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The Impact of E-Government on Administrative Law Principles in Germany: The Case of North Rhine-Westphalia

Dessertation

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Table of Contents

1. First Chapter: Foundations of the Research

1.1. Introduction

Since its inception, the state has undergone continuous transformation, a process that Schaefer (2016) describes as inherent to human institutions, which never achieve perfection but are constantly reshaped[1]. This dynamic is particularly evident in public administration, where traditional paper-based and hierarchical structures are increasingly unable to meet the demands of the digital era. The transition to e-government is therefore not merely a matter of technical modernisation; it requires a fundamental re-examination of the core principles of administrative law—legality, proportionality, and due process—to ensure that the constitutional guarantees of the Rechtsstaat remain effective in a digital environment.

Within this context, the concept of "e-government maturity" has become a central benchmark. It is commonly assessed by the extent to which digital systems meet rising public expectations in terms of efficiency, accessibility, transparency, and accountability. These dimensions also intersect with the objectives of sustainable development[2]. Yet, the pursuit of maturity raises pressing legal questions: How can the statutory basis of digital procedures be secured (legality)? How can the necessity and proportionality of technological measures be evaluated (proportionality)? And how can rights of participation, notice, and redress be safeguarded in increasingly automated administrative processes (due process)?[3].

The German legislator has sought to address these challenges through the Federal E-Government Act of 2013, which aimed to modernise federal administration and promote digitisation[4]. At the regional level, the E-Government Act of North Rhine-Westphalia (EGovG NRW)[5], enacted in 2020, provides a particularly instructive case. It contains provisions on electronic files, digital communication, and accessibility, thereby illustrating how legal frameworks interact with technological innovation while remaining anchored in constitutional principles. By examining the implementation of EGovG NRW, this dissertation seeks to analyse how the foundational principles of administrative law are being reinterpreted

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[1] Schaefer, Jan Philipp, *Die Umgestaltung des Verwaltungsrechts* (The restructuring of administrative law), Tübingen: Mohr Siebeck, 2016:1.
[2] E-Government Survey 2020: Digital Government in the Decade of Action for Sustainable Development, with Addendum on COVID-19 Response (United Nations, 2020), xx.
[3] Alder, John. General principles of constitutional and administrative law. 2002.
[4] Fraenkel-Haeberle, Cristina. "Fully Digitalized Administrative Procedures in the German Legal System." *European Review of Digital Administration & Law–Erdal* 1, no. 1-2 (2020): 105-111. 109
[5] North Rhine-Westphalia E-Government Act (EGovG NRW), 2020, https://recht.nrw.de/lmi/owa/br_text_anzeigen?v_id=73520171220150354215.

in the digital age and to assess whether they continue to function as effective constitutional safeguards within a transformed administrative landscape.

1.2. Motivation Behind Choosing This Research:

The rapid digital transformation of public administration poses complex legal challenges. As governments around the world increasingly embrace e-government to enhance the efficiency and accessibility of public services, it becomes imperative to examine the implications for the fundamental principles of administrative law, such as legality, proportionality, and due process. In this context, the e-government law in the state of North Rhine-Westphalia (EGovG NRW) serves as a compelling case study to illustrate the digital transition process and the legal hurdles facing digital governance.

This research is motivated by a critical need to identify the legal gaps that arise during the implementation of e-government initiatives. Legislators often struggle to keep pace with rapid technological advances, and this study seeks to analyse how the EGovG NRW law, in particular, aligns with established principles of administrative law. Furthermore, the research aims to assess the delicate balance between digital transformation and legal safeguards, exploring how the shift from traditional processes to digital interactions raises fundamental questions about citizens' rights, including access to justice, procedural fairness, and data protection. We will examine whether the EGovG NRW adequately protects these rights and if additional safeguards are necessary to maintain trust and accountability.

This study contributes to the growing body of legal scholarship on e-government. Given the increasing reliance on digital governance, this research offers meaningful insights into the need for adaptable legal frameworks that ensure both technological innovation and legal certainty. Ultimately, this work aligns with a broader academic and professional interest in administrative law, digital transformation, and public sector innovation, providing a critical examination of the EGovG NRW within the context of e-government implementation.

1.3. Overview of the research structure:

This dissertation offers a specialised examination of the evolving role of e-government within the German legal and administrative framework, with particular attention to the interaction between digital transformation and administrative principles. The structure of the thesis follows a progressive logic: it begins with conceptual and methodological foundations, proceeds to the federal context, narrows to the regional case study of North Rhine-Westphalia, and culminates in normative analysis and recommendations.

Chapter One introduces the research problem and situates it within the broader discourse on digitalisation and public administration. It outlines the central research question, defines the objectives of the study, and explains the methodological approach adopted.

Chapter Two, "E-Government in the German Federal Administrative System," provides the national context. It examines Germany's comparatively cautious and legally grounded approach to digitalisation, shaped by federalism and the constitutional principle of the Rechtsstaat. The chapter traces the development of key legislative instruments, including the Federal E-Government Act (EGovG, 2013) and the Online Access Act (OZG, 2017), and analyses how federal structures influence their implementation. This contextual overview establishes the institutional and legal backdrop for the more detailed doctrinal analysis that follows.

Chapter Three, "The Impact of E-Government on Administrative Law Principles," moves from description to critical evaluation. It analyses how digitalisation reshapes fundamental principles such as legality, proportionality, accountability, and transparency, particularly in the context of automated decision-making and digital service delivery.

Chapter Four, "Legal Frameworks for E-Government in North Rhine-Westphalia," presents the case study at the regional level. It examines the provisions of the E-Government Act of North Rhine-Westphalia (EGovG NRW, 2020). The analysis considers how core administrative law principles—legality, proportionality, equality, transparency, legitimate expectations, accountability, and data protection—are reflected in the statutory text. Particular attention is given to the balance between efficiency and safeguards, exploring whether these principles operate merely as abstract guidelines or whether they have substantively shaped the law's design.

Chapter Five, "Recommendations and Conclusions," synthesises the findings of the study. The chapter concludes with a reflection on the broader significance of the findings.

Through this structure, the dissertation aims to provide a comprehensive and nuanced understanding of the impact of e-government on German public administration and administrative law. By combining theoretical analysis with a focused case study, it contributes to ongoing scholarly debates on the future of administrative governance and the role of law in shaping digital transformation.

1.4. Research problem

While e-government legislation is designed to modernise public administration and reduce bureaucratic obstacles, its integration of digital technologies raises significant legal issues that require in-depth study. Although the primary objective of these legal frameworks is to improve the efficiency, quality, and accessibility of administrative services, a core concern is the potential impact of e-government on the fundamental principles of administrative law, such as legality, proportionality, and due process. As traditional administrative procedures increasingly give way to digital alternatives, fundamental questions arise about the preservation of these basic legal principles in a new digital context.

A critical issue is the effectiveness of existing legal safeguards, which were developed primarily for traditional, paper-based administrative procedures. These protections may not be fully compatible with the evolving nature of digital governance, particularly regarding the automated processing of personal data, the risk of digital exclusion, and a lack of transparency in algorithmic decision-making. Therefore, this research seeks to identify these legal gaps and explore solutions to ensure the legally acceptable implementation of e-government. It will critically assess how Germany's e-government law interacts with the fundamental principles of German administrative law to address these concerns.

By doing so, the study aims to ensure that e-government initiatives not only promote administrative efficiency but also uphold fundamental legal standards, protect citizens' rights, and facilitate effective public administration in the digital age. This assessment aims to contribute to the ongoing development of legal frameworks that are best suited to the challenges posed by digital transformation in the public sector.

1.5. Research Questions

This dissertation investigates the legal implications of e-government within the German administrative law framework, using the E-Government Act of North Rhine-Westphalia (EGovG NRW, 2020) as a case study to illustrate broader doctrinal and practical challenges. The study is guided by one overarching research question and several sub-questions.

1.5.1 Main Research Question

To what extent does the introduction of digital technologies affect the fundamental principles of German administrative law, and what legal gaps must be addressed to ensure

that e-government initiatives both protect citizens' rights and enhance administrative efficiency?

1.5.2 Sub-questions

1.5.2.1. Doctrinal compliance: To what extent do German e-government frameworks—particularly the EGovG NRW as a case study, alongside the Verwaltungsverfahrensgesetz (Administrative Procedure Act)—comply with fundamental principles of administrative law such as legality, proportionality, and procedural guarantees (Verfahrensgrundsätze)?

1.5.2.2. Citizens' rights: How are citizens' rights, including access to justice, transparency, and participation, affected by the shift to digital administrative procedures, and what insights does the NRW case provide for the German context more broadly?

1.5.2.3. Data protection and privacy: In what ways do the EGovG NRW and related legal frameworks address data protection and privacy concerns, particularly in light of the General Data Protection Regulation (GDPR) and corresponding German legislation?

1.5.2.4. Legal gaps and reforms: What legal gaps emerge in the application of digital technologies under the EGovG NRW, and what potential reforms could ensure that German e-government law effectively supports digital transformation while maintaining essential constitutional and administrative safeguards?

1.6. Research Hypotheses and Testing Methodology

This study formulates four hypotheses derived from established legal theory and regulatory frameworks. These hypotheses represent logical predictions about the interaction between e-government and administrative law and will be evaluated through a legal-analytical methodology. The approach combines doctrinal analysis of statutory provisions (including the EGovG NRW, the Verwaltungsverfahrensgesetz, and the GDPR), comparative legal analysis with other European jurisdictions, and a review of relevant academic discourse and policy documents.

1.6.1 Hypothesis 1: Compliance with Administrative Law Principles

Hypothesis: German e-government law, illustrated by the case of North Rhine-Westphalia, broadly reflects the fundamental principles of administrative law—legality, proportionality, and procedural guarantees (Verfahrensgrundsätze)—yet its digital implementation may generate procedural challenges that necessitate legal clarification or amendment. Testing Approach: A doctrinal analysis of statutory provisions and academic commentary will be conducted to identify potential tensions between digital procedures and traditional safeguards. Expected Result: The analysis may reveal inconsistencies between digital practices (e.g., automated notifications, electronic files) and established legal protections, highlighting areas where procedural adaptation is required.

1.6.2 Hypothesis 2: Efficiency and Transparency in Tension

Hypothesis: E-government legislation enhances administrative efficiency and accessibility but simultaneously raises concerns regarding transparency and public accountability. Testing Approach: The provisions of the EGovG NRW will be examined for their adequacy in ensuring transparency and accountability, supplemented by a comparative review of other European e-government frameworks. Expected Result: The findings are likely to show that while digitalisation improves efficiency, it may reduce opportunities for citizen participation and oversight, suggesting the need for additional transparency mechanisms.

1.6.3 Hypothesis 3: Legal Gaps in Alignment with Broader Frameworks

Hypothesis: The EGovG NRW does not fully align with overarching legal frameworks such as the GDPR and the Verwaltungsverfahrensgesetz, resulting in gaps concerning data protection and procedural safeguards. Testing Approach: A normative legal analysis will assess the consistency of the EGovG NRW with these frameworks, supported by academic commentary on digital rights and administrative procedure. Expected Result: The study may identify areas of partial compliance or inconsistency, particularly in data protection and procedural harmonisation, indicating the need for legislative refinement.

1.6.4 Hypothesis 4: Structural and Administrative Preconditions

Hypothesis: The effective implementation of e-government law requires not only legal provisions but also institutional and structural reforms, including investment in digital infrastructure, legal training for administrative staff, and measures to mitigate the digital

divide. Testing Approach: Government reports, policy documents, and legislative materials will be analysed to identify administrative and structural challenges. Expected Result: The research is expected to reveal institutional weaknesses that necessitate targeted reforms to ensure that e-government initiatives achieve both efficiency and legal robustness.

1.7. Significance and Relevance of the Research

The rapid digitalisation of public administration necessitates a systematic examination of how e-government initiatives interact with constitutional and administrative law principles. The relevance of this research lies in assessing whether technological innovation is compatible with the requirements of the Rechtsstaat and the protection of citizens' rights, particularly in light of European instruments such as the GDPR and national frameworks including the Verwaltungsverfahrensgesetz.

This study contributes on three levels:

1.7.1. Practical relevance:

It offers insights for public authorities implementing e-government, addressing challenges such as digital exclusion, efficiency, and transparency. By identifying these issues, the research supports practitioners in designing administrative processes that remain accessible and reliable in digital environments.

1.7.2. Legal relevance:

It highlights gaps and inconsistencies in existing legislation, especially concerning the alignment of e-government measures with constitutional principles and data-protection requirements. This helps to inform the development of coherent and legally sound regulatory frameworks capable of guiding digital transformation.

1.7.3. Academic relevance:

It contributes to legal scholarship by analysing how fundamental administrative law principles—legality, proportionality, transparency, and effective legal protection—are being reinterpreted in digital contexts. This analysis enriches comparative debates on digital

governance and clarifies how these principles evolve when applied to technologically mediated administrative procedures.

Ultimately, the study provides both theoretical and practical perspectives on the adequacy of current legal frameworks for digital governance, ensuring that the modernisation of public administration enhances efficiency while safeguarding fundamental rights and maintaining public trust.

1.8. Research Methodology

This dissertation adopts a legal-doctrinal approach, complemented by comparative analysis, to examine the E-Government Act of North Rhine-Westphalia (EGovG NRW) as a case study and to assess its implications for administrative procedures. This combined methodology is chosen for its capacity to provide a rigorous and systematic evaluation of statutory provisions, their implementation, and their alignment with fundamental principles of administrative law[6]. By integrating doctrinal analysis with comparative perspectives, the research ensures both depth and breadth in its examination of the legal framework governing e-government.

1.8.1. Legal Doctrinal Approach: The doctrinal method forms the core of this study. It entails the identification, interpretation, and critical evaluation of legal rules and principles[7].

1.8.1.1. Analysis of Legal Texts: The study interprets and evaluates statutory provisions (Grundgesetz, VwVfG, EGovG, OZG, EGovG NRW, GDPR, eIDAS) in light of core administrative principles such as legality, proportionality, transparency, and effective legal protection.

1.8.1.2. The provisions of the EGovG NRW are interpreted within the framework of fundamental administrative law principles. The analysis examines how the Act balances the imperatives of digital transformation with the requirements of transparency, procedural fairness, data protection, and effective legal protection.

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[6] Kothari, Chakravanti Rajagopalachari. *Research methodology: Methods and techniques*. New Age International, 2004.

[7] See Council of Australian Law Deans. 2005. "Statement on the Nature of Legal Research." 1. accessed Juni 10, 2025. https://cald.asn.au/wp-content/uploads/2023/11/cald-statement-on-the-nature-of-legal-research-20051.pdf

1.8.2. Comparative Approach: By situating the NRW framework within the broader German and European context, the research identifies best practices and highlights areas for legal refinement.

1.8.3. Primary sources include legislation, policy documents, and case law; secondary sources include academic literature and comparative studies.

1.8.4. A thematic analysis is applied to assess (1) compliance with administrative principles, (2) practical challenges of digitalisation, and (3) broader implications for governance.

1.8.5. Limitations of the Study: The focus on NRW limits generalisability; case law remains scarce due to the Act's recent enactment; and the study does not exhaustively cover all sector‑specific regulations.

1.8.6. Use of Digital Tools: This dissertation has made limited and carefully monitored use of artificial intelligence tools for language refinement and idea structuring. All outputs have been critically reviewed and edited by the author to ensure compliance with scholarly standards.

1.9. Literature Review

The digital transformation of public administration in Germany has been extensively analysed in both national and comparative scholarship. Wirtz and Kubin (2024)[8] emphasise that Germany's federal structure and its strong commitment to the Rechtsstaat have shaped a cautious and often fragmented approach to e‑government reforms, with substantial variation across federal and state levels. This phase of reform focused on institutionalising digital infrastructure, particularly through secure electronic identity verification systems, culminating in the introduction of the electronic identity card (eID) in 2010. A pivotal constitutional development occurred in 2009 with the amendment introducing Article 91c of the Basic Law, which provided the legal foundation for cooperative federal action in information technology[9]. This was operationalised through the IT‑Staatsvertrag (State Treaty on IT) and the establishment of the IT Planning Council (IT‑Planungsrat), the first formal body coordinating digital governance across Germany's multi‑level administrative structure.

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[8] Wirtz, Bernd W., and Pascal RM Kubin. "Governance Reforms in Germany: An Analysis of Digital Reforms." In Comparative Governance Reforms: Assessing the Past and Exploring the Future, pp. 75-92. Cham: Springer Nature Switzerland, 2024.

[9] German Basic Law, Article 91c.

Federal legislation such as the E-Government Act (E-Government-Gesetz, 2013)[10] and the Online Access Act (Onlinezugangsgesetz, 2017)[11] provided a legal framework for the integration of digital tools into administrative procedures, while state-level initiatives, including the EGovG NRW (2016)[12], illustrated both innovative practices and persistent inconsistencies in implementation. Bernhardt (2021) highlights that the scope of EGovG NRW initially allowed municipalities discretion over non-mandatory requirements, but later amendments clarified its application, extending obligations to municipal associations and embedding specialised provisions such as georeferencing in registers and interoperability standards for electronic documentation[13].

From a doctrinal perspective, scholars such as Pünder and Stelkens have analysed how fundamental principles of administrative law—legality, proportionality, and procedural guarantees (Verfahrensgrundsätze)—are challenged by digitalisation. Pünder observes that recent legislative trends, particularly in the context of digital administration, often prioritise efficiency over deliberation, sometimes diminishing procedural safeguards and public participation[14]. Stelkens cautions that digitalisation risks transforming procedural rights into mere simulations of legality, particularly when automated systems replace traditional safeguards. Rights such as the duty to hear (§28 VwVfG)[15], access to files (§29 VwVfG)[16], and the obligation to provide individualised reasoning (§39 VwVfG)[17] may be reduced to schematic input forms or standardised justifications, raising constitutional concerns including equality violations, democratic deficits, and the obligation under Art. 83 Basic Law[18] to ensure effective execution of federal law[19].

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[10] E-Government-Gesetz (EGovG) – Act to Promote Electronic Government, 2013, amended 2021, https://www.gesetze-im-internet.de/egovg/.

[11] Germany, Onlinezugangsgesetz (OZG), Federal Law Gazette I, no. 49 (2017): 3122.

[12] North Rhine-Westphalia. Gesetz zur Förderung der elektronischen Verwaltung in Nordrhein-Westfalen (E-Government-Gesetz NRW) https://recht.nrw.de/lmi/owa/br_text_anzeigen?v_id=73520171220150354215.

[13] Bernhardt, Wilfried, E-Government-Gesetzgebung von Bund und Ländern im Vergleich und Best-Practices-Leitlinie, Berichte des NEGZ Nr. 21 (E-Government legislation of the federal and state governments in comparison and best-practices guideline, Reports of the NEGZ No. 21) (Berlin: Nationales E-Government Kompetenzzentrum e. V., 2021).

[14] Pünder, Hermann, "German Administrative Procedure in a Comparative Perspective: Observations on the Path to a Transnational Ius Commune Proceduralis in Administrative Law," International Journal of Constitutional Law 11, no. 4 (October 2013): 941, https://doi.org/10.1093/icon/mot045

[15] German Administrative Procedure Act (VwVfG), §28

[16] German Administrative Procedure Act (VwVfG), §29

[17] German Administrative Procedure Act (VwVfG), §39

[18] German Basic Law, Article 83.

[19] Stelkens, Ulrich, Verfassungsrechtliche Rahmenbedingungen des digitalisierten Verwaltungsverfahrens, presentation at the Online Winter Conference of the Arbeitsgemeinschaft für Verwaltungsrecht im Deutschen Anwaltverein, Landesgruppe Nordrhein-Westfalen, 2024, Einführung Verwaltungsrecht, (Constitutional Framework of Digitalized Administrative Procedures, presentation at the Online Winter Conference of the Working Group for Administrative Law in the German Bar Association, North Rhine-Westphalia Regional Group, 2024, Introduction to Administrative Law) https://arbeitsgemeinschaft-verwaltungsrecht-nrw.de

Beyond doctrinal concerns, data protection and privacy have also received considerable attention. Fraenkel-Haeberle (2020) argues that while the GDPR[20] serves as a cornerstone of European digital governance, fully digitalised administrative procedures risk undermining procedural fairness unless safeguards for participation and redress are explicitly integrated. Moreover, information systems developed at federal, state, and municipal levels often lack interoperability, hindering efficient data exchange and integrated service delivery[21].

Taken together, this literature illustrates a dynamic interplay between e-government innovation and administrative law, shaped by competing priorities of efficiency, legality, and equity. The EGovG NRW serves as a critical case study for examining these tensions, offering insights into the challenges of legislating digital transformation while preserving constitutional safeguards. Comparative perspectives demonstrate that other jurisdictions embed rule-of-law safeguards more explicitly into digital administration, suggesting potential avenues for doctrinal adaptation in Germany[22]. This dissertation therefore situates its analysis within these debates, asking whether the EGovG NRW succeeds in reconciling digital innovation with the enduring constitutional principles of German administrative law, and thereby contributes to both national and international discourse.

1.10. This first chapter has laid the foundations of the dissertation by introducing the research topic, outlining its motivation, and defining the central problem. It has presented the main research question together with sub-questions and hypotheses, and explained the methodological framework adopted. The chapter has also clarified the significance and relevance of the study, highlighting its practical, legal, and academic contributions.

By situating the research within the broader context of administrative law and digital transformation, the chapter has established the rationale for using the E-Government Act of North Rhine-Westphalia as a case study. It has also underscored the importance of examining how digitalisation interacts with constitutional principles such as legality, proportionality, and procedural guarantees.

The following chapter builds on this foundation by providing the national context of e-government in Germany. It traces the development of federal legislation and explores how

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[20] Regulation (EU) 2016/679 (General Data Protection Regulation), Art. 22.
[21] Fraenkel-Haeberle, Cristina, "Fully Digitalized Administrative Procedures in the German Legal System," European Review of Digital Administration & Law – Erdal 1, no. 1–2 (2020) https://www.erdalreview.eu/free-download/978882553896010.pdf
[22] Bernhardt, E-Government-Gesetzgebung, 11; Wirtz and Kubin, "Governance Reforms in Germany," 79.

Germany’s federal structure and commitment to the Rechtsstaat shape the digital transformation of public administration.

Chapter 2: E-Government in the German Federal Administrative System

2.1. Introduction

The transformation of public administration is an ongoing process across European states, yet in Germany it has evolved in a particularly cautious and legally oriented manner. This trajectory—shaped by the country's federal structure and its strong adherence to the rule-of-law tradition—has been described in the literature as comparatively slow and conservative, as noted by Mergell (2021)[23]. Comparative benchmarks, such as the European Commission's Digital Economy and Society Index (DESI), consistently indicate that Germany lags behind other EU member states in the availability and usability of online public services[24]. Scholars attribute this underperformance to structural and institutional constraints, including the multi-layered administrative system across federal, Länder, and municipal levels, which—as argued by Bartholomae, Nam, and Steinhoff (2023)[25]—has contributed to fragmented and uneven patterns of digitalisation.

Public perceptions of German administration frequently highlight its bureaucratic complexity. Although citizens often express dissatisfaction with procedural burdens, Klumpp (2002) observes that trust in the reliability and legality of administrative institutions remains high[26]. This trust reflects an understanding of administration as a central guarantor of legality and predictability. At the same time, Germany's methodical approach to digital transformation—while slowing innovation—has helped reinforce confidence in the consistency and legality of administrative action. As Kai (2021) notes, the incentives for pursuing structural or systemic administrative reform remain limited, constrained by federalism, doctrinal conservatism, and dispersed political responsibilities. Consequently, digital reforms tend to proceed incrementally rather than through comprehensive institutional transformation[27].

Against this background, the evolution of e-government in Germany cannot be separated from the constitutional and administrative principles that structure public authority.

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[23] Mergel, Ines, "Digital Transformation of the German State," in Public Administration in Germany, eds. Sabine Kuhlmann, Isabella Proeller, Dieter Schimanke, and Jan Ziekow (Cham: Springer, 2021), 332-333.
[24] European Commission. "The Digital Economy and Society Index (DESI)." Last modified August 7, 2024. https://digital-strategy.ec.europa.eu/en/policies/desi.
[25] Florian Bartholomae, Chang Woon Nam, and Peter Steinhoff, *Does Federalism Affect E-Government in Germany?* CESifo Working Paper No. 10260 (Munich: CESifo, 2023), 2.
[26] Klumpp, Dieter. "From websites to e-government in Germany." In *Electronic Government*, pp. 18-25. Springer, Berlin, Heidelberg, 2002.18
[27] Wegrich, Kai. "Is the turtle still plodding along? Public management reform in Germany." Public Management Review 23, no. 8 (2021): 1107-1116.1

Legality, proportionality, accountability, and transparency continue to provide the normative framework against which digital procedures are assessed. Digitalisation therefore raises not only questions of implementation, but also questions about how administrative principles are interpreted and operationalised in technologically mediated environments.

Within this context, the chapter examines the development of e-government in Germany with a focus on its legal and institutional dimensions. It traces the progression from early digital initiatives to the enactment of key legislative instruments such as the E-Government Act (EGovG) and the Online Access Act (OZG), while analysing the influence of federalism on implementation across the federation, the Länder, and municipalities. In addition, the chapter considers how technological infrastructures and legal requirements interact in shaping digital governance, particularly in relation to automated and data-driven procedures. This interaction is central to understanding how digital processes can remain aligned with the principles of legality, proportionality, accountability, and transparency, and how administrative law adapts to the growing reliance on digital systems.

Ultimately, the chapter situates Germany's digital transformation within its broader legal and institutional traditions. It provides the analytical foundation for Chapter Three, which examines the normative and practical implications of e-government for administrative law, including how digitalisation reshapes the balance between efficiency, legality, and the protection of individual rights.

2.2. Foundations of Administrative Law in Germany

The codification of public administrative law in Germany represents a comparatively late development within the broader historical trajectory of the discipline. Until the mid-20th century, administrative law was shaped primarily by judicial decisions and scholarly contributions, without a comprehensive statutory framework. When administrative law emerged at the federal and imperial levels as an independent academic discipline, scholarly attention focused predominantly on substantive law rather than on administrative procedure[28]. As Kahl (2003) notes, codified procedural rules were not introduced until the latter half of the 20th century, culminating in the promulgation of the Federal Administrative Procedure Code (Verwaltungsverfahrensgesetz) in 1976. This legislation established a coherent set of

[28] Kahl, Wolfgang. "Das Verwaltungsverfahrensgesetz zwischen Kodifikationsidee und Sonderrechtsentwicklungen." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 68-135. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 68-69.

procedural norms binding on administrative authorities, thereby marking a decisive step in the institutionalisation of administrative practice[29].

Crucially, at this point, a clear distinction must be drawn between substantive administrative law and administrative procedural law. Substantive law regulates the content of administrative action, while procedural law governs the manner in which such action is undertaken. Together, they form the structural and normative framework of German administrative practice.

Within this framework, several fundamental legal principles underpin administrative decision-making. These include the rule of law (Gesetzmäßigkeit der Verwaltung), proportionality (Verhältnismäßigkeit), and the protection of legitimate expectations (Vertrauensschutz). Such principles function as normative benchmarks that promote legal certainty, accountability, and transparency. As Sommermann (1997) emphasizes, they should not be regarded merely as formal requirements but as substantive guarantees designed to prevent arbitrary state action and to safeguard human dignity and individual liberty[30].

2.2.1. Scope of Administrative Law and Procedural Law

Administrative procedural law constitutes a distinct and indispensable branch of administrative law, primarily concerned with regulating the formalised interactions between public authorities and individuals or legal entities. As Wade and Forsyth (2014) state, its protective function lies in establishing safeguards designed to prevent arbitrary administrative conduct and to promote fairness and transparency[31]. Otto Mayer (1961) similarly emphasises that procedural rules serve to constrain administrative excess and reinforce accountability. These norms are not merely technical instruments; they embody deeper commitments to the rule of law[32].

Bettermann (1959) characterises administrative procedural law as governing *"the formation, form, publication, enforcement, challenge, and modification of decisions issued by administrative authorities, as well as their review."*[33] Arzoz (2017) extends this

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[29] Kahl, Wolfgang. "Das Verwaltungsverfahrensgesetz zwischen Kodifikationsidee und Sonderrechtsentwicklungen." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 68-135. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 71-82.

[30] Sommermann, Karl-Peter. "Constitutional state and public administration." In Public Administration in Germany, edited by Sabine Kuhlmann · Isabella Proeller Dieter Schimanke · Jan Ziekow, 17-33. IIAS Series: Governance and Public Management, 2021, 21.

[31] Wade, William, and Christopher Forsyth. Administrative law. Oxford University Press, USA, 2014. 4

[32] Otto Mayer, Deutsches Verwaltungsrecht [German Administrative Law], Volume 1 (Nachdruck, 1961 [1923]) cited in Cassisi, Sabino. "New Paths for Administrative Law: A Manifesto". International Journal of Constitutional Law 10, No. 3 (2012): 603-613. 605

[33] Bettermann, Karl August "Das Verwaltungsverfahren." VVDStRL 17 (1959): 118–21.

understanding by framing administrative procedure as the set of rules and doctrines that structure decision-making by administrative bodies. From this perspective, regulation encompasses the procedural stages of initiation, processing, party participation, evidence-gathering, negotiation, decision-making, reasoning, and communication. These stages are guided by principles such as efficiency, fairness, proportionality, protection of legitimate expectations, and the presumption of validity[34]. Importantly, these principles often intersect with substantive legal norms, illustrating the integrated character of administrative law.

In the German legal context, administrative law encompasses both substantive and procedural dimensions. Substantive law regulates the organisation, powers, and legal obligations of public authorities, underpinned by principles such as legality, proportionality, and transparency. Procedural law governs the processes through which administrative decisions are prepared and adopted, guided by principles of procedural fairness, legal certainty, public participation, and efficiency[35].

The adoption of the Verwaltungsverfahrensgesetz (VwVfG) in 1976 marked a significant step in codifying general administrative procedure, reinforcing the systematic legal formalisation of administrative action within the federal rule-of-law framework[36]. Its scope, however, remains relatively restricted. As defined in Section 9 VwVfG[37], the Act applies primarily to activities producing external legal effects, including procedures for examining legal requirements, issuing administrative acts, and concluding administrative contracts[38].

The federal design of the basic law (Grundgesetz) created a perceived need for harmonisation of procedural rules at both federal and Länder levels, particularly since

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[34] Arzoz, Xabier. "Administrative Procedures." Max Planck Encyclopedia of Comparative Constitutional Law (2017).
[35] Ziekow, Jan. "Das Verwaltungsverfahrensrecht in der Digitalisierung der Verwaltung." *Neue Zeitschrift für Verwaltungsrecht* 16 (2018): 1169.
[36] Hoffmann-Riem, Wolfgang. "Verwaltungsverfahren und Verwaltungsverfahrensgesetz-Einleitende Problemskizze." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 10-67. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 13
[37] Section 9 of the VwVfG
[38] Schmitz, Thomas. “Implementing the Rule of Law in Public Administration by an Administrative Procedure Act – The Example of Germany.” In Teoria şi practica administrării publice: Materiale ale Conferinţei ştiinţifico-practice cu participare internaţională, 20 mai 2016, Chişinău, edited by Oleg Balan et al., 17 ff. Chişinău, 2016.

legislative implementation largely falls within Länder competence. This harmonisation was closely linked to strengthening the principle of legality in public administration[39].

Although the boundary between substantive and procedural domains is not always clearly defined[40], the distinction remains analytically useful for assessing the implications of e-government. Rather than a rigid doctrinal separation, the focus lies on the interplay and integration of these domains. This reflects broader scholarly observations that administrative law, and by extension administrative procedure, lacks a fully settled conceptual consensus regarding its precise boundaries[41].

Rather than maintaining the traditional distinction between substantive and procedural principles of administrative law, this thesis adopts a functional perspective. All principles—whether related to legality, equality, fairness, or legal certainty—are examined through their operational role within digital administrative governance. This approach allows for a comprehensive understanding of how digitisation affects both the exercise of administrative authority and the protection of individual rights, and how these evolving dynamics contribute to the legitimacy and accountability of modern public administration.

2.2.2. Core Principles of Administrative Law:

Within the domain of administrative law, certain core principles act as foundational guides for the exercise of public authority. Rooted in constitutional norms and evolving legal doctrine, these principles ensure that administrative action is not only lawful but also procedurally just, predictable, and responsive to the needs of the public. The following sections will provide an overview of these key principles.

2.2.2.1. Substantive Principles

The substantive principles relevant to the exercise of administrative authority are legality, proportionality, protection of legitimate expectations, equality, transparency, and legal certainty.

2.2.2.1.1. Principle of legality

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[39] Hoffmann-Riem, Wolfgang. "Verwaltungsverfahren und Verwaltungsverfahrensgesetz-Einleitende Problemskizze." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 10-67. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 13

[40] Smith, E, 'Norway' in Auby, JB, (ed), Codification of Administrative Procedure (Bruylant 2014) 284, as cited in Arzoz, Xabier. "Administrative Procedures." Max Planck, Encyclopedia of Comparative Constitutional Law (2017).

[41] Auby, JB, (ed), Codification of Administrative Procedure (Bruylant 2014), as cited in Arzoz, Xabier. "Administrative Procedures." Max Planck, Encyclopedia of Comparative Constitutional Law (2017).

The principle of legality constitutes a foundational norm of German administrative law. It requires that all administrative action be based on statutory authority and exercised in accordance with the competences and procedural rules established by law, as articulated in Article 20(3) of the Basic Law (Grundgesetz)[42]. This requirement is particularly significant in the context of administrative acts, which must satisfy both formal legality—concerning the competence of the issuing authority, procedural compliance, and appropriate form—and material legality, which relates to the substantive content of the act[43].

The principle encompasses two core dimensions: the primacy of law (Gesetzesvorrang), which prohibits administrative acts that contradict statutory provisions, and the requirement of a legal basis (Gesetzesvorbehalt)[44], which ensures that any interference with individual rights must be explicitly authorised by statute. The Federal Constitutional Court has refined this principle through the Wesentlichkeitstheorie, holding that essential decisions affecting fundamental rights must be taken by the legislature itself[45].

Within the framework of the Verwaltungsverfahrensgesetz (VwVfG), legality is operationalised through procedural safeguards such as the duty to investigate (§24), the right to be heard (§28), and the obligation to provide reasons (§39). These provisions ensure that administrative decisions are not only lawful but also transparent and subject to review[46].

Closely related is the concept of discretion (Ermessen), which requires that administrative authorities act within the limits conferred upon them by law[47]. Discretion must be exercised in a manner consistent with statutory objectives, and any departure beyond the legally authorised scope constitutes an overreach of administrative power.

The principle of legality also resonates with the broader European framework. Under Article 5(2) of the Treaty on European Union (TEU), the principle of conferral requires that public authorities, including EU institutions, act solely within the powers granted to them by

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[42] Germany. *Grundgesetz* [Basic Law]. Atr. 20 (3)
[43] Mitskevich, Ludmilla A. "Administrative acts of Germany." *Журнал Сибирского федерального университета. Серия: Гуманитарные науки* 4, no. 2 (2011): 216-222. 219-221
[44] Steffen Detterbeck, Allgemeines Verwaltungsrecht (General Administrative Law), 18th ed. (Munich: C.H. Beck, 2020), 70.
[45] Scientific Services of the German Bundestag, Criteria of the Wesentlichkeitstheorie of the Federal Constitutional Court, WD 3 - 152/19, June 14, 2019, 1–2, https://www.bundestag.de/resource/blob/655254/1764b49aa3c85458a840652cf134e031/WD-3-152-19-pdf-data.pdf.
[46] *Grundgesetz für die Bundesrepublik Deutschland* [Basic Law], Art. 20(3); *Verwaltungsverfahrensgesetz* (VwVfG), §§ 24, 28, 39.
[47] Künnecke, Marina, Tradition and Change in Administrative Law: An Anglo-German Comparison, Berlin, *Springer*, 2007, p. 37.

law. This parallel underscores the shared commitment to legality as a safeguard against arbitrary governance[48].

While the principle has long served as a bulwark against arbitrariness in public administration, the advent of digitalisation and algorithmic decision-making introduces new complexities. Automated systems must likewise operate within a clear and accountable legal framework, raising questions about how statutory authorisation, procedural safeguards, and judicial review can be adapted to ensure legality in an era of algorithmic governance.

2.2.2.1.2. Principle of Proportionality

The principle of proportionality (Verhältnismäßigkeit) is a cornerstone of German administrative law, guiding both the exercise of public authority and the judicial review of administrative discretion. It requires that any administrative measure interfering with individual rights satisfy three cumulative tests: suitability (Geeignetheit), necessity (Erforderlichkeit), and appropriateness (Angemessenheit). This structured framework ensures that governmental action remains rational, balanced, and consistent with the requirements of a democratic society governed by law[49].

This tripartite analysis has been widely adopted in both German and European jurisprudence. As Stott (1997) explains, the suitability criterion assesses whether the chosen measure is capable of achieving the intended objective. The necessity requirement examines whether a less restrictive but equally effective alternative could have been employed. Finally, proportionality in the strict sense—the balancing test—evaluates whether the burden imposed on the individual is excessive in relation to the public benefit pursued. Together, these steps discipline administrative discretion and reinforce the legitimacy of state intervention[50].

Despite its widespread acceptance, interpretive challenges remain. Nolte (1994) highlights concerns about the conceptual clarity of "appropriateness," noting that a measure failing to achieve its objective may be mischaracterised as disproportionate, even if its intent was legitimate. Similarly, the necessity criterion risks being misunderstood unless situated within the broader proportionality framework[51]. These critiques underscore the importance of a nuanced and context-sensitive application of the principle.

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[48] Hofmann, Herwig. "General principles of EU law and EU administrative law." (2020). 223

[49] Yutaka Arai-Takahashi, "Proportionality – A German Approach," in The Principle of Proportionality in European Law, ed. Evelyn Ellis (Oxford: Oxford University Press, 1999), 123–145.

[50] Stott, David. *Principles of administrative law*. Routledge-Cavendish, 1997. 277.

[51] Nolte, Georg. "General principles of German and European administrative law: a comparison in historical perspective." *The Modern Law Review* 57, no. 2 (1994): 191-212.193

At the European level, proportionality is enshrined in Article 5(4) of the Treaty on European Union[52], which stipulates that Union action must not exceed what is necessary to achieve the objectives of the Treaties. While echoing the German tripartite structure, this formulation reflects the EU's constitutional order and reinforces proportionality as a safeguard against excessive or arbitrary governance. Both at the national and supranational levels, administrative decisions are therefore expected to demonstrate a rational alignment between the means employed and the ends pursued[53].

In the context of digital transformation, proportionality faces new challenges. As Widlak et al. (2020) observe, the reuse of a single dataset across multiple administrative processes raises concerns about the cumulative effects of decision-making. This development calls for a broader understanding of proportionality—one that evaluates not only isolated administrative acts but also the systemic architecture of data systems and information flows[54].

2.2.2.1.3. Protection of Legitimate Expectations

The principle of the protection of legitimate expectations (*Vertrauensschutz*) is grounded in the idea that individuals must be able to place trust in the legality, consistency, and reliability of administrative actions. This trust encompasses not only the competence of public authorities but also the presumed stability of their decisions. Accordingly, the principle operates as a limitation on the ability of administrative bodies to retroactively revoke or alter favourable decisions in a manner detrimental to the individual—particularly in the absence of a clear legal basis[55].

In German administrative law, this principle is codified in Section 48(2) of the Administrative Procedure Act (*Verwaltungsverfahrensgesetz – VwVfG*), which stipulates that an unlawful administrative act conferring a pecuniary benefit may not be revoked if the recipient has relied on its validity and such reliance, when weighed against the public interest in revocation, warrants legal protection[56]. The Federal Constitutional Court has further anchored this principle within the broader framework of legal certainty (*Rechtssicherheit*)

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[52] European Commission. *Consolidated Version of the Treaty on European Union*. OJ C 326, 26 October 2012, pp. 13–390

[53] Petoft, Arian. "The concept and instances of general principles of administrative law: Towards a global administrative law." *Cuestiones constitucionales* 42 (2020): 309-355. 345.

[54] Widlak, Arjan, Marlies van Eck, and Rik Peeters. "Towards principles of good digital administration: Fairness, accountability and proportionality in automated decision-making." In *The Algorithmic Society*, pp. 67-83. Routledge, 2020.10.

[55] Arjola-Sarja, Terhi. "The Ombudsman as an advocate for good administration." Parliamentary Ombudsman of Finland. 90 Years (2010). 101.

[56] Federal Republic of Germany, Administrative Procedure Act (Verwaltungsverfahrensgesetz – VwVfG), § 48(2).

and the rule of law under Article 20(3) of the Basic Law (*Grundgesetz*)[57], thereby elevating it to a constitutional dimension.

At the European level, the doctrine of legitimate expectations has developed through the jurisprudence of the Court of Justice of the European Union. Here, the principle functions to shield individuals from the retroactive annulment of administrative decisions upon which they had reasonably relied. As Nolte (1994) notes, the principle affords not only procedural safeguards but also substantive legal protection, reinforcing the integrity of public administration and promoting legal certainty across jurisdictions[58].

Ultimately, the protection of legitimate expectations functions as a stabilising force within administrative law. It ensures that public authorities act in a manner that is predictable, accountable, and respectful of individual reliance. In doing so, it reinforces the foundational values of legal certainty and trust in public institutions—values that acquire renewed importance in the context of digital governance, where algorithmic decision-making and data-driven processes may challenge traditional reliance interests.

2.2.2.1.4. Principle of Equality

The principle of equality requires that all individuals be treated impartially under the law, regardless of their social or institutional position. As Stott (1997) notes, this principle underpins legal equality by ensuring that individuals benefit from comparable safeguards while bearing equivalent responsibilities. Within a rule-of-law framework, it is presumed that all persons are equally bound by the same legal norms, thereby reinforcing the legitimacy and fairness of administrative governance[59].

In the German constitutional order, equality before the law is firmly embedded in Article 3 of the Grundgesetz. This provision prohibits preferential or adverse treatment based on characteristics such as sex, parentage, race, language, national or social origin, faith, or political belief. It functions both as a normative commitment to equal treatment and as a constitutional benchmark for evaluating administrative conduct[60].

From an administrative law perspective, the principle has undergone significant evolution. As Nolte (1994) observes, its early application primarily constrained authorities

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[57] Article 20(3) of the Basic Law (*Grundgesetz*)
[58] Nolte, Georg. "General principles of German and European administrative law: a comparison in historical perspective." *The Modern Law Review* 57, no. 2 (1994): 191-212.195
[59] Stott, David. Pri*nciples of administrative law*. Routledge-Cavendish, 1997. 23-24.
[60] Basic Law for the Federal Republic of Germany, art. 3, accessed August 16, 2025, https://www.gesetze-im-internet.de/englisch_gg/englisch_gg.html.

from deviating—without sufficient justification—from established patterns of behaviour, even within the bounds of discretion. Over time, Article 3(1) supported the development of the doctrine of Selbstbindung der Verwaltung (administrative self-binding), whereby consistent adherence to internal guidelines, such as circulars or instructions, could generate legitimate expectations. Departures from these informal norms were increasingly scrutinised as potential infringements of the equality principle, particularly when such guidelines effectively standardised discretionary decision-making[61].

The digitalisation of administrative processes has introduced new dimensions to the equality debate. As Coglianese (2021) highlights, algorithmic bias poses risks to impartiality, since automated systems trained on data reflecting existing social or structural inequalities may reproduce or amplify those biases. This development underscores the need to adapt equality principles to ensure that digital governance remains consistent with constitutional guarantees of fairness and non-discrimination[62].

Beyond its constitutional and procedural roles, the principle of equality has expanded to encompass anti-discrimination protections. The General Equal Treatment Act (Allgemeines Gleichbehandlungsgesetz – AGG)[63], which implements EU directives, prohibits discrimination on grounds such as race, gender, religion, disability, age, or sexual orientation. This legislative framework reinforces the commitment to substantive equality and ensures that administrative practices align with broader European human rights standards.

2.2.2.1.5. Principle of Accountability

The principle of accountability constitutes a foundational tenet of lawful administration, requiring public officials to justify their decisions and actions in accordance with established legal standards and democratic principles. It constrains discretionary power by fostering transparency, ensuring legal compliance, and reinforcing institutional responsibility[64].

Within the German constitutional framework, accountability is reflected in Article 34 of the Grundgesetz. This provision stipulates that when a public official breaches an official duty and causes harm to a third party, liability primarily attaches to the state or the employing authority. At the same time, it preserves the possibility of recourse against the individual in

[61] Nolte, Georg. "General principles of German and European administrative law: a comparison in historical perspective." *The Modern Law Review* 57, no. 2 (1994): 191-212.203
[62] Coglianese, Cary. "Administrative law in the automated state." *Daedalus* 150, no. 3 (2021): 104-120.112.
[63] The General Equal Treatment Act (*Allgemeines Gleichbehandlungsgesetz – AGG*)
[64] Stott, David. Pri*nciples of administrative law*. Routledge-Cavendish, 1997. 23-24.

cases of intentional misconduct or gross negligence, thereby balancing institutional liability with personal responsibility[65].

Procedural reinforcement of accountability is found in Article 39 of the Verwaltungsverfahrensgesetz (VwVfG)[66], which establishes the Begründungspflicht—the duty to provide reasons. Public authorities must accompany administrative decisions with the legal and factual grounds on which they are based. In cases involving discretion, decisions must be supported by clear and well-substantiated considerations, ensuring that both the rationale and proportionality of administrative action are transparent and subject to review[67].

Although not formally codified as a standalone principle, accountability is deeply embedded in the Rechtsstaat tradition and operationalised through a network of safeguards, judicial oversight, and institutional controls. Administrative courts (Verwaltungsgerichte) play a central role by reviewing the legality and proportionality of administrative acts, granting individuals standing to challenge decisions that affect their rights. Complementing this judicial oversight, audit institutions (Rechnungshöfe) at federal, state, and local levels monitor the lawful and efficient use of public resources. While lacking direct enforcement powers, their public reporting exerts significant influence on administrative practice[68].

In the context of digitalisation and algorithmic governance, accountability requires recalibration to ensure that automated decisions remain transparent, contestable, and subject to institutional scrutiny. As Mehde (2021) noted, the German system is characterised by "intensive control" over administrative discretion—a feature that must be preserved and adapted to address the challenges posed by data-driven decision-making[69].

2.2.2.1.6. Principle of transparency

The principle of transparency (Transparenzprinzip) is widely recognised as a foundational value of democratic governance and the rule of law. Although not formally codified as an autonomous principle in the same manner as legality or proportionality, it

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[65] Basic Law for the Federal Republic of Germany, art. 34, accessed August 16, 2025, https://www.gesetze-im-internet.de/englisch_gg/englisch_gg.html.
[66] german Administrative Procedure Act (Verwaltungsverfahrensgesetz), § 39, "Statement of Reasons for Administrative Acts." Federal Law Gazette I, no. 17, last amended by Art. 8 of the Act of 21 June 2021 (Federal Law Gazette I p. 2154).
[67] Petoft, Arian. "The concept and instances of general principles of administrative law: Towards a global administrative law." Cuestiones constitucionales 42 (2020): 309-355.348. see also Badura, Peter and Erichsen, Hans-Uwe, Allgemeines Verwaltungsrecht, Berlin, V. W. de Gruyter, 1988, p. 418. cited in Petoft 2020: 348
[68] Mehde, Veith, "Control and Accountability: Administrative Courts and Courts of Audit," in Public Administration in Germany, Governance and Public Management Series (Springer, 2021), 185–203.
[69] Mehde, Veith, "Control and Accountability: Administrative Courts and Courts of Audit," in Public Administration in Germany, Governance and Public Management Series (Springer, 2021), 185–203.

operates as a procedural guarantee that reinforces core administrative law standards, including accountability, participation, and legality.

In German administrative law, transparency is embedded in a range of procedural safeguards. The Verwaltungsverfahrensgesetz (VwVfG) grants parties the right to access relevant files (§29), obliges authorities to provide reasons for administrative decisions (§39), and requires that affected individuals be adequately informed[70]. These provisions enable individuals to understand the basis of administrative actions, assess their legality, and exercise their rights effectively. Transparency thereby facilitates judicial review and public oversight, particularly in areas involving discretionary power or complex regulatory frameworks.

Beyond individual proceedings, transparency is institutionalised through obligations on public authorities to provide information to citizens[71]. The German Freedom of Information Act (Informationsfreiheitsgesetz)[72] enshrines the right to obtain official information held by federal authorities[73]. This right is reinforced by corresponding legislation at the state level, such as the Freedom of Information Act for North Rhine-Westphalia[74], which explicitly promotes openness and civic participation. Collectively, these laws mark a significant departure from the traditional principle of official secrecy, positioning openness as a central tenet of contemporary administrative practice.

Taken together, these developments demonstrate that while transparency may not be codified as a standalone principle, it functions as a cross-cutting normative standard whose legal and practical significance continues to expand. In the context of digitalisation, transparency acquires renewed importance, ensuring that data-driven and algorithmic administrative processes remain comprehensible, contestable, and subject to oversight. As highlighted in Germany's submission to the OECD Roundtable on Procedural Fairness, transparency is increasingly regarded as a constitutional requirement underpinning fair administrative proceedings and strengthening public trust in public institutions[75].

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[70] Germany. Verwaltungsverfahrensgesetz (VwVfG), § 29 § 39.
[71] Ziekow, Jan. "Administrative procedures and processes." In Public Administration in Germany, pp. 163-183. Cham: Springer International Publishing, 2021. 168.
[72] Germany, Informationsfreiheitsgesetz [Freedom of Information Act], BGBl. I S. 2722 (2005).
[73] Germany. Verwaltungsverfahrensgesetz (VwVfG), § 29.
[74] North Rhine-Westphalia, Informationsfreiheitsgesetz Nordrhein-Westfalen [Freedom of Information Act of North Rhine-Westphalia], GV. NRW. S. 694 (2001).
[75] OECD, "Procedural Fairness: Transparency Issues in Civil and Administrative Proceedings – Germany," Working Party No. 3, 16 February 2010, Bundeskartellamt publication.

2.2.2.2. Procedural Principles

2.2.2.2.1. Procedural Fairness

The principle of procedural fairness (Verfahrensgerechtigkeit) is a fundamental constitutional principle in the German legal system and plays a central role in administrative law. It affirms that legal processes hold intrinsic value, independent of their substantive outcomes, by providing a framework for evaluating the legitimacy of administrative action. Accordingly, administrative procedures are assessed not only on the basis of their results but also on the fairness and integrity of the process itself[76].

Procedural fairness is realised through a cluster of guarantees, including the right to be heard, the right of defence, the right to an impartial and independent adjudicator, and the right to judicial review[77]. These safeguards are particularly significant in regulatory contexts, where administrative bodies often interfere deeply with individual rights and freedoms. Ensuring robust procedural guarantees is therefore essential to maintaining legitimacy and protecting individuals against arbitrary state action[78].

Within the framework of the Verwaltungsverfahrensgesetz (VwVfG), procedural fairness is concretised in provisions such as the duty to investigate (§24), the right to be heard (§28), and the obligation to provide reasons (§39). These rules require authorities to engage with affected individuals before rendering decisions, to base determinations on a complete and accurate factual record, and to justify their actions transparently[79]. Collectively, they reinforce the integrity of administrative processes and safeguard individuals from opaque or arbitrary decision-making[80]. From a constitutional perspective, procedural fairness is anchored in Article 20(3) of the Grundgesetz, which binds all executive action to law and justice, thereby elevating procedural guarantees to a constitutional dimension[81].

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[76] Summers, Robert 'Evaluating and Improving Legal Process–A Plea for'Process Values'(1974/Vol. 60/No. 1) Cornell Law Review 1-52, at 1.
[77] Bernatt, Maciej, Sprawiedliwość proceduralna w postępowaniu przed organem ochrony konkurencji [Procedural fairness in the proceedings before the competition authority] (Warszawa: Wydawnictwo Naukowe WZ UW 2011), pp. 91-98. as cited in Bernatt, Maciej. "Administrative sanctions: between efficiency and procedural fairness." Review of European Administrative Law 9, no. 1 (2016): 5-32.8
[78] Bernatt, Maciej. The Principle of Procedural Fairness and its Implementation in the Administrative Proceedings-perspective of the country in the democratic transition. SSRN, 2013.10
[79] Bernatt, Maciej, Sprawiedliwość proceduralna w postępowaniu przed organem ochrony konkurencji [Procedural fairness in the proceedings before the competition authority] (Warszawa: Wydawnictwo Naukowe WZ UW 2011), pp. 91-98. as cited in Bernatt, Maciej. "Administrative sanctions: between efficiency and procedural fairness." Review of European Administrative Law 9, no. 1 (2016): 5-32.8
[80] Germany. Verwaltungsverfahrensgesetz (VwVfG), §§ 24, 28,39.
[81] Article 20(3) of the Grundgesetz

While these safeguards strengthen fairness, they may also reduce efficiency. Extensive procedural guarantees can lengthen proceedings and increase costs, potentially burdening private parties[82]. The traditional procedural ideal (Verfahrensgedanke) has therefore come under pressure in the contemporary administrative landscape. As Pünder (2013) observes, recent legislative trends—particularly in the context of digital administration—have often prioritised efficiency over deliberation. This shift has been achieved by diminishing the weight of procedural safeguards, thereby weakening traditional guarantees of public participation and procedural legitimacy[83].

2.2.2.2.2. Legal Certainty

The principle of legal certainty (Rechtssicherheit) is widely regarded as "*one of the requirements of the ideal of the Rechtsstaat*."[84] It ensures that individuals can foresee the legal consequences of administrative actions and rely on the stability of legal norms. By requiring that laws and administrative measures be clear, accessible, and consistently applied, legal certainty operates as a safeguard against arbitrary governance. It is closely linked to the rule of law under Article 20(3) of the Grundgesetz, which mandates that all executive action be bound by law and justice[85].

Legal certainty requires that laws be sufficiently clear and accessible, that administrative decisions be consistent and foreseeable, and that retroactive changes be limited to protect legitimate expectations. As Ulrich Stelkens observes, tensions may arise between legal certainty and legality, particularly when correcting unlawful administrative acts risks undermining public trust or producing disproportionate consequences. This highlights the need to balance the corrective function of legality with the stabilising role of legal certainty[86].

In administrative procedures, legal certainty is reinforced through mechanisms such as the obligation to provide reasons for decisions (§39 VwVfG), the protection of legitimate expectations (§48 VwVfG), and the requirement that administrative acts be issued by competent authorities following proper procedures[87]. These safeguards ensure that individuals are not subject to unpredictable or retroactive changes in legal status and that administrative

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[82] Bernatt, Maciej. "Administrative sanctions: between efficiency and procedural fairness." Review of European Administrative Law 9, no. 1 (2016): 5-32.8

[83] Hermann Pünder. "German Administrative Procedure in a Comparative Perspective: Observations on the Path to a Transnational Ius Commune Proceduralis in Administrative Law." International Journal of Constitutional Law 11, no. 4 (October 2013): 940–61: 941. https://doi.org/10.1093/icon/mot045

[84] Lifante-Vidal I (2020) Is legal certainty a formal value? Jurisprudence 11(3): 456–467. 457.

[85] Article 20(3) of the Grundgesetz

[86] Ulrich Stelkens, "Legal Certainty and Protection of Legitimate Expectations," General Principles of Administrative Law, University of Speyer, 2016, lecture notes

[87] Germany. Verwaltungsverfahrensgesetz (VwVfG) §§ 39, 48.

discretion is exercised within a stable and transparent framework. In this sense, the rights and obligations of citizens, as formulated in law, must correspond to their practical enforcement[88].

In the digital era, legal certainty encounters new challenges. Automated decision-making systems, dynamic databases, and algorithmic governance may alter traditional expectations of stability and predictability in administrative processes. These developments raise important questions about how legal certainty can be safeguarded when administrative outcomes are increasingly shaped by evolving technological tools.

2.2.2.2.3. Public Participation

The principle of public participation (Bürgerbeteiligung) reflects the democratic imperative that individuals affected by administrative decisions should have the opportunity to engage meaningfully in the decision-making process. It functions both as a procedural safeguard and as a mechanism for enhancing the legitimacy, transparency, and responsiveness of public administration. Modern administrative law has moved beyond the traditional conception of citizens as passive recipients of administrative action. Instead, contemporary approaches emphasise participation as a means of recognising citizens as active contributors who shape administrative processes[89].

At the European level, public participation has been recognised as a core principle of administrative law, shaped by the gradual institutional development of the European Communities. Its evolution reflects a broader movement toward embedding values of good governance and democratic transparency within the administrative framework of the European Union. From the 1990s onwards, participation gained prominence in institutional debates, culminating in the 2001 White Paper on European Governance. This document identified openness, participation, accountability, effectiveness, and coherence as guiding principles for EU institutions, thereby situating public participation within a broader normative framework of governance[90].

In German administrative law, public participation is codified in statutory frameworks, particularly in areas involving environmental planning, infrastructure development, and spatial regulation. The Verwaltungsverfahrensgesetz (VwVfG)[91] provides

[88] legal certainty thus means that the rights and obligations of citizens formulated in law must correspond to practical law enforcement.
[89] Petoft, Arian. "The concept and instances of general principles of administrative law: Towards a global administrative law." Cuestiones constitucionales 42 (2020): 309-355. (351)
[90] Mendes, Joana. Participation in EU Rule-Making: A Rights-Based Approach. Oxford: Oxford University Press, 2011.
[91] Verwaltungsverfahrensgesetz (VwVfG) [Administrative Procedure Act], Bundesgesetzblatt I 1976, 1253, as amended (current version at: https://www.gesetze-im-internet.de/vwvfg/)

for public notice and comment procedures in specific cases, ensuring that affected individuals and interest groups are informed and given the opportunity to submit objections or suggestions. These mechanisms are reinforced by sector-specific legislation, such as the Federal Environmental Impact Assessment Act (UVPG), which mandates public involvement in projects with significant ecological implications[92].

Scholarly perspectives further highlight the importance of participation. As Gerd Winter observes, administrative decision-making should not be entrusted exclusively to technical experts but should be embedded within procedures that provide opportunities for citizen involvement. Such participation is particularly vital where decisions affect collective interests or fundamental rights[93]. Active engagement of citizens in this manner enhances the legitimacy of administrative action and strengthens public trust in governance[94].

From a constitutional perspective, public participation is anchored in the principles of democracy and the rule of law under Article 20 of the Grundgesetz. Participation is therefore not merely a procedural formality but a substantive component of lawful administration, ensuring that administrative processes remain transparent, accountable, and responsive to the citizenry.

2.2.2.2.4. Efficiency and Timelines

The principle of efficiency and timeliness (Effizienz und Zeitgerechtigkeit) reflects the expectation that administrative procedures be conducted in a manner that is both resource-conscious and temporally appropriate. Although not always codified as a standalone legal norm, it is widely recognised as a functional requirement of lawful administration, closely connected to the principles of proportionality, transparency, and good governance.

Efficiency constitutes a central normative standard in German administrative law. It guides public authorities in the prudent allocation of resources, the avoidance of unnecessary procedural delays, and the timely achievement of administrative objectives. Legislative reforms of the early 1990s[95] illustrate how this principle was translated into concrete

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[92] Gesetz über die Umweltverträglichkeitsprüfung (UVPG) [Federal Environmental Impact Assessment Act], Bundesgesetzblatt I 2017, 2808, as amended (current version at: https://www.gesetze-im-internet.de/uvpg/).
[93] Winter, Gerd. "Theoretical Foundations of Public Participation in Administrative Decision-Making." *Environmental Democracy and Law* (2014). https://www.gerd-winter.jura.uni-bremen.de/theoretical_foundations.pdf
[94] Röhl, K. F. "Verfahrensgerechtigkeit (Procedural Justice) Einführung in den Themenbereich und Überblick", Zeitschrift für Rechtssoziologie, vol. 14, No. 1, 1993, p. 19.
[95] Voßkuhle, Andreas. 2021. "Allgemeines Verwaltungs- und Verwaltungsprozeßrecht." In Rechtswissenschaft und Rechtsliteratur im 20. Jahrhundert, 935–968. Munich: C.H. Beck. https://doi.org/10.17104/9783406731181-935 940-943

measures that continue to influence the organisation and conduct of administrative procedures.

In German law, efficiency and timeliness are operationalised through procedural mechanisms designed to prevent undue delay and promote discipline. The Verwaltungsverfahrensgesetz (VwVfG) includes provisions such as §10, which obliges authorities to conduct proceedings in a simple, expedient, and timely manner, thereby discouraging unnecessary complications[96]. As Pünder (2013) notes, the German approach seeks to reconcile procedural integrity with the practical need for effective and timely decision-making[97].

The principle is also closely linked to the concept of time limits, which reinforce the expectation that administrative procedures be concluded within a reasonable period[98]. This is particularly critical in contexts involving discretionary powers, where prolonged inaction may amount to implicit denial or procedural unfairness. Scholarly debate has focused on administrative silence, where authorities fail to respond within a reasonable timeframe, prompting discussions on legal fictions that treat silence as implicit approval in certain circumstances[99].

In the digital era, efficiency and timeliness acquire new dimensions. E-government platforms enable faster processing, real-time tracking, and automated responses, thereby enhancing procedural speed. Yet these technological advancements must be balanced against the requirements of accuracy, transparency, and human oversight. Efficiency cannot override fairness or legal safeguards, particularly when algorithms are employed in complex or rights-sensitive determinations.

2.2.2.2. Conclusion

Taken together, the principles of procedural fairness, legal certainty, public participation, and efficiency and timeliness form the procedural backbone of German administrative law. Each principle contributes a distinct normative dimension: procedural fairness safeguards impartial treatment and respect for individual rights; legal certainty ensures predictability and stability; public participation strengthens democratic legitimacy

[96] § 10 Verwaltungsverfahrensgesetz (VwVfG).
[97] Pünder, Hermann. "German Administrative Procedure in a Comparative Perspective: Observations on the Path to a Transnational Ius Commune Proceduralis in Administrative Law." International Journal of Constitutional Law 11, no. 4 (October 2013): 940–961. https://doi.org/10.1093/icon/mot045
[98] Petoft, Arian. "The concept and instances of general principles of administrative law: Towards a global administrative law." Cuestiones constitucionales 42 (2020): 309-355. (346)
[99] Engewald, Bettina. (2020). Administrative Silence in Germany. In: Dragos, D., Kovač, P., Tolsma, H. (eds) The Sound of Silence in European Administrative Law. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-030-45227-8_3

and civic engagement; and efficiency promotes responsive and resource-conscious governance. These principles are not merely isolated norms but are collectively anchored in the constitutional framework of the Grundgesetz. Article 20(3) provides the foundational mandate that all executive action be bound by law and justice, thereby establishing the overarching Rechtsstaat tradition from which these procedural requirements derive their authority.

The implications of e-governance for these foundational principles will be examined in detail in Chapter Three of this dissertation.

2.3. Administrative Reform and Digital Transformation in Germany

Building on both the cautious and legally grounded trajectory outlined in the introduction and the foundational principles of administrative procedure, the following section examines how these dynamics materialise within Germany's federal administrative framework and its ongoing digital transformation.

Within the German federal system, each Land historically enacted its own Administrative Procedure Act, resulting in a degree of procedural diversity. These differences, however, are generally limited, as most Länder either explicitly refer to the Federal Administrative Procedure Act (Verwaltungsverfahrensgesetz, VwVfG) or replicate its core provisions with only minor adaptations[100].

Administrative reform in Germany, particularly in the context of digitalisation, has traditionally been characterised by caution and incrementalism. Recent years, however, indicate a gradual acceleration of reform. Of particular relevance to digital administration, the VwVfG includes provisions on electronic communication, most notably in Sections 3a and 71e, which form part of the legal architecture supporting digital administrative processes[101].

This evolution reflects both external regulatory pressures and internal administrative imperatives. At the supranational level, instruments such as the eIDAS Regulation[102] have established standards for cross-border digital public services and electronic identification, requiring corresponding adaptations within national frameworks. Domestically, there is

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[100] Schmitz, Thomas. "The administrative procedure in German administrative law." *Administrative Decision and Administrative Procedure under German, French and Vietnamese Law* (2013). 2

[101] Germany, *Administrative Procedure Act (VwVfG) section 3a and 71e.*

[102] European Parliament and Council. Regulation (EU) No 910/2014 on Electronic Identification and Trust Services for Electronic Transactions in the Internal Market (eIDAS). July 23, 2014. Official Journal of the European Union L 257, 73–114. https://eur-lex.europa.eu/eli/reg/2014/910/oj/eng.

growing recognition of the need to modernise and streamline administrative structures. The enactment of the Online Access Act (Onlinezugangsgesetz) represents a significant milestone, signalling enhanced political commitment to digital transformation and prompting institutional reorganisation within federal ministries[103].

2.4. The Historical and Institutional Context of Digitalization in German Public Administration

This section shifts focus to the historical and institutional context in which these principles are being adapted to the realities of digital transformation in Germany. It examines how the country's unique federal structure and its evolving legislative framework have shaped the development of its digital public administration.

2.4.1. From Early Technological Innovations to the Legal Foundations of Digital Public Administration

The roots of digital public administration can be traced to broader technological developments that have long influenced the organisation and objectives of bureaucratic governance. Early milestones in computing illustrate a technocratic rationality oriented toward efficiency and precision[104]. For example, Charles Babbage's 19th-century efforts to construct an "analytical engine"—supported by the British state—coincided with reforms aimed at systematising administrative functions[105]. Similarly, Herman Hollerith's punch card technology, later foundational for IBM, was adopted by the U.S. Census Bureau in 1890 to improve the efficiency of data processing[106].

While these innovations laid the groundwork for modern data management, the transformation of public administration accelerated with the advent of the digital age. Grönlund and Horan (2005) suggest that the rise of digital governance closely followed

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[103] Wegrich, K. (2021). Is the turtle still plodding along? Public management reform in Germany. Public Management Review, 23(8), 1107-1116. 4

[104] Justin Longo, *From Massive Mainframes to Massive Data, Databanks to #OpenData, "As We May Think" to Thinking Machines: Computer Supported Policy Analysis and the Future of Practice*, Working draft for Dobell Symposium, 2011, 5, accessed May 30, 2025, https://jlphdcand.files.wordpress.com/2011/08/longo-working-draft-from-massive-mainframes-to-massive-data-computer-supported-policy-analysis.pdf.

[105] Seitkazin, Ruslan. "Civic Engagement in the Digital Age: The Case of Hungary." (2021). 66

[106] Justin Longo, *From Massive Mainframes to Massive Data, Databanks to #OpenData, "As We May Think" to Thinking Machines: Computer Supported Policy Analysis and the Future of Practice*, Working draft for Dobell Symposium, 2011, 5, accessed May 30, 2025, https://jlphdcand.files.wordpress.com/2011/08/longo-working-draft-from-massive-mainframes-to-massive-data-computer-supported-policy-analysis.pdf.

the trajectory of internet-based innovation[107]. In Germany, the development of digital government reflected these broader technological trends while also responding to domestic efforts to modernise administrative structures. In its initial phase, e-government primarily involved the creation of static websites by public authorities, designed to disseminate information about administrative services and policies. This early stage provided the foundation for subsequent legal and institutional reforms that sought to embed digitalisation more deeply within the framework of public administration[108].

2.4.2. Defining E-Government in Legal and Administrative Contexts

The concept of e-government has gained widespread usage in public administration discourse, yet its interpretation remains varied across different contexts. As Hu et al. (2009) observe, there is no universally accepted definition, reflecting the multifaceted nature of digital transformation within the public sector. Scholarly debates nonetheless converge around two dominant dimensions: process optimisation and citizen engagement[109].

a. Process Optimization and Service Delivery:

A significant strand of scholarship defines e-government as the use of Information and Communication Technologies (ICTs) to improve the quality, efficiency, and accessibility of public services. From this perspective, digital governance is understood as an evolving approach to public administration that seeks to deliver services that are transparent, adaptable, cost-effective, and responsive to citizen expectations[110]. Yildiz (2007), for example, views e-government as the systematic integration of ICT into administrative structures to streamline service delivery and enhance effectiveness[111]. Similarly, Baker et al. (2004) emphasise the simplification of processes and transactions in the provision of government services, including interactions both within government and between authorities, individuals, and businesses[112].

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[107] Grönlund, Åke, and Thomas A. Horan. "Introducing e-gov: history, definitions, and issues." Communications of the association for information systems 15, no. 1 (2005): 39. 714

[108] Klumpp, Dieter. "From websites to e-government in Germany." In *Electronic Government*, pp. 18-25. Springer, Berlin, Heidelberg, 2002. 19.

[109] Hu, Guangwei, Wenwen Pan, Mingxin Lu, and Jie Wang. "*The widely shared definition of e-Government: An exploratory study*." *The Electronic Library* 27, no. 6 (2009): 968-985.

[110] Fraenkel-Haeberle, Cristina. "Fully Digitalized Administrative Procedures in the German Legal System." *European Review of Digital Administration & Law–Erdal* 1, no. 1-2 (2020): 105-111. 107.

[111] Mete Yildiz, "E-government research: Reviewing the literature, limitations, and ways forward," *Government information quarterly* 24, no.3 (2007): 646–665.

[112] Becker, Jörg, Lars Algermissen, and Bjoern Niehaves. "Organizational engineering in public administrations: a method for process-oriented egovernment projects." In Proceedings of the 2004 ACM symposium on Applied computing, pp. 1385-1389. 2004. cited in Eddowes, Lee Anthony. "*Good practice in e-government:*

These operational definitions highlight indicators such as cost reduction, service quality, and timeliness, which have increasingly guided public sector reforms.

b. Citizen Engagement and Broader Governance:

Beyond efficiency, e-government is also associated with democratic participation and governance. Nica (2015) extends the concept to include more active citizen involvement in public programmes and policymaking through digital services that promote transparency, responsiveness, and inclusiveness[113]. Brown (2005) adopts an even broader perspective, defining e-government as encompassing all governmental activities influenced by digital technologies[114]. Within this framework, Brown identifies four domains: (1) the role of the state in economic and social development; (2) e-governance, including mechanisms such as e-voting and online consultations; (3) e-public administration, which requires new competencies; and (4) international relations[115].

Synthesis Despite definitional diversity, a common thread is the reliance on automated systems to facilitate interaction between citizens, businesses, and public authorities. As Bartholomae, Nam, and Steinhoff (2023) notes, the overarching objective is to expand access to public services while reducing operational costs and enhancing administrative effectiveness[116].

2.4.3. Federal Implementation Structures and Their Impact on E-Government Realisation

a. The Federal Administrative Structure and its Impact on E-Government

In Germany, public administration operates across three territorial levels: the federal government, the states (Länder), and municipalities (Kommunen). The Länder bear primary responsibility for executing both federal and state legislation, which means that the practical implementation of e-government policies largely falls within their remit—particularly at the Länder and municipal levels, where most administrative interactions with citizens occur. As Sommermann (2021) notes, the federal level retains supervisory competencies, especially

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management over methods?." In International Conference on e-Government, pp. 257-267. Berlin, Heidelberg: Springer Berlin Heidelberg, 2005. 257.

[113] Nica, Elvira. "*Sustainable development and citizen-centric e-government services*." Economics, Management, and Financial Markets 10, no. 3 (2015): 69-74.

[114] Brown, David. "Electronic government and public administration." International Review of Administrative Sciences 71, no. 2 (2005): 241-254. 242

[115] Brown, David. "Electronic government and public administration." International Review of Administrative Sciences 71, no. 2 (2005): 241-254. 242-244

[116] Bartholomae, Florian W., Chang Woon Nam, and Peter Steinhoff. "Does Federalism Affect E-Government in Germany?." (2023).3

concerning the enforcement of federal laws[117]. However, as Kuhlmann (2021) emphasises, it does not exercise direct administrative authority over the execution of laws at the state level[118]. This decentralised model reflects the principle of administrative federalism enshrined in the Basic Law.

The execution of federal laws by the Länder is governed by Articles 84 and 85 of the Basic Law. Article 84 allows the Länder to implement federal legislation on their own responsibility, with the federal government limited to ensuring legal compliance. By contrast, Article 85 provides for execution on behalf of the federation, enabling the federal government to issue binding instructions[119]. This distinction is crucial for digital administrative processes, as it determines the extent of federal influence over the rollout and operation of e-government services at the subnational level.

Despite structural variations across the Länder—stemming from differences between two-tier and three-tier administrative systems—a notable degree of uniformity persists in recruitment practices and administrative cultures. This contributes to a relatively consistent framework for digital service delivery across jurisdictions[120]. As Stott (1997) observes, the term "governmental" should be understood broadly to encompass any public entity with legal authority, including law enforcement agencies, which fall under the scope of administrative law even if not formally established by government[121].

b. The Legal and Institutional Framework of Digital Administration

At the federal level, ministries and agencies largely operate within the Weberian model of bureaucracy, which Weber (1922) described as the "*purest type of legal authority*[122]". This model, characterised by hierarchical structures and a clear allocation of functions, has significant implications for implementing digital policies[123]. Accordingly, key federal agencies, such as the Federal Network Agency (Bundesnetzagentur), play a pivotal

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[117] Sommermann, Karl-Peter. "Constitutional state and public administration." *Public administration in Germany* (2021): 17-33. 24
[118] Kuhlmann, Sabine, Isabella Proeller, Dieter Schimanke, and Jan Ziekow. "German public administration: Background and key issues." *Public Administration in Germany* (2021): 1-13. 5
[119] Schrapper, Ludger. "The administration of the Länder." *Public Administration in Germany* (2021): 105-121. 106
[120] Kuhlmann, Sabine, Isabella Proeller, Dieter Schimanke, and Jan Ziekow. "German public administration: Background and key issues." *Public Administration in Germany* (2021): 1-13. 6
[121] Stott, David. Principles of administrative law. Routledge-Cavendish, 1997. 3
[122] Weber, Max. Economy and Society: An Outline of Interpretive Sociology. Tübingen: J.C.B. Mohr (Paul Siebeck), 1922, 126 ff.
[123] Fleischer, Julia. "Federal administration." *Public Administration in Germany* (2021): 61-79. 69

role in providing and safeguarding the technological foundations for e-government[124]. In certain fields, such as border protection and intelligence, digital procedures are implemented by federal authorities without the intermediary role of the Länder, reflecting a more centralized scope of federal administrative competence[125].

Within this framework, the E-Government Act (EGovG) serves as a central legislative instrument[126]. It establishes binding provisions for federal administrative bodies and, in certain cases, extends its applicability to Länder and municipal authorities. However, the EGovG is not a comprehensive codification on its own. Instead, it is part of a broader "*mosaic of complementary legislative measures,*" including the Online Access Act (Onlinezugangsgesetz – OZG)[127], which requires the digitalization and interconnection of public service portals. Additional relevant provisions are found in data protection law, digital identity regulation, and the legal framework for electronic signatures. This integrated structure collectively shapes Germany's process of digital transformation.

Taken together, the multilevel administrative structure, the constitutional allocation of competences, and the mosaic of complementary legal instruments create a complex but navigable framework for implementing e-government in Germany. This framework reflects both the decentralised nature of German federalism and the growing need for coordinated legal and institutional responses to digitalisation.

2.4.4. Procedural Safeguards and Rights Protection in Digital Administrative Processes

E-government systems are expected to uphold a set of principles to preserve the integrity of administrative procedures as the interface between the state and the citizen transitions from physical to digital formats[128]. This section examines how core guarantees are being adapted to the realities of digital administration.

a. Participant Rights and their Digital Application

Foundational rights of participants—such as the right to be heard and the right to inspect files—remain central in digital administrative procedures. Although the mode of interaction has shifted from physical to virtual platforms, the substantive guarantees

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[124] Sommermann, Karl-Peter. "Constitutional state and public administration." *Public administration in Germany* (2021): 17-33. 25
[125] Schrapper, Ludger. "The administration of the Länder." *Public Administration in Germany* (2021): 105-121. 106
[126] Act of Germany (EGovG). Accessed August 6, 2025. https://www.gesetze-im-internet.de/englisch_egovg/.
[127] *Online Access Act (Onlinezugangsgesetz – OZG)*. Section 3. and 9. Federal Law Gazette I 2017.
[128] Schmitz, Thomas. "The administrative procedure in German administrative law." *Administrative Decision and Administrative Procedure under German, French and Vietnamese Law* (2013). 5-8

embedded in administrative law must not be diminished. Public authorities are therefore required to facilitate electronic access to relevant information and provide meaningful opportunities for participants to exercise their rights through digital channels. The right to inspect files, for instance, may be operationalised through secure access to electronic records. Likewise, the principle of confidentiality demands that electronic data be protected in accordance with applicable standards[129]. As Siegel (2020) observes, digitisation does not negate the normative essence of these rights but requires their reinterpretation to ensure fairness, transparency, and data protection in an electronic environment[130].

b. The Shift from "Street-Level" to "System-Level" Bureaucracy

Digital administration also reshapes the relationship between citizens and the state. The absence of binding procedural obligations for users, combined with a focus on accessibility, reflects the intention to maintain inclusiveness in e-government initiatives. This design allows participation to remain voluntary while equipping authorities with sufficient information technology to reach lawful decisions[131]. Bovens and Zouridis (2002) argue that this development marks a shift from traditional "street-level bureaucracies," where discretion was exercised by frontline officials, to "system-level bureaucracies" driven by ICTs that reduce direct human interaction. This transformation reconfigures the citizen-state relationship into a more service-oriented and user-friendly interaction, while simultaneously increasing procedural standardisation and flexibility[132].

c. The Irrelevance of Defects and the Risk to Procedural Rights

Automated administrative decision-making raises particular concerns regarding the principle of the irrelevance of defects in procedure and form, as codified in Sections 44 and 45 of the Verwaltungsverfahrensgesetz (VwVfG). These provisions allow authorities to "cure" procedural flaws at a later stage, such as by providing a missing justification or conducting a hearing after an electronic act has been issued. While this flexibility offers pragmatic solutions for minor technical errors, it is not without controversy. If defects

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[129] Schmitz, Thomas. "The administrative procedure in German administrative law." *Administrative Decision and Administrative Procedure under German, French and Vietnamese Law* (2013). 5-8

[130] Siegel, Thorsten. "Digitalisierung des Verwaltungsverfahrens – Digitalisierung im Verwaltungsverfahren." Juristische Ausbildung 2020(9): 920–931. https://doi.org/10.1515/jura-2020-2482.

[131] Schmitz, Thomas. "The administrative procedure in German administrative law." *Administrative Decision and Administrative Procedure under German, French and Vietnamese Law* (2013). 5-8

[132] Bovens, Mark, and Stavros Zouridis. 2002. From Street-Level to System-Level Bureaucracies: How Information and Communication Technology Is Transforming Administrative Discretion and Constitutional Control. Public Administration Review 62, no. 2 (March–April): 174–84. 175.

affecting core rights—such as the right to be heard—are too readily overlooked, there is a significant risk that citizens' procedural guarantees may be undermined[133].

The challenges and theoretical shifts outlined above have not remained abstract. They have been progressively addressed through legislative and strategic milestones, the most prominent of which are examined in the following section.

2.4.5. Prominent Milestones in Germany's Digital Government Development

The development of digital governance in Germany has been shaped by incremental legal reforms and strategic institutional innovations aimed at modernising public administration. This section outlines the key milestones that have defined this trajectory.

a. Early Strategic Initiatives and Foundational Legislation

The federal initiative Bund Online 2005, launched in September 2000[134], represented a significant turning point by aiming to make eighteen key public services available online. It reflected a systematic effort to integrate digital tools into administrative practice[135].

While the programme enhanced online service availability at the federal level, evaluations highlighted limitations in intergovernmental integration and user-centric design. Importantly, the legal basis for secure electronic interactions had already been established with the enactment of the Digital Signature Act (Signaturgesetz) in 1997[136], which laid the groundwork for subsequent strategic initiatives.

b. Institutionalization and Cooperative Frameworks

In response to challenges in intergovernmental coordination, the federal government introduced the "E-Government 2.0" programme in 2006[137]. This phase emphasised institutionalising digital infrastructure, particularly through secure electronic identity verification systems, culminating in the introduction of the electronic identity card (eID) in 2010[138].

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[133] Schmitz, Thomas. "The administrative procedure in German administrative law." *Administrative Decision and Administrative Procedure under German, French and Vietnamese Law* (2013). 5-8

[134] Federal Ministry of the Interior. BundOnline 2005: Implementation Plan for the Federal Government's E-Government Initiative. Berlin: Federal Ministry of the Interior, 2000.

[135] Klumpp, Dieter. "From websites to e-government in Germany." In *Electronic Government*, pp. 18-25. Springer, Berlin, Heidelberg, 2002. 23.

[136] Germany. Gesetz zur digitalen Signatur (Signaturgesetz) [Digital Signature Act]. Bundesgesetzblatt Teil I [Federal Law Gazette, Part I], no. 14 (1997): 1870.

[137] Bundesministerium des Innern. E-Government 2.0: Innovations for Germany's Public Administration. Berlin: Bundesministerium des Innern, 2006.

[138] Wirtz, Bernd W., and Pascal RM Kubin. "Governance Reforms in Germany: An Analysis of Digital Reforms." In Comparative Governance Reforms: Assessing the Past and Exploring the Future, pp. 75-92. Cham: Springer Nature Switzerland, 2024. 79

A pivotal constitutional development occurred in 2009 with the amendment introducing Article 91c of the Basic Law, which provided the legal foundation for cooperative federal action in information technology[139]. This provision was operationalized through the IT-Staatsvertrag (State Treaty on IT)[140], leading to the establishment of the IT Planning Council (IT-Planungsrat)[141], the first formal body tasked with coordinating digital governance across Germany's multi-level administrative structure[142].

This phase not only expanded the scope and accessibility of digital services but also embedded information technology into core administrative processes. Emphasis was placed on secure identity verification, cybersecurity, and inclusivity. Efforts were directed at ensuring equal access across societal groups and fostering public trust in digital platforms (Bundesministerium des Innern, für Bau und Heimat, 2009; 2010)[143].

c. Landmark Legislative Acts and Modern Initiatives

Subsequent reforms were guided by landmark legislation and modern strategic initiatives. The E-Government Act (E-Government-Gesetz), enacted in 2013, provided a comprehensive legal framework for integrating digital tools into administrative procedures, offering guidance for federal, state, and municipal authorities[144]. In 2017, the Online Access Act (Onlinezugangsgesetz, OZG) marked a major milestone by mandating that all federal and state-level public services be electronically accessible by 2022[145]. Its implementation led to the creation of new collaborative structures, notably the Federal IT Cooperation (FITKO) in 2020[146], to coordinate digitization efforts.

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[139] Basic Law for the Federal Republic of Germany, Art. 91c.
[140] IT Planning Council. State Treaty on the Establishment of a Federal IT Cooperation (IT-Staatsvertrag). Concluded by the Federal Republic of Germany and the Länder, entered into force April 1, 2010.
[141] IT Planning Council (IT-Planungsrat). Official Website of the IT Planning Council. Accessed Sep. 01, 2025. https://www.it-planungsrat.de/.
[142] Wirtz, Bernd W., and Pascal RM Kubin. "Governance Reforms in Germany: An Analysis of Digital Reforms." In Comparative Governance Reforms: Assessing the Past and Exploring the Future, pp. 75-92. Cham: Springer Nature Switzerland, 2024. 78
[143] Wirtz, Bernd W., and Pascal RM Kubin. "Governance Reforms in Germany: An Analysis of Digital Reforms." In Comparative Governance Reforms: Assessing the Past and Exploring the Future, pp. 75-92. Cham: Springer Nature Switzerland, 2024. 78
[144] Wirtz, Bernd W., and Pascal RM Kubin. "Governance Reforms in Germany: An Analysis of Digital Reforms." In Comparative Governance Reforms: Assessing the Past and Exploring the Future, pp. 75-92. Cham: Springer Nature Switzerland, 2024. 79
[145] Wirtz, Bernd W., and Pascal RM Kubin. "Governance Reforms in Germany: An Analysis of Digital Reforms." In Comparative Governance Reforms: Assessing the Past and Exploring the Future, pp. 75-92. Cham: Springer Nature Switzerland, 2024. 79-80
[146] "FITKO – Federal IT Cooperation," Federal Agency for IT Cooperation (FITKO), accessed Sep. 01, 2025, https://www.fitko.de/.

Despite progress, commentators such as Fleischer (2021) identify persistent gaps, particularly in open data provision, reflecting structural and cultural constraints within Germany's administrative tradition[147].

d. Conclusion: Germany's digital government development has been characterised by incremental reforms and institutional innovations that modernised public administration while respecting federal structures. Significant progress has been achieved in service digitalisation and citizen engagement. Yet persistent challenges—especially those concerning intergovernmental coordination, infrastructural disparities, and open data accessibility—continue to shape the effectiveness and inclusivity of Germany's digital transformation.

2.4.6. European Influences

The evolution of e-government in Germany has been significantly shaped by European and international initiatives that have progressively influenced the digital transformation of public administration. These external frameworks have provided strategic orientation and served as reference models for legal and institutional reforms within the German context.

At the European level, the European Union (EU) has played a formative role in articulating strategic objectives that, although not always binding, have exerted considerable influence on national digital policies. One of the earliest initiatives was the eEurope 2002 Action Plan, which sought to promote internet access across households, businesses, and public institutions[148], while introducing specific timelines for Member States to implement digital services. This was followed by eEurope 2005[149], which shifted attention toward broadband infrastructure and interactive public services[150].

Subsequent EU strategies reinforced the growing significance of digital administration. The i2010 strategy, adopted in the mid-2000s, linked digital transformation to broader socioeconomic goals under the Lisbon Strategy[151]. Building on this foundation, the eGovernment Action Plan 2011–2015, emerging from the Malmö Declaration, emphasised

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[147] Fleischer, Julia. "Federal administration." *Public Administration in Germany* (2021): 61-79. 76
[148] European Commission and Council. 2000. eEurope: An Information Society for All – Action Plan.
[149] European Commission and Council. 2005. eEurope: An Information Society for All – Action Plan.
[150] van Kampen, Jakob. "From Plan to Reality: Applications of the European eGovernment Action Plan 2016-2020 on the National and Institutional Level-a Comparison between Germany, the United Kingdom and Estonia." Master thesis, Hochschulbibliothek der Technischen Hochschule Köln, 2018. 11.
[151] European Commission, i2010 – Information Society and the Media: Working towards Growth and Jobs, EUR-Lex

principles such as user-centricity, interoperability, and administrative efficiency[152]. These orientations encouraged Member States to enhance transparency and improve service quality, influencing Germany's reforms in areas such as integrated service portals and harmonised IT systems.

The eGovernment Action Plan 2016–2020 further consolidated these objectives, sharpening the focus on cross-border service delivery, administrative efficiency, and alignment with the Digital Single Market[153]. Germany's response was not merely declarative but took legislative form. The enactment of the Online Access Act (Onlinezugangsgesetz – OZG) illustrates this alignment, obliging all levels of government to provide accessible digital services through standardised portals. In this sense, EU strategies functioned less as external mandates and more as frameworks shaping domestic legal instruments and administrative priorities[154].

A particularly noteworthy milestone was the Tallinn Declaration on eGovernment (2017), through which Germany and other Member States reaffirmed their commitment to accessible, inclusive, secure, and interoperable public digital services. The Declaration reinforced principles such as digital-by-default, inclusiveness, trust, interoperability, user-centricity, and transparency. Although political in nature, these commitments have influenced Germany's administrative priorities[155].

Beyond strategic guidance, EU law has exerted binding influence through the principle of primacy, which requires that EU law prevail over conflicting national provisions. This doctrine obliges Member States to amend or reinterpret domestic legislation to comply with EU standards. As Schmitz (2013) notes, the binding force of EU law has necessitated substantive changes to national administrative frameworks, even where such changes initially encountered resistance due to concerns over autonomy and constitutional identity[156].

While EU law is primarily implemented by Member States, enforcement responsibilities have become increasingly fragmented. In some areas, EU agencies play a

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[152] European Commission. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: The European eGovernment Action Plan 2011–2015: Harnessing ICT to Promote Smart, Sustainable & Innovative Government. COM(2010) 743 final, 2010.
[153] European Commission, EU eGovernment Action Plan 2016–2020: Accelerating the Digital Transformation of Government, COM(2016) 288 final
[154] Onlinezugangsgesetz (OZG) – Online Access Act, 2017, https://www.gesetze-im-internet.de/ozg/.
[155] European Union, Tallinn Declaration on eGovernment, signed October 6, 2017, Tallinn, Estonia
[156] Schmitz, Thomas. "The administrative procedure in German administrative law." *Administrative Decision and Administrative Procedure under German, French and Vietnamese Law* (2013). 3

direct role, and EU instruments shape not only substantive obligations but also administrative procedures. As Hofmann observes, this development creates indirect effects on domestic processes, even beyond the immediate scope of Union law[157].

International organisations have also contributed to shaping the discourse. OECD[158] recommendations on digital government strategies and the United Nations' E-Government Development Index (EGDI)[159] provide benchmarking tools and policy guidance that inform national reforms.

In sum, European and international influences have acted not merely as external drivers but as normative reference points in Germany's approach to e-government. While national sovereignty continues to underpin administrative lawmaking, Germany's alignment with supranational and global standards reflects a broader trend toward harmonisation of legal and administrative frameworks in the digital era.

2.5. Federal Administrative Structure and the Challenges of Digital Transformation

The federal organisation of the German state significantly shapes the institutional configuration and operational execution of e-government policies. Unlike unitary systems, Germany's federal model distributes administrative responsibilities across three levels—the federal government, the Länder, and municipalities—each fulfilling distinct yet interrelated functions. While this decentralised framework supports regional self-governance and reflects the principle of subsidiarity, it also presents challenges for coordination and uniform implementation, particularly in the context of digital transformation.

2.5.1 Federal Distribution of Competences in Administrative Law

Germany's federal administrative system is characterised by a structured division of competences between the Federal Government (Bund) and the constituent states (Länder), rooted in the Basic Law (Grundgesetz). The federal government retains exclusive legislative powers in areas such as foreign affairs, national defence, and customs (Articles 73, 87a GG), while the implementation of most federal laws is delegated to the Länder under Articles 83 to 85 GG[160].

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[157] Hofmann, Hans. "Europeanisation and German Public Administration." *Public Administration in Germany* (2021): 53-60. 58-59

[158] Organisation for Economic Co-operation and Development (OECD), Recommendation of the Council on Digital Government Strategies, OECD/LEGAL/0406, adopted July 15, 2014, https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0406

[159] United Nations Department of Economic and Social Affairs, United Nations E-Government Survey 2022: The Future of Digital Government, (New York: United Nations, 2022), https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2022.

[160] Germany. Grundgesetz [Basic Law].

This decentralised approach has long defined German public administration. As Schmitz (2013) notes, the division of competences ensures that the Länder enjoy considerable autonomy in implementing laws, thereby reinforcing their administrative capacity[161]. The principle of ministerial autonomy (Ressortprinzip), whereby federal ministers independently manage their departments within the policy direction set by the Chancellor and Cabinet, further enhances decentralisation and sectoral specialisation[162].

Historically, this model was reinforced after World War II with the adoption of a democratic federal constitution. As Behnke (2021) explains, the federal government was intentionally designed not to enforce its own laws directly, thereby safeguarding against overcentralisation of power and ensuring the durability of institutional decentralisation[163].

In contrast to more centralised systems, Germany's federal government does not act as the principal provider of public services. Its responsibilities lie primarily in legislation, regulation, and intergovernmental coordination, while operational delivery falls to the Länder and municipalities. As Fleischer (2021) observes, this arrangement has preserved administrative stability but limited the scope for sweeping institutional reform at the federal level[164].

At the local level, municipalities play a crucial role in service delivery, despite not being constitutionally recognised as a separate level of government. Schneider (2021) highlights their responsibilities in civil registration, urban planning, and waste management—sectors increasingly shaped by digital initiatives[165]. Municipalities operate under Länder supervision and must align with overarching policy frameworks. Article 28(2) GG guarantees them autonomy in managing local affairs, but this remains subject to legal constraints, particularly the primacy of federal law over state and local regulations (Article 31 GG)[166]. As Fábián (2005) notes, municipalities may act only within the scope of the law[167], a limitation that is especially significant in digital governance, where federal and state standards on data protection, IT infrastructure, and interoperability prevail.

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[161] Schmitz, Thomas. "The administrative procedure in German administrative law." *Administrative Decision and Administrative Procedure under German, French and Vietnamese Law* (2013). 2
[162] Fleischer, Julia. "Federal administration." *Public Administration in Germany* (2021): 61-79. 77
[163] Behnke, Nathalie, and Sabine Kropp. "Administrative federalism." Public administration in Germany (2021): 35-51. 37.
[164] Fleischer, Julia. "Federal administration." *Public Administration in Germany* (2021): 61-79. 77
[165] Schneider, Hans-Peter. "The federal republic of Germany." Distribution of Powers and Responsibilities" McGill-Queen's University Press, Canada (2006). 4.
[166] Article 28, 31 of the German Basic Law
[167] Adrián Fábián, Vergleichendes Kommunalrecht (Bayern und Ungarn)[Comparative Municipal Law (Bavaria and Hungary), Pécs: Faculty of Law, University of Pécs, 2005. 7

Financial autonomy further, as noted by Schneider (2006), complicates the position of municipalities. Unlike the Länder, which enjoy constitutionally enshrined borrowing powers, municipalities generally require state approval to incur public debt—including funding for digital projects[168]. Their administrative autonomy thus remains closely tied to both legal and fiscal oversight by the Länder.

In this context, the division of responsibilities becomes particularly complex, as telecommunications fall under exclusive federal competence, ensuring uniform infrastructure policy. Nevertheless, municipalities remain essential in operationalising digital governance strategies. While data protection is shared—federal principles are enforced by state authorities, leading to variations across the Länder[169].

Coordination is particularly important in IT security, broadband deployment, and interoperability. The Federal Office for Information Security (BSI)[170] sets cybersecurity standards, while the Länder incorporate them into local systems. Under Article 85 GG[171], the federal government supervises Länder execution of federal laws through regulations, inspections, and compliance oversight, facilitating some standardisation but also revealing the limits of federal reach[172].

The rise of digital administration has exposed tensions within this federal structure. Fragmented competences may hinder the agility required for integrated, data-driven governance. As Kuhlmann (2021) observes, Germany's administrative culture values predictability, solidarity, and institutional consistency—attributes that can conflict with the flexibility and innovation demanded by digital transformation[173]. Thus, while federalism has enabled local adaptability, it now faces pressure to accommodate cross-cutting digital agendas that transcend traditional boundaries.

This tension between stability and adaptability lies at the core of the challenges facing digital governance in Germany's multilevel administrative framework, underscoring the need for enhanced coordination mechanisms and adaptive legal reforms.

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[168] Schneider, Hans-Peter. "The federal republic of Germany." Distribution of Powers and Responsibilities" McGill-Queen's University Press, Canada (2006). 5

[169] Schneider, Hans-Peter. "The federal republic of Germany." Distribution of Powers and Responsibilities" McGill-Queen's University Press, Canada (2006). 5

[170] Act on the Federal Office for Information Security (BSI Act – BSIG), German Federal Law Gazette I, 2009, 2821, last amended 2021.

[171] Art. 85 GG Basic law

[172] Schneider, Hans-Peter. "The federal republic of Germany." Distribution of Powers and Responsibilities" McGill-Queen's University Press, Canada (2006). 5

[173] Kuhlmann, Sabine, Isabella Proeller, Dieter Schimanke, and Jan Ziekow. "German public administration: Background and key issues." *Public Administration in Germany* (2021): 1-13. 4

2.5.2 Administrative Fragmentation and Its Impact on Digitization

The allocation of competences among federal, state (Länder), and municipal authorities[174] has contributed to a fragmented digital environment, reflected in diverse legal frameworks, uneven administrative capacities, and varying degrees of political commitment to reform[175].

Each Land retains substantial autonomy in shaping its own digital governance strategies. As a result, information technology systems developed at federal, state, and municipal levels often lack interoperability, hindering efficient data exchange and integrated service delivery[176].

Responsibility falls on the Länder to involve municipalities in their digitalisation efforts. Mergel (2021) suggests that municipal interest organisations provide a practical means of consolidating communication and coordination across approximately 11,000 municipalities. Yet uncertainty persists regarding their engagement beyond prototype development. While some Länder have established digital portals and provide services to municipalities free of charge, others have yet to formulate strategies for municipal participation in rollout and long-term use[177].

This fragmented approach has led to inefficiencies, redundant investments, and restricted interoperability, particularly in domains requiring cross-border data exchange. The National Regulatory Control Council (NKR) has repeatedly raised concerns about the sluggish pace of implementation, citing excessive complexity, fragmented organisational structures, and inadequate intergovernmental coordination[178].

Legal harmonisation has also been affected. Despite the binding mandate of the Onlinezugangsgesetz (OZG), which requires the digital availability of administrative services at federal and Länder levels, implementation remains inconsistent. Many municipalities

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[174] Articles 28 and 72 of the Grundgesetz (German Basic Law)
[175] Bartholomae, Florian W. and Nam, Chang Woon and Steinhoff, Peter, Does Federalism Affect E-Government in Germany? (2023). *CESifo Working Paper* No. 10260, Available at SSRN: https://ssrn.com/abstract=4357552 or http://dx.doi.org/10.2139/ssrn.4357552
[176] Fraenkel-Haeberle, Cristina. "Fully Digitalized Administrative Procedures in the German Legal System." *European Review of Digital Administration & Law–Erdal* 1, no. 1-2 (2020): 105-111. 107.
[177] Mergel, Ines. "Digital transformation of the German state." (2021). *Public administration in Germany*. Springer Nature, 2. 336.
[178] Ines Mergel, "Digital Transformation of the German State," in Public Administration in Germany, eds. Sabine Kuhlmann, Isabella Proeller, Dieter Schimanke, and Jan Ziekow (Cham: Springer, 2021), 336.

continue to rely on outdated legacy systems, and several Länder have not achieved full integration with federal infrastructure[179].

The OZG's cooperative approach—delegating responsibility for specific services to particular Länder or regional clusters—was intended to leverage local expertise. However, Heuberger and Schwab (2021) warned that such fragmentation risks undermining legitimacy, particularly regarding equitable service delivery. They emphasise the importance of inclusive service design and technical solutions responsive to diverse demographic needs—for example, simplified access for elderly users alongside more sophisticated services for younger citizens[180].

These institutional divides pose not only operational obstacles but also raise normative concerns regarding equality of access and administrative justice. Citizens' ability to interact digitally with public authorities increasingly depends on their place of residence, potentially undermining the constitutional principle of equal treatment in administrative matters[181].

In summary, administrative fragmentation reflects the broader federal logic of Germany's constitutional order but simultaneously constitutes a critical barrier to coherent and equitable digital governance.

2.5.3 Institutional Actors and Their Roles

Given the administrative fragmentation outlined earlier, coordination among institutional actors is crucial to overcoming structural challenges in Germany's digital governance.

The institutional landscape of digital governance in Germany is shaped by a constellation of interrelated actors, each with distinct legal mandates and administrative functions. At the federal level, the Federal Ministry of the Interior (BMI) plays a central role in setting strategic objectives for digital transformation and overseeing the implementation of relevant legislation, including the E-Government Act and the Online Access Act (OZG). The BMI also supervises national digital infrastructure projects and coordinates cross-ministerial

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[179] Heuberger, Moritz, and Christian Schwab. "Challenges of digital service provision for local governments from the citizens' view: Comparing citizens' expectations and their experiences of digital service provision." *The future of local self-government: European trends in autonomy, innovations and central-local relations* (2021): 115-130.125.

[180] Heuberger, Moritz, and Christian Schwab. "Challenges of digital service provision for local governments from the citizens' view: Comparing citizens' expectations and their experiences of digital service provision." *The future of local self-government: European trends in autonomy, innovations and central-local relations* (2021): 115-130.125.

[181] Bogdanovskaya, Irina Yurievna. "E-Government: Legal Aspects." *Legal Issues Digit. Age* 3 (2022): 4.9

efforts, serving as the primary interface between political leadership and the operational bodies responsible for administrative digitalisation[182].

A key institutional innovation is the IT Planning Council (IT-Planungsrat), established following the 2009 constitutional amendment introducing Article 91c of the Basic Law. This provision created a legal framework for intergovernmental cooperation in information technology. Formalised through the 2010 State Treaty on IT (IT-Staatsvertrag), the Council comprises representatives from the federal government and the Länder, with the mandate to harmonise IT strategies and ensure interoperability across Germany's multi-level administrative structure. In recent years, its role has expanded beyond strategic coordination to include oversight of OZG implementation. Each federal state has been assigned a thematic area within the designated service fields under the OZG, thereby facilitating cooperative responsibility and distributed development[183].

To support the Council's execution capacity, the Federal IT Cooperation (Föderale IT-Kooperation, FITKO) was created as its executive arm. FITKO is responsible for operational coordination and the development of common digital infrastructures, including standardised platforms and central service components. It also manages the joint digitisation programme (OZG-Umsetzung), which allocates approximately 575 administrative services among the Länder and municipalities for decentralised implementation. While FITKO has streamlined communication and fostered synergies, its effectiveness remains contingent on political commitment and adequate resource allocation at both federal and state levels[184].

Concurrently, data protection authorities—most notably the Federal Commissioner for Data Protection and Freedom of Information (BfDI)—play a critical regulatory role in ensuring that digital transformation efforts comply with constitutional and European data protection standards. The BfDI provides guidance on data governance, conducts compliance reviews, and issues opinions on legislative proposals involving automated decision-making, biometric systems, and artificial intelligence[185].

Beyond institutional structures, the development of digital competences among public officials constitutes an essential dimension of administrative capacity building. Although

[182] Federal Ministry of the Interior (BMI). E-Government. Accessed August 30, 2024. https://www.bmi.bund.de/EN/topics/administrative-reform/e-government/e-government-node.html
[183] IT Planning Council (IT-Planungsrat). Official Website of the IT Planning Council. Accessed Sep. 01, 2025. https://www.it-planungsrat.de/.
[184] "FITKO – Federal IT Cooperation," Federal Agency for IT Cooperation (FITKO), accessed Sep. 01, 2025, https://www.fitko.de/.
[185] Federal Commissioner for Data Protection and Freedom of Information (BfDI). Home. Accessed Sep 01, 2025. https://www.bfdi.bund.de/DE/Home/home_node.html.

Germany has adopted the European Digital Competency 2.0 framework (EU Science Hub n.d.), it has not yet developed a comprehensive national strategy to systematically build these competencies. Early initiatives include proposals for a government digital academy serving all levels of government and an eGovernment Massive Open Online Course (MOOC) for civil servants. Mergel (2021) notes that expert interviews emphasise the need for public managers to foster a digital mindset, understand the implications of emerging technologies, and develop the agility required to navigate diverse digital tools. Middle managers, in particular, are expected to acquire proficiency in modern project management methodologies to effectively guide transformation processes[186].

In examining the institutional framework responsible for the implementation of digital transformation policies within German public administration, it appears that a combination of overlapping competences and complementary functions characterises the roles of various actors at both the federal and state levels. The following table highlights the principal institutions, their core responsibilities, and the legal or policy foundations guiding their activities, thereby providing a structured reference point for analysis.

Institutional Body	**Core Role**	**Legal / Policy Basis**
Federal Ministry of the Interior (BMI)	- Sets strategic objectives for digital transformation. - Oversees the implementation of legislation (E-Government Act, Online Access Act – OZG). - Manages national digital infrastructure projects and inter-ministerial coordination. - responsible for cybersecurity in the government sector in cooperation with the Federal Office for Information Security (BSI)	Federal legislation, including the E-Government Act and OZG.

[186] Mergel, Ines. "Digital transformation of the German state." (2021). *Public administration in Germany*. Springer Nature, 2. 342.

IT Planning Council (IT-Planungsrat)	- Coordinates between the federal government and the Länder. - Ensures interoperability and joint strategies. - Oversees OZG implementation and the allocation of service areas among the Länder. - Its role extends to making mandatory decisions regarding common IT standards.	Article 91c of the Basic Law. IT State Treaty (IT-Staatsvertrag) of 2010.
Federal IT Cooperation (FITKO)	- Executive arm of the IT Planning Council. - Operational coordination and development of shared digital infrastructure. - Manages the OZG implementation program and service distribution across Länder and municipalities.	an organization that was created in 2018 as part of the evolving cooperation between the states and the federal government, with operational work beginning in 2019
Federal Commissioner for Data Protection and Freedom of Information (BfDI)	- Supervises compliance with constitutional and EU data protection standards. - Provides advisory opinions on draft legislation related to new technologies.	General Data Protection Regulation (GDPR) and Federal Data Protection Act (BDSG).
Digital Competence-Building Programs	- Enhances digital skills among civil servants.	European Digital Competence Framework (DigComp 2.0); digital competence programs are based on

	- Promotes digital culture and understanding of modern technologies among administrative leaders. - Includes initiatives such as the Federal Digital Academy and the E-Government MOOC.	the German government's Digital Strategy.

2.6. Legislative Instruments Governing E-Government Implementation

Several core legislative instruments shape Germany's e-government landscape at the federal level. Chief among them are the E-Government Act (EGovG, 2013)[187], which lays the legal groundwork for digital administrative operations; the Online Access Act (OZG, 2017)[188], which mandates digital service delivery across all administrative levels; the Federal Data Protection Act (BDSG)[189], ensuring alignment with the GDPR; and the IT State Treaty (2009)[190], which provides the institutional basis for intergovernmental coordination through the IT Planning Council and FITKO[191]. Each of these instruments will be examined in detail in the following subsections.

2.6.1 The E-Government Act (EGovG)

The E-Government Act (E-Government-Gesetz, EGovG), adopted in 2013 and subsequently amended, constitutes a central legislative framework for the digital transformation of public administration at the federal level. Its principal objective is to modernise administrative operations by introducing binding requirements for electronic communication, digital file management, and secure data exchange. In doing so, the Act reflects broader policy goals of enhancing efficiency, transparency, and accessibility through digital technologies.

The scope of the Act extends to administrative activities conducted under public law, subject to specific exclusions. Section 1(5) EGovG exempts domains such as the prosecution

[187] E-Government-Gesetz (EGovG) – Act to Promote Electronic Government, 2013, amended 2021, https://www.gesetze-im-internet.de/egovg/.
[188] Onlinezugangsgesetz (OZG) – Online Access Act, 2017, https://www.gesetze-im-internet.de/ozg/.
[189] Bundesdatenschutzgesetz (BDSG) – Federal Data Protection Act, 2018, https://www.gesetze-im-internet.de/bdsg_2018/.
[190] IT-Planungsrat, IT-Staatsvertrag – State Treaty on Information Technology, 2009, https://www.it-planungsrat.de/.
[191] Föderale IT-Kooperation (FITKO), FITKO – Federal IT Cooperation, https://www.fitko.de/.

of administrative offences, taxation and customs, and procedures under the Second Book of the Social Code. These exclusions reflect areas governed by distinct legal frameworks, thereby limiting the Act's reach[192].

Among its key provisions, the EGovG imposes obligations on federal authorities to integrate digital tools into their interactions with citizens and businesses. Section 2 establishes the legal equivalence of electronic signatures to handwritten signatures, thereby supporting the validity of digital documentation[193]. Section 6 requires secure data transmission mechanisms to safeguard confidentiality and integrity in electronic communication[194].

Beyond procedural mandates, the Act promotes interoperability and standardisation through unified technical and organisational frameworks (Section 11)[195]. Although formally binding only on federal institutions, the EGovG indirectly influences subnational administrations[196].

In Germany's federal system, where harmonisation remains a persistent challenge due to the constitutional distribution of competences, the Act's non-compulsory character for Länder and municipalities has contributed to uneven implementation.

Overall, the EGovG is widely recognised as a cornerstone of Germany's digital governance strategy. It embeds the principles of electronic administration into the normative fabric of administrative law and facilitates the transition to digital formats. At the same time, its limited binding scope underscores the broader challenge of achieving coherence in a decentralised system, highlighting the tension between federal legislative initiatives and the constitutional autonomy of the Länder.

2.6.2 The Online Access Act (OZG)

a. The Online Access Act (Onlinezugangsgesetz, OZG):

The Act enacted in 2017, constitutes a central legislative instrument in Germany's efforts to digitalise public administration[197]. The Act imposes a binding requirement on

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[192] Derya Catakli, Digitalisierung der Verwaltung: Eine Untersuchung zur Umsetzung des E-Government-Gesetzes in der Bundesverwaltung [Digitalisation of Administration: A Study on the Implementation of the E-Government Act in the Federal Administration] (Dissertation, Deutsche Universität für Verwaltungswissenschaften Speyer, 2021), 101.
[193] E-Government Act (E-Government-Gesetz, EGovG), § 2
[194] E-Government Act (E-Government-Gesetz, EGovG), § 6
[195] E-Government Act (E-Government-Gesetz, EGovG), § 11
[196] E-Government Act (E-Government-Gesetz, EGovG), § 1
[197] Germany, Onlinezugangsgesetz (OZG), Federal Law Gazette I, no. 49 (2017): 3122.

federal, state (Länder), and municipal authorities to make their administrative services digitally accessible by the end of 2022. Yet, according to a 2023 report by the Federal Court of Audit (Bundesrechnungshof), only 19% of digitalisable services had been made available online by that deadline, underscoring a significant gap between legislative ambition and practical implementation[198].

A core innovation of the OZG is the federated service catalogue (OZG-Leistungskatalog), which classifies over 575 administrative services and provides a structured framework for their digital implementation[199]. Closely linked to this is the "Einer für Alle" (EfA, "one for all") model, which allows a single Land to develop a digital solution for a given service, with the resulting application made available for reuse by other jurisdictions[200]. This cooperative mechanism is designed to enhance efficiency, avoid duplication, and promote interoperability across governance levels.

The Act also mandates the integration of individual administrative portals into a single nationwide access point. This centralisation aims to streamline the user experience and establish uniform standards for identification and authentication. While the OZG does not create new substantive rights, it codifies digital access as a procedural right and imposes corresponding obligations on public authorities to adapt their services accordingly[201].

Despite these ambitions, implementation has faced substantial challenges. Germany's multi-level federal structure, divergent IT systems, and uneven municipal capacities have hindered progress. Bartholomae, Nam, and Steinhoff (2023) highlight political and structural factors, noting that despite the enactment of the OZG and institutional developments such as the appointment of a Minister of State for Digital Affairs, the pace of transformation remains slow. Systemic obstacles—including weaknesses in service delivery and varying levels of implementation across jurisdictions—continue to impede rapid progress[202].

In sum, the OZG represents a significant step in embedding digital access within Germany's administrative framework. However, its limited realisation illustrates the

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[198] Federal Court of Auditors (Bundesrechnungshof). Report pursuant to Section 99 of the Federal Budget Code (BHO): Implementation of the Online Access Act – Bonn: Bundesrechnungshof, 2023. https://www.bundesrechnungshof.de/SharedDocs/Downloads/DE/Berichte/2023/onlinezugangsgesetz-volltext.pdf?__blob=publicationFile&v=2

[199] Digitale Verwaltung. "OZG-Leistungen." Accessed June. 28, 2025. https://www.digitale-verwaltung.de/Webs/DV/DE/onlinezugangsgesetz/ozg-grundlagen/info-leistungen/info-leistungen-node.html

[200] Einer für Alle – "Einfach erklärt" Accessed June. 28, 2025. https://www.digitale-verwaltung.de/Webs/DV/DE/onlinezugangsgesetz/efa/efa-node.html?utm_source=chatgpt.com

[201] Germany, Onlinezugangsgesetz (OZG), Federal Law Gazette I, no. 49 (2017): 3122.

[202] Bartholomae, Florian W., Chang Woon Nam, and Peter Steinhoff. "Does Federalism Affect E-Government in Germany?." (2023).9-10

persistent tension between legislative ambition and practical execution in a decentralised federal system. Addressing these shortcomings requires not only technical solutions but also enhanced intergovernmental coordination and a stronger commitment to harmonisation.

b. The Online Access Act Amendment (OZG-Änderungsgesetz, OZG 2.0):

Recent legislative developments have sought to address these deficits through the Online Access Act Amendment (OZG-Änderungsgesetz), which entered into force on 24 July 2024 following approval by the Bundesrat on 14 June 2024. Often referred to as OZG 2.0, this reform builds upon the federal government's Digital Administration Package (Paket für die digitale Verwaltung) adopted in May 2023, and represents a comprehensive effort to modernise, standardise, and accelerate Germany's digital transformation[203].

The amendment introduces several key innovations. First, it obliges the federal government to establish binding technical standards and uniform interfaces within two years, thereby strengthening interoperability and reducing fragmentation between federal, Länder, and municipal systems. Second, it formalises the BundID user account as the central access point for citizens, to be expanded into a unified DeutschlandID, enabling secure, end-to-end-encrypted communication between users and public authorities. Third, the reform enshrines the "Once-Only" principle into law, ensuring that individuals and companies no longer need to repeatedly submit the same documents—such as birth certificates—when applying for different services, as administrative bodies may retrieve them electronically with the applicant's consent[204].

From a rights-based perspective, OZG 2.0 marks a significant conceptual shift by introducing a statutory entitlement to digital administration. Within four years of promulgation, citizens will be able to invoke a legal right to electronic access to federal administrative services. Similarly, businesses will benefit from a "digital-only" requirement: within five years, all company-related federal administrative procedures must be fully available online through dedicated organisational accounts.

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[203] Federal Ministry of the Interior and for Home Affairs, "OZG Amendment Act: Package for Digital Administration," Digital Administration, accessed November 2025, https://www.digitale-verwaltung.de/Webs/DV/DE/onlinezugangsgesetz/das-gesetz/ozg-aenderungsgesetz/ozg-aenderungsgesetz-node.html.

[204] Federal Ministry of the Interior and for Home Affairs, "OZG Amendment Act: Package for Digital Administration," Digital Administration, accessed November 2025, https://www.digitale-verwaltung.de/Webs/DV/DE/onlinezugangsgesetz/das-gesetz/ozg-aenderungsgesetz/ozg-aenderungsgesetz-node.html.

These measures aim to streamline administrative interaction, enhance accessibility, and strengthen individual data sovereignty through an expanded Data Protection Dashboard (Datenschutzcockpit). The reform also aligns the OZG more closely with major federal digitalisation initiatives such as register modernisation and digital identity infrastructure, positioning it as the structural backbone of Germany's long-term e-government strategy. Nevertheless, as experience with the original OZG demonstrates, the success of OZG 2.0 will depend not merely on legal mandates but on effective intergovernmental coordination, technical harmonisation, and sustained political commitment to implementing a truly user-centric digital administration.

2.6.3. Interaction Between EGovG and OZG

The E-Government Act (EGovG) and the Online Access Act (Onlinezugangsgesetz, OZG) together constitute the foundational legislative pillars of Germany's digital transformation in public administration. Although both laws pursue the overarching objective of promoting digital governance, they approach this aim from distinct yet complementary perspectives.

Enacted in 2013, the EGovG focuses primarily on modernising internal administrative processes within federal institutions. Pursuant to Section 1 EGovG, its objective is to promote electronic administration and digital communication within federal authorities[205]. The Act establishes binding obligations concerning electronic records management, secure digital communication, and the legal recognition of electronic signatures[206].

By contrast, the OZG, which entered into force in 2017, adopts a service-oriented perspective. Its central aim is to ensure that administrative services are accessible online to citizens and businesses across all levels of government—federal, state (Länder), and municipal[207]. This collaborative approach differs from the EGovG's institution-centred emphasis on internal procedural reforms and technical standardisation.

The divergent scopes and binding effects of the two laws have led to uneven implementation. While the EGovG is formally binding only on federal authorities, the OZG extends its obligations across the multi-level governance structure[208]. However, the limited enforceability of the EGovG at the subnational level, combined with heterogeneous IT infrastructures and varying administrative capacities among the Länder and municipalities,

[205] EGovG, Section 1.
[206] EGovG, Section 6,7.
[207] Onlinezugangsgesetz (OZG), Section 1.
[208] EGovG, Section 1. and Onlinezugangsgesetz (OZG), Section 1.

has resulted in fragmented progress. The Bundesrechnungshof (Federal Court of Auditors), in its 2024 report, highlighted significant delays and inconsistencies, noting that the target of providing all administrative services online by the end of 2022 was largely unmet[209].

Recognising these shortcomings, the legislature adopted the OZG-Änderungsgesetz (OZG 2.0), which entered into force in July 2024. This reform introduces binding technical standards, formalises the BundID/DeutschlandID as central user accounts, and enshrines the "Once-Only" principle into law. Most significantly, it establishes a statutory entitlement to digital administration, granting citizens and businesses enforceable rights to electronic access to federal services within defined timelines[210].

From an administrative law perspective, the interaction between EGovG and OZG has thus evolved: while the EGovG continues to regulate internal federal processes, the OZG—especially in its amended form—anchors digital access as a procedural right and strengthens cooperative federalism through binding standards. Together, they illustrate both the opportunities and the challenges of embedding digital governance within Germany's constitutional framework.

However, some observers suggest that the lack of clearly defined enforcement mechanisms could make coordinated implementation more challenging[211].

2.6.4. Institutional and Technical Frameworks for Implementation

The Bund plays a central role in defining technical standards, interoperability frameworks, and security protocols essential for a unified digital governance system. At the forefront of this effort is the Coordination Body for Information Technology Standards (KoSIT)[212], which develops national IT standards to ensure seamless interoperability across digital public services. Complementing this, the Federal Office for Information Management

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[209] Federal Court of Auditors (Bundesrechnungshof), Report on the Implementation of the Online Access Act, April 2024, https://www.bundesrechnungshof.de/SharedDocs/Downloads/DE/Berichte/2024/umsetzung-onlinezugangsgesetz-volltext.pdf?__blob=publicationFile&v=2.

[210] Federal Ministry of the Interior and for Home Affairs, "OZG Amendment Act: Package for Digital Administration," Digital Administration, accessed November 2025, https://www.digitale-verwaltung.de/Webs/DV/DE/onlinezugangsgesetz/das-gesetz/ozg-aenderungsgesetz/ozg-aenderungsgesetz-node.html.

[211] Ines Mergel, "Digital Transformation of the German State," in Public Administration in Germany, eds. Sabine Kuhlmann, Isabella Proeller, Dieter Schimanke, and Jan Ziekow (Cham: Springer, 2021), 334.

[212] KoSIT. "Coordination Body for Information Technology Standards." Accessed July 29, 2025. https://www.kosit.org/.

(FIM)[213] standardises processes, data formats, and service descriptions, thereby enhancing usability and consistency across administrative bodies.

In the domain of IT security and data protection, the Federal Office for Information Security (BSI)[214] develops and enforces cybersecurity regulations, aligning them with both national and EU frameworks[215]. A key component of this strategy is the IT-Grundschutz framework, which outlines fundamental security measures for federal and state authorities and safeguards sensitive government data against cyber threats.

E-government infrastructure is further supported by initiatives designed to enhance transparency and accessibility. The National Open Data Portal (GovData)[216] facilitates public and business access to government information, while the Federal Digital Identity System (BundID)[217] provides a secure authentication mechanism for citizens and businesses accessing public services. An illustrative example of successful federal implementation is ELSTER[218], the electronic tax system, which streamlines tax administration, reduces bureaucratic complexity, and enhances efficiency.

Taken together, these institutional and technical frameworks form a crucial component of Germany's federal digital transformation agenda. Yet, as Guckelberger (2025) observes, Germany's legalistic administrative tradition has led to increasingly detailed regulatory provisions aimed at facilitating the digital transition[219]. This reflects an acknowledgment of existing legal gaps and inadequacies that may hinder the full realisation of e-government initiatives. The reliance on detailed regulation underscores the ongoing challenge of aligning administrative law with rapid technological developments—a theme that will be further explored in Chapter 3, particularly with respect to the impact of digitalisation on administrative procedures.

Institutional Body	Core Role	Legal / Policy Basis

[213] Federal Office for Information Management (FIM). "Federal Office for Information Management: IT Standardization." Accessed July 29, 2025. https://www.fim.de/.
[214] Federal Office for Information Security (BSI). "Cybersecurity and Data Protection." Accessed July 29, 2025. https://www.bsi.bund.de/.
[215] Federal Office for Information Security (BSI). "IT-Grundschutz: IT Security and Risk Management." Accessed July 29, 2025. https://www.bsi.bund.de/EN/Topics/IT-Grundschutz/itgrundschutz_node.html.
[216] GovData. "National Open Data Portal." Accessed July 29, 2025. https://www.govdata.de/.
[217] BundID. "Federal Digital Identity System." Accessed July 29, 2025. https://www.bundid.de/.
[218] ELSTER. "ELSTER: The Electronic Tax System." Accessed July 29, 2025. https://www.elster.de/.
[219] Guckelberger, Annette. "31 The Internet and Digital Technologies as Essential Tools for the Civil Service." The Civil Service in Europe (2025): 615-634. 623.

Coordination Body for IT Standards (KoSIT) It is a subordinate body of the IT Planning Council (IT-Planungsrat).	Establishes national IT standards to ensure interoperability across digital public services.	Federal-State agreement on IT standardization; IT-Planungsrat mandate.
Federal Office for Information Management (FIM)	Standardizes processes, data formats, and service descriptions to improve usability across administrations.	Federal implementation guidelines under the OZG framework. It is not a standalone legal body, but rather an initiative or executive program carried out by the Federal Ministry of the Interior in cooperation with other entities.
Federal Office for Information Security (BSI)	Develops and enforces cybersecurity regulations; manages the IT-Grundschutz framework.	BSI Act; alignment with GDPR and EU Cybersecurity frameworks.
National Open Data Portal (GovData)	Facilitates open access to government information for public and business use.	Federal Open Data Strategy; relevant transparency legislation.
Federal Digital Identity System (BundID)	Provides secure digital authentication for citizens and businesses.	OZG provisions; eIDAS Regulation. It is based not only on the European eIDAS Regulation but also on national laws such as the eID Act (eID-Gesetz)

ELSTER e-tax system	Enables electronic tax filing, reducing bureaucracy and increasing efficiency.	Federal Tax Code; E-Government Act.

2.7. Legal Foundations of Digital Administrative Procedures

2.7.1. Definition and Scope of Digital Administrative Procedures

Digital administrative procedures refer to the conduct of administrative processes through electronic means, encompassing digital communication, automated decision-making, and online service delivery. They mark a departure from traditional paper-based models, relying instead on secure digital identities, electronic signatures, and centralised online portals. In Germany, the growing recognition of such procedures within administrative law reflects broader efforts to modernise public administration, enhance accessibility, and promote procedural efficiency[220].

This development is reflected in the incorporation of § 3a into the Verwaltungsverfahrensgesetz (VwVfG), introduced in 2003 as part of a broader legislative reform adapting legal communication to the demands of a digital society[221]. The provision authorised electronic communication in administrative processes and has since been amended to accommodate evolving technological standards, including the legal acceptance of electronic documents and the use of secure transmission channels.

The evolution of § 3a illustrates the legislature's responsiveness to the increasing importance of digital interaction between public authorities and individuals. It also raises doctrinal questions regarding the balance between efficiency and procedural safeguards, particularly in relation to legal certainty and equality of access. These issues have gained further relevance in light of subsequent digitalisation measures, most notably the Onlinezugangsgesetz (OZG), which extends the principle of electronic access to a broader range of administrative services. Together, these developments demonstrate how German administrative law has progressively integrated digital procedures into its normative

[220] Federal Ministry of the Interior and Community (BMI), Digitale Verwaltung 2020 and subsequent strategy papers, various years. Accessible via: https://www.bmi.bund.de. These documents outline the evolving national strategy for the digital transformation of public administration.
[221] Verwaltungsverfahrensgesetz (VwVfG) [Administrative Procedure Act], § 3a, last amended by Article 3 of the Act of June 21, 2019, Federal Law Gazette I, p. 846, https://www.gesetze-im-internet.de/vwvfg/__3a.html.

framework, while simultaneously confronting the challenge of safeguarding fundamental principles in a digital environment.

2.7.2. Compatibility with Fundamental Administrative Law Principles

Digital administrative procedures must adhere to the fundamental principles of administrative law, including legality (Rechtsmäßigkeit), transparency (Transparenz), the right to be heard (Recht auf Gehör), and equal treatment (Gleichbehandlungsgrundsatz)[222]. The integration of digital tools, however, introduces challenges in safeguarding these principles. For example, the right to be heard requires adaptation to digital formats, ensuring that individuals can submit statements, evidence, or objections electronically[223].

Legislative developments have begun to reshape the German administrative framework in response to these challenges. The implementation of the relevant EU directive into national law led to the introduction of § 71a ff. VwVfG[224], which Siegel (2019) interprets as establishing a genuine subjective right to access electronic administrative procedures[225]. This marks a significant step in embedding digital participation within administrative law.

In parallel, the 2017 legislative reform formally recognised the legal validity of fully automated administrative decisions—acts rendered without human involvement. It is important to distinguish these from partially automated procedures, in which certain phases, such as preliminary assessments, remain subject to manual review. German administrative law provides clear terminological differentiation: partially automated decisions are described as mit Hilfe automatischer Einrichtungen (§§ 28(2) no. 4, 37(5), 39(2) no. 3 VwVfG)[226], while fully automated acts are referred to as ausschließlich automationsgestützt (§ 155(4) AO) or vollständig durch automatische Einrichtungen (§ 35a VwVfG; § 31a SGB X)[227].

These normative developments prompt critical reflection on the implications of automation for procedural safeguards. They raise questions about whether the current legal

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[222] Siegel, Thorsten. "Digitalisierung des Verwaltungsverfahrens – Digitalisierung im Verwaltungsverfahren." Juristische Ausbildung 2020(9): 920–931. https://doi.org/10.1515/jura-2020-2482.
[223] European Parliament. "REPORT with recommendations to the Commission on Digitalisation and Administrative Law." A9-0309/2023. 26 October 2023. https://www.europarl.europa.eu/doceo/document/A-9-2023-0309_EN.html.
[224] Germany. Verwaltungsverfahrensgesetz (VwVfG) [Administrative Procedure Act], § 71a ff. Federal Law Gazette I 1976, p. 1253, as amended.
[225] Thorsten Siegel, "Der Europäische Portalverbund – Frischer Digitalisierungswind durch das einheitliche digitale Zugangstor ('Single Digital Gateway')," Neue Zeitschrift für Verwaltungsrecht 13 (2019): 905.
[226] Verwaltungsverfahrensgesetz (VwVfG) [German Federal Administrative Procedure Act], §§ 28 (2) no. 4, 37 (5), and 39 (2) no. 3.
[227] Abgabenordnung (AO) [German Fiscal Code], § 155 (4), first sentence; VwVfG, § 35a; and Sozialgesetzbuch X (SGB X) [German Social Code, Book X], § 31a.

framework adequately ensures transparency, accountability, and the protection of individual rights in algorithmically driven decision-making.

2.7.3. European Legal Sources and Frameworks

At the European level, Regulation (EU) No 910/2014 on electronic identification and trust services for electronic transactions in the internal market—commonly referred to as the eIDAS Regulation—constitutes a foundational legal instrument for the digitalisation of administrative procedures. It establishes a harmonised framework for electronic identification, electronic signatures, electronic seals, time stamps, and other trust services. By requiring mutual recognition of these instruments across Member States, eIDAS enhances the legal validity and cross-border operability of digital administrative acts within the European Union, thereby strengthening legal certainty and facilitating the integration of digital governance into national systems[228].

Beyond the supranational framework, bilateral and regional cooperation also plays a significant role in shaping digital administration. Collaboration between countries, as well as between national governments and local authorities, enables the exchange of best practices and the joint development of digital services. Marques et al. (2025) emphasise that such partnerships are essential for improving the efficiency of local government operations and for creating shared digital platforms that serve both authorities and citizens[229].

Taken together, the eIDAS Regulation and cooperative initiatives illustrate how European legal sources and governance practices complement one another. While eIDAS provides the normative foundation for interoperability and legal certainty, regional and local partnerships ensure that these principles are translated into practical, citizen-oriented solutions. This dual approach highlights the interplay between supranational law and local implementation, a theme that will be further examined in subsequent chapters with regard to subsidiarity and the constitutional principles underpinning administrative law.

2.7.4. Jurisprudential and Scholarly Approaches

German jurisprudence has increasingly adapted to the realities of digital administration by recognising the legal effectiveness of electronic communications and

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[228] European Parliament and Council. Regulation (EU) No 910/2014 on Electronic Identification and Trust Services for Electronic Transactions in the Internal Market (eIDAS). July 23, 2014. Official Journal of the European Union L 257, 73–114. https://eur-lex.europa.eu/eli/reg/2014/910/oj/eng.

[229] Ferro, Enrico, and Maddalena Sorrentino. "Can intermunicipal collaboration help the diffusion of E-Government in peripheral areas? Evidence from Italy." Government Information Quarterly 27, no. 1 (2010): 17-25.

administrative acts, provided they comply with statutory requirements. Courts and legal scholars have affirmed that electronically submitted documents are valid if transmitted through secure official channels and accompanied by a qualified electronic signature (QES), in accordance with § 126a BGB[230] and § 3a VwVfG[231]. This interpretation has been reinforced in doctrinal commentary, which confirms the legal validity of QES in contexts requiring formal written form, including administrative acts and other legally significant communications processed through certified electronic signature platforms[232].

In addition, § 35a of the Verwaltungsverfahrensgesetz (VwVfG) explicitly authorises fully automated administrative acts, provided that such automation is legally permitted and does not involve administrative discretion[233]. This statutory recognition marks a significant development, distinguishing between acts that can be automated without human intervention and those that require evaluative judgment.

2.7.5. Data Protection and Procedural Safeguards

The integration of digital technologies into administrative procedures necessarily entails extensive processing of personal data, making data protection a fundamental pillar for ensuring legality, transparency, and trust in public administration. Within the German legal framework, the constitutional right to informational self-determination, as established by the Federal Constitutional Court, anchors the protection of personal data as essential to safeguarding human dignity and autonomy[234].

At the European level, the General Data Protection Regulation (GDPR) reinforces these protections by imposing strict requirements on public authorities concerning data minimisation, purpose limitation, and accountability. It also guarantees individuals' rights to access, rectification, and objection, which are crucial for maintaining procedural fairness in digital administrative contexts[235].

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[230] Bürgerliches Gesetzbuch (BGB). § 126a, "Electronic Form." Last modified January 1, 2023. https://www.gesetze-im-internet.de/bgb/__126a.html.
[231] Bundesministerium der Justiz, "§ 3a VwVfG – Elektronische Kommunikation," Gesetze im Internet, accessed June 6, 2025, https://www.gesetze-im-internet.de/vwvfg/__3a.html.
[232] Dr. Alberto Povedano Peramato, "Can the Section of an Employment Contract Agreeing a Fixed-Term Period Be Legally Valid if Using a Qualified Electronic Signature through DocuSign?" Görg, May 14, 2024, https://www.goerg.de/en/insights/publications/14-05-2024/can-the-section-of-an-employment-contract-agreeing-a-fixed-term-period-be-legally-valid-if-using-a-qualified-electronic-signature-through-docusign.
[233] Bundesministerium der Justiz, "§ 35a VwVfG – Automatisierter Erlass eines Verwaltungsaktes," Gesetze im Internet, accessed June 6, 2025, https://www.gesetze-im-internet.de/vwvfg/__35a.html.
[234] Federal Constitutional Court of Germany. Census Act Case (Volkszählungsurteil), Judgment of 15 December 1983 – 1 BvR 209/83 et al., BVerfGE 65, 1. English summary accessed June 7, 2025. https://www.bundesverfassungsgericht.de/SharedDocs/Entscheidungen/EN/1983/12/rs19831215_1bvr020983en.html
[235] Regulation (EU) 2016/679 (General Data Protection Regulation), Arts. 15–18, 21.

Building on these general safeguards, Article 22 GDPR specifically addresses automated decision-making, stipulating that individuals should not be subject to decisions based solely on automated processing without meaningful human intervention[236]. This provision underscores the need to balance efficiency gains with the protection of citizens' procedural rights.

Data protection rules and procedural safeguards are therefore indispensable for upholding core administrative law principles in the digital era. They ensure that administrative digitalisation respects citizens' fundamental rights and sustains democratic legitimacy[237]. Yet, despite this comprehensive legal framework, practical challenges remain. As Bartholomae, Nam, and Steinhoff (2023)[238] observe, one of the main shortcomings of the German e-government system lies in the insufficient provision of user-oriented online services. From a legal perspective, this deficiency raises concerns about accessibility and equality of treatment, which are integral to the legitimacy of administrative action.

In sum, the legal frameworks governing data protection and procedural safeguards not only legitimise the digital transformation of public administration but also ensure that innovation does not undermine fundamental rights. They embed digitalisation within constitutional and administrative law principles—particularly legality, transparency, proportionality, and the protection of legitimate expectations—thereby maintaining democratic control and legal accountability in the digital age.

2.8. Strategic and Financial Instruments Supporting E-Government

Germany's commitment to advancing e-government is supported by a combination of strategic frameworks and targeted financial instruments. Federal and Länder authorities, in cooperation with municipalities, provide financial, technical, and regulatory support to modernise administrative structures, develop secure digital infrastructures, and promote innovative governance models. Initiatives such as the DigitalPakt Schule, Digitale Verwaltung 2020+, Smart Cities Modellprojekte, and the Gigabit Strategy illustrate how funding priorities are linked to long-term strategic objectives.

2.8.1. Funding and Innovation Programs

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[236] Regulation (EU) 2016/679 (General Data Protection Regulation), Art. 22.

[237] For detailed analysis of data protection in public administration, see sources such as the Federal Data Protection Act (BDSG), and relevant GDPR commentaries. See: Federal Commissioner for Data Protection and Freedom of Information (BfDI), Annual Report 2023, available at: https://www.bfdi.bund.de.

[238] Bartholomae, Florian W., Chang Woon Nam, and Peter Steinhoff. "Does Federalism Affect E-Government in Germany?." (2023): 8.

Financial support constitutes a central pillar of Germany's digital transformation agenda. At the federal level, the DigitalPakt Schule, led by the Federal Ministry of Education and Research (BMBF), provides multi-billion-euro investments to equip schools with modern IT infrastructure and strengthen digital literacy[239]. Complementing this, the Digitale Verwaltung 2020+ initiative, coordinated by the Federal Ministry of the Interior and Community (BMI), focuses on enhancing administrative efficiency by supporting the introduction of digital tools and infrastructures across federal and Länder administrations[240].

At the municipal level, the Smart Cities Modellprojekte, initiated by the Federal Ministry for Housing, Urban Development and Building (BMWSB), empower cities to design and implement integrated digital strategies. These projects encompass data platforms, e-participation mechanisms, and mobility solutions that align with sustainability objectives and citizen-centric service delivery[241].

Looking to the future, the Zukunftsfähige Verwaltung durch Innovation initiative, jointly supported by the BMI and the Federal Ministry for Economic Affairs and Climate Action (BMWK), demonstrates a forward-looking investment strategy. It promotes experimental approaches such as artificial intelligence for decision-making, open data governance, and co-creation platforms that directly engage citizens in shaping public administration[242].

Taken together, these programs illustrate how financial instruments are deployed not only to modernise infrastructure but also to embed innovation within administrative practice. From an administrative law perspective, they highlight the increasing reliance on targeted funding as a regulatory tool. These themes will be further examined in subsequent chapters, particularly in relation to the normative implications of financing digital transformation within a federal system.

2.8.2. National Strategies and Infrastructure

[239] Bundesministerium für Bildung und Forschung (BMBF), "DigitalPakt Schule," last modified July 15, 2025, https://www.digitalpaktschule.de/.
[240] Bundesministerium des Innern, für Bau und Heimat (BMI), "Digitale Verwaltung 2020+," accessed July 29, 2025, https://www.bmi.bund.de.
[241] Bundesministerium für Wohnen, Stadtentwicklung und Bauwesen (BMWSB) Smart City Dialog" accessed July 29, 2025, https://www.smart-city-dialog.de/.
[242] Bundesministerium des Innern, für Bau und Heimat (BMI), "Zukunft der Öffentlichen Verwaltung – Förderprogramme," accessed July 29, 2025, https://www.bmi.bund.de.

Germany's digital transformation is guided by comprehensive strategic frameworks that define policy objectives, set measurable targets, and rely on the expansion of core digital infrastructure.

At the strategic level, key policy documents such as the Digital Strategy 2025[243] and the Federal Government Digital Strategy 2022[244] establish long-term priorities for digital governance, economic competitiveness, and societal inclusion. More recently, the National Strategic Roadmap for the Digital Decade, developed by the Federal Ministry for Digitalisation and Transport, has aligned Germany's objectives with the European Union's 2030[245] Digital Decade framework. Together, these strategies emphasise digital competencies, secure identities, sustainable networks, and innovative public services as central elements of progress.

These priorities are reflected in concrete initiatives. For example, the Digital Charter School and the National Strategy for Continuing Education aim to strengthen digital literacy across all levels of education[246]. Parallel investments in digital infrastructure seek to establish contemporary, effective, and sustainable networks that facilitate widespread access[247]. Beyond education and infrastructure, the strategies also promote innovation in the economy, business environments, science, and research, thereby reinforcing Germany's global competitiveness. A further objective is the expansion of e-government services, with efforts directed at digitising public services to enhance accessibility, efficiency, and citizen-centric delivery[248].

Viewed collectively, these strategies illustrate how Germany integrates policy planning with infrastructure development to advance digital transformation. From an administrative law perspective, they raise important questions about how strategic objectives translate into enforceable rights, how subsidiarity shapes the distribution of responsibilities

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[243] European Commission. "Germany Digital Strategy 2025." Digital Skills & Jobs Platform. Accessed Juni 29, 2025. https://digital-skills-jobs.europa.eu/en/actions/national-initiatives/national-strategies/germany-digital-strategy-2025.

[244] der Bundesregierung, Digitalstrategie. "Digital Strategy - Creating Digital Values Together." (2022).

[245] European Commission. "Germany: National Digital Decade Strategic Roadmap." Digital Skills & Jobs Platform, last modified [if available], accessed July 01, 2025. https://digital-skills-jobs.europa.eu/en/actions/national-initiatives/national-strategies/germany-national-digital-decade-strategic-roadmap.

[246] European Commission. "Germany: National Digital Decade Strategic Roadmap." Digital Skills & Jobs Platform, last modified [if available], accessed July 01, 2025. https://digital-skills-jobs.europa.eu/en/actions/national-initiatives/national-strategies/germany-national-digital-decade-strategic-roadmap.

[247] der Bundesregierung, Digitalstrategie. "Digital Strategy - Creating Digital Values Together." (2022).

[248] der Bundesregierung, Digitalstrategie. "Digital Strategy - Creating Digital Values Together." (2022).

across governance levels, and how equality of access can be ensured in the provision of digital public services. These normative implications will be explored further in subsequent chapters.

2.8.3. National Digital Infrastructure:

From an infrastructural perspective, several core elements underpin the delivery of e-government in Germany. The Gigabit Strategy (2022) aims to achieve full fibre-optic and advanced mobile network coverage by 2030[249], thereby ensuring nationwide digital connectivity. Building on this foundation, the BundID[250] system provides secure digital authentication for citizens and businesses. Developed in line with the European Union's eIDAS regulation[251], BundID facilitates cross-border interoperability and strengthens trust in digital administrative interactions.

With regard to security and coherence, the Federal Office for Information Security (BSI)[252] has established the IT-Grundschutz framework, which sets cybersecurity standards for public administrations and safeguards sensitive government data against emerging threats. Complementing this, the Coordination Body for IT Standards (KoSIT)[253] develops national IT standards to ensure interoperability and seamless communication across different levels of government. Together, these measures seek to create a coherent and resilient infrastructure for digital governance.

Despite these comprehensive measures, Germany continues to face challenges in ensuring equitable access, uniform implementation across federal and state levels, and the safeguarding of citizens' rights. These issues remain central to the legal analysis in subsequent chapters, where they will be examined in light of fundamental principles of administrative law.

2.9. Conclusion

This chapter has demonstrated that the trajectory of digital transformation in German public administration unfolds within a complex constitutional and legal framework shaped by federalism, a strong commitment to the rule of law, and a cautious approach to technological

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[249] European Commission, Digital Connectivity in Germany, accessed July 2025, https://digital-strategy.ec.europa.eu/en/policies/digital-connectivity-germany.
[250] BundID. "Federal Digital Identity System." Accessed July 29, 2025. https://www.bundid.de/.
[251] European Parliament and Council. Regulation (EU) No 910/2014 on Electronic Identification and Trust Services for Electronic Transactions in the Internal Market (eIDAS). July 23, 2014. Official Journal of the European Union L 257, 73–114. https://eur-lex.europa.eu/eli/reg/2014/910/oj/eng.
[252] Bundesamt für Sicherheit in der Informationstechnik (BSI), IT-Grundschutz – IT Baseline Protection, accessed July 2025, https://www.bsi.bund.de/DE/Themen/Unternehmen-und-Organisationen/Standards-und-Zertifizierung/IT-Grundschutz/it-grundschutz_node.html.
[253] Koordinierungsstelle für IT-Standards (KoSIT). XÖV – Standards for Electronic Administrative Processes in Germany. Accessed July 2025. https://www.xoev.de/.

innovation. Significant legislative and institutional progress has been achieved through instruments such as the E-Government Act (EGovG) and the Online Access Act (OZG). Yet, these advances coexist with persistent challenges, including administrative fragmentation, overlapping decision-making levels, and the continuing need to modernise technical infrastructure. Together, these factors influence both the pace and the effectiveness of digital transformation.

Recognising these legal and institutional constraints is essential for understanding how digitalisation interacts with core administrative principles and procedures. The analysis underscores that digital transformation not only requires technical adaptation but also raises doctrinal questions about legality, transparency, subsidiarity, and accountability. These questions reveal that the digitalisation of administrative processes cannot be reduced to a matter of efficiency alone, but must be examined in light of constitutional guarantees and the enduring normative commitments of administrative law.

The insights gained here, therefore, provide the foundation for Chapter Three, which moves from the structural and institutional context to a closer examination of the normative and procedural implications of e-government. In particular, the next chapter will analyse how the integration of automated administrative procedures under § 35a VwVfG challenges established safeguards of fairness and proportionality, and how administrative law must recalibrate its principles to ensure that technological innovation remains aligned with the constitutional requirement to treat individuals as subjects of rights. By shifting the focus from systemic structures to doctrinal principles, Chapter Three continues the trajectory of this study, exploring how administrative law adapts to the pressures of digitalisation while preserving its foundational legitimacy.

Chapter 3: The Impact of E-Government on Administrative Law Principles

3.1. Introduction

This chapter moves beyond the descriptive account of administrative law presented in the preceding chapters and undertakes an analytical exploration of how its guiding principles are being reshaped by the growing use of information technology in public administration. Building on the legal, institutional, and policy context outlined earlier, the analysis focuses on the concrete implications of digitalization for the fundamental principles of administrative law.

The discussion highlights how digital governance affects both the normative foundations of administrative law and its procedural mechanisms, while also transforming the modes of interaction between public authorities and citizens.

Over the past two decades, the perception of administrative law as a rigid and largely static field has been increasingly challenged. As Cassese (2012) observes, scholarship—particularly in France and Belgium—has suggested that broader socio-political dynamics have contributed to a loss of coherence in administrative law as a unified framework. In contrast, contemporary German legal thought generally interprets these developments not as a decline but as an evolution toward greater flexibility and transparency, with a stronger focus on providing guidance rather than enforcing rigid formalism. This evolving conception reflects a redefinition of the state's role within modern governance. Importantly, the expansion of digital governance has accelerated this transformation, prompting both normative and procedural adjustments[254].

This redefinition of the state's role underscores the continued importance of core legal principles, which by their very nature are general in scope, yet they exist in a hierarchical order where certain foundational principles encompass or guide others. This is why General Principles of Administrative Law are frequently referenced as the most fundamental tenets from which a multitude of other principles are derived[255]. In the context of digital governance, compliance with the rule of law necessitates that administrative processes remain legally sound, transparent, and accessible to safeguard the fundamental rights of citizens[256]. As Waldo (2017)'s analysis suggests, digital reforms must be assessed not only by their

[254] Cassese, Sabino. "New paths for administrative law: A manifesto." *International Journal of Constitutional Law* 10, no. 3 (2012): 603-613. 604

[255] Petoft, Arian. "The concept and instances of general principles of administrative law: Towards a global administrative law." Cuestiones constitucionales 42 (2020): 309-355. (313)

[256] do Rosario Anjos, Maria, Sonia Novais Santos, and Raquel Salgado. 2024. "Digital Public Administration and Good Governance." Economic and Social Development: Book of Proceedings, 199–208.

procedural efficiency but also by the principles they embody and the governance philosophy they advance[257].

The nature of digital transformation requires that the analysis of administrative law principles be more integrated than a discussion of each principle in isolation. For instance, there is a strong functional interdependence between legality and legal certainty: an automated decision cannot be regarded as lawful unless its outcomes are predictable and capable of justification. Similarly, transparency constitutes a prerequisite for accountability, since responsibility for automated decisions cannot be meaningfully assigned without an adequate understanding of how such decisions are made. This interconnectedness also extends to principles such as fairness and equality, as potential biases in artificial intelligence algorithms may simultaneously infringe upon both. Building on these relationships, this chapter adopts an analytical approach that examines principles in their interrelation, thereby illustrating that the challenges posed by digital transformation often affect multiple principles at once and therefore call for comprehensive legal responses.

For analytical clarity, the principles are not examined in isolation but grouped according to their functional interrelations and normative tensions. This approach, which follows insights from comparative administrative law and recent scholarship on digital governance, allows for a more integrated assessment of how digitalisation simultaneously impacts clusters of principles rather than single guarantees in isolation.

The following sections will therefore analyze key administrative law principles to trace their reinterpretation in light of automated decision-making and digital service delivery.

3.2. The Conceptual and Normative Framework of Administrative Principles

This dissertation now moves from an examination of the legal and institutional contexts of digital transformation in Germany to a critical analysis of the fundamental principles underpinning administrative law. Such a shift is necessary, as any assessment of the impact of digitalisation must be grounded in a precise understanding of the normative character of these principles.

A central challenge posed by digital transformation is the need to distinguish clearly between legal principles and legal rules. Dworkin (1967) emphasised that principles differ from rules in that they do not prescribe a fixed legal consequence once particular conditions are satisfied. Instead, principles provide reasons that orient decision-making without

[257] Waldo, Dwight. The administrative state: A study of the political theory of American public administration. Routledge, 2017. 49

determining a single obligatory outcome. This characteristic grants principles a degree of flexibility, enabling them to guide administrative judgment rather than impose rigid results[258].

Another defining feature of principles lies in their relative weight or normative importance. Unlike rules, which typically operate in an all-or-nothing manner, principles can conflict with one another. In such circumstances, decision-makers must balance competing principles and determine their relative significance. As Dworkin (1967) observed, this evaluative element explains how conflicting principles can coexist within a single legal system, in contrast to contradictory rules, which cannot operate simultaneously[259]. Raz (1972) further distinguished between rules and principles by noting that rules prescribe relatively precise conduct, whereas principles establish broader behavioural standards[260]. Together, these insights highlight the inherently flexible and evaluative nature of principles.

These theoretical characteristics provide an essential foundation for understanding their practical application in German public law. At the constitutional level, the principle of the rule of law (Rechtsstaatsprinzip), enshrined in Article 20(3) of the Basic Law (Grundgesetz)[261], establishes a normative framework that administrative authorities must observe. Within this framework, the principle of proportionality (Verhältnismäßigkeit) exemplifies the structured balancing process: judicial review under the narrow sense of proportionality (Angemessenheit) serves as the mechanism by which competing interests and conflicting principles are weighed. This enables courts to determine whether an administrative decision, even within the bounds of discretionary authority (Ermessen), represents a normatively reasonable solution.

By situating administrative principles within this conceptual and normative framework, the dissertation provides the basis for analysing how digitalisation challenges their application. Automated decision-making, algorithmic discretion, and data-driven governance intensify the need for balancing legality, certainty, transparency, and proportionality. The following sections will therefore build on this foundation to examine

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[258] Ronald M. Dworkin, 'The Model of Rules' (1967) 35 University of Chicago Law Review as cited in Braithwaite, John. "Rules and principles: A theory of legal certainty." Australasian Journal of Legal Philosophy 27, no. 2002 (2002): 47-82.50.

[259] Ronald M. Dworkin, 'The Model of Rules' (1967) 35 University of Chicago Law Review as cited in Braithwaite, John. "Rules and principles: A theory of legal certainty." Australasian Journal of Legal Philosophy 27, no. 2002 (2002): 47-82.50.

[260] Raz, Joseph, 'Legal Principles and the Limits of Law' (1972) 81 Yale Law Journal 823. as cited in Braithwaite, John. "Rules and principles: A theory of legal certainty." Australasian Journal of Legal Philosophy 27, no. 2002 (2002): 47-82.51.

[261] German Basic Law, Article 20(3)

how digital transformation reshapes the interpretation and application of administrative law principles in practice.

3.2.1. Distinctive Attributes of Legal Principles

Scholars have identified several attributes that distinguish legal principles from ordinary legal rules. These include comprehensiveness, generality, non-positivization, optimization, performance relativity, and perpetuity (Petoft 2020)[262]. Together, these features highlight the distinctive normative role of principles within administrative law.

3.2.1.1. Comprehensiveness and Generality

Legal principles are comprehensive in scope, capable of addressing a wide range of legal situations and phenomena. Their generality allows them to provide interpretative guidance across diverse contexts, thereby ensuring coherence and adaptability within the legal system. This capacity enables principles to fill normative gaps and mitigate interpretative ambiguities, reinforcing the stability of administrative law[263].

3.2.1.2. Non-positivization

Principles retain an abstract character that is not exhausted by their codification into rules. While rules may reflect the formal structure of principles through explicit reference, they do not fully articulate the principle itself. Rules can be understood as finalised written expressions of the substantive directives embedded in principles. Principles, however, continue to inform rules and remain embedded within their interpretative context, particularly as recognised in judicial precedent[264].

3.2.1.3. Optimization

Principles are characterised by their capacity for optimisation. They engage both legal and meta-legal considerations, combining normative standards with factual circumstances. This enables principles to adapt within the hierarchy of legal norms and to guide purposive

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[262] Petoft, Arian. "The concept and instances of general principles of administrative law: Towards a global administrative law." Cuestiones constitucionales 42 (2020): 309-355. 312.

[263] Raimo Siltala, A Theory of Precedent: from Analytical Positivism to a Postanalytical Philosophy of Law, Oxford, Hart Publishing, 2000, p. 60. as cited in Petoft, Arian. "The concept and instances of general principles of administrative law: Towards a global administrative law." Cuestiones constitucionales 42 (2020): 309-355. (312)

[264] Claus-Wilhelm, Canaris, Systemdenken und Systembegriff in der Jurisprudenz, Berlin, Duncker & Humblot, 1983, p. 50. as cited in Petoft, Arian. "The concept and instances of general principles of administrative law: Towards a global administrative law." Cuestiones constitucionales 42 (2020): 309-355. (314)

interpretation aimed at ensuring validity[265]. Importantly, if the descriptive proposition underpinning a principle proves invalid, the principle is not extinguished but redefined through a new valid articulation[266]. For example, proportionality requires that governmental measures correspond appropriately to the circumstances in which they are applied, illustrating the optimisation function of principles[267].

3.2.1.4. Performance Relativity

The interaction of normative and factual elements embedded in the discourse of legal principles often leads to a degree of relativity in their functions. In practice, and owing to the nature of the issues at stake, principles are placed in what may be described as an axiological competition, in which their relative weight must be assessed[268]. In this process, the principle that embodies greater legitimacy, logical coherence, and validity is accorded priority over competing principles, without nullifying the latter. Nevertheless, such priority is not absolute, as the balance may shift under different circumstances. Consequently, the operative function of a principle is closely linked to the specific facts and normative considerations integrated into the context of each individual case[269].

3.2.1.5. Perpetuity

Principles are embedded within the value system of the legal-political order, giving them a relatively stable and enduring character. They serve as elevated aims of governance and cannot be disregarded in the normative context. They are consistently inscribed in both

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[265] Klement, Jan Henrik, "Common Law Thinking in German Jurisprudence-On Alexy's Principles Theory", in Klatt, Matthias (ed.), Institutionalized Reason. The Jurisprudence of Robert Alexy, Oxford, Oxford University Press, 2012, p. 173. as cited in Petoft, Arian. "The concept and instances of general principles of administrative law: Towards a global administrative law." Cuestiones constitucionales 42 (2020): 309-355. (314)

[266] Alexy, Robert, "On the Structure of Legal Principles" Ratio Juris, vol. 13, No. 3, 2000, p. 294. as cited in Petoft, Arian. "The concept and instances of general principles of administrative law: Towards a global administrative law." Cuestiones constitucionales 42 (2020): 309-355. (314)

[267] Sweet, Alec and Mathews, Jud, "Proportionality, Judicial Review, and Global Constitutionalism", in Bongiovanni, Giorgio; Sartor, Giovanni and Valentini, Chiara (eds.), Reasonableness and Law, New York, Springer, p. 171. as cited in Petoft, Arian. "The concept and instances of general principles of administrative law: Towards a global administrative law." Cuestiones constitucionales 42 (2020): 309-355. (312)

[268] Poscher, Ralf, "The Principles Theory: How Many Theories and What is their Merit?", in Klatt, Matthias (ed.), op. cit., p. 218; Bernal, Carlos, "Legal Argumentation and the Normativity of Legal Norms", in Dahlman, Christian and Feteris, Eveline (eds.) Legal Argumentation Theory. Cross-Disciplinary Perspectives, London, Springer, 2012,p. 103. as cited in Petoft, Arian. "The concept and instances of general principles of administrative law: Towards a global administrative law." Cuestiones constitucionales 42 (2020): 309-355. (314)

[269] Alexy, Robert, Arthur Kaufmanns "Theorie der Rechtsgewinnung", in Neumann, Ulfrid; Hassemer, Winfried and Schroth, Ulrich (eds.), Verantwortetes Recht: die Rechtsphilosophie Arthur Kaufmannns, Stuttgart, Franz Steiner Verlag, 2005, p. 47. as cited in Petoft, Arian. "The concept and instances of general principles of administrative law: Towards a global administrative law." Cuestiones constitucionales 42 (2020): 309-355. (315)

human thought and nature[270], regardless of whether they acquire legal recognition and practical effect through judicial precedent[271].

Principles' link to Good Administration Values

Taken together, these inherent attributes of legal principles position them as fundamental normative reference standards. As Torbica and Golić (2022) argue, such principles are often rooted in constitutional provisions or in overarching legal norms and embody the core values that sustain and preserve a governance system committed to the rule of law[272]. Classical principles emphasise formal obligations and procedural safeguards, while modern principles incorporate values of good governance to strengthen the substantive dimension of legality[273].

From this perspective, general administrative principles may be defined as "*the most general, comprehensive, non-codified, and enduring legal standards, recognised in judicial precedent, which operate alongside good governance values to optimise the administrative legal order and secure the rule of law in governmental action*"[274].

The substantive dimension of the rule of law provides an entry point for integrating value-based standards into the legal domain. This reflects the longstanding debate between natural law theorists and legal positivists regarding the relationship between substantive meaning and procedural form[275]. Principles may thus be understood as normative bridges linking the factual realities of governance with the formal structures of law[276]. Their interdependent operation enables them to expand, adapt, and respond to challenges posed by digitalisation.

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[270] Adams, David M., Philosophical Problems in the Law, 4th ed., California, Thomson and Wadsworth, 2005, p. 53. as cited in Petoft, Arian. "The concept and instances of general principles of administrative law: Towards a global administrative law." Cuestiones constitucionales 42 (2020): 309-355. (315)
[271] Wacks, Raymond, Philosophy of Law, Oxford, Oxford University Press, 2006, p. 44. as cited in Petoft, Arian. "The concept and instances of general principles of administrative law: Towards a global administrative law." Cuestiones constitucionales 42 (2020): 309-355. (315)
[272] Torbica, Milica, and Darko Golić. "Incompatibility of the law on general administrative procedure and the law governing the special administrative procedure conducted before the cadastre." *Law on General Administrative Procedure: Contemporary Tendencies and Challenges* 39, no. 3 (2022): 293. 295
[273] Petoft, Arian. "The concept and instances of general principles of administrative law: Towards a global administrative law." Cuestiones constitucionales 42 (2020): 309-355. (321)
[274] Petoft, Arian. "The concept and instances of general principles of administrative law: Towards a global administrative law." Cuestiones constitucionales 42 (2020): 309-355. (320)
[275] Kramer, Matthew H., "On the Moral Status of the Rule of Law", Cambridge Law Journal, vol. 63, No. 1, 2004, p. 65. as cited in Petoft, Arian. "The concept and instances of general principles of administrative law: Towards a global administrative law." Cuestiones constitucionales 42 (2020): 309-355. (325)
[276] Petoft, Arian. "The concept and instances of general principles of administrative law: Towards a global administrative law." Cuestiones constitucionales 42 (2020): 309-355. (319)

Owing to their axiological content and functional orientation, they provide a means of addressing conceptual gaps and fostering coherence within administrative legal systems[277].

This conceptual framework demonstrates the complex and interconnected nature of legal principles. Their generality, breadth, and integrative function render them sufficiently flexible to accommodate processes of digital transformation. By absorbing the effects of technological innovation without undermining their normative integrity, administrative principles provide a stable yet adaptable foundation for modern governance. The following sections will adopt a functional approach to examine how each principle is recalibrated in the face of digital transformation.

3.2.2. The Challenges of Digitalisation for Administrative Principles

The interface between administrative law and digitalisation constitutes a dynamic and multifaceted domain. While digital technologies are often associated with efficiency, procedural streamlining, and cost reduction, administrative law remains anchored in foundational principles such as legality, transparency, proportionality, and the protection of individual rights. This juxtaposition creates a fundamental tension between managerial optimisation and the enduring normative commitments of public law.

A principal concern in this context is the potential weakening of individualised legal scrutiny. Automation may accelerate administrative processes but can simultaneously diminish the nuanced, case‑specific evaluations required by principles such as proportionality and equality before the law. Bovens and Zouridis (2002) observed a shift in policy implementation from applying rules to individual cases toward the design of autonomous operational systems, thereby integrating administrative processes through information technology[278].

Digital platforms also promise improved accessibility and more efficient interaction with public authorities. Yet they may inadvertently marginalise individuals or groups with limited technological competence or access. This raises significant concerns regarding inclusivity and equality, particularly for vulnerable populations, and highlights the need to ensure that digitalisation does not exacerbate existing inequalities in administrative practice[279].

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[277] Bydlinski, Franz, Juristische Methodenlehre und Rechtsbegriff, New York, 2011, p. 289.
[278] Bovens, Mark, and Stavros Zouridis. "From street‑level to system‑level bureaucracies: how information and communication technology is transforming administrative discretion and constitutional control." Public administration review 62, no. 2 (2002): 174-184.
[279] Bogdanovskaya, Irina Yurievna. "E-Government: Legal Aspects." *Legal Issues Digit. Age* 3 (2022): 4.9

In light of these challenges, scholars have increasingly called for a reassessment of the theoretical underpinnings of administrative law in the digital age. Rather than treating digitalisation as inherently incompatible with legal norms, recent literature advocates a context-sensitive approach that reinterprets traditional concepts. This perspective emphasises the alignment of digital administrative practices with core legal values, including transparency, procedural fairness, and institutional accountability. Engstrom and Ho (2020), for example, argue that algorithmic decision-making necessitates new oversight structures to safeguard procedural integrity and public accountability[280]. Similarly, Cobbe et al. (2021) propose doctrinal frameworks for reviewing automated decisions, enabling individuals to contest algorithmically generated outcomes within established legal channels[281]. These contributions reflect a growing consensus that digital transformation requires recalibration rather than abandonment of administrative law's foundational principles.

More broadly, this evolving discourse highlights the potential for embedding rights-based principles within the architecture of digital systems. Gottardo (2021) underscores the importance of constructing transnational frameworks of algorithmic accountability grounded in human rights and democratic values. Such initiatives provide a basis for reconciling technological innovation with the normative foundations of administrative governance[282].

Recent European regulatory developments illustrate how administrative principles can be recalibrated in response to technological innovation. The European Union's Artificial Intelligence Act (EU AI Act) adopts a risk-based approach and introduces specific normative requirements for high-risk systems, particularly regarding accuracy and operational safety. Article 15 stipulates that such systems must demonstrate a high level of accuracy, robustness, and cybersecurity throughout their lifecycle, accompanied by clear documentation of performance limitations[283]. These provisions mitigate technical risks while reinforcing transparency and accountability, which remain integral components of administrative

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[280] Engstrom, David Freeman, and Daniel E. Ho. "Algorithmic accountability in the administrative state." Yale J. on Reg. 37 (2020): 800.

[281] Cobbe, Jennifer, Michelle Seng Ah Lee, and Jatinder Singh. "Reviewable automated decision-making: A framework for accountable algorithmic systems." In Proceedings of the 2021 ACM conference on fairness, accountability, and transparency, pp. 598-609. 2021.

[282] Gottardo, Raenette. "Building Global Algorithmic Accountability Regimes: A Future-focused Human Rights Agenda Beyond Measurement." Peace Human Rights Governance 5, no. Peace Human Rights Governance 5/1 (2021): 65-96.

[283] Artificial Intelligence Act, Article 15, accessed September 30, 2025, https://artificialintelligenceact.eu/article/15/; Fraunhofer IKS, Whitepaper: The EU AI Act – A Framework for Trustworthy AI Systems, accessed September 30, 2025, https://www.iks.fraunhofer.de/content/dam/iks/documents/whitepaper-eu-ai-act-fraunhofer-iks.pdf.

procedures grounded in the rule of law. Scholarly analysis has emphasised that the EU AI Act establishes a structured framework for risk management, data governance, and human oversight, thereby ensuring that technological innovation remains aligned with fundamental legal principles[284].

In this sense, regulatory initiatives such as the EU AI Act provide a foundational framework for reconciling technological innovation with the normative underpinnings of administrative governance. At the same time, they safeguard legal certainty (Rechtssicherheit) and the individual right to effective judicial review under Article 19(4) of the Basic Law (Grundgesetz)[285], despite the rapid pace of technological change that risks narrowing administrative discretion and undermining the integrity of decision-making processes.

3.3. Revisiting Core Principles: A Transitional Overview

To meaningfully assess how digitalisation is reshaping administrative law, it is essential to revisit the foundational principles that have long structured the exercise of public authority. These principles—legality, proportionality, legitimate expectations, equality, accountability, transparency, procedural fairness, legal certainty, public participation, and efficiency—constitute the normative infrastructure upon which administrative legitimacy is built. Their relevance persists even as the modalities of governance evolve, and their reinterpretation in light of digital transformation demands careful analytical attention.

The preceding chapter offered a detailed exposition of these principles in their classical form, grounded in constitutional doctrine, statutory frameworks, and jurisprudential development. The transition to digital governance, however, necessitates a re-engagement with these principles—not as static legal constructs, but as dynamic standards that must adapt to new technological realities. This section therefore serves as a conceptual bridge, summarising the core principles as they have traditionally operated, while preparing the ground for their analytical re-evaluation in the context of algorithmic decision-making, data-driven administration, and e-government platforms.

3.3.1. Legality and the Boundaries of Discretion

The principle of legality remains the cornerstone of administrative law, mandating that all public actions be grounded in statutory authority and executed within the bounds of

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[284] Artificial Intelligence Act, Article 15, accessed September 30, 2025, https://artificialintelligenceact.eu/article/15/; Fraunhofer IKS, Whitepaper: The EU AI Act – A Framework for Trustworthy AI Systems, accessed September 30, 2025, https://www.iks.fraunhofer.de/content/dam/iks/documents/whitepaper-eu-ai-act-fraunhofer-iks.pdf.

[285] German Basic Law, Article 19(4)

legal competence. In the German constitutional framework, Article 20(3)[286] of the Basic Law enshrines this requirement, which is further operationalised through procedural safeguards in the Verwaltungsverfahrensgesetz (VwVfG). These include the duty to investigate (§ 24), the right to be heard (§ 28), and the obligation to provide reasons (§ 39), all of which ensure that administrative decisions are lawful, transparent, and reviewable[287].

Legality encompasses both the primacy of law (Vorrang des Gesetzes) and the requirement of a statutory basis (Vorbehalt des Gesetzes)[288], refined further by the Federal Constitutional Court's Wesentlichkeitstheorie, which reserves essential decisions affecting fundamental rights to the legislature[289]. In the digital age, this principle faces new challenges, particularly in ensuring that automated systems operate within a clear and accountable legal framework. Delegating decision-making to algorithms must not obscure the legal basis of administrative acts or dilute the boundaries of discretion conferred upon authorities. Maintaining legality in automated systems is also a precondition for applying other principles, notably proportionality, which assesses the substance and rationality of legally authorised interventions.

A key aspect of administrative law's adaptation to digitalisation involves ensuring functional equivalence in procedures. Section 3a VwVfG, introduced through a coordinated legislative effort, establishes the legal equivalence of statutory written form and electronic form, provided that the latter is accompanied by a qualified electronic signature. As Schmitz (2003) notes, this provision was conceived as a general clause intended to apply broadly across administrative law[290].

Nevertheless, significant obstacles to the full implementation of electronic procedures persist. Numerous provisions within the Verwaltungsverfahrensgesetz (VwVfG) continue to impose requirements for oral or written forms that do not permit substitution by signed electronic formats. Regulations still mandate specific paper-based formalities or the necessity of physical presence, such as consultation sessions (§ 73 VI VwVfG) or oral hearings (§ 67

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[286] German Basic Law, Article 20(3)
[287] German federal Administrative Procedure Act, §24,28 39.
[288] Sommermann, in: Mangoldt/Starck/Klein, Grundgesetz, 7. Auflage 2018, Art. 20 GG, Rn. 261. as cited in Catakli, Derya. Verwaltung im digitalen Zeitalter: Die Rolle digitaler Kompetenzen in der Personalakquise des höheren Dienstes. (Administration in the digital age: The role of digital skills in personnel acquisition for higher civil service) Springer Nature, 2022. 87.
[289] Scientific Services of the German Bundestag, Criteria of the Wesentlichkeitstheorie of the Federal Constitutional Court, WD 3 - 152/19, June 14, 2019, 1–2, https://www.bundestag.de/resource/blob/655254/1764b49aa3c85458a840652cf134e031/WD-3-152-19-pdf-data.pdf.
[290] Schmitz, Heribert. "Fortentwicklung des Verwaltungsverfahrensgesetzes: Konkrete Gesetzgebungspläne und weitere Perspektiven." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 136-155. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 145.

VwVfG)[291]. As a result, the complete digitalisation of formal procedures remains unattainable under the current legal framework, thereby creating a boundary that the principle of legality must continually address.

This tension illustrates how digitalisation tests the adaptability of legality, demanding ongoing doctrinal reflection to reconcile technological innovation with constitutional guarantees, particularly the rule of law and the protection of fundamental rights. In this respect, the challenge is not merely technical but normative, as it requires determining whether digital forms of participation—such as secure video platforms or authenticated electronic communication—can achieve functional equivalence with traditional requirements of personal presence and written form, without undermining procedural safeguards or diminishing the substantive integrity of administrative law.

3.3.2. Proportionality: Assessing Cumulative Impacts in Data-Driven Administration

Closely linked to legality is the principle of proportionality, which disciplines administrative discretion by requiring that any interference with rights be suitable, necessary, and appropriately balanced. This tripartite test—suitability (Geeignetheit), necessity (Erforderlichkeit), and appropriateness (Angemessenheit)—ensures that governmental measures are rational and justified. Codified in both German and European jurisprudence, proportionality reinforces the legitimacy of state intervention and provides a structured framework for judicial review[292].

In digital governance, proportionality faces new challenges. Automated systems may enhance efficiency and objectivity, yet the exercise of human discretion remains indispensable to ensure that administrative measures are genuinely suitable, necessary, and proportionate. Discretionary authority arises because public officials frequently confront complex circumstances that cannot be fully codified into standardised procedures. As Lipsky (1980) observed[293], "*street-level bureaucrats often work in situations too complicated to reduce to programmatic formats…[they] have discretion because the accepted definitions of their tasks call for sensitive observation and judgement, which are not reducible to programmed formats*." Far from being rendered obsolete by technological innovation, this

[291] Britz, Gabriele. "Reaktionen des Verwaltungsverfahrensrechts auf die informationstechnischen Vemetzungen der Verwaltung." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 214-277. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 225.
[292] Yutaka Arai-Takahashi, "Proportionality – A German Approach," in The Principle of Proportionality in European Law, ed. Evelyn Ellis (Oxford: Oxford University Press, 1999), 123–145.
[293] Lipsky, M. 1980. Street Level Bureaucracy: Dilemmas of the Individual in Public Services. New York: Russell Sage Found P.15, as cited in Levy, Karen, Kyla E. Chasalow, and Sarah Riley. "Algorithms and decision-making in the public sector." Annual Review of Law and Social Science 17, no. 1 (2021): 309-334.

feature of administrative work remains essential. Scholars increasingly emphasise that effective governance requires careful attention to the interaction between human judgment and automated systems, rather than reliance on algorithmic outputs alone[294].

Empirical evidence illustrates the practical importance of this interaction. In certain contexts, officials actively intervene to correct or override algorithmic recommendations, thereby mitigating potential biases and ensuring more nuanced outcomes[295]. This interplay underscores that while automation can support administrative decision-making, it cannot replace the evaluative judgment necessary to uphold proportionality.

In the digital context, proportionality must also be reinterpreted to address cumulative impacts. Data reuse, algorithmic profiling, and systemic decision-making can impose aggregate burdens on individuals that extend beyond isolated administrative acts. As Widlak et al. (2020) note, the reuse of datasets across multiple processes raises concerns about fairness and overreach. Proportionality must therefore evolve to assess not only discrete measures but also the broader architecture of digital systems and information flows. This expanded understanding is essential for preserving fairness, safeguarding legitimate expectations, and preventing disproportionate outcomes in automated governance[296].

Thus, proportionality continues to ensure rationality and justification in administrative measures, but in the digital era it must be complemented by stability and predictability. Only by integrating these dimensions can proportionality maintain its role as a cornerstone of administrative legitimacy in data-driven governance.

3.3.3. Legitimate Expectations and Legal Stability

The principle of legitimate expectations (Vertrauensschutz) constitutes an integral constitutional complement to legality, safeguarding individuals from arbitrary changes in

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[294] Guay JP, Parent G. 2018. Broken legs, clinical overrides, and recidivism risk: an analysis of decisions, and to adjust risk levels with the LS/CMI. Crim. Justice Behav. 45(1):82–100, and Veale M, Brass I. 2019. Administration by algorithm? Public management meets public sector machine learning. In Algorithmic Regulation, ed. K Yeung, M Lodge, pp. 121–49. Oxford, UK: Oxford Univ. Press, and Vogl TM, Seidelin C, Ganesh B, Bright J. 2020. Smart technology and the emergence of algorithmic bureaucracy: artificial intelligence in UK local authorities. Public Adm. Rev. 80:946–61, as cited in Levy, Karen, Kyla E. Chasalow, and Sarah Riley. "Algorithms and decision-making in the public sector." Annual Review of Law and Social Science 17, no. 1 (2021): 309-334.

[295] Albright A. 2019. If you give a judge a risk score: evidence from Kentucky bail decisions. Discuss. Pap. Ser. 85, and Stevenson MT, Doleac JL. 2019. Algorithmic risk assessment in the hands of humans. Discuss. Pap. 12853, as cited in Levy, Karen, Kyla E. Chasalow, and Sarah Riley. "Algorithms and decision-making in the public sector." Annual Review of Law and Social Science 17, no. 1 (2021): 309-334.

[296] Widlak, Arjan, Marlies van Eck, and Rik Peeters. "Towards principles of good digital administration: Fairness, accountability and proportionality in automated decision-making." In *The Algorithmic Society*, pp. 67-83. Routledge, 2020.10.

administrative decisions upon which they have reasonably relied. Anchored in Article 20(3) of the Basic Law, it reinforces legal certainty and trust in public institutions. A central function of this doctrine lies in its constraint on retroactivity (Rückwirkung), which arises when newly enacted laws are applied to situations that occurred[297] or were acted upon before their formal entry into force[298].

Within this framework, Vertrauensschutz delineates constitutional limits to the state's power to enact retrospective laws or administrative measures. Given the high value placed on stability and predictability within the rule of law, the Federal Constitutional Court has developed a rigorous jurisprudence distinguishing between true retroactivity—affecting completed facts—and apparent retroactivity—affecting ongoing legal relationships[299]. This distinction is critical: measures exhibiting true retroactivity are generally regarded as constitutionally problematic, underscoring the imperative to protect citizens' reliance against legislative instability[300].

The application of this doctrine extends directly to the procedural sphere. In the Verwaltungsverfahrensgesetz, § 48(2) governs the withdrawal (Rücknahme) of unlawful administrative acts. While the provision grants the administration authority to correct unlawful decisions, it severely restricts retroactive withdrawal (ex tunc) when the decision was favourable to the citizen. This emphasis on reliance and predictability is affirmed across legal levels, including the European sphere, where the Court of Justice of the European Union has similarly developed the doctrine to protect individuals from arbitrary annulment of administrative decisions[301].

In the digital age, the principle of legitimate expectations acquires renewed importance. As administrative decisions are increasingly mediated by automated systems, ensuring that individuals can continue to trust in the reliability and fairness of public authority remains a constitutional imperative[302]. The opacity of algorithmic processes must not undermine the stability of legal commitments or the predictability of administrative

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[297] Tøssebro, Henriette Nilsson. "The Principle of Non-Retroactivity and Its Application to Administrative Decisions." The New Law (2018): 361-378. 361.
[298] Herfurtner, Wolfgang "Rückwirkung – Was bedeutet das?" Last modified August 15, 2023. Accessed October 4, 2025. https://kanzlei-herfurtner.de/rueckwirkung/..
[299] von Bary, Christiane, and Marie-Therese Ziereis. "Rückwirkung in grenzüberschreitenden Sachverhalten: Zwischen Statutenwechsel und" ordre public"." Rabels Zeitschrift für ausländisches und internationales Privatrecht/The Rabel Journal of Comparative and International Private Law H. 1 (2021): 146-171. 149.
[300] Herfurtner, Wolfgang "Rückwirkung – Was bedeutet das?" Last modified August 15, 2023. Accessed October 4, 2025. https://kanzlei-herfurtner.de/rueckwirkung/..
[301] Court of Justice of the European Union (CJEU), Case C-181/20, *Interseroh*, ECLI:EU:C:2021:1045.
[302] Nolte, Georg. "General principles of German and European administrative law: a comparison in historical perspective." *The Modern Law Review* 57, no. 2 (1994): 191-212.195

outcomes. Safeguarding legitimate expectations in digital governance, therefore, requires not only doctrinal continuity but also innovative mechanisms of transparency and accountability, ensuring that technological innovation does not erode the constitutional foundations of trust in public administration.

3.4. Analysis of Administrative Law Principles in Light of Digital Transformation

The following sections undertake a structured examination of the impact of digital transformation on the foundational principles of administrative law. To capture the distinct dimensions of administrative action under legal scrutiny, the analysis is divided into functional categories. These categories encompass, first, the principles underpinning trust and stability (legality and legal certainty); second, the requirements of procedural justice and fairness (equality, procedural fairness, and public participation); third, the mechanisms of control and accountability (transparency and accountability); and finally, the functional drivers of change (efficiency and timeliness).

This systematic approach provides a framework for assessing how core principles—including proportionality and administrative discretion—are challenged and reinterpreted in the context of e-government, algorithmic decision-making, and data-driven administration. By employing this analytical structure, the study seeks to demonstrate that established standards of administrative law are not only subject to reinterpretation but, in certain respects, are being reshaped within the evolving landscape of digital governance. This transformation generates inherent tensions, particularly between the pursuit of efficiency and the preservation of normative legitimacy, which will be explored in detail in the subsequent sections.

3.4.1. Principle of Legality, Legal Certainty and Protection of Legitimate Expectations

This section provides an integrated analysis of the principles of legality, legal certainty, and the protection of legitimate expectations, emphasising their close interconnections within the framework of digitalised administrative processes. The principle of legality requires that all administrative action be grounded in law and exercised within the limits of statutory competence. Legal certainty complements this requirement by ensuring that the law is predictable, stable, and transparent, thereby enabling individuals to orient their conduct in reliance on established norms. The protection of legitimate expectations extends this stability further, safeguarding the trust of individuals in the continuity and reliability of administrative conduct.

The opacity of algorithmic processes and the risk of arbitrary outcomes threaten not only legality but also the predictability and reliability that underpin legal certainty and legitimate expectations. A deficiency in legal certainty, for instance, undermines legality and simultaneously erodes the confidence of individuals who rely on consistent and foreseeable administrative practice. Thus, examining these principles together reflects their functional interdependence.

3.4.1.1. Introduction to the Principle of Legality

The principle of legality (Gesetzmäßigkeit), as outlined in the preceding chapter, constitutes a cornerstone of German administrative law and serves as a fundamental benchmark for evaluating administrative conduct. At both the national and supranational levels, legality requires that administrative measures be firmly grounded in statutory authority and remain subject to judicial oversight. In the German context, this requirement reflects a deeply rooted legalistic tradition in which the conformity of administrative action with the law takes precedence over considerations such as efficiency or managerial convenience[303].

Within the framework of digitalisation, the principle of legality acquires renewed significance. It ensures that technological innovations in administrative practice—such as automated decision-making or data-driven processes—do not erode constitutional safeguards. By maintaining the primacy of law, legality functions as a normative anchor, guaranteeing that digital transformation in public administration proceeds within boundaries set by constitutional principles and thereby preserving the legitimacy of administrative governance.

3.4.1.2. Legal Foundations and the Challenge of Form Requirements

The Federal eGovernment Act (EGovG) of 2013, together with the Online Access Act (OZG), provides the statutory foundation for electronic communication, digital file management, and online access to administrative services[304]. These instruments promote efficiency and accessibility, yet they operate within the boundaries of established legal norms. In practice, the implementation of legality in digital procedures continues to face constraints arising from the law's traditional reliance on paper-based and oral communication requirements, which have historically impeded comprehensive electronic interaction. Where written form is mandated, the transition to electronic communication remains de lege lata

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[303] Catakli, Derya. Verwaltung im digitalen Zeitalter: Die Rolle digitaler Kompetenzen in der Personalakquise des höheren Dienstes. (Administration in the digital age: The role of digital skills in personnel acquisition for higher civil service) Springer Nature, 2022. 86.

[304] E-Government-Gesetz des Bundes (EGovG), BGBl. I S. 2749, last amended 2023, § 1; Onlinezugangsgesetz (OZG), BGBl. I S. 3122, 2017; Deutscher Bundestag, Wissenschaftliche Dienste, "Sachstand: E-Government in Deutschland – Aktueller Stand auf Bundes- und Landesebene," WD 3 – 3000 – 134/19, 28 June 2019 WD-3-134-19-pdf-data.pdf (bundestag.de)

limited unless the digital format can achieve functional equivalence with its analogue counterpart[305].

Procedural law has sought to address this challenge by introducing technological solutions. This development is reflected in § 3a(2) and § 37 of the Verwaltungsverfahrensgesetz (VwVfG), which establish the legal equivalence between written and electronic form, provided the latter is accompanied by a qualified electronic signature (QES)[306]. This requirement is not arbitrary; it is essential to ensure that electronic documents fulfil the key legal functions of paper-based administrative acts[307]. The verifiability offered by the QES must confirm two decisive legal requirements: integrity—that the electronic document remains unaltered—and authenticity—that the signatory is an authorised official of the competent authority[308]. These safeguards are particularly significant for administrative acts with long-term effects, where legal certainty depends on establishing the unambiguous origin and content of the decision[309].

Because legality must be verifiable throughout the lifetime of an administrative act, the issue of long-term sustainability arises. The Signature Act (SigG), in § 10, underscores that documentation supporting the QES must be retained and verifiable over extended periods. This requirement ensures that the authenticity and integrity of administrative acts, especially those granting rights or imposing duties over many years, remain legally sound and subject to judicial review for the entire duration of their effect[310].

Automated administrative decision-making is also recognised in § 35a VwVfG, which permits fully automated administrative acts under narrowly defined conditions. According to this provision, automation is lawful only where expressly authorised by statute and where no

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[305] Britz, Gabriele. "Reaktionen des Verwaltungsverfahrensrechts auf die informationstechnischen Vemetzungen der Verwaltung." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 214-277. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 221.
[306] Britz, Gabriele. "Reaktionen des Verwaltungsverfahrensrechts auf die informationstechnischen Vemetzungen der Verwaltung." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 214-277. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 221.
[307] Britz, Gabriele. "Reaktionen des Verwaltungsverfahrensrechts auf die informationstechnischen Vemetzungen der Verwaltung." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 214-277. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 221.
[308] Schmitz, Heