantly in terms of the political and economic domains. As the authors indicate, the integration of polycentricity mechanisms in the Ukrainian system provides evidence to suggest a theoretical linkage between polycentricity and societal resilience (Keudel & Huss, 2025, p. 13). Thus, polycentric governance can truly complement the research as it has its essential mark in the Ukrainian system.

Ultimately, utilising polycentric governance as a supplementary theoretical framework contributes to the research as it is fairly compatible with the primary theoretical framework – adaptive governance. For instance, decentralisation, engagement of diverse interest groups and stakeholders, cooperation and robustness in the face of crises. Therefore, polycentric governance aligns with the aspects of adaptive governance and can also bridge the gaps that the adaptive governance framework will fail to address.

Conclusively, the research exploits the theoretical framework of adaptive governance through the digital lens, supplementing it with a polycentric governance model. The key dimensions encompass decentralisation and decision-making under uncertain conditions. The concept of crisis resilience is studied as a foreseen outcome of adaptive governance, which refers to the ability of digital services to sustain and adapt their performance in times of crises (Mamediiieva & Moynihan, Digital resilience in wartime: The case of Ukraine, 2023, p. 1516). The developed framework focuses on the aforementioned dimensions and supplements the examination through a polycentric governance mode.

To summarise, the study focuses on the digital aspects of adaptive governance in Ukraine. Thus, the literature review section has already demonstrated the alignment of digital governance with adaptive governance; however, it is also important to consider the dynamics and situation regarding this alignment in Ukraine. Ukraine has been actively utilising the means

of digital governance, even prior to the Russian invasion and beginning of war; nonetheless, this process has even increased after the start of war, as the emphasis on digital governance played a huge role in terms of assuring the continuity of governance in the wartime period (Mamediiieva, HKS, 2025). Digital transformation in Ukraine has been a vital process due to several significant factors. For instance, “Ukraine acquiring the status of a candidate for EU membership in 2022, decentralization is a particularly important prerequisite in the transition to a digital society” (Tomashevskaya & Oliinyk, 2022, p. 109). Moreover, digitalisation in Ukraine interlinks democratic decentralisation and digital governance to foster governance security and resilience in times of complexity resulting from the war conflict (Gustafsson et al., 2025, p. 6). Hence, it is clear that digital governance in Ukraine operates through the elements of adaptive and polycentric governance, stressing decentralisation and resilience in a war-affected crisis.

The standalone frameworks of adaptive governance and digital governance have their own features which are very similar and supposedly beneficial for combating crises. However, their incorporation and mixture provide a hybrid model that encompasses digital characteristics, adaptability features, and their influence on public service delivery, which is reflected in increased quality of transparency and accountability, citizen participation, and an overall degree of improved public service delivery. Overall, the digital adaptive governance framework emphasises the core ideas of adaptiveness (decentralisation and response to uncertainty) and digitalisation (e-governance and an ICT-based approach), thereby providing a significant potential outcome: crisis resilience.

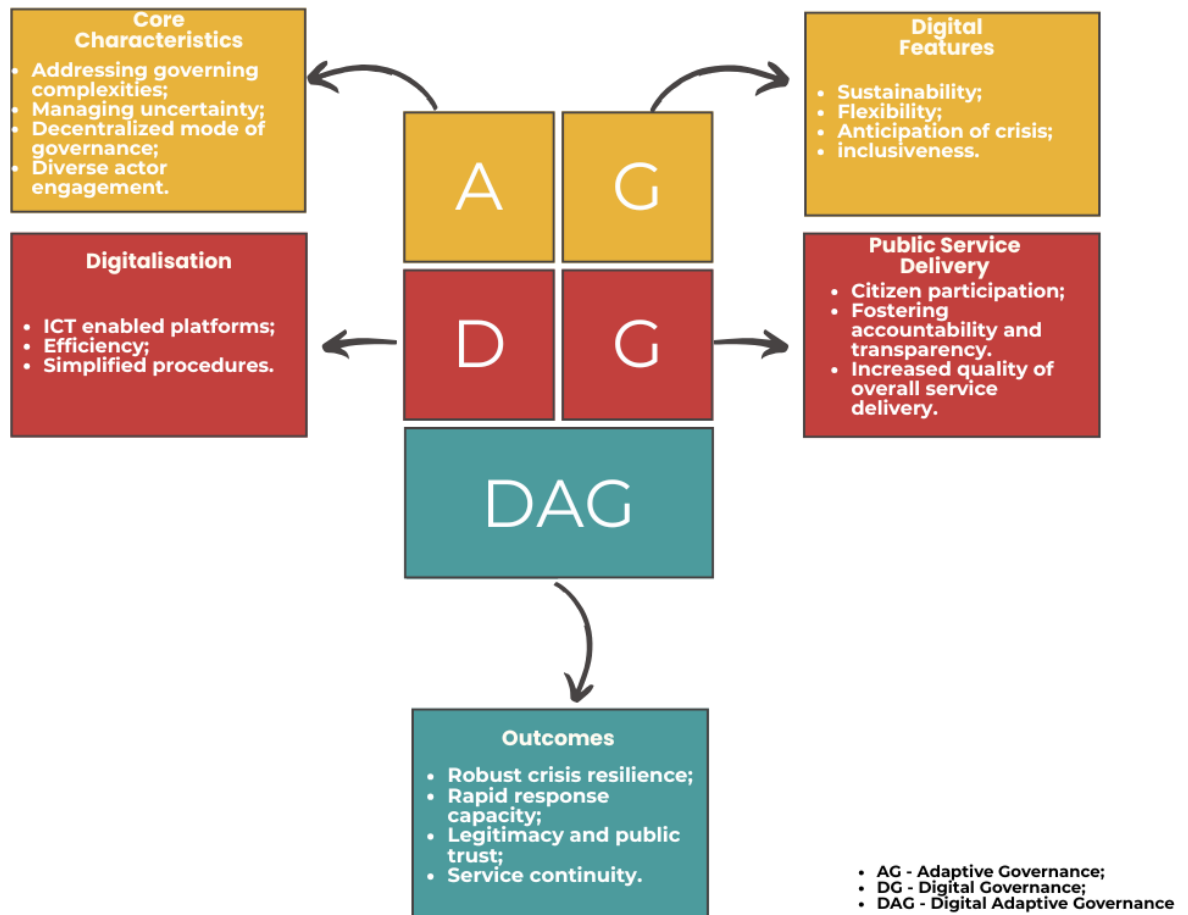


Figure 5. Theoretical framework

Source: created by the author

Chapter 2: Research Methodology and Data Sources

The chapter outlines the research methodology and data sources. The chapter presents the selected methods used for the research, the data sources, and the empirical analysis of the data, which allow for addressing the research problem, answering the research question, and understanding the thesis's focus. The following sections cover the strategies which help to grasp the substance of the matter.

2.1. Research Problem

In order to comprehend the issue behind the focused topic, it is inevitable to address the ongoing full-scale Russia-Ukraine war. The full-scale invasion of Russia into Ukraine began on 24 February 2022 (Kusa, 2022, p. 7); however, this date does not fully capture the war, as Russia had several attempts to fully invade Ukraine even prior to the full-scale invasion in February 2022 (Kennedy, 2025). For instance, Russia invaded and annexed Crimea in 2014, which can be perceived as a response of Vladimir Putin, the president of Russia, to the fact that, in 2014, the manifestations and protests in Ukraine overthrew the pro-Russian president Viktor Yanukovich (Kennedy, 2025). Thus, the history suggests that Russia's aggressive invasion is not a one-time attack, but a well-organised military conquest attempt. Nevertheless, Ukraine has resisted, and the war is still ongoing.

The war can influence multiple domains of the social-political agenda. War is a time period which affects governance in general and causes institutional change (Justino & Stojetz, 2018, p. 1). This circumstance creates a specific condition that transforms the political context, determines new demands, strategies, and urgencies, and ultimately makes it essential to unveil a wide range of activities and services (Justino, 2022, pp. 6-8). Consequently, the invasion of Russia has seriously affected Ukraine, as it led to extensive destruction of social and residential infrastructure, degradation in the economy, and severe losses in the sector of human capital and culture (Fedyk & Fedyk, 2025, p. 168). The war impacted public governance and the provision of digital public services as well, primarily because Russian attacks damaged critical infrastructure and disrupted telecommunications with internet networks in Ukrainian communities (Matveieva et al., 2024, pp. 2002-2003).

Another detail that underscores the problem's relevance is that this kind of research is new in political science. There is a lack of empirical studies on the functionality of digital public services under conditions of war. The literature review in the first chapter identified crucial patterns and tendencies across adaptive governance, digital governance, digital public service delivery, and wartime challenges more broadly; however, the academic scholarship lacks credible empirical studies on wartime digital service delivery and functioning. This presumes that studying war-induced crises in the context of digital governance is crucial for filling a gap in the academic literature.

Moreover, the literature review pinpointed key aspects that address the extent of the linkage between adaptive governance theory and empirical wartime cases. For instance, in the academic literature, adaptive governance is mostly described as a theoretical framework widely used in public governance and administration; however, only a handful of scholars have conducted research on the relationship between adaptive governance and wartime cases. Therefore, the study argues that there is a gap between adaptive governance theory and empirical wartime cases; nevertheless, the thesis aims to bridge this gap and demonstrate that adaptive governance theory can serve as a suitable framework for studying wartime conditions in digital public governance.

Hence, the full-scale, long-lasting invasion of Russia in Ukraine induced some conditions that required urgent resilience, transformation and adaptation. One of the affected realms has been public service delivery. Eventually, the abovementioned facts invoked a crisis in Ukraine, which required an appropriate and effective response.

2.2. Research Aim, Question and Analytical Focus

As mentioned above, the damage caused by the full-scale war has been widespread across many fields, especially in public service delivery. However, the public governance and administration of Ukraine developed mechanisms that maintained service functionality and bolstered resilience during this period of crisis. Therefore, the **aim** of the research is to analyse how wartime digital public services were linked with the adaptive governance of Ukraine and, through this process, crisis resilience from February 2022 to December 2025. In addition, in line with the stated research aim, the following **analytical dimensions** have been identified. As adaptive governance is a complex theory encompassing several aspects, it is crucial to

understand which dimensions of adaptive governance are present in Ukrainian digital public services and, therefore, analyse how its components prevail across these services. Understanding the role of digitalisation in the adaptation process, it is also vital to examine the extent to which adaptive governance and digitalisation are connected to crisis resilience.

Hence, in accordance with the research aim and objectives, the following **research question** has been formulated: To what extent did wartime digital public services support adaptive governance and observable manifestations of crisis resilience in Ukraine from February 2022 to December 2025?

As indicated in the theoretical framework section, the study analyses empirically observable manifestations of crisis resilience rather than measuring resilience as a final outcome. The concepts of digital services, adaptive governance, and crisis resilience are used as analytical categories that guide the empirical analysis. The study ascertains evidence across these concepts using three research methods, as stated below. As for digital services, this concept is examined through the service launch, adaptation and transformation since the beginning of the invasion. Adaptive governance is analysed in terms of its elements and characteristics (decentralisation, flexibility, etc.). Moreover, the observable manifestations of crisis resilience are scrutinised through evidence of service continuity, functionality maintenance, and response capacity.

The purpose does not indicate analysing digital platforms, websites, or services through app analytics, user statistics, or performance measurement, but rather to collect evidence through the research methods discussed below. The triangulation of methods ensures to trace evidence. The evidence is considered strong when the pattern appears in more than one method.

2.3. Research Method and Data Collection

The thesis employs **qualitative** research methodology, exploiting an **embedded single-case study** (Yin, 2003). This is a method which enables examining a comprehensive, holistic picture without losing track of details. This approach emphasises details, particular, distinct components that result in gathering insights and achieving an in-depth understanding. An embedded case study focuses on several subunits of analysis within a single primary case. The topic of the thesis is quite complex and requires an appropriate, in-depth understanding to

answer the research question. Thus, the chosen embedded single-case study approach allows for analysing the aspects of adaptive digital governance as a response to wartime crises in Ukraine. This comprehensive topic encompasses diverse dimensions and components; therefore, the selected methodological approach is relevant to its study. According to Yin's (2003) typology, the example of Ukraine appears critical to study via an embedded single-case approach. Contrary to holistic cases, which focus on one single case and one unit of analysis, the case of Ukraine embodies several units of analysis within a single case. For instance, Ukraine is a single case which incorporates units such as wartime impact, public services, digitalisation, and adaptive governance. Hence, the embedded single-case approach is suitable for the thesis's topic.

The embedded single-case study incorporates **content analysis**, **document analysis** and **semi-structured interviews**. The key **empirical focus** consists of the digital public service platforms operating in wartime Ukraine. They are treated as embedded units of analysis. The central focus is on a platform, Diia, which also serves as the unifier of other relevant public service platforms such as eVorog, eRecovery, and ePidtrymka. These services serve as the main elements of Ukrainian public service delivery.

For instance, the Diia platform is a product of the Ministry of Digital Transformation of Ukraine and offers a range of services, including digital passports, business registration, support for military forces, and driver's licence applications. The core benefit of this platform is that it unites a mobile app, which enables access to digital citizen documents and public services all within a one, unified online portal (Digital State, 2026).

Moreover, an eVorog platform is a chatbot that can obtain data on enemy force movements from Ukrainian civilians and pass it to their armed forces. This chatbot is capable of detecting and monitoring enemy equipment in the regions which are temporarily occupied (Kyiv GovTech Centre , 2025).

As for a platform, eRecovery is a government programme that allows Ukrainians whose homes have been damaged by the war to repair them and receive funds for the repairs through the Diia platform. The process is simple and requires logging in on the Diia platform and joining the eRecovery service (EEF, 2023).

The ePidtrymka platform is also a government-initiated programme that allows Ukrainian citizens to receive 1,000 Ukrainian hryvnias (UAH) in support to help them overcome winter during wartime. The Diia platform serves as the main gateway, allowing

citizens to apply for this programme (CMU, 2024). Consequently, the above-discussed services and programmes are all Diia-based, underscoring the significance of this platform in wartime digitalisation in Ukraine.

The empirical data source is the official documents, policy initiatives, and news provided by the Ministry of Digital Transformation of Ukraine (MDT) (MDT, 2026). In addition, the thesis utilises empirical data from the official wartime reports provided by the Organisation for Economic Co-operation and Development (OECD), which encompass wartime digitalisation and public service delivery per se. The data is derived from the Facebook posts of the following Ministry of Digital Transformation officials: Mykhailo Fedorov, Aleksey Vyskub, and Valeriya. Ultimately, the additional data source for this thesis is collected through in-depth semi-structured interviews with experts.

The **time frame** for collecting the relevant data is the wartime period, February 2022 – December 2025, because the Russian full-scale invasion of Ukraine began in February 2022.

The research utilises the document analysis method. The document analysis approach enables us to grasp the context of the wartime period crisis and adaptive digital governance mechanisms in Ukraine. It allows tracing the process and gathering evidence encompassing the elements of adaptive digital governance and crisis resilience. For document analysis, the research has utilised 10 relevant documents, including official legislative acts, ministry orders, protocols, and reports from international organisations. To ensure the coherence and relevance of those documents, a document corpus list has been created (see Appendix 1). The documents have been selected through purposive sampling, emphasising the timeframe and the mentioned digital services. The coding has been done, which allowed revealing keywords, patterns, similarities and differences (See Appendices 2 and 3). The codes derived through document analysis have been categorised into the following six themes (categories). Hence, the gathered codes have been categorised accordingly, allowing for an understanding of the big picture while classifying them into broader themes (see Appendix 4). The codes have been selected and categorised based on the context and relevance (see Appendix 5).

Using a content analysis approach, the Facebook posts of the aforementioned officials are examined over the specified timeframe. The officials have been selected based on their role, experience and influence on digital transformation in Ukraine. Mykhailo Fedorov has served as a Deputy Prime Minister of Minister of Digital Transformation of Ukraine in 2020-2023, then as a Deputy Prime Minister for Innovation, Education, Science and Technology

Development - Minister of Digital Transformation of Ukraine in 2023-2025 and On 17 July 2025, he was appointed First Deputy Prime Minister of Ukraine - Minister of Digital Transformation of Ukraine, before taking a post of the minister of defence of Ukraine in 2026 (CMU, 2026). He is considered a leader of Ukraine's digital revolution and the youngest minister in Ukraine's history. His main project, among other important reforms, is a "state in smartphone – Diia" (WeForum, 2026). Aleksey Vyskub has served as First Deputy Minister of Digital Transformation since 2019, monitoring the development of public services, Diia and the reduction of bureaucratic burden (MoD, 2026). He contributed to the creation of drone-assault regiments and the development of lower-tier air defence. As for Valeryia Ionan, she held the post of Deputy Minister at the Ministry of Digital Transformation of Ukraine and, later, the post of First Deputy Minister of European Integration at the Ministry of Digital Transformation. She has been an instrumental figure in terms of enhancing the Diia ecosystem, encompassing six projects, of which two have been under her direct leadership (Vital Voices, 2024). Therefore, the selected officials have been the most vocal figures in MDT and, as such, the leaders in implementing digital transformation. The official discourse is analytically valuable for the research because it provides insights into governance intentions. Gives us official arguments, posture, and perspectives on the intentions and initiatives behind governance decisions. Also, official posts can demonstrate the framing of adaptation, the steps taken in this process, and the working procedures for the reforms.

This method facilitates the identification of patterns and insights in qualitative data. The Facebook posts are textual qualitative data, and content analysis reveals patterns and key aspects through coding and further categorisation (see Appendices 6, 7 and 8). The content analysis has been conducted using a hybrid coding approach that combines deductive and inductive methods. The units of analysis of coding are meaning units, which encompass the parts of the text that express a relevant idea (see Appendix 6). Approximately 100 posts have been analysed. The posts have been filtered and selected based on relevance and time frame criteria. For instance, posts that were not published during the study timeframe and posts that were irrelevant in terms of their substance and content have not been included in the analysis. The content analysis focused on posts that address digitalisation, public service delivery, digital platforms, adaptation, wartime governance, and digital service reforms.

The study acknowledges the possibility of positive bias by Ukrainian officials, as they have been members of the Ministry of Digital Transformation and have been involved in developing new digital services, platforms, and projects. Hence, given their contribution to the

mentioned process, the study recognises the potential positive bias of the aforementioned officials.

Furthermore, additional data sources have been collected via semi-structured interviews with relevant experts. The experts have been selected through purposive sampling, meeting the following criteria: expertise in adaptive, e-governance, and digital public services; familiarity with digital services operating in Ukraine; and awareness of wartime and crisis digital governance. In total, 10 interviews have been conducted with relevant experts. The respondents were people with practical experience in digital governance and adaptation, as well as scholars who have been observing and researching the topic for years (see Appendix 10). Hence, the information derived from the interviews encompasses real-time examples, practices, specific facts, challenges, successes, and, in essence, participants' perceptions of the matter. The coding and further categorisation of the interview transcripts have been done (see Appendices 12 and 13). Expert inferences and analysis enriched the data collection process, providing valuable insights and deepening the understanding of the research topic (see Appendix 9). The interviews have been conducted with the experts who have practical experience and work in the public governance sector. In total, the research approached 26 potential interviewees; 10 responded and agreed to participate, resulting in an approximately 38% response rate. The interviews have been conducted with informed consent, and informants have been informed of the ethical considerations of interview procedures (see Appendix 11).

The triangulation of content analysis, document analysis, and semi-structured interviews with experts ensures the reliability of the data, as it has been derived from multiple relevant sources.

2.4. Theory and Empirical Observation

As mentioned in the first chapter, the adaptive governance theory serves as the main theoretical framework for the thesis. It is supplemented with another framework, polycentric governance. Therefore, it is essential to link the theory to the methodology and understand the implications that are observable and researchable. To do this, first and foremost, the theoretical construct mechanisms should be acknowledged. For instance, the theory suggests that decentralisation and uncertainty response are two core theoretical constructs that occur in digital public services and are ultimately linked to crisis resilience. But how do we trace them

methodologically? The previous sections emphasise the methods and data sources, which reveal the evidence through theoretical mechanisms. The theoretical elements, such as decentralisation, become observable through multi-actor involvement, coordination, and local authority autonomy. For the uncertainty response, the analysis focuses on emergency procedures and quick transformational strategies. As for wartime digital public services, the observable indicators include the services that emerged during the war, expansions, launches, and functional domain changes. When it comes to the observable manifestations of crisis resilience, the focus on evidence is on targeted crisis-overcoming precedents and examples of functional and usable continuity. The above-discussed data sources and methods allow for examining these observable evidences and producing the output. The content and document analysis enable tracing evidence, finding patterns, and generalising inferences by working on the data discussed in previous subchapters.

Table 1. Theoretical mechanisms and observable evidence

Theoretical Mechanism	Observable Evidence	Data source	Method
Decentralisation	Multiple stakeholder involvement, diverse local authority decision-making, and coordination.	FB posts, official documents, expert ideas.	Content analysis, document analysis, and interviews.
Uncertainty response	Emergency procedures, quick decisions.	FB posts, official documents, expert ideas.	Content analysis, document analysis, and interviews
Wartime digital public services	Launches of services, Functional domain changes, expanded services.	Official documents, posts, interviews with experts and service webpages	Document analysis, interviews, and content analysis
Manifestations of crisis resilience	Targeted crisis response, continuity of service functionality.	FB posts, documents, Expert ideas.	Content analysis, document analysis, and interviews

2.5. Methodological Limitations

The thesis acknowledges several key methodological limitations. For instance, it is essential to state that the research focuses solely on Ukraine, so this is a single-country study. This fact creates some significant limitations, such as a generalisation issue. Because the study covers only one country, it is difficult to generalise the findings to wartime digital public service delivery across the board, as each state has its own context. Wartime conditions can vary widely depending on the country, duration, damage, the confronting sides, etc.

Additionally, the thesis does not attempt to build any direct causal relationships between the operation of digital services and crisis resilience. The research is qualitative and interpretive; therefore, the triangulation of the aforementioned research methods yields findings and patterns that emphasise the connections among digital services, adaptive governance, and empirical manifestations of crisis resilience.

Also, it is important to highlight that some documents for document analysis¹ have been translated from Ukrainian to English. The auto translation has been utilised to translate a number of Facebook posts during the content analysis. The study acknowledges that the translation may reveal minor inconsistencies; every translated section of the text has been further reviewed and analysed by the author. The content analysis section contains multiple direct quotations that do not reflect the original language but are translations.

Moreover, the research mostly relies on elite-driven and official sources for gathering data. Every method (content analysis, document analysis, interview) encompasses official documents, posts, statements and ideas of official representatives of a certain organisation or domain. Consequently, the data is valid and reliable; however, the lack of user-oriented data still establishes limitations. The research lacks real-life user experience with the mentioned digital public services during wartime. Hence, the study is more official-centred than user-centred.

Another important aspect underscores the constraints of the wartime situation. The war creates conditions in which it is impossible to access certain data and information for security reasons. Some sources have limited access. Difficulty also occurred when trying to reach some

¹ AI has been used to translate Ukrainian documents from Ukrainian to English (OpenAI, 2026).

officials for data-gathering, as some were hard to reach due to power outages or because of their schedules. All of these complications are caused by war, as the research recognises.

Ultimately, working on research that addresses wartime country cases poses certain limitations for the study as a whole, which should be taken into account by future research.

Chapter 3: Empirical Analysis and Results

3.1. Document Analysis

The chapter presents the analysis and findings from document analysis. The inquiry is provided through the thematic categories of the document analysis findings determined via coding and categorisation procedures.

3.1.1. Theme 1: Digital Public Services

First, social needs and citizen-oriented service delivery are key for the Ukrainian government during the war in every domain, including digital public service delivery. The document shows that the Ministry of Digital Transformation of Ukraine has been a powerful advocate for digital transformation in public service delivery, aiming to enhance citizens' lives and promote economic development, with the Diia app and other digital initiatives at the forefront (Bajraktari & Nehrieieva, 2023, p. 9). Digital services appear in documents as important instruments for answering citizens' needs. The demonstration of this process is evident in the document: "Also, in a situation marked by physical barriers, such as landmines and forced migration, digital services are playing a key role in reaching and aiding affected individuals" (Bajraktari & Nehrieieva, 2023, p. 18). So, the digital services are aimed at meeting the needs of citizens who have suffered the most because of the war and at serving as a vital aid to them. Furthermore, the new digital public services aim to operate in terms of inclusiveness and accessibility, covering all layers of society and ensuring equal service delivery. The document emphasises that marginalised and vulnerable people are also very important: "New digital services were created for internally displaced persons to more easily obtain assistance and manage documentation" (Bajraktari & Nehrieieva, 2023, p. 19). This project has offered several e-services to war veterans and people with disabilities, ultimately demonstrating inclusiveness and an effort to encompass as many people with special needs as possible. "These digital innovations are making it easier for vulnerable groups to access essential services and manage documentation" (Bajraktari & Nehrieieva, 2023, p. 19). In this process, the Diia app has played a critical role.

The following document provides a summary of a year of digitalisation in Ukraine. This is the report from the Ministry of Digital Transformation evaluating 2022 and naming it a year of digital invincibility (MDT, 2022, p. 1). In terms of digital public services, this document mostly highlights statistical data on the use of the Diia app, the number of users, and newly introduced e-services. The document indicates that more than 6 million users of the Diia application (MDT, 2022, pp. 2-3). It also shows the number of new digital services launched (more than 39), which deliver aid to the army, conduct surveys, report on damaged properties, assist internally displaced persons (IDPs), etc. The report also addresses cybersecurity enhancements and the total number of users of newly introduced digital public services, such as eVorog. Overall, this document provides a clear example of the significance of digital public services, as evidenced by the statistical indicators.

The documents highlight the historical roots of public services, noting that laws adopted even before the war have laid a solid foundation for future digital public services, including the Diia portal (SIGMA, 2022, pp. 5-6). Moreover, concrete e-services and their roles are also discussed. For instance, the introduction of the digital identity document (eDocument), the eSupport programme, financial allowances for internally displaced persons, and other support strategies and programmes: “Most of these services are related to financial support, which reflects the needs of society in the current situation” (SIGMA, 2022, p. 18). The reflection of society's needs is crucial to consider. This tells us that these sources strongly emphasise societal needs. The most important part is: “These services are also available online via the mobile application Diia” (SIGMA, 2022, p. 18). Thus, the documents do not just discuss public service delivery; they transform the discussion in the realm of electronic service delivery and address the role and practical implications of those services.

To continue with the following documentary sources, another OECD (2024) report finds Diia as a holistic, unique ecosystem that offers online and e-government services across diverse areas, such as education, business, and open data (OECD, 2024, p. 25). According to the analysis, Diia's role and presence in public service delivery are central to public governance and administration. This statement is evident through the following idea: “The new Diia.Engine low-code platform helps speed up the creation of digital public services and the digitalisation of registries, as it facilitates data exchange through “Trembita” (OECD, 2024, p. 27). Ultimately, the Diia platform has been a product of the government’s digitalisation ambitions and the EU’s efforts to support Ukraine's digitalisation during the war.

Furthermore, the role of e-service eRecovery, also known as “eRestoration”, should also be mentioned. This service played a crucial role in this particular enforcement of the resolution, due to the fact that: “for the Restoration of Certain Categories of Real Estate Objects Damaged as a Result of Hostilities, Terrorist Acts, and Sabotage Caused by the Armed Aggression of the Russian Federation, using the electronic public service "eRestoration" (CMU, 2023, p. 1). Restoration procedures can be completed conveniently through the mentioned e-service, which operates under the Diia portal.

In addition, the synthesised analysis of the documents illustrates service continuity, the impact of digital tools, effective service delivery, regional needs, greater convenience, and modernisation. This is evident in the increased usage of digital tools (UNDP, 2025, p. 4) and service continuity despite difficult conditions (World Bank, 2024, pp. 26-27). Also, Diia’s increased role is associated with convenience, cooperation and information exchange (Government of Ukraine, 2024, p. 47). Digital services contribute to the process of regional digitalisation (MDT, 2023, p. 6) and modernisation, which is eventually linked with European Union (EU) requirements (European Commission, 2024, p. 24).

To conclude, across all the documents on the first theme – digital public services - some crucial tendencies are visible. First and foremost, almost all the documents emphasise the role of the Diia portal, which incorporates a number of public services and whose operation, service delivery quality, target groups, and functionality are mostly regarded as the product of Diia and its facilitation. Another pattern is that the digital public services are purposeful and have a special mission. The war environment and circumstances have created conditions which require very particular and precise actions. Thus, these e-services serve to fulfil societal needs arising from war. The statistical data and real-life examples in the documents show that digital services have become both convenient and crucial for citizens. They even tend to develop and expand their use of digital tools in their daily lives. Furthermore, the findings from the document analysis suggest the likelihood that digital services will continue to develop and remain important in the Ukrainian system, leading us to anticipate that they will remain fundamental to public governance and administration in Ukraine even after the war.

3.1.2. Theme 2: Digital Governance

To begin with, it should be mentioned that digitalisation in Ukraine has been going on since 2021, and it has strongly enhanced after the beginning of the war: “Progress in the process of digitalisation has been enormous even in the face of the war that started in early 2021 and the dire humanitarian consequences that it has entailed” (Bajraktari & Nehrieieva, 2023, p. 9). This process has been linked to the introduction of multiple e-services, such as e-recovery and e-subsidies. Despite the war-created challenges and risks, the digital transformation process has not paused in Ukraine, which is evident in the following idea: “While the war has created enormous challenges for Ukraine's digital transformation, it has also highlighted the importance of digital technologies and has further accelerated the digital transformation process” (Bajraktari & Nehrieieva, 2023, p. 10). The rapid pace of digital transformation has brought numerous benefits, including advances in digital services. The digitalisation actions and reforms prior to the full-scale invasion ensured convenience and further transformation, enabling a smooth transition to wartime requirements (SIGMA, 2022, pp. 8-9). One of the pioneering digital services in Ukraine is ProZorro, launched in 2015, which serves as a procurement service (OECD, 2024, p. 61). Pre-war digitalisation processes are considered to play their role in Ukraine’s future abilities as well: “Beyond short-term policy responses, digitalisation also bears the potential of enhancing Ukraine’s overall recovery and long-term modernisation” (OECD, 2024, p. 12).

The progress in e-governance and the consequences of digital transformation can be examined through the number of services funded and introduced by the Ministry of Digital Transformation of Ukraine. These procedures could not have been launched or conducted without coherent steps and actions (MDT, 2022, pp. 5-6). However, fundraising has also been vital in this situation, as approximately 255 million US dollars have been raised on one fundraising platform, not to mention the digital lend-leases, which underscore Ukraine's digital capabilities (MDT, 2022, p. 9).

The process of digital transformation is evaluated positively by the partner organisations and donors of Ukraine. They support the promotion of digital governance and argue that digitalisation can be a crucial characteristic of strong democratic governance systems (UNDP, 2025, p. 3). Digitalisation remains central at the legislative level as well. For example, it is believed that the digital transformation can serve as a driving force of modernisation and, therefore, should be discussed at the law-enforcement level (Government of Ukraine, 2024, p.

68). Modernisation is a key part of EU integration; therefore, Ukraine's digitalisation is not only a temporary state of affairs but also a long-term goal essential for future, more complex stages. Digital transformation is also a component of the European Commission's (2024) EU integration assessment report. The progress is noted in this report as well; however, there is still room for improvement. "Ukraine also started preparatory work on the regulatory framework for radio spectrum policy and further developed its well-advanced e-government system" (European Commission, 2024, p. 72). Hence, Ukraine continues to improve its digital governance mechanisms to build a system that meets the EU's requirements.

To conclude, the second theme of the document analysis presents central ideas on digital governance in Ukraine. One notable and recurring finding across multiple documents is the significance of the digital transformation prior to the war. Most of the documents address digitalisation steps positively before the invasion, emphasising the fundamental importance of previous reforms in transformation and in quick responses to wartime crises. The role of the MDT and the government of Ukraine is also considered one of the major driving mechanisms of digital transformation, as they implement reforms, plans, and actions, and perceive digitalisation as a legislative goal of utmost necessity for future modernisation.

3.1.3. Theme 3: Adaptive Governance

The analysis identified the elements of adaptive governance and their alignment with digital governance in documents. First, it is essential to note the involvement and coordination of diverse stakeholders in the digitalisation process, which have been present throughout the Digital, Inclusive, Accessible (DIA) Support Project (Bajraktari & Nehrieieva, 2023, p. 68). The system and the mentioned support project have shown the following features: "impressive adaptive ability in response to the country's emerging priorities in the wake of the war" (Bajraktari & Nehrieieva, 2023, p. 19). This kind of adaptation emerged as a mechanism linked to the citizen-oriented, war-affected aid delivery described in the previous chapters. This process also encompassed another characteristic of adaptive governance, the empowerment of local authorities: "Some stakeholders suggested that UNDP should place greater emphasis on support for local governments in a bottom-up approach to digitalization" (Bajraktari & Nehrieieva, 2023, p. 21).

The mentioned project was able to address complexities posed by the war and address them effectively through an adaptive approach, which is stated in the following line: “The DIA Support project has had an impressive adaptive capacity, a critical quality that has enabled the project to respond proactively and effectively to the complex and evolving context marked by the war” (Bajraktari & Nehrieieva, 2023, p. 50). Furthermore, a significant feature evident in this document has been readiness for future risks, achieved through the partnerships of MDT and other state partners in digitalising the system and launching new services. This context enriched the system's adaptive capacity and established a well-prepared organisation able to anticipate future risks: “This adaptability has not only made the project resilient in the face of severe and challenging circumstances, but also positions it well for future development and continued success” (Bajraktari & Nehrieieva, 2023, p. 52).

Additionally, decentralisation has been widely emphasised in many areas: “continuing decentralisation of powers (with resources) to local self-government bodies to provide administrative services, and further digitalisation” (SIGMA, 2022, p. 7). This document also demonstrates the first steps of the adaptation during the first days of the Russian invasion: “In order to mitigate the risk factors described above, the Government gradually adapted the system to the new conditions. Service delivery ceased to be unified and standardised throughout the country and differed in terms of territory, time, scope of services and service providers” (SIGMA, 2022, p. 11). The timeline also suggests that a large number of services were adapted during the second month of the war, followed by further adaptive actions. Moreover, the adaptive response included regulations and laws that enabled the government to operate in a more flexible space, leading to another feature of adaptive governance in the face of war crises.

Digitalisation and adaptiveness can enhance many realms of the governance systems. For instance, it can be a driver of economic growth and also a strong asset for resilience and recovery. This can be achieved through the following fact: “Digital tools can enhance overall flexibility and adaptability, and they can increase firms’ resilience” (OECD, 2024, p. 26). Decentralisation efforts are also underscored, as this approach aligns with Ukraine’s broader decentralisation efforts. Overall, coordination with regional units, decentralisation, flexible operational capacity, and adaptability are central to enhancing and boosting digital transformation in Ukraine's social and business sectors (OECD, 2024, p. 43). Thus, these features underscore the role of adaptive governance in such circumstances.

Moreover, the United Nations Development Programme (UNDP) (2025) report also features some adaptive governance components, emphasising the role of multi-level governance as a vital part of democratic governance and the responsibility of local authorities. This idea emphasises the following: “Local authorities in 10 communities were given support in developing recovery plans, complemented by civic oversight, engaging 851 residents and civil society representatives” (UNDP, 2025, p. 5), indicating that decentralisation and diverse actor involvement are presented as related to achieving recovery in the adaptation process.

Coordination and multi-level collaboration are also features outlined in the World Bank (2024) report. The following is noted: “the implementation capacity of and coordination among line ministries, subnational authorities, civil society, community-based organizations, and implementing agencies” (World Bank, 2024, p. 34). Also, the adaptation of service systems as a necessary element for supporting war veterans is emphasised in the context of service delivery adaptation. However, decentralisation and coordination remain central in overall damage and needs assessment in Ukraine (World Bank, 2024, p. 23).

After all, the adaptive governance features manifest in the analysed documents. They showcase the context of war and Ukraine and the complexity between each characteristic. Ultimately, the major emphasis was on decentralisation and the engagement of diverse stakeholders. These aspects were mentioned in many documents, not only as components of adaptive governance but also as a general reform vector for Ukraine. The coordination and collaboration across the multiple levels and layers of socio-political life are central to the adaptation process. And explicitly in the context of war, which is even more complex and creates greater uncertainty, these features become even more crucial. The system’s ability to adapt is perceived as one of the mechanisms for combating war-induced crises, tackling challenges, and mitigating risks.

3.1.4. Theme 4: War Crises

As noted above war environment is specific and it poses multiple risks, challenges and issues to governance systems in general; however, this kind of risks have been very concrete in terms of Ukraine: “While the war has created enormous challenges for Ukraine's digital transformation, it has also highlighted the importance of digital technologies and has further accelerated the digital transformation process” (Bajraktari & Nehrieieva, 2023, p. 10). As

expressed, war has been a significant challenge to Ukraine's digital transformation, per se, resulting in severe issues in adaptive digital governance and service delivery.

The war-induced issues covered the security and safety of the system of public governance and administration (SIGMA, 2022, pp. 11-12). Nevertheless, the system showed all signs of a proper response, primarily due to the following: “The Ukrainian system of administrative service delivery showed itself to be quite remarkable during the war, both in terms of safety and security and in terms of response to the new needs of people because of the war and its consequences” (SIGMA, 2022, p. 27). This kind of approach entailed spreading responses across diverse directions, such as e-services, Diia support, adaptation, and the widening of the administrative service network, which has been successfully accomplished.

The previous paragraphs emphasise that the war poses serious threats and challenges to governance systems, making their management harder; however, digital technologies and digital governance features can play a vital role in addressing these issues and strengthening the system's structure (OECD, 2024, p. 41). Moreover, digital tools can be used as a war-crisis response measure more than other entities because they offer significant improvement capacity, thereby enabling them to serve as powerful mechanisms to weaken war-induced risks (OECD, 2024, p. 47).

Furthermore, forthcoming documents also underscore the extent of the damage caused by the Russian invasion. For instance, the Russian attacks caused severe damage to public and private properties, vehicles and areas, which require restoration, and e-services have been declared to be used to conduct the restoration procedures (CMU, 2023, p. 2). War also forged special needs for veterans.

Ultimately, the damage caused by the war has certainly been significant to most spheres of social and political life, including public governance and administration. To demonstrate this, the numbers can be used to illustrate: According to the United Nations, as of October 2023, 3.7 million people are internally displaced in Ukraine, and 14.6 million require health, protection, and other specific services (Government of Ukraine, 2024, p. 6).

3.1.5. Theme 5: Public Knowledge and Trust

Digital literacy is crucial for raising awareness in terms of digitalisation. Digital transformation will only succeed if society is digitally aware and literate. Thus, the digitalisation reforms also included digital awareness and literacy as key points (Bajraktari & Nehrieieva, 2023, pp. 30-31). A significant number of Ukrainian citizens, especially elderly people, lack the skills and awareness necessary for digital transformation and the use of e-services. Therefore, through digitalisation, these people were able to attend training and specialised courses to increase digital literacy across society (Bajraktari & Nehrieieva, 2023, p. 33). As a result, the progress is tangible as follows: “Considerable progress was made to advance digital literacy, with the goal of reaching 6 million Ukrainians with digital development programmes being achieved end 2023” (OECD, 2024, p. 23). This notable progress has been achieved through the initiative, which also encompasses the Diia platform (Diia digital education initiative). Attention to digital literacy programmes and initiatives has increased further since the beginning of the war (OECD, 2024, pp. 23-26).

Ukraine has taken further steps to empower transparency, digital governance and sustainability. The UNDP (2025) report addresses the mentioned idea as follows: “Ukraine is committed to a transparent, inclusive, digital, and environmentally sustainable future, even as it reconstructs and moves towards EU accession” (p. 1). Moreover, reforms that incorporate digitalisation also promote transparency, inclusiveness, and accountability in service delivery (World Bank, 2024, p. 23).

The Ministry of Digital Transformation of Ukraine is eager to promote digital literacy and has long-term goals, such as: “The Ministry's strategic goal is to involve the population in digital literacy programmes. The latest survey recorded a 13% increase in adults with basic+ digital skills: from 47% (2019) to 60% (2023). Among children aged 10-17, this share is 85.9%. Adults with no digital skills fell to 7.2% in 2023” (MDT, 2023, p. 14).

The promotion of the aforementioned values is crucial for both digital development and EU accession. The document Ukraine Plan (2024) indicates the following: “Inclusiveness, transparency, and accountability are guiding the implementation of the Plan throughout the entire timeframe. Ultimately, the Plan will also foster the political, institutional, legal, administrative, social and economic reforms required to comply with European Union values” (p. 7). Additionally, as for the European Commission Report (2024), transparency is also a key element: “Recently adopted laws on transparency in local self-government and on democracy

at the local level, which is yet to be signed by the President, aim to improve local decision-making” (p. 24).

Ultimately, the analysis has demonstrated that digital transformation reforms can be ineffective without proper public awareness, trust, and transparency. First, the reforms need to be transparent and visible to society in order to gain legitimacy and be launched democratically. Moreover, society should gather knowledge and become digitally aware to benefit from digital services. As indicated, the government of Ukraine and other authorities are doing their best to support digital literacy and aim to achieve significant progress in this field.

3.1.6. Theme 6: Manifestations of Crisis Resilience

The documents emphasise resilience in the context of digital transformation. Some digital transformation reforms can be characterised as achievements in overcoming war-related challenges and demonstrating adaptability and resilience (Bajraktari & Nehrieieva, 2023, p. 22). The risk management has been relevant: “It involved an evaluation of the demands of a wartime environment, which included increased security considerations, resilience to physical damages, and the adaptability to swiftly changing operational circumstances” (Bajraktari & Nehrieieva, 2023, p. 49).

Another manifestation of crisis resilience is the system's ability to be well prepared for future developments and challenges. This is evident in digitalisation reforms and the DIA support project context as well. The adaptability has been akin to consequences: “This adaptability has not only made the project resilient in the face of severe and challenging circumstances, but also positions it well for future development and continued success” (Bajraktari & Nehrieieva, 2023, p. 52). The main feature of the system’s establishment process is as follows: “it's about building a resilient system capable of withstanding not only the significant damages in infrastructure as a result of the war, but also able to adapt to future unforeseen challenges and technological shifts” (Bajraktari & Nehrieieva, 2023, p. 60).

In the process of establishing resilience, the state has played its role. For example, the following: “The State response to war conditions and new challenges in service delivery was fast and efficient” (SIGMA, 2022, p. 27). Also, the war showcased the core advantages of the system of service delivery, such as wide and decentralised work, reliable communication

channels, and laws and regulations that allow the government flexibility. The role of the MDT has been significant in this reform (SIGMA, 2022, pp. 27-28).

Furthermore, to achieve resilience and enhance it across the system, it is vital to leverage digital tools and mechanisms, of course, within the context of digital transformation (OECD, 2024, p. 3). The Ukraine example shows that reliance on the ICT sector can be a pivotal element in establishing a resilient system, as technological advancements are associated with flexibility and rapid responses to the crisis's needs. Additionally, it can also expand post-war recovery (OECD, 2024, p. 23). Crisis resilience has been pursued in many directions, including the effective coordination of the work of local and central governments (UNDP, 2025, p. 3).

The resilience of the Ukrainian system has been evident across many domains of governance, including digital service delivery (Government of Ukraine, 2024, p. 151). However, the key emphasis has also been on the readiness of the AI: “According to the Oxford Governmental AI Readiness Index 2020, Ukraine is the leading AI provider in Eastern Europe. There are more than 2,000 companies developing AI solutions in the Ukrainian market” (Government of Ukraine, 2024, p. 272). Overall, this approach has been one of the reasons the public service delivery system has remained functional. The continuation of service delivery can be perceived as successful (European Commission, 2024, pp. 27-28).

3.1.7. Document Analysis: Discussion

The document analysis identified an idea centred on the purposeful utilisation of specific digital services. For instance, most of the documents contained code that intentionally used digital services to support people who suffered from war and those who experienced specific disadvantages due to the war consequences. Hence, there is a pattern suggesting that digital services in wartime public governance in Ukraine are used in a very tangible, specific, target-oriented, and purposeful manner, ultimately linked with people recovering from and withstanding the crisis. This is important to grasp the relationship between digital adaptive governance and crisis resilience. The adaptation of Diia elements and the emergence of purposeful, user-oriented services illustrate that the combination of digitalisation and adaptive governance is one of the mechanisms connected to wartime crisis resilience.

Additionally, the document analysis findings connect to the literature reviewed in the first chapter of the thesis and to the theoretical framework. First, the literature review presented the core features of adaptive governance, the conditions necessary for adaptation, and the major substance of the digital transformation. The analysed documents contained sufficient codes related to the core features of adaptive governance. For instance, decentralisation has been a major topic in the context of war and crisis resilience in the documents mentioned. The analysis indicates that decentralisation reform has been truly significant for the government of Ukraine even prior to the war, and the importance has risen since the beginning of the war. This finding strengthens the literature review's suggestion that addresses past decentralisation efforts in Ukraine, claiming that this process not only played a vital role in the pre-war era but has also served as a crucial element of wartime adaptation. Consequently, decentralisation has supported multi-level governance, empowering local authorities and ultimately enabling rapid decision-making. The document analysis also includes the engagement of diverse stakeholders in the adaptation process, which indeed could not have been easy without prior decentralisation and multi-level governance reforms. Therefore, these patterns in Ukrainian public governance and administration incorporate elements of the theories that underpin the thesis's theoretical framework – polycentric and adaptive governance. Multiple authority centres and decentralisation are key characteristics of polycentricity, and moreover, adaptive governance, apart from those mentioned aspects, involves coordination, engagement of diverse actors, and addressing uncertainties and complexities.

Moreover, the linkage of digitalisation and adaptiveness has already been mentioned in relation to Diia's digitalisation; however, the document analysis also revealed approximate statistics on Diia users and the number of new digital services launched since the beginning of the war. These numbers emphasise that digital services are among the major contributors to adaptation and, most importantly, that the Ministry of Digital Transformation of Ukraine has played an essential role by launching new digital initiatives, programmes, ideas, and reforms.

In addition, most of the documents highlight resilience in the face of a war crisis. For instance, the analysed documents indicate the presence of multi-level resilience, far-reaching ICT resilience, community resilience, and the ability to withstand the crisis. This kind of pattern is not mentioned without a context (see Appendix 5) as the resilience matter is reviewed in wartime service delivery conditions. These findings address the relationship of adaptive governance to crisis resilience. The above-discussed arguments underscore that adaptive governance has been recognised and utilised in Ukrainian public governance during the war,

and that, ultimately, the digital addition to this mode of governance played its part in establishing a system able to withstand war crises through the aforementioned measures.

Another important idea to consider emphasises that digitalisation and adaptiveness are linked to crisis resilience not only in the field of digital governance but also in other domains. Document analysis revealed several findings indicating that the business sector and civil society also employ digitalisation strategies and adaptive measures to resist the war crisis. This inference leads to the assumption that the aforementioned strategy is one of the general operational frameworks for the government of Ukraine and civil society, and that, eventually, public governance is one of the realms in which they implement this approach. However, the aforementioned premise is not odd, as the documents also demonstrate that digital governance and further digitalisation are a significant direction for Ukraine in its EU accession.

3.2. Content Analysis

The chapter emphasises analysis of the findings, results, and central arguments derived from the Facebook posts of the Officials: Mykhailo Fedorov, Aleksey Vyskub, and Valeryia Ionan.

3.2.1. Primary Analysis

The overall messages from these officials took several directions; however, most were interconnected. It is not surprising that they share the same basic rhetoric, as they are representatives of the common institution and work on shared goals and projects. So, essentially, the core emphasis was on praising digitalisation, highlighting the role of digital transformation in Ukraine as one of the key contributors to convenience and speed. They shared a faith in ICT-based governance principles and were proud of the success and current state of Ukrainian technologies in governance.

The posts addressed the idea that the contemporary social-political environment requires compatible responses, which lie in digitalisation. Officials' frame technologies, focused on convenience, flexibility, and the elimination of time constraints, are a major form of modern governance. Therefore, the current circumstances in Ukraine require all the aforementioned positive outcomes brought by digital transformation. For instance, the quote from December

3, 2025, by Fedorov states: “Artificial Intelligence is the new norm for the state, business, and education”. This claim outlines the significance of technologies and AI in Ukraine and the official's vision, as he cannot imagine a modern state without them. The positive results of digitalisation reflect officials’ support for technology. “With each such electronic transaction, the state becomes more convenient and efficient, anti-corruption and transparent” – (Vyskub, 13 July, 2023). Additionally, the official posts underscored satisfaction with the current level of digital governance in Ukraine and addressed not only the present situation but also future plans and ambitions. For instance, all the MDT representatives mentioned in their posts that they are putting in all the effort to make Ukraine one of the frontrunners of digital transformation in a handful of years. The following quotes emphasise this reasoning:

- “Let's create the most digital and free country in the world!” (Vyskub, 17 June, 2022);
- “Even in the time of war, Ukraine continues to build the most convenient digital state in the world for citizens and businesses” (Fedorov, 26 December, 2025);
- “Ukraine confidently declares its ambitions to become the most digital state in the world” (Ionan, 24 December, 2024).

Also, the common remark in the officials’ discourse emphasised the role of digital services in the success of digitalisation and wartime response. Eventually, Diia has been a mechanism that has facilitated a number of major digital services, and this platform helped deliver appropriate services during extreme wartime conditions. The officials acknowledge that the war created a specific circumstance that requires proper steps to live in those conditions. For example, the following quote from Ionan’s post perfectly illustrates the consequences brought by the war and the role of digital services through the Diia platform: “According to statistics, there are currently about 7 million internally displaced people in Ukraine. In the Diya application, each of those who had to leave their homes can receive a comprehensive service: an IDP certificate and apply for a monthly payment of financial support from the state” (28 April, 2022).

The war has affected millions of people who require various services and seek support across diverse regions of the country. Fedorov’s post states: “Due to the war and life circumstances, not all Ukrainians can personally come to the administrative service centres (CNAPs)” (18 December, 2025). Therefore, the damage is significant and has not gone unnoticed by the officials. Consequently, they are confident in digital services and claim that even under wartime conditions, they can maintain functionality and operate effectively:

“Despite the fourth year of the full-scale invasion, the IT sector remains one of the key drivers of the economy and the largest exporter of services” (Fedorov, 11 December, 2025).

Moreover, another striking pattern throughout the rhetoric of the mentioned officials underscored the essence of international coordination and partnerships with actor states, organisations and groups. Each official’s posts frequently presented photos and statements from summits, forums, and negotiations with various international actors. They all underlined that digitalisation success is also closely linked to international support.

3.2.2. Comparison of the Officials’ Views

It is true that, in the majority of their posts, the aforementioned officials share the common discourse on the role of Diia, digital transformation success, and the essence of technology in governance and public service delivery. Nevertheless, there are some ideas which appeared to be very peculiar for each of them.

For instance, Aleksey Vyskub had the fewest posts during the wartime period and was the rarest amongst the analysed politicians. His rhetoric focused primarily on Ukraine's future, which he described as highly optimistic. He was satisfied with the past and present stance of Ukrainian technologies and public services: “No country in the world has introduced e-services of this level” (9 June, 2023), but maintained confidence in future developments. Interestingly, the future success in digital transformation and e-governance seemed to be correlated with the success in defeating the aggressor state. This is argued in the following quote: “The future of Ukraine is paperless & Putinless” (18 November, 2022). Furthermore, the post-war recovery is also interlinked with digitalisation as per Vyskub: “Digital for freedom is, first of all, our vision of the future of Ukraine as the most free and digital country in the world, the recovery and rapid economic development through digitization, as well as the offer of "digital land lease" to international partners” (14 July, 2022).

International partnerships and the role of aid provided by allies are another focus of Vyskub’s posts. He generally addressed the support from international society and partner states, which have been making significant efforts to provide appropriate assistance to Ukraine in the battle against the occupier. However, the state primarily emphasised by Vyskub has been Estonia, which serves as a model for Ukraine’s digital transformation: “Before the war, Estonia actively supported the digitization of our country, and during the war, it became the best partner

- the country that provides the most financial support in proportion to GDP” (2 September, 2022). Ukraine is willing to become a similar state in terms of digitalisation and transfer the successful reforms and projects from the Estonian experience. Essentially, this is happening in real time with similar reforms appearing in Ukraine: “The experience of Ukraine and Estonia is combined in international projects” (12 September, 2023). The mentioned statements have been the main components of Vyskub’s views. However, this was not exclusive to him, as Ionan and Fedorov also underlined these notions, but these beliefs have been central in Vyskub’s discourse. For example, Ionan also emphasised future development objectives: “We keep moving towards the goal of becoming the top 3 countries in the world in terms of AI development and implementation by 2030” (1 December, 2025), as well as Fedorov: “From the most convenient digital country to the country of innovation and economic freedom” (26 December, 2025), But these thoughts were not necessarily primal drivers of their content.

As for Ionan, adaptation played a notably important role in her rhetoric. For this official, adaptation has been vital in responding to wartime realities. Quick adaptation associated with safety, responding to newly emerging risks, achieving convenience, and maintaining proper system functionality. Ionan quotes: “We have to adapt quickly to meet the new realities of life” (24 December, 2024). She also addressed the significance of digitalisation in the process of adaptation: “Digitalization is extremely important now, as millions of Ukrainians are adapting to the challenges of war, improving their skills or acquiring new ones, and testing themselves in new professions” (2 November, 2022). This has been crucial across digital services. Valeryia Ionan underscored the Ministry of Digital Transformation's efforts in this process: “We need to ensure that systems and processes are adapted and evolved” (16 December, 2024).

Additionally, another key aspect of Ionan’s thoughts has been cybersecurity and the cruciality of secure cyberspace: “In the face of war, cyber hygiene is very important; it's a matter of security” (3 December, 2025). According to her, cybersecurity can guarantee diverse directions of the state’s fundamental domains. It is closely linked to a state's general security and the resilience of various realms. The following quote reveals the mentioned argument: “Presented the first results within the Tallinn Mechanism, which is aimed at implementing cybersecurity projects and strengthening the resilience of Ukraine's civil infrastructure, as well as strengthening international cooperation” – (9 August, 2024). The role of cybersecurity becomes increasingly significant during the war: “In times of war, cyber resilience is critical to Ukraine’s national security” (27 October, 2025). Consequently, Ionan suggested that cyber

resilience is also considered important to a state's overall resilience and noted the implications of adaptive ability.

Regarding the core aspects of Fedorov's discourse, it should be noted that he addressed practically the vast majority of topics related to this research, which is not surprising given his position as the highest-ranking official among the analysed representatives. He served as a first deputy minister of the Ministry of Digital Transformation, so he oversaw most aspects of his duties in his Facebook posts. Besides, there were still some vital ideas that frequently appeared in his rhetoric. One of them has been his perception of the ongoing war. Fedorov's posts encompass the characteristics of the modern political agenda, including the current war. He views this war as the most technologically advanced in recent years and believes that technological superiority can be achieved only by enhancing capabilities. That's the domain where he puts most of the effort. Additionally, resilience is another essential element of Fedorov's content. For instance, the Ministry of Digital Transformation has been trying to launch programmes and projects to build resilience in public governance and administration. The former minister has been trusting the IT sector to develop technologies and establish a system capable of withstanding war challenges. For example, one of the quotes: "Ukrainian IT business demonstrates a high level of resilience" (11 December, 2025) addresses the mentioned notion.

Also, Fedorov underscores the resilience in cyberspace similarly to Ionan: "In the face of full-scale war, resilience in cyberspace is key to the security of the state" (22 December, 2025). Ultimately, resilience is a focus for Fedorov: "International recognition in London demonstrates that Ukraine is developing educational technologies that meet global standards and strengthen our digital resilience" (18 November, 2025).

Another vital aspect of Fedorov's discourse concerns the concrete actions of specific digital services. The official mentioned that Diia has been the central mechanism behind all those services. Every digital service operates through the Diia platform, and people use the Diia app daily, which serves as a "state in a smartphone". These services are connected with the daily lives of Ukrainians: "Support Programs in Action - digital first designed services that really simplify the life of Ukrainians. These are services such as eHoselya, eRobota, eRecovery, Nackeshbek and other grant programs that have been launched online since the beginning" (16 September, 2025). Diia has several directions, and the number of Diia users

increases proportionally. Fedorov states: "Already 35 000 + users have talked with Diia.ai and generated over 1,000 references." (29 September, 2025).

Moreover, Diia also serves as a bridge that brings together diverse groups, companies, and enterprises. It is recognised as a measure for a smooth and convenient relationship and resolves bureaucratic burden: "Diya.City is a unique tax and legal space created in interaction between Government, Parliament and business to develop technology companies." (17 October, 2025). Overall, Fedorov's discourse enclosed the core dimensions of the Ministry of Digital Transformation's work, especially emphasising IT capability responding to the war challenges, resilience, reforms and projects through the Diia app and platform.

3.2.3. Content Analysis: Discussion

First of all, the officials in their posts underscore the complexities, challenges and risks brought by the war. For instance, the officials address the difficulties caused by the war and underline the extent of those challenges: "From the very beginning, we set our goal to create the most comfortable digital state in the world, but the Russian full-scale invasion has brought new challenges" (Ionan, 24 December, 2024). This particular quote demonstrates that the war created an unusual context, bringing new risks.

The war in Ukraine has resulted in various issues across diverse areas, creating an environment characterised by uncertainty and complexity. This thought is empowered by the rhetoric of the examined representatives. In his posts, Mykhailo Fedorov repeatedly stated that the adaptation was forced by the war-induced situation. He claimed that the war triggered a rapid adaptation of services that shouldn't have been an exclusive part of public governance, but were also transferred to warfare (July, 2022). The challenges affected every realm of society, including public service delivery. There was a rapid need for adaptation: "Bureaucracy is one of the main challenges for war" (Vyskub, 26 July, 2023). Hence, the adaptation of the digital sector was one of the first steps in response to the first wave of uncertainty, marked by complexity and driven by the war.

In addition, the posts also contained other features of adaptive governance, such as decentralisation: "In Ukraine, decentralization reform is an important part of public government" (Ionan, 27 December, 2024). The concept of decentralisation has primarily been tangible through the empowerment of local authorities and the push for digital transformation

across regions: “implementing transformation not only at the national level but also regionally” (Ionan, 24 December, 2024). Ionan has been a person who emphasised the empowerment of regions the most. She argued that the digitalisation of regions was one of the essential goals of the Ukrainian reforms in public governance and administration: “The full-scale Russian invasion and other challenges we now face require non-conventional innovative solutions. We are actively working and strengthening the direction of regional digitization so that communication between the state and citizens is fast and transparent for every Ukrainian” (18 July, 2024). This is particularly important to note as decentralisation requires diverse centres of authority and strong autonomous local governments. Consequently, this finding also relates to the supplementary theoretical framework – polycentric governance - as the central concept of polycentricity encompasses multiple authority centres and the diffusion of decision-making between local and central governments.

These examined posts also addressed the engagement of diverse stakeholders, which is another feature of adaptive governance. As mentioned above, the MDT has ambitious plans for digital transformation and the technological future of Ukraine. As they claim, these missions cannot be accomplished without the teamwork and involvement of every group in society. That is why the Ministry is open for new projects, relationships and negotiations with various actors: “We invite governments, scientists, business and civil society to cooperate” (Ionan, 12 September, 2025). The Diia is presented as a crucial in this process, as it is a platform that connects all stakeholders. For instance, the “Diia.business” platform has been one of the key channels for engagement in the Ministry of Digital Transformation's new projects for medium and small enterprises.

Moreover, the adaptation can possibly be linked to some notable results, one of which is the anticipation of future crises – the ability of the system to predict upcoming risks and combat them in a well-prepared way. The framing of adaptation and digital transformation in Ukraine not only stabilises the system's stance on responding to the war crisis, but also builds a future that will result in one of the most sophisticated digital states in the world. This idea is accentuated by Ionan, who claims that MDT reforms are not solely focused on current challenges and adaptation but also on creating a future in which technology fuels convenience and opens new possibilities (18 December, 2024). However, this goal is not expected to be achieved in the long run; it is expected to be achieved in the near future, with some degree of success currently. And it is true, the Ukrainian technological progress is already remarkable: “We have risen to the 5th place with 102 by the digitization of public services, and now the

success of Ukraine was noted by the World Bank in the updated report GovTech Maturity Index (GTMI) 2025” (Fedorov, 26 December, 2025).

All of the ideas, goals, future plans and efforts from the representatives of MDT are related to digitalisation. They believe that digital transformation will serve as an enabling mechanism for diverse governance actions in the contemporary world, and therefore, they start to build a system ready for the future even despite the war: “The war is the best time for quick and bold reforms, so that after the victory we have a transparent and effective digital state, where all services are provided automatically and without officials, and unnecessary functions are delegated to business. Public request for this will be maximum” (Vyskub, 18 November, 2022). Digitalisation reforms cover many domains: “Last year, all schools of the city introduced an electronic diary. All teachers, parents, and students need in one online platform and in-app: e-journal, diary, call schedule, success and attendance analytics, learning materials.” (Fedorov, 2 July, 2023). The posts underscored that the officials strive to exploit all the benefits of digital governance, for example, to use the Diia app and platform as simply and daily as a taxi or food delivery service (Ionan, 13 October, 2025).

Moreover, they also acknowledge the impact of digitalisation. This is another pattern – the emphasis on the essential role of digitalisation. Each official acknowledges digital transformation, is proud of it and is eager to put in all the effort to continue this process. The particular Diia-based services have been perceived as central to digital success. As Vyskub notes: “Trembita is the basis of all services of Action” (13 July, 2023). The representatives of the MDT also aspire to distinguish a digitally literate and aware society. They agree that this is the basis of digital transformation. A digitally aware society can support the digitalisation of the entire state, according to its arguments. This is why these officials emphasise the role of digital literacy reforms, stating that digital literacy and awareness among Ukrainian citizens are placed as one of the core priorities of the MDT (Fedorov, 17 May, 2023). Ionan also quotes as follows: “We strive to make the digital environment safe for every Ukrainian and shape a culture of using technology” (12 November, 2025). Therefore, digitalisation is a present condition, a future goal, and a mode of governance for these officials, and thus plays a significant role in almost every domain of public service delivery and adaptive governance.

This kind of synthesis is associated with resilience in wartime crises. The system becomes strong, the services continue to function, which is vital to maintain governance in the wake of invasion: “Diia has shown how digital public services can keep a country functioning

even in wartime: millions of citizens are able to access IDs, documents and essential public services anytime, anywhere, directly via their smartphones” (Ionan, 19 December, 2025). Also, the service delivery becomes more convenient and quicker. All those achievements can be perceived as evidence of observable manifestations in achieving resilience: “With the onset of the full-scale Russian invasion, we expanded our services to Diia, which contributed to improving overall resilience and support for temporarily displaced citizens” (Ionan, 15 July, 2024).

Some limitations were identified from the content analysis. First, a significant part of the posts of the analysed officials is devoted to the digitalisation in general. It allows for identifying certain key patterns, but given the nature of the posts, it is difficult to gather many details about adaptive governance. The posts were mostly statements and evaluations of specific reforms, projects, and meetings; as a result, few delved into adaptive governance in depth. Nevertheless, the general analysis enabled understanding and distinguishing the findings. Another limitation is the similarity of the posts of each official. They have been the representatives of the same institution; it is clear that they were working on the same projects, which is natural. However, this circumstance made some of their posts overlap, making it difficult to compare.

3.3. Interviews with Experts: Discussion

Generally, the experts mostly had a similar attitude about the digital transformation process. This context has been highly regarded by most of them, indicating true success and framing digitalisation as one of the core aspects for Ukraine’s development. They addressed the relevance of digitalisation to the daily lives of Ukrainians, its contribution, and future ambitions, goals, and aspirations. They also agreed that digital transformation is closely linked to digital service empowerment, with several positive consequences. The experts indeed underlined the role of digital services during wartime, the convenience and other contributions. Moreover, every respondent specifically highlighted the essence of the Diia app and platform, as well as their significant impact. Their beliefs were predominantly based on experience and personal observations; thus, at some point, their views on digitalisation and e-services differed slightly; however, the overall message remained similar. Also, every interviewee shared the same claims on the challenges and crises of war. They came up with particular examples of

difficulties caused by the war, vulnerable groups, war-affected people and the extent of war damage. Hence, in this regard, their opinion was mostly identical.

The main differences among respondents' answers occurred when addressing adaptive governance and crisis resilience. It should be noted that they all agree on the presence of adaptive governance features. They also underline the necessity of adaptation; nevertheless, their opinions varied regarding the features of adaptation, emphasising some characteristics strongly and arguing over the degree of adaptation. Essentially, the arguments of experts encompassed diverse key aspects of adaptive governance. The interviewees also agreed on the vital impact of digitalisation on adaptive governance and the role of digital adaptive governance in responding to the crisis. Crisis resilience has been perceived differently by the respondents, leading to diverse ideas about what constitutes a demonstration of resilience. Overall, there were some themes that were matters of total agreement among the interviewees, complemented by topics where opinions differed.

3.3.1. Digital Transformation

Digital transformation has been mostly characterised as a total success. The experts recognised the role of digital transformation across every domain in Ukraine, and they pursued specific reforms to digitalise, which ultimately brought success to the country. For instance, according to the number of interviewees, the success of digital transformation and the increased role of digital governance are connected to the digitalisation reforms and processes that began a couple of years prior to the Russian invasion of Ukraine. To demonstrate this, respondent 6 claimed: “The Ministry of Digital Transformation of Ukraine was created back in 2019, before the full-scale invasion started. So, the active digitalisation of government started back then”. Respondent 7 also agreed with this idea, claiming that the digital system had already been well established since 2019. Respondent 10 also adds that, before MDT, there was a National Agency of Digitalisation undertaking digital transformation.

Digitalisation could not have been possible without the past and ongoing reforms introduced by the government and the Ministry of Digital Transformation. For instance, certain reforms played a huge role in this process, such as the creation of Chief Digital Transformation Officers (CDTOs) (Respondent 1). According to the respondents, digitalisation has brought numerous positive results. For instance, it has sped up the process and reduced bureaucratic

burden (Respondents 1 and 5). It also affected communication and created additional channels (Respondent 2). Another important aspect is the extent of digitalisation's contribution. Every respondent acknowledged that digitalisation created a new opportunity to support war-affected individuals and veterans through digital tools. Respondent 8 provided examples of the eRecovery project and the Diia projects, highlighting support for IDPs and the recovery of damaged properties. Other respondents also underscored the role of digital awareness. They mentioned some projects aimed at increasing digital awareness; however, they still consider that further digitalisation will not be possible without a digitally aware society (Respondents 4, 2 and 6). Digitalisation was also recognised as enabling consideration of future recovery from war, allocating resources, and responding to the primary needs crucial to recovery (Respondent 9).

The respondents acknowledge the importance of digitalisation and its positive impacts. The role of digitalisation has increased since the beginning of the war: “Digitalisation had been actively developing in Ukraine, but with the onset of the war, it became a key driver of the country’s development, significantly influencing the transformation of public governance and administration” (Respondent 5). Respondent 5 also stated that Ukraine's future success and development heavily rely on digital transformation.

3.3.2. Digital Services

When it comes to digital services, experts' views on e-services are largely similar, and they share the idea that e-services provide convenience and speed. For example, many experts highlight that digital services are more trustworthy than the people who can provide them. This assumption is primarily based on the risk of corruption in traditional bureaucracy. Thus, the respondents pointed out some examples from their work experience and argued that e-services reduce the risks of corruption, addressing Diia as a single digital window to the government, which: “Will reduce corruption and that will ultimately increase our GDP by saving time of citizens to get their services” (Respondent 6).

The experts have confidence in digital services, especially the Diia app. Respondent 8 mentioned that the presence of Diia and other e-services ensures transparency, accountability, reliability, and high-quality services for the people. The digital services simplify service delivery in general: “Procedures for providing services have also been simplified, for example:

obtaining internally displaced person (IDP) status, receiving assistance for IDPs, and accessing financial aid” (Respondent 5). The Diia app plays a significant role, as demonstrated in many ways. For instance: “The Diia application has become the primary tool for service delivery, while services for Administrative Service Centres (CNAPs) have started to be developed based on the Diia Portal” (Respondent 5). Also, another direction of Diia operation is the military aspect: “For example, in Diia, we had an enemy chatbot. So, everyone can work as an intelligence agency. to send information about enemies, where they, especially in the first days of the full invasion. And it helps A lot” (Respondent 1). Another example of the military aspect is as follows: “The Delta system, the famous military system to track Russians locally that was designed based on the, based on the Diia system” (Respondent 4).

The expert thoughts derived from the interviews also show that the Diia app and digital services during wartime are primarily intended to support people who suffer from war. People directly affected by the war are facing issues arising from the war-induced crisis. The following instances highlight the mentioned claim. Respondent 1 recalls an instance in which a student was able to continue her studies thanks to digitally entered documents in Diia, despite losing all her paper-based documents due to the war. Moreover, this is also underlined by respondent 2: “Before the war, when you know, being based in Ukraine, I could digitally go to the tax service, and so nowadays everything is much more streamlined and digitalised. Same with IDPs”. The digital services aim to help war veterans as well. This was particularly highlighted by respondents 6 and 9, who mentioned the service “Veteran Pro”, which is designed for war veterans and their family members to access the support quickly. Another very significant online service, highlighted by several interviewees, is online marriage. This service allows couples to legally and officially get married online. This is crucial because some couples are unable to see each other due to war-related circumstances (Respondents 2, 3, 5, and 6). The role of e-services is significant as respondent 10 points: “In the beginning of the war, digital services rescued all the people”.

The positive impact of digitalisation is indeed significant; however, experts' critical details emphasising the potential negative aspects of digital services should not be overlooked. For example, respondent 7 addressed that the Diia platform and online services have some data protection issues: “one reason of why the system is not perfect, even being highly digitalised, highly effective and highly user-centred, but without this core value of protection of user”. Another concern is linked to the accessibility issues. The thing is that some digital services are difficult to access for disabled people, and this creates complications for them, according to

respondent 3. Nevertheless, ultimately, the experts expressed their faith in digital services. These services might not be perfect, but they are linked to wartime crisis response and convenient, fast, transparent and reliable service provision for society.

3.3.3. War Crisis

Additionally, the experts recognised the war crisis and its impact on every aspect of Ukrainians' daily lives. This has been a topic that has generated the strongest consensus among the experts, as they all acknowledge the hardship of the situation and see its influence first at work or in their lives. Respondent 1 mentioned that the ongoing war has, of course, affected service delivery, which is not surprising given its impact on absolutely everyone. Also, according to respondent 10: “We have, at the beginning of full-scale invasion, problems with front offices, administrative services centres”. Hence, the challenges have spread in many ways. One direction encompassed data securing actions: “When the war started, we, you know, immediately, how to say, understood several challenges. First, that was where we were storing data” (Respondent 8). Moreover, war has also affected the state's resources. Respondent 4 argues about it: “The full-scale invasion was quite of course it affected mainly the resources that the state has and the capacities of the state. And so, most resources had to be, uh, shifted to protect the state basically”. The war disrupted public services and registries, and there were potential hacking attempts by Russians as well (Respondent 9).

To clearly comprehend the wartime impact, it is necessary to observe the evolution of the war and how it has progressed. This is what some of the interview participants did. They recalled the early stages of war. For instance, according to respondent 2, at the beginning of the war, everything was strongly centralised, rigid, and top-down, while as the war has progressed, this approach has become more proactive and crisis-responsive. Respondent 6 also elaborated on this aspect, stating that the onset of the war created a shocking situation, hardening governance and weaponising it. However, the current context is different: “Now it's still centralised. And again, Diia acts the single window. but we still have more like co-production without different communities. And some people became, and organisations became more independent” (Respondent 6).

Additionally, more key challenges have been tangible for the interviewees. War has determined new vulnerable groups, such as veterans and IDPs, who need special support

(Respondent 7). The following quote by respondent 5 supports and supplements the previous claim: “Due to the war, the inability to physically access government institutions made electronic services critically important for internally displaced persons and other vulnerable groups”. The Russian invasion also resulted in territories being temporarily occupied, and therefore, the government of Ukraine was unable to access or deliver public services to these regions, which is another challenge that shouldn’t be ignored (Respondent 3). The central inference from the experts’ thoughts on the war crisis is that the war has caused significant problems across the country, from the central government to every citizen of Ukraine. The impact has been serious, affecting every domain, including public services.

3.3.4. Crisis Response

Regarding the crisis response, the respondents' primary agreement line centred on the roles of adaptation and digitalisation in responding to crises. However, it should also be noted that their answers differed at some point. The experts underscored digitalisation as one of the ways to withstand the crisis. The support to war-affected people, the reforms to ensure convenience and quickness, and the projects to maintain services are all connected with digitalisation, but also with adaptation. Respondent 5 notes that, as the war has progressed, decision-making has become quicker and more flexible, adapting to wartime needs. The emergence of the necessary services was also significant: “That is, services are emerging very quickly in response to the difficulties people face. So, I think this is precisely where government adaptability lies” (Respondent 3). The system has managed to adapt and deliver digital solutions to wartime needs, according to respondent 2. The experts argued that the response to the crisis was relatively quick and effective, with digital adaptive governance playing a role.

Nevertheless, as mentioned above, the beginning of the war was different in that sense as well. Respondent 7 emphasises the fact that the response at the early stages of the war was relatively slow compared to the current stance. Moreover, recently the response has become more inclusive: “And recently, services have been becoming more inclusive, not as quickly as we would like, but the same applications, Diia and others, have become available for use with VoiceOver, TalkBack” (Respondent 3). Hence, the evolution of war in that regard is also interesting. The experts also address the role of international partner states or organisations in crisis response. They have been vital, providing crucial support to Ukraine. For instance,

respondent 1 outlined support from the EU, Switzerland, Sweden, and the United States Agency for International Development (USAID). Their support is also notable for creating a flexible environment that enables adaptation. The international support is highlighted by respondent 8 as well, who mainly underscored the importance of international financial support for recovery and an appropriate crisis response.

The digital adaptive approach has not solely encompassed public services but has also been a crucial aspect of military empowerment. Respondent 6 states the following: “So basically, the digital recruitment service in the Reserve Plus allows citizens to choose that consists in the armed forces. And as of 2026, the system features over 13,000 efforts”. Consequently, the response to the war-induced crisis is closely linked to digitalisation and adaptive actions, and requires timely, efficient steps to tackle it.

3.3.5. Digital Adaptive Governance

When it comes to digital adaptive governance and its features, the respondents agreed on the presence of a mixture of digitalisation and adaptiveness. They see the contribution of digitalisation to adaptive governance and believe the role of digital transformation in the adaptation process is significant. Respondent 2 emphasised that this kind of adaptation to a certain degree can be possible, but depending on the context, the digital component plays a vital role as described: “So, in a way, I think there are some, let's say, physical solutions. Also work, but on the other hand, they need the digital component for citizens to be able to learn information about them”. The crucial aspect of digital adaptive governance is the system's ability to adapt. This was also highlighted by the experts in the sense of pre-war digitalisation efforts. As mentioned above, some experts underscore that Ukraine began its digitalisation reforms and projects years before the Russian invasion, which they consider one of the factors that helped the system to adapt to the newly emerging circumstances, such as war.

The experts outline the elements of digital adaptive governance, and each expert identifies aspects of this governance mode they consider most important. For example, respondent 3 emphasised that the adaptation process can be recognised as a positive process for Ukraine. In this process, Ukraine has learned to adapt existing services and create new ones to live in new conditions. Among the notable elements of digital adaptive governance, the empowerment of regions has been evident in Ukraine, according to the interview participants. One instance is

connected with regional adaptation: “So there raises a certain degree of adaptation also at the regional and local level. There has been quite much of in the municipal international cooperation when different municipalities” (Respondent 2). Thus, according to the mentioned respondent, the adaptation of regional authorities contributed to Ukraine's overall adaptive success. The role of the local authorities was also highlighted by respondent 5. This expert underlined the service delivery evaluation at the local level to enhance the degree of service delivery in regions: “Efforts have also been made to evaluate the quality of services provided and enhance them at the local level”. This assessment enabled the determination of weak spots of service provision at the regional level and emphasised the need for adaptation (Respondent 5).

The local authorities were also included as a respondent, but this expert reviewed this aspect in terms of coordination and cooperation between central and local governments, stating that coordination is crucial across different areas because war mostly determines diverse demands and issues that require divergent responses (Respondent 4). This respondent showed that not only regional-level authorities require attention and coordination in the adaptation process, but also sub-national-level authorities.

Another component of adaptive digital governance is decentralisation, which was discussed by the experts. This aspect was addressed by multiple experts, who stated that decentralisation reforms, initiated almost a decade prior to the invasion, have served as a strong foundation for future adaptation and played an important role in empowering local-level authorities. For example, respondent 7 discussed the key value of decentralisation: “The most valuable point of decentralisation, in my opinion, is that this reform makes us more responsible, all of us, and that actually every voice matters, every action matters”. This situation supports society to take independent actions and make quick decisions in difficult conditions, for instance, during a war crisis.

Moreover, one of the crucial components of digital adaptive governance – cooperation of diverse actors was also emphasised by the interviewees. A strong example of this idea is a reference from respondent 8, who underscored the Ministry of Digital Transformation's cooperation with diverse stakeholders, including businesses, civil society groups, the Non-governmental Organisation (NGO) sector, and international partners. This process was portrayed as crucial for the ministry to implement digitalisation reforms and to hear the voices of different groups. Additionally, respondent 6 also added that the digital services can empower

these kinds of relationships: “So digital services are created for cooperation between local governments, civil society organisations, our own”. This respondent addressed another role of the actors: “Many different projects have emerged. There are the NGOs were created, facilitated or supported by the government. But obviously government cannot be the only one body that is active during times like war” (Respondent 6). It should also be noted that, according to respondent 9, the Ministry of Digital Transformation collaborated with various NGOs and civil society groups to mitigate the risks faced by war-affected people.

Overall, many aspects enabled adaptation; however, respondent 1 identified political will as one of the most important. This political will was primarily established by Minister Fedorov since taking over the Ministry of Digital Transformation (Respondent 1). Ultimately, the digital adaptive governance in wartime Ukraine is characterised by the experts via following elements:

- Flexibility;
- Quick/direct response to crises;
- Decentralisation;
- “Ad hoc” actions;
- Cooperation of stakeholders;
- Empowerment of local authorities;
- Digital mechanisms;
- Adaptive capacity of the services.

3.3.6. Crisis Resilience

To continue the discussion on crisis resilience, it is worth emphasising that the respondents highlighted the importance of digitalisation and adaptability in withstanding the crisis, tackling war-induced challenges, and maintaining a robust system. One of the key elements connected with manifestations of crisis resilience has been the precise and coherent response to the war-related needs. This was mainly highlighted in support programmes for war-affected people, as the examples above already addressed this. Moreover, one of the central demonstrations of crisis resilience has also been the maintenance of the functionality of the public governance system, according to the experts. Despite the war, public service provision has continued throughout this period, and the system has not lost its primary operation.

Regarding the contribution of digital adaptive governance to crisis resilience, most responses were similar, and the experts cited system functionality maintenance as one of its key manifestations. For instance, respondent 2 considers the role of digital adaptive governance vital in crisis resilience: “So I think it really helps to kind of hold the whole system functioning and have an overview and have information for the governments to have information on what is happening”. Moreover, respondent 10 considers that digitalisation and adaptive mechanisms helped the services not to collapse. Additionally, respondent 4 saw a relationship between the digital adaptive governance components and crisis resilience: “On the one hand, that Ukraine proved resilience, national resilience because the state was able to continue providing public services, but that was at cost not only the state but also engagement of other actors”. The combination of adaptation and the launch of new projects is perceived as one of the supporters of resilience, underscoring the role of adaptiveness and digitalisation as significant components of eventual war-crisis resilience in Ukraine. The mentioned idea is emphasised in this quote as follows: “The adoption of cloud technologies, distributed systems, and adaptable management strategies boosts the state’s capacity to respond to new challenges and sustain the operation of essential services” (Respondent 5). The role of digitalisation has been described as vital for crisis resilience, by respondent 9 as well: “digitalisation is like one of the pillars of our resilience”. Also, respondent 6 addressed some key elements of digital adaptive governance as necessary for establishing a strong system able to sustain challenges. For example, the key elements mentioned were actor cooperation, institutional flexibility, pre-war digitalisation, and the operation of unified platforms, such as Diia and Trembita. These components ultimately appeared to be one of the helping aspects to digital adaptive governance, connected with manifestations of crisis resilience: “So I'd say that we, that this period from 2022, shows that the adaptive digital governance is the critical factor for state resilience” (Respondent 6).

Other participants, such as respondents 7 and 8, also emphasised the role of digital adaptive governance and crisis resilience, but they still underlined that there is room for improvement: “So adaptiveness means the need to create possibilities for better resilience for population, but at the same time, state doesn't take this obligation to create this resilience, but it allows citizens to step in and actually be free” (Respondent 7). Respondent 8 also addressed this matter, stating that the future need for investment is obvious to maintain such resilience. Another key dimension of crisis resilience, underscored by numerous experts, has been cyber-resilience. The interviewees argued that since the beginning of the war, Russia has been conducting cyberattacks on Ukraine. The digitalisation of the entire system was associated with the

system's ability to resist those attacks and demonstrate cybersecurity and resilience. Hence, these experts consider cyber-resilience a crucial element of Ukraine's overall resilience.

3.3.7. Several Risks to Democracy

Additionally, some experts noted that the wartime period posed several risks to democracy in Ukraine. For instance, respondent 5 claimed that the war undermined accountability and transparency in governance, key components of the democratic system, and that this was more evident at the early stages of the war. Nevertheless, according to respondent 7, the threat to democracy can be posed by digitalisation, as it is in Ukraine currently. This expert emphasised the potential risk of digital authoritarianism: “But the problem is in digital authoritarianism, as I call it, because now, through this Diia, through these digital services, the state has access to personal or public data and 2nd uses this data against men who are not mobilised”. These digital services allow the government to use personal data illegally, and the data is not adequately protected, leading to the issues mentioned. The unprotected data creates a discrimination issue as well, because the male population in Ukraine is being military mobilised via these digital services allocated data regardless of their will or desire. Hence, there are some significant issues that require attention, and we should not solely focus on the positive side of digitalisation.

3.3.8. Patterns, Findings and Limitations

With minor differences, all the experts outline the role of digital adaptive governance as a tool to tackle crises. Consequently, for most interview participants, the central demonstration of crisis resilience in terms of digital adaptive governance has been the maintenance of system functionality, ensuring continuous service delivery despite the war.

The respondents outlined the elements of adaptive governance. The components, such as flexibility, engagement of diverse stakeholders, decentralisation, and the role of local authorities, complemented by digitalisation, are also reflected in the theoretical framework of the research. This idea emphasises that, according to experts' experience and beliefs, the framework of adaptive governance has been utilised and applied in practice in Ukrainian public governance and administration. The experts agreed on the presence of a significant link

between digitalisation and adaptive governance, arguing that digitalisation is considered a supporter for smooth, high-quality adaptation. The digitalisation impact, such as convenience, speed, and the ability to deliver services under difficult conditions, simplified governance processes in general, including adaptation. Consequently, the experts underscored that digitalisation is, to a certain extent, connected to adaptation. Thus, the pre-war digitalisation and the reforms of the Ukrainian government, in partnership with civil society groups and international actors, were linked to a number of digital services, notably Diia, which eventually helped adapt to wartime circumstances and manifest crisis resilience. Therefore, the expert interviews provided some essential answers to the research question.

The interviews delivered some patterns and findings; however, there are notable limitations that need to be addressed. For instance, in terms of the dimensions of adaptive governance, the experts covered most of the elements; nevertheless, the legal dimension should be acknowledged as well. The presence of legitimacy to use every measure, every tool, every action (Respondent 4). This idea has been emphasised by other experts as well. They underline that in this process of adaptation, some essential aspects of governance and legitimacy can be hindered. They recognise the adversity of war-crisis conditions; however, they still argue that accountability, transparency, and the diminished presence of democratic elements can pose significant risks to the legitimacy of the government and, by extension, the democratic environment in a country. Another type of contradiction concerns the system's ability. As the chrestomathy of adaptive governance suggests, adaptation is necessary when circumstances are complex and uncertain. Eventually, the system is expected to respond to those crisis conditions quickly and flexibly. According to experts, the response to the crisis and adaptation are currently working effectively; however, this was not the case at the beginning of the invasion. It is natural, per se, as it is always difficult to deliver the highest level of efficiency rapidly; still, it is crucial to underline this aspect, as many respondents noted that the early-stage situation was very vague.

Discussion and Conclusion

Discussion

Across the three methods used to conduct the analysis, the war crisis has been recognised as a disruptive mechanism, prompting the adaptation of public services to support war-affected people and vulnerable groups and maintain service functionality. Hence, one of the consistent manifestations of crisis response and resilience has been service continuity. The central aspect of this case is that the onset of the war posed diverse challenges and undermined public service delivery; yet, despite these circumstances, the system remained functional. Also, the document analysis emphasised the resilience of communities and regions, outlining the robustness of multi-level resilience. As for content analysis and interviews, system functionality has been the central manifestation of crisis resilience; however, certain directions of resilience have also been evident in them. For instance, the Facebook posts acknowledged the enhanced role of cybersecurity in contributing to the state's overall resilience.

Therefore, crisis resilience is manifested in the services that continue to be delivered to society and that ensure people's needs are met. The analysis suggests that one of the elements linked to maintaining the system's functionality and continuity of service delivery has been digitalisation and the adaptation of certain services. Each method revealed that digital transformation is a well-established and coherently anticipated direction for Ukraine. The central institution for digitalisation is the Ministry of Digital Transformation, which implements reforms and projects and develops innovative ideas.

There are a number of services underscored in documents and content, and mentioned by the experts, and their roles are significant; nevertheless, the most noticeable linkage in the digitalisation of public services has been provided by the Diia app and platform. Throughout the analysis, Diia has been recognised as the bridge of several digital services. For instance, the document analysis revealed the complex role of Diia and other digital services, encompassing intentional support for war-affected people and the delivery of services to vulnerable groups in society who need them most. These e-services emphasise IDP support, veteran reintegration into society, recovery of damaged properties, etc; however, these examinations added another layer of digitalisation to infer, such as convenience. Diia and other services not only support people who suffer from war but also ensure overall convenience by saving time, reducing commuting, and delivering quality. Also, the key findings are reduced

bureaucracy and reduced underlying corruption risks. The analysis suggests that digital services can reduce corruption risks and lower bureaucratic inefficiencies, as e-services are flexible, fast, and not paper-based.

The analysis presents a positive attitude towards digitalisation. This pattern suggests a political commitment to and a will for digitalisation. There is an ambition among MDT officials to further advance the state's digital infrastructure; however, achieving these goals will be difficult without effective digital awareness campaigns and reforms.

The study found that service adaptation occurred as a response to the war. According to the analysis, the adaptation of particular services stands out as crucial. For instance, some services began operating concurrently to address wartime needs and deliver necessities to people who were suffering. This kind of transformation was connected with the recovery from wartime consequences. Moreover, adaptive governance has been mostly manifested through its elements, as analysed. Documents primarily indicate decentralisation and multi-level governance, whereas experts mostly emphasise cooperation of diverse stakeholders. Cooperation and engagement among actors have been revealed through each method; however, the content analysis and interviews place even greater emphasis on international coordination and cooperation, as well as on the role of partner actors in crisis resilience, adaptation, and digitalisation.

Ultimately, the aspects of adaptive governance most underscored in the analysis include decentralisation, local authority empowerment, flexibility and the coordination and cooperation of diverse actors. All those components were connected to adaptation. Consequently, the analysis demonstrated that the war conditions created complex circumstances, and the uncertainty (especially emphasised by the experts) has been present on many occasions.

Moreover, the examination's findings and patterns indicate that the approach Ukraine has adopted to maintain service delivery and withstand the crisis is a synthesis of digitalisation and adaptive governance, ultimately resulting in digital adaptive governance. The presence of the aforementioned components of adaptive governance, along with the system's ability to adapt and respond to crises, indicates that adaptive governance has been widely used as a strategy in Ukraine as well. However, the key idea, emphasising the collaboration of those two approaches, is that the overall conditions brought by the war required rapid, flexible decisions

and adaptation, which, accompanied by digitalisation, was linked to an even more rapid, convenient, specific, precise, and tangible process.

Ultimately, the methodological triangulation yielded findings that highlighted key distinctions and similarities across the methods, as demonstrated in Table 2.

Table 2. The comparative table of the findings of each research method

Finding	Document Analysis	Content Analysis	Interviews with Experts	Consistency of the Finding
Diia Impact	+	+	+	Full
Digital Adaptive Governance	+	+	+	Full
Strong Emphasis on Particular e-Services	+	+	-	Partial
War Circumstances	+	+	+	Full
Digital Awareness	-	+	-	Partial
Crisis Resilience	+	+	+	Full
Future Digitalisation Ambitions	-	+	+	Partial
Risks to Democracy	-	-	+	Partial
Digitalisation Success	+	+	+	Full
Cybersecurity	-	+	+	Partial

Note: The sign “+” demonstrates that the finding was present in the methods, while the sign “-” suggests that the finding was not visible.

Conclusion

The study's results suggest that wartime conditions disrupted certain key services, eventually prompting a need for adaptation. The adaptation process was supported by digital transformation, associated with digital services such as Diia and the transformation of other platforms into more explicit, targeted offerings. Thus, this process has been one of the facilitators of the maintenance of service delivery and crisis response, which were ultimately observable mechanisms of crisis resilience. This finding contributes to the academic literature, adding to the scholarship on digital adaptive governance. The research problem appeared relevant as per the findings. The study results indicate that responding to wartime needs in the field of public service delivery has been important for the government, civil society groups, and citizens. There was a demand from society for public services to fulfil critical necessities arising from the war. Thus, digital services made their mark in this process.

The research results showed a similar situational progression in Ukraine, as explained by the theory of adaptive governance, indicating the first shock of the crisis and the spread of emergency, then bringing unpredictable, uncertain, and complex conditions, emphasising the need to adapt and respond to them. Thus, certain major public services in Ukraine were adapted, and some were newly created, showcasing the evolution of adaptation.

To continue, the results also indicate that adaptive governance in Ukraine manifests not only in the system's quick decisions and its ability to adapt to conditions, but also in the essential elements of adaptive governance being crucial parts of the Ukrainian governance approach. The analysis has outlined the importance of decentralisation for governments, civil society groups, and the public at large. Also, the research results showcase that the response to the crisis has been reasonably fast and, most importantly, flexible. The decision-making aimed to prioritise the most essential domains and to support war-affected people at the central, local, and regional levels, thereby demonstrating flexible responses to demands and making sound decisions. Moreover, cooperation and coordination among diverse stakeholders show that the crisis is equally problematic for all members of society and requires a unified response. Thus, the actions and reforms were not solely implemented by the government; they also involved financial, human, organisational, and other resource contributions from local and international actors. All these processes, supplemented by the empowerment of local authorities, supported the initiation, implementation, and delivery of services under these difficult conditions.

The study results clearly outline that one of the important conditions for adaptation success was digital transformation. Digital transformation has been a part of the Ukrainian governance even before the full-scale invasion; however, the Russian aggression increased the recognised importance of digitalisation. Digitalisation served as one of the mechanisms through which adaptation occurred. It was one of the measures to reduce the bureaucratic burden and make particular services rapid, purposeful, flexible, and high-quality. The study revealed examples of fast, inclusive service delivery in the areas and to the people who needed them most due to the war, and who were the main victims of its consequences. There is a pattern of trust in digital governance, digital tools, and digital services. The ambition and aspirations of Ukrainian governance, civil sector and other organisation representatives fuel this process. The central example of digital transformation has been the Diia app and platform, which has served as a model for digital services. However, the contributions of other digital services, such as eRecovery, ProZorro, VeteranPro, and others, shouldn't be overlooked.

One of the visible advantages of digital adaptive governance has been support for people seeking help, those who struggled, and those who were vulnerable due to the invasion. IDPs, veterans and other vulnerable groups were direct beneficiaries of digital services. Additionally, a digital adaptive model helped reduce many risks that traditionally undermine governance and influence service delivery quality. According to the results, one of the primary findings has been the decrease of corruption risks, the mitigation of bureaucratic complications, time savings, and the reduction of transportation needs. Those sole aspects were ultimately unified, presenting convenience and quality. The system continued to function and deliver services. Despite the risks posed by the war, maintaining service continuity should be considered a manifestation of crisis resilience. Each research method revealed a pattern of the significance of this aspect. Service delivery could have been severely disrupted, but digital adaptive governance appeared to be one of the mechanisms for tackling the crisis and maintaining functionality.

Moreover, the research results identified some notable limitations to be recognised and considered for future research. For instance, one limitation has been positivity bias. Most of the data sources have been delivered from the Ukrainian domain. Some documents were provided by the Ukrainian government, the Facebook posts analysed belong to Ukrainian officials, and the interview experts represent Ukraine as well. The study acknowledges that Ukrainian sources are essential for understanding a local topic about Ukraine. However, there is still the possibility of potential positivity bias from their side.

Furthermore, some of the results have addressed the potential negative effects of digital adaptive governance. The vast majority of analysis has been devoted to the positive benefits, relationships, and patterns of the mentioned governance approach; however, the other side should also be recognised, as it can pose risks to democracy and reveal some aspirations towards digital authoritarianism. The topic encompasses the strong aspects of digital adaptive governance per se, to better understand the matter and answer the research question; nevertheless, future research should acknowledge potential contradictory characteristics of the substance.

Limitations also encompass the potential progress of the full-scale war. As the war continues and the final outcome of this invasion remains uncertain, the future is vague. Therefore, the research examined digital adaptive governance in Ukraine within the timeframe under consideration; hence, the study does not claim that this model should be maintained in the future or that it is superior or has limitless capabilities. Thus, there is room for further research and inferences regarding the most suitable governance approaches as the war continues. Still, it should be noted that the present stance of Ukrainian officials, legitimacy, trust, and support from the people suggest that the adapted system may be able to establish a robust, powerful model prepared for future crises.

Another aspect concerns data sources. The war complicated the availability of data sources. Due to the high risk of cyberattacks, some official documents were unavailable to the public. Also, under war conditions, the state maintains a certain level of secrecy, making it difficult to identify specific data sources. Moreover, the war conditions affected the expert-finding process. The research recognises that the potential interviewees have their responsibilities and duties which are even more critical in war circumstances. Therefore, due to time constraints and the specifics of their job position, some experts were unreachable. Most of the data was gathered from official sources, representatives, and practical experience; it was impossible to understand the viewpoints of real-time users of digital services or the direct beneficiaries. Further research should consider the viewpoints of these members of society, their stance on the pros and cons of these reforms, data protection, and their general expertise as users of the services.

Overall, the research results showcase that digital transformation is considered one of the most important features of Ukraine's political agenda. The findings suggest that digital transformation has supported the creation of several diverse digital services, which have been

associated with adaptive governance because of their ability to mitigate the complications of traditional service delivery. Therefore, according to the results, digital services can be linked to adaptive governance, ultimately helping to identify manifestations of crisis resilience, such as maintaining service functionality and rapid response to the war crisis.

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Appendices: Document Analysis

Appendix 1: Document List

Document ID	Document Date	Type of Document	Issuer of the Document	Title	Relevance	Source of the Document
N1	2022	Report	Ministry of Digital Transformation of Ukraine	A Year of Digital Invincibility	Provides an overview of digital transformation and service delivery in 2022	MDT (2022)
N2	October, 2022	Report	SIGMA programme	Administrative Service Delivery in Ukraine in the Context of War	Underscores wartime challenges in terms of service delivery	SIGMA (2022)
N3	April, 2023	Resolution of the Cabinet of Ministers of Ukraine	Cabinet of Ministers of Ukraine	On approval of the Procedure for providing compensation for the restoration of certain categories of real estate objects damaged as a result of hostilities, terrorist acts, sabotage caused by the armed a result of hostilities, terrorist acts, sabotage caused by the armed aggression of the Russian Federation, using the electronic public aggression of the Russian Federation, using the electronic public service “eRestoration”	Legal act document, which emphasises electronic public service eRestoration	CMU (2023)
N4	2023	Report	Ministry of Digital Transformation	Digital Transformation Index of Ukrainian Regions	Encompasses regional tendencies of digital transformation in Ukraine	MDT (2023)

Appendix 1 continuation

N5	September, 2023	Evaluation Document	DIA Support Project	Digital, Inclusive, Accessible: Support to Digitalization of Public Services in Ukraine Project	Provides an assessment of the Diia and digitalisation support in Ukraine	Bajraktari & Nehrieieva (2023)
N6	February, 2024	Assessment Report	World Bank	Ukraine: Rapid Damage and Needs Assessment (RDNA3)	Underscores wartime crises, results, damage and needs in Ukraine	World Bank (2024)
N7	2024	Report	OECD	Enhancing Resilience by Boosting Digital Business Transformation in Ukraine	Reflects on wartime crisis resilience	OECD (2024)
N8	October, 2024	Report	European Commission	Ukraine 2024 Report	Commission report on Ukraine, which underscores all domains of the social-political agenda, including digital service delivery during wartime and digitalisation	European Commission (2024)
N9	July, 2025	Report	United Nations Development Programme (UNDP)	Supporting Ukraine's Vision: Transparent, Inclusive, and Sustainable Development	Overview of war damage and digital development in Ukraine	UNDP (2025)
N10	2024	Strategy plan document	Government of Ukraine	Ukraine Plan 2024-2027	Emphasises present and future circumstances and development strategies (including digitalisation)	Government of Ukraine (2024)

Appendix 2: The Codebook of the Document Analysis

Code Name	Definition	Example Quote	Total N of Mentions
#Digitalisation	Mentions the use of ICTs and digital mechanisms	"Progress in the process of digitalization has been enormous even in the face of the war" (Doc 1, p. 9)	35
#Digital_Services	Mentions of particular digital services and digital services in general	"+39 new digital services were launched" (Doc 2)	43
#E-governance/e-government	Mentions of e-governance/e-government examples and features	"Ministry of Digital Transformation of Ukraine is the central executive body ensuring e-government" (Doc 8, p. 9)	13
#Digital_Transformation	Mentions of the digital transformation process and instances	"Digital transformation as a part of democratic governance" (Doc 6, p. 3)	44
#Resilience	Mentions of resilience in the face of crisis	"The mobile phone and Internet infrastructure of Ukraine appeared to be quite resilient and far-reaching during the invasion, allowing people to access Internet in most territories of the country" (Doc 3, p. 14)	32
#Adaptiveness	Mentions of adaptive governance or its elements	"In order to mitigate the risk factors described above, the Government gradually adapted the system to the new conditions" (Doc 3, p. 11)	23
#Digital_literacy	Mentions of digital literacy efforts and the situation	"The Ministry's strategic goal is to involve the population in digital literacy programmes". (Doc 8, p. 15)	9

Appendix 2 continuation

#Transparency	Mentions of the role of transparency in public service delivery	"Ukraine is committed to a transparent, inclusive, digital, and environmentally sustainable future". (Doc 6, p. 2)	28
#War	Mentions of the war and its consequences/risks/challenges/crises	"sabotage caused by the armed aggression of the Russian Federation" (Doc 5, p.2)	84
#Flexibility	Mentions the system's ability to act flexibly	"Digital tools can enhance overall flexibility" (Doc 4, p. 26)	8
# Preparedness/readiness	Mentions the system's preparedness/readiness for future crises	"This adaptability has not only made the project resilient in the face of severe and challenging circumstances, but also positions it well for future development and continued success" (Doc 1, p. 52)	2
#Decentralisation	Mentions of the instances of decentralisation in Ukraine	"The Plan also has a special emphasis on advancing decentralisation and regional development". (Doc 9, p. 12)	18
#Stakeholder_engagement	Mentions of the involvement of diverse interest groups/actors/stakeholders	"effort will require central and local executive authorities and stakeholders to work jointly". (Doc 7, p 66)	31
#Diia	Mentions of the Diia portal, its impact and services	" +6 million users of the Diia application". (Doc 2)	79
#Efficacy	Mentions of effectiveness in crisis management	"Despite Russia's ongoing war of aggression, Ukraine's government has continued to function effectively". (Doc 10, p 24)	12
#Recovery	Mentions war recovery efforts and examples	"Strengthen public sector capacity to plan, prepare, and deliver recovery and reconstruction activities" (Doc 7, p 18)	40

Appendix 2 continuation

#Multi-level_governance	Mentions of the role of different hierarchical levels of the governance system	"Effective Multi-level Governance". (Doc 6, p 3)	9
#Digital_tools	Mentions of the usage of digital tools	"Digital tools provide better and quicker access to information and facilitate communication" (Doc 4, p 23)	23

Appendix 3: Document Analysis Matrix

Code Name	Doc 1	Doc 2	Doc 3	Doc 4	Doc 5	Doc 6	Doc 7	Doc 8	Doc 9	Doc 10
#Digitalisation	Progress in Digitalisation (p.9)	Not mentioned	Further Digitalisation (p.7)	ICT development (p.12)	Not mentioned	Frequent usage of digital tools (p.4)	Digitalisation of courts (p.166)	Regional digitalisation (p.7)	Legislation of digitalisation (p.68)	Civil service digitalisation (p.25)
#Digital_Services	Digital services and social assistance (p.19)	New digital services launched	MDT and eDocument service (p.14)	"Diia.Engine" and "Trembita" services (p.27)	"eRecovery" role (p.1)	E-services for war veterans (p.4)	Not mentioned	Regional e-services (p.4)	Export of e-services (p.272)	Civil digital services (p.25)
#e-governance/e-government	Recent e-governance progress (p.10)	Diia digital governance model.	Not mentioned	E-government adaptation (p.27)	Not mentioned	Not mentioned	Not mentioned	MDT executive (p.9)	European standards of e-government (p.276)	Advancement of e-government (p.14)
#Digital_Transformation	Acceleration of digital transformation (p.10)	Not mentioned	Not mentioned	OECD guide to digital transformation (p.3)	Not mentioned	Democracy and digital transformation (p.3)	Digital transformation and future (p.13)	Spread of digital transformation (p.6)	Digital transformation plan (p.55)	Level of the digital transformation (p.14)
#Resilience	Withstanding the crisis (p.60)	Unbreakability	Far-reaching ICT resilience (p.14)	Increased resilience (p.26)	Resilience and recovery (p.11)	Promotion of resilience (p.2)	Resilient communities (p.45)	Not mentioned	Not mentioned	Multi-level resilience (p.24)
#Adaptiveness	Adaptive response to war (p.19)	Not mentioned	Adaptation to mitigate risks (p.11)	Enhanced adaptability (p.26)	Not mentioned	Not mentioned	Adapted service for veterans (p.69)	De-occupation and adaptability (p.7)	adapting relevant legislation (p.131)	Not mentioned
#Digital_literacy	Challenges of digital literacy (p.30)	Not mentioned	Not mentioned	Progress in digital literacy (p.23)	Not mentioned	Not mentioned	Not mentioned	Digital literacy enhancement plan (p.15)	Not mentioned	Not mentioned
#Transparency	Public service transparency (p.20)	Not mentioned	Not mentioned	Not mentioned	Not mentioned	Transparent future (p.2)	Transparent reforms (p.85)	Not mentioned	Transparent recovery process (p.161)	Local level transparency (p.24)

Appendix 3 continuation

#War	War-affected people (p.19)	Not mentioned	War regulations (p.13)	Invasion challenges (p.3)	Aggression of Russia (p.2)	War damage assessment (p.6)	War damage in numbers (p.8)	Emerged needs of wartime (p.14)	War impact (p.14)	Limitations caused by the war (p.23)
#Flexibility	Flexible decision-making (p.4)	Not mentioned	Laws allowing flexibility (p.27)	Digital tools enhancing flexibility (p.26)	Not mentioned	Not mentioned	Not mentioned	Not mentioned	Not mentioned	Not mentioned
#Preparedness/readiness	Future readiness (p.52)	Not mentioned	Not mentioned	Not mentioned	Not mentioned	Not mentioned	Not mentioned	Not mentioned	Not mentioned	Not mentioned
#Decentralisation	Not mentioned	Not mentioned	Decentralisation of administrative services (p.7)	Efforts to decentralise government (p.47)	Not mentioned	Empowered local authorities (p.5)	Decentralisation reform (p.23)	Decentralisation of programmes (p.13)	Advancing decentralisation and regional development (p.12).	EU principles of decentralisation (p.26)
#Stakeholder_engagement	Stakeholder consultations ensuring success (p.66)	Not mentioned	Not mentioned	Stakeholder collaboration (p.76)	Not mentioned	Not mentioned	Joint work of the stakeholders and authorities (p.66)	Not mentioned	Stakeholder engagement in general planning (p.36)	Cooperation (p.4)
#Diia	Diia's range of services (p.9)	6 million + Diia users	Cruciality of the platform (p.21)	Not mentioned	Complexity of the Diia portal (p.18)	Not mentioned	Investment in Diia (p.92)	Diia in numbers (p.11)	Government and Diia cooperation (p.47)	The most frequent users of Diia (57)
# Efficacy	Not mentioned	Not mentioned	Effective response to challenges (p.27)	Effectiveness of digital security policies (p.13)	Not mentioned	Effective coordination of the aid (p.7)	Not mentioned	Paperless regime to increase efficiency (p.15)	Not mentioned	Government effectiveness despite the war (p.24)

Appendix 3 continuation

#Recovery	Not mentioned	Not mentioned	Not mentioned	Enhanced long-term recovery (p.14)	Recovery in practice	UNDP support to recovery (p.4)	Strong public sector essential for recovery (p.180)	Not mentioned	Recovery will require a lot of capacity building in the civil service (p.47)	Not mentioned
#Multi-level governance	Bottom-up approach to digitalisation (p.21)	Not mentioned	Not mentioned	Not mentioned	Not mentioned	Effective Multi-level Governance (p.3)	Not mentioned	E-democracy tools in local self-governance (p.18)	Not mentioned	Multi-level governance vital for resilience (p.24)
#Digital_tools	Digital tools and social needs (p.29)	Not mentioned	Not mentioned	Advantages of digital tools (p.23)	Not mentioned	Usage of digital tools in numbers (p.4)	Not mentioned	Not mentioned	Digital tools and transparency (p.279)	Not mentioned

Appendix 4: Categorisation of Document Analysis Codes

The codes have been grouped into six categories:

- **Digital public services;**
- **Digital governance;**
- **Adaptive governance;**
- **War crises;**
- **Public knowledge and trust;**
- **Manifestations of crisis resilience.**

Category 1: Digital Public Services:

- Digital services;
- E-services;
- Electronic services;
- Digital public service delivery;
- Administrative services;
- Digitalisation of service delivery;
- Diia.

Category 2: Digital governance:

- Digitalisation;
- E-governance/E-government;
- Digital transformation;
- ICTs;
- Digital tools.

Category 3: Adaptive governance:

- Adaptation;
- Adaptive response/ability;
- Flexibility;
- Coordination;
- Decentralisation;

- Local government empowerment;

Category 4: War crises:

- War;
- Wartime;
- War-induced risks/challenges;
- Invasion;

Category 5: Public knowledge and trust:

- Digital literacy;
- Awareness;
- Transparency;
- Accountability;

Category 6: Manifestations of crisis resilience:

- Resilience;
- Efficiency;
- Preparedness/Readiness;
- Maintenance;
- Recovery.

Appendix 5: Document-by-document Code Categorisation and Context

Document 1. Dia Project Evaluation (Bajraktari & Nehrieieva, 2023)

Category	Context and Relevance
Theme 1 – Digital Public Services	• Social needs; • Citizen-oriented approach; • Aid to war-affected people; • Inclusiveness and accessibility; • E-services as a part of bottom-up governance; • Usage of Diia to improve life. • Usage of Diia to support war-affected people.
Theme 2 – Digital Governance	• Digitalisation progress during the war; • Advancement of public services via digitalisation; • Digitalisation as a source of good governance; • Digitalisation as a way to support war-affected people; • A way to withstand a war crisis; • Progress in e-governance
Theme 3 – Adaptive Governance	• Response and adapt in the face of war; • Operating in wartime circumstances; • Adaptation to help vulnerable groups; • Anticipation of future risks; • Decision-making flexibility; • Coordination vitality in terms of digitalisation; • Involvement of various stakeholders; • Importance of local governments; • Response to risk;
Theme 4 – War Crises	War posed challenges to digital transformation.
Theme 5 – Public Knowledge and Trust	• Digital literacy as a challenge of digitalisation; • Training sessions launched to develop digital literacy and awareness.
Theme 6 – Manifestations of Crisis Resilience	• Resilience of MDT (Ministry of Digital Transformation of Ukraine); • Resilience in the face of war; • Understanding the risks; • Efficient distribution of aid; • Preparedness to continue and adapt to future risks; • Readiness for change; • Maintenance of functionality.

Document 2. Ministry of Digital Transformation's Report² (MDT, A Year of Digital Invincibility, 2022)

Category	Context and Relevance
Theme 1 – Digital Public Services	• The statistical number of newly introduced e-services; • The statistical overview of the Diia app workflow and the number of users; • Diia capabilities; • Financial resources invested in empowering digital public services.
Theme 2 – Digital Governance	The projects financed and introduced by the MDT.
Theme 3 – Adaptive Governance	The number of involved government bodies and stakeholders.
Theme 4 – War Crises	“Digital blockade” as a way to face wartime crises.

² AI has been used to translate Ukrainian documents from Ukrainian to English (OpenAI, 2026).

Document 3. OECD Report (SIGMA, 2022)

Category	Context and Relevance
Theme 1 – Digital Public Services	• Overview of e-services; • The first steps of digital public service introduction; • The war-induced challenges of service delivery; • Names some significant new services; • Role of the portal Diia in service delivery.
Theme 2 – Digital Governance	• The chronology of the establishment of digital transformation; • Digitalisation reforms;
Theme 3 – Adaptive Governance	• Adaptation of the system to mitigate risks; • Number of adapted services; • Adaptation procedures and time period; • Quick and effective response to the wartime needs; • New laws and their flexibility; • Role of local bodies in the process of decentralisation;
Theme 4 – War Crises	• Consequences and potential challenges posed by the war; • Success and safety of the service delivery system during war conditions; • E-services addressing war-affected society;
Theme 6 – Manifestations of Crisis Resilience	• Contribution of digitalisation to resilience; • Effectiveness of system; • Maintenance of services during the war;

Document 4. OECD Report (2024)

Category	Context and Relevance
Theme 1 – Digital Public Services	• Emphasis on several digital public services, such as Diia; • Diia flagship project overview; • Government’s digitalisation ambitions; • The EU’s effort to support Ukraine’s digitalisation during the war.
Theme 2 – Digital Governance	• Long-term digitalisation goals; • Digitalisation of registries and public administration; • E-government segments; • Number of Ukrainians possessing digital skills;
Theme 3 – Adaptive Governance	• Flexibility and adaptability in public administration and the business sector; • Adaptation of Diia; • Coordination with regional units; • Stakeholder cooperation in terms of digital security. • Decentralisation efforts.
Theme 4 – War Crises	• Digitalisation to tackle war-related challenges; • The potential of digital tools to deal with war challenges;
Theme 5 – Public Knowledge and Trust	• Progress in digital literacy; • Digital literacy certification; • Digital government steps fostering transparency and competitiveness;
Theme 6 – Manifestations of Crisis Resilience	• Digital tools enhancing resilience; • ICT sector vital for war-crises resilience; • Post-war recovery and EU accession.

Document 5. Resolution of the Ministry of Digital Transformation of Ukraine³ (CMU, 2023)

Category	Context and Relevance
Theme 1 – Digital Public Services	• The role of particular digital services; • eRecovery practical operation; • The substance of the eRecovery project; • Diia's role in the recovery process.
Theme 2 – Digital Governance	• MDT order; • E-government practical example.
Theme 4 – War Crises	• Using e-service to overcome Russia's aggression caused damage. • War veteran needs.

³ AI has been used to translate Ukrainian documents from Ukrainian to English (OpenAI, 2026)

Document 6. UNDP Report (UNDP, 2025)

Category	Context and Relevance
Theme 1 – Digital Public Services	• Increased usage of digital tools and services considered an achievement. • Improved public service delivery through digital tools and a set of services;
Theme 2 – Digital Governance	• Promotion of digital transformation; • Digital transformation as a part of democratic governance;
Theme 3 – Adaptive Governance	• Role of local authorities in the process of recovery; • Multi-level governance.
Theme 4 – War Crises	War caused damage.
Theme 5 – Public Knowledge and Trust	• Ukraine’s commitment towards a transparent and inclusive digital future;
Theme 6 – Manifestations of Crisis Resilience	• Effective actions of local and central governments.

Document 7. The World Bank Report on Ukraine (World Bank, 2024)

Category	Context and Relevance
Theme 1 – Digital Public Services	Public services and war;
Theme 2 – Digital Governance	• Statistical findings regarding the share of digital governance in the process of recovery; • Electronic tools implementation;
Theme 3 – Adaptive Governance	• Adaptation of service systems in order to respond to the needs of war veterans; • Recovery and adaptation of services; • Coordination between national, subnational authorities and society; • Decentralisation reform;
Theme 4 – War Crises	War created extremely difficult conditions.
Theme 5 – Public Knowledge and Trust	Reforms addressing the extent of transparency and accountability of service delivery.
Theme 6 – Manifestations of Crisis Resilience	• Digitalisation role in creating a resilient environment in the face of cyberattacks. • Digital infrastructure resilience;

Document 8. Digital Transformation Index of Ukraine's Regions 2023⁴ (MDT, 2023)

Category	Context and Relevance
Theme 1 – Digital Public Services	• The need for digital service development; • Percentage of e-services; • Overview of Diia's sectoral operation in numbers;
Theme 2 – Digital Governance	• Prioritisation of digitalisation; • Implementation of e-democracy tools.
Theme 3 – Adaptive Governance	• Regional digitalisation during wartime; • Digitalising local authorities
Theme 4 – War Crises	Wartime necessities in terms of services.
Theme 5 – Public Knowledge and Trust	MDT's strategic goal in terms of the improvement of digital literacy.
Theme 6 – Manifestations of Crisis Resilience	• Efficiency in digital infrastructure; • Readiness of the infrastructure;

⁴ AI has been used to translate Ukrainian documents from Ukrainian to English (OpenAI, 2026)

Document 9. Ukraine Facility – Ukraine Plan 2024-2027 (Government of Ukraine, 2024)

Category	Context and Relevance
Theme 1 – Digital Public Services	• The convenience of electronic services; • Trembita system through the Diia platform;
Theme 2 – Digital Governance	• Digitalisation of state services; • Digitalisation as a driving force of modernisation; • Potential digitalisation plans for the future in diverse domains of social-political life;
Theme 3 – Adaptive Governance	• Adaptation of legislation; • Adapt to meet European standards; • Decentralisation importance for democratisation;
Theme 4 – War Crises	Significance of war and its socio-economic consequences.
Theme 5 – Public Knowledge and Trust	Transparency, inclusiveness and accountability in the process of post-war recovery.
Theme 6 – Manifestations of Crisis Resilience	• Resilience in different domains, including digital services; • Emphasis on AI readiness index; • Maintenance of digital infrastructure

Document 10. European Commission Report on Ukraine (European Commission, 2024)

Category	Context and Relevance
Theme 1 – Digital Public Services	Consistent progress with regard to digital service delivery;
Theme 2 – Digital Governance	• Development continuation of the e-government system; • Key role of digitalisation in terms of user-focused service delivery;
Theme 3 – Adaptive Governance	• Coordination in the policy development field; • Involvement of stakeholders and cooperation remain crucial for EU integration.
Theme 4 – War Crises	Changed environment due to the war.
Theme 5 – Public Knowledge and Trust	Recent laws on transparency in local governments;
Theme 6 – Manifestations of Crisis Resilience	• Role of multi-level governance in resilience and recovery; • Continuity of governance despite the war;

Appendices: Content Analysis

Appendix 6: Codebook for Content Analysis⁵

Code Name	Definition	Example Quote
#Digital Services	Use of the names of certain digital services, emphasis on their role	“Trembita is the basis of all services of Action” - 13 Jul, 2023 - Vyskub
#Diia	Diia-based services and practical examples of Diia platform functionality	“Diia has shown how digital public services can keep a country functioning even in wartime: millions of citizens are able to access IDs, documents and essential public services anytime, anywhere, directly via their smartphones”. - 19 Dec, 2025 - Ionan
#Digital Transformation/Digitalisation	Facts indicating ICT-based governance empowerment	“Artificial Intelligence is the new norm for the state, business, and education” - 30 Dec, 2025 - Fedorov;
#International Coordination	Projects, meetings, agreements with international partner states and organisations	“Estonia is the most digital country in Europe is our mentor in creating digital Ukraine” - Jun 3, 2023 - Ionan
#War Challenges	Consequences brought by the war	“Due to the war and life circumstances, not all Ukrainians can personally come to the CNAP” - 18 Dec, 2025 - Fedorov

⁵ Most of the posts were in the Ukrainian language, and they were translated into English using automatic translation offered by Facebook.

#Resilience	Maintenance of robustness despite the war	“Ukrainian IT business demonstrates a high level of resilience” - 11 Dec, 2025 - Fedorov
#Cybersecurity/Cyberresilience	Emphasis on the importance of cybersecurity and the projects to ensure it	“In the face of full-scale war, resilience in cyberspace is key to the security of the state” - 22 Dec, 2025 - Fedorov
#Digitalisation Experience	Sharing Ukrainian digitalisation experience	“Ukraine’s digital transformation started long before the full-scale Russian invasion” - 16 Sep, 2025 - Ionan
#Future Digitalisation	Future digital development plans and ambitions	“The future of Ukraine is paperless & Putinless” - 18 Nov, 2022 - Vyskub
#Adaptation	Changing the system according to the present circumstances, examples	“We need to ensure that systems and processes are adapted and evolved” - 16 Dec, 2024 - Ionan
#Cooperation	Within-state cooperation of various actors	“Diya.City is a unique tax and legal space created in interaction between Government, Parliament and business to develop technology companies.” - 17 Oct, 2025 - Fedorov
#War-crisis response	Examples of the combat against war-induced consequences	“In war time, this technology is critical to keeping hospitals, schools, critical infrastructure and frontline areas connected” - 29 Sep, 2025 - Ionan

#Regional Digitalisation	Digitalisation of the regions of Ukraine	“As I already wrote, regional digital transformation remains one of our priorities” - 5 Nov, 2022 - Ionan
#Decentralisation	Enhancement of local authorities	“In Ukraine, decentralization reform is an important part of public government” - 27 Dec, 2024 - Ionan
#Digital Awareness	Literacy and Digital Education	"Digital literacy and education of Ukrainians in different spheres are one of the priorities of the Ministry of Digital" - 17 May, 2023 - Fedorov
#Democratic Values	Transparency, anti-corruption, rule of law	“With each such electronic transaction, the state becomes more convenient and efficient, anti-corruption and transparent” - 13 Jul, 2023 - Vyskub

Appendix 7: Categorisation of the Content Analysis Codes

Category #	Code
1. Digital Transformation	• Digital services; • Diia; • Digital transformation/Digitalisation; • Digitalisation experience; • Digital awareness; • Future Digitalisation.
2. Adaptive Governance	• Adaptation; • Cooperation; • Regional digitalisation; • Decentralisation; • Democratic values.
3. War Circumstances	• War challenges; • Resilience; • Cybersecurity; • International Coordination; • War crisis response.

Appendix 8: The Comparative Matrix of the Content Analysis

Category	Official 1: Mykhailo Fedorov	Official 2: Aleksey Vyskub	Official 3: Valeryia Ionan
Digitalisation	• Underscores the Diia platform and Diia-based services and the significance of AI; • Is proud of the past and present success; • Believes in IT-based governance in public administration and in a war as well.	• Underlines e-services as a possibility to support war-impacted people (i.e. veterans); • Is delighted with the quality of the Ukrainian e-services; • Digital services save time and ensure the highest degree of convenience.	• Diia is an example of the robustness of digital services; • Future goal is to be the best in digital transformation, as per Ionan; • Digital literacy is perceived as one of the key mechanisms to boost digital development.
Adaptive Governance	• This war for him is a war of technology in which adaptation is crucial; • Adaptation of the digital tools ensures convenience and readiness; • Addresses the services created via multi-stakeholder cooperation.	• Addresses adaptive governance the least amongst these officials; • Outlines the cruciality of cooperation between business, civil society and government.	• Adaptation is key in the face of war-related challenges; • Regional digitalisation and decentralisation are part of wartime adaptation; • Partnerships and coordination of the private sector, business and the state remain crucial.
War Circumstances	• Emphasises several challenges: speed, “invisible war”, IDPs; • Cyber-resilience is vital; • This contemporary war is perceived as posing specific challenges which can be addressed through digital transformation.	• For him, this is the war of technology; • International coordination is reasoned as one of the central measures to enhance e-governance (exclusively partnership with Estonia); • Bureaucratic complications can hinder war-crisis response, thus digitalisation is the answer.	• War caused many problems, especially creating IDPs (Internally Displaced People); • Cyber-resilience can ensure national security; • Summits, projects, grants, and digital innovation support from the international partners are another central way to combat the war crisis.

Appendices: Interviews with Experts

Appendix 9: Interview Guide

1. How has a war affected public governance and service delivery in Ukraine?
2. What role do digital public services play in Ukrainian public governance and administration?
3. How has the adaptation process been going in Ukrainian public governance during wartime?
4. What elements of adaptive governance are present in Ukrainian public service delivery?
5. What kind of impact does digitalisation have on Ukrainian public governance in general?
6. What role does digitalisation play in the process of adaptation of public service delivery in wartime Ukraine?
7. How does digital adaptive governance manifest in the process of public service delivery in wartime Ukraine?
8. To what extent does adaptive digital governance contribute to war-induced crisis resilience in Ukraine?
9. Would you like to add something?

Appendix 10: Interview Respondents

N	Name	Affiliation	Country	Informant Type	Interview Date	Interview Duration	Interview Mode	Confidentiality
1	Andrii Piskun	Senior Expert - e-Governance Academy	Ukraine	Practitioner	10/3/2026	37 Minutes	Online	Name Mention Allowed
2	Dmytro Popov	Director -Digital Accessibility Laboratory	Ukraine	Practitioner	20/3/2026	25 Minutes	Online	Name Mention Allowed
3	Olga Matveieva	Associate Professor - Institute of Public Administration of Dnipro University of Technology; Research fellow - Marie Jahoda Centre for International Gender Studies of Ruhr-University Bochum	Ukraine and Germany	Scholar	20/3/2026	40 Minutes	Online	Name Mention Allowed
4	Yevhenii Kharchenko	ICT Coordinator - UNDP Diia support project	Ukraine	Practitioner	26/03/2026	N/A	Written Answers/Notes	Name Mention Allowed
5	Marina Rabinovych	Assistant Professor at the Department of Public Policy and Governance - Kyiv School of Economics	Ukraine	Scholar	31/03/2026	28 Minutes	Online	Name Mention Allowed
6	Oksana Huss	Researcher in the BIT-ACT research project - University of Bologna; Lecturer - Anti-Corruption Research and Education Centre	Italy and Ukraine	Scholar	09/04/2026	32 Minutes	Online	Name Mention Allowed
7	Danylo Molchanov	Chief of Party - UK DIGIT (Digitalisation for Growth, Integrity and Transparency)	Ukraine	Practitioner	20/04/2026	58 Minutes	Online	Name Mention Allowed
8	Nelli Blinova	Head of AI International Partnerships - Ministry of Digital Transformation	Ukraine	Practitioner	17/04/2026	48 Minutes	Online	Name Mention Allowed

Appendix 10 continuation

9	Oksana Grechko	Digitalisation Policy Specialist – DIA Support Project (Digital Inclusive Accessible: Support to digitalisation of public services)	Ukraine	Practitioner	30/04/2026	35 Minutes	Online	Name Mention Allowed
10	Serhii Karelin	Senior Expert – e-Governance Academy	Ukraine	Practitioner	05/05/2026	24 Minutes	Online	Name Mention Allowed

Appendix 11: Informed Consent Form

This is an informed consent form for a semi-structured interview, which serves as one of the research methods for conducting the qualitative analysis in the MA Thesis – “Adaptive Digital Governance: The Response to the Wartime Crises in Ukraine”.

Interviewer (Author of the thesis): Tornike Goglidze – Student of the **University of Tartu**, Johan Skytte Institute of Political Studies. Contact – tornike.goglidze@ut.ee

Supervisor of the thesis: Dmytro Khutkyy - Head of the University of Tartu Ukraine Centre, Research Fellow in Digital Governance, Johan Skytte Institute of Political Studies, University of Tartu, Estonia.

University of Tartu data protection office contact: admekaitse@ut.ee

The research analyses how digital services are associated with adaptive governance and empirical manifestations of crisis resilience.

The information derived from the interview will be used to establish the thesis's findings, analyse patterns, and draw general inferences. The data and quotes from the interview will be used solely for academic purposes.

The interview utilises the following **anonymisation** techniques: Generalisation and Pseudonymisation.

Data Processing According to General Data Protection Regulation (**GDPR**): The interview will collect the respondent's name and last name, a voice recording of the interview, and the respondent's job position. The data will be kept on an encrypted university drive. The data expires two years after the potential successful defence of the thesis (for publication purposes), hence it will be destroyed.

According to **GDPR**, the respondent is granted the following rights:

1. **Right to withdraw** – the interviewee is able to withdraw from the interview process regardless of time, without any kind of penalty. To withdraw from the interview, the interviewee should inform the interviewer at the following e-mail address: tornike.goglidze@ut.ee.

2. **Right to access** – The respondent is able to know what kind of data is gathered or kept by the interviewer and ask to fix or adjust in the case of the identification of error(s).
3. **Right to ensure** – The respondent is able to request their personal data to be deleted.

Please select the preferred option:

- I agree to the video being recorded during the interview ☐
- I agree that only audio is to be recorded ☐
- I agree that the interviewer neither records video nor audio, but only takes notes ☐

“I understand the interview procedure, details, objectives, and purposes and agree to my personal data being processed as described above” ☐

Name (printed name):

Date:

Signature:

X _____

Appendix 12: The Initial Coding of the Interview Transcripts

Quote Fragment	Initial Code	Researcher Comment
"In most, let's say, cases like life events, you don't need the paper-based document at all" (Respondent 8)	#Convenience of e-services	Convenience is one of the central contributions of digitalisation
"A lot of people are really moved from their places where they lived. So that's why they need to receive like some services electronically" (Respondent 1)	#Wartime consequences	Challenges, issues and difficulties caused by the invasion
"For instance, and yes, that's how Diia became the single point of opportunities for people, both like before the war and even more after the war" (Respondent 6)	#Diia contribution	The role of Diia as a key contributor to digital success and adaptation
"That is, services are emerging very quickly in response to the difficulties people face. So I think this is precisely where government adaptability lies" (Respondent 3)	#Adaptation	Examples of adaptation from their experience and observations
"So this approach created a flexible environment with a huge political will" (Respondent 1)	#Flexibility of decision-making	The cruciality of flexible decision-making procedures

"The next stream is Digital Services for Veterans or Veteran Pro in 2025. For 25 veteran services were consolidated into a unified digital space called Veteran Pro" (Respondent 6)	#Digitalisation reforms	Concrete digitalisation reforms
"You can address a lot of challenges easier, providing digital services. Then, trying to. to change the lives of people in offline format" (Respondent 9)	#Digitalisation contribution	The key positive results of digital transformation
"We can trust to registers much more than to the papers which were given to people like 10 years ago, for example, and the decisions became... More concrete and right decisions" (Respondent 1)	#Reliability of e-services	E-services are trustworthy and reliable
"I think maybe this really reliance on digital tools is important, a certain degree of innovation" (Respondent 2)	#Digital tools	The presence of particular digital tools in digital service delivery
"I believe that there has been quite a big role of the municipalities because they know their problems best" (Respondent 2)	#Role of local authorities	The significance of central-local governmental coordination

"Ukraine succeeded significantly in the reform of post-decentralisation and then digitalisation" (Respondent 7)	#Decentralisation	Decentralisation is one of the important aspects of Ukraine's success
"So digitalisation and adaptation work very well together" (Respondent 2)	#Digital adaptive governance	The combination of digitalisation and adaptiveness is tangible
"Before Zelenskyy became like a president, it was his national anthem. We won a state in a smartphone. It started from this idea and sometimes after this, we received the first application of the year and people start to use it. And we have a lot of problems with it" (Respondent 10)	#Pre-war digitalisation issues	The imperfections of digitalisation before its further development
"On the one hand, that Ukraine proved resilience, national resilience because the state was able to continue providing public services" (Respondent 4)	#System functionality/service provision maintenance	Resilience in the public governance field is associated primarily with the maintenance of service provision
"Digital services have been developing very rapidly lately" (Respondent 3)	#Digitalisation	Respondents' perspectives on digitalisation
"So, we're supporting the government institutions with the digital anti-corruption reform" (Respondent 8)	#Low risks of corruption	Lowering the risks of corruption is an achievement of digitalisation

"digital government services can be provided in places like temporarily occupied territories or even, for example, near the front lines" (Respondent 3)	#Digital access	The importance of the inclusiveness of digital services
"So I'd say that we, that this period from 2022, shows that adaptive digital governance is the critical factor for state resilience" (Respondent 6)	#Resilience	Resilience is a key factor to analyse in terms of digital adaptive perspectives
"we were able to, again, make people understand why digitalization is important and how it can make lives of our businesses and our citizens better" (Respondent 6)	#Digital awareness	Digital awareness necessity prior to digitalisation reforms
"So maybe the bigger influence on that had cyber war, all the attacks that were attempted on the digital system in Ukraine" (Respondent 4)	#Cyber-resilience	Cyber resilience is considered part of the overall resilience and sustainability
"So digital services are created for cooperation between local governments, civil society organisations, our own" (Respondent 6)	#Engagement/Cooperation of stakeholders	Actors are considered to be welcome to participate and contribute to success

"Meanwhile, the economic downturn has compelled various public institutions to learn how to work with donors and secure external funding for urgent initiatives" (Respondent 5)	#International donors	International support is also crucial in terms of achieving a digitalisation breakthrough and resilience
"The state has begun to respond more closely to the needs and demands of citizens, for example, by addressing the specific needs of IDPs" (Respondent 5)	#Effective response	The government's response to the crisis has been quick and efficient
"Meanwhile, digitalisation has facilitated the swift recovery and scaling of services even during crises" (Respondent 5)	#Recovery	The reforms should also emphasise recovery actions
"Even before the full-scale invasion, the digital ecosystem in Ukraine was quite advanced" (Respondent 6)	#Pre-war digitalisation	Digitalisation establishment prior to the invasion
"But the problem is in digital authoritarianism, as I call it, because now, through these digital services, the state has, first of all, access to" (Respondent 7)	#Digital authoritarianism danger	Potential negative consequences of wartime digitalisation

"But to make it the kind of the whole cycle and to make it maximum transparent and, you know, like accountable, we produced this kind of like the scenario" (Respondent 8)	#Transparency	Transparency should be ensured via digitalisation and adaptiveness
"These are services for IDPs, for veterans and their families. And there is also a platform, Veteran Pro. It's like, it's a platform which unites information about different kind of services for veterans just in one place " (Respondent 9)	#Supporting war-affected people	Actions to support people suffering from war challenges
"It's like traditional way in Ukraine now, when you have a digital application for you with your wallet and your services. So, it's normal for people became" (Respondent 10)	#Digital way of living	Digitalisation effect daily

Appendix 13: The Comparative Matrix of the Interview Codes

Theme/Category	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7	Respondent 8	Respondent 9	Respondent 10
Digital Transformation	Addresses digitalisation reforms, such as CDTO offices; Delighted with the speed brought by digitalisation	Emphasise the impact of digitalisation on communication and digital awareness.	Underlines success in digitalisation; the economic effect of digitalisation	Underscores public awareness	Considers digitalisation as a main driver of the state's development	Emphasises pre-war digitalisation; Technological breakthrough	The respondent names successful digitalisation reforms	Underlines digitalisation contributions to the war-affected people	Underscores the digitalisation contribution to the accessibility of services	Considers it as an ongoing progress
Digital Services	Trusts e-services more than people bureaucrats; Is happy with Diia's work	Underlines particular e-services; the importance of reliance on digital tools	Believes in e-services, but sees some accessibility issues	Emphasises repurposed use of e-services; Highlights the "Delta" system	Points out simplified service delivery; Overviews CNAPs	Outlines the e-service and Diia users in numbers	Underlines the role of Diia, but also mentions data protection issues	Believes that Ukraine is building transparent and trustworthy services	Mentions the digital service role in supporting war-affected people	Emphasises e-services as the main contributors to the resolution of wartime issues
War Crisis	Wartime hardens service delivery; Everyone gets affected by war.	Recalls the early stages of the impact of war;	Emphasises temporarily the challenges of temporarily occupied territories	Points out the war's influence on state resources	Highlights the inability to physically access institutions as one of the challenges	Believes that war caused institutional weaponisation and weakened traditional governance	Highlights the fact that war determines new vulnerable groups	Considers securing the data as one of the war-induced challenges	Emphasises war consequences, such as closed registries and hack attacks	Underscores war consequences with front offices and administrative service centres
Crisis Response	Emphasises the role of EU and USAID support	Considers digital solutions as a response to the crisis	Thinks that recently response to the crisis has become more inclusive	Not present	Considers response quick and effective, mainly for IDPs	Underscores military digitalisation as one of the responses to the crisis	Emphasises slow response at the early stages	Highlights mostly IDP support; International financial support	Considers international support one of the main drivers of crisis response	Primarily underlines support of war-affected people as a way of response
Digital Adaptive Governance Features	Ad hoc adaptation; Political will for adaptation.	Highlights the evolution of adaptation and regional adaptive capacity	Ukraine has successfully adapted according to this respondent	Addresses decentralisation and central-local government coordination; Legal dimension of adaptation	Highlights the role of local authorities	Mentions the cooperation of diverse actors; Flexibility	Outlines decentralisation success and the early adaptation stages	Emphasises the cooperation of stakeholders and adaptiveness of services	Highlights the collaboration and cooperation of MDT with diverse organisations	Mentions coordination of actors, quick adaptation of services

Crisis Resilience	Not present	Continuity of system functionality is one demonstration of resilience	Finds digital resilience significant	Outlines system functionality, maintenance, and cyber-resilience	Cyber-resilience/service continuity is crucial, as per this respondent	Administrative continuity and adaptation are key in system maintenance	Resilience is present, but new possibilities for better resilience are crucial	Considers resilience as a matter which requires significant investments	Believes that service continuity and digital development demonstrate the state's resilience	Highlight the avoidance of service delivery collapse as an example
Risks to Democracy	Not present	Not present	Not present	Not present	War has weakened transparency and accountability	Not present	Believes in a risk of digital authoritarianism; Discrimination	Not present	Not Present	Not Present

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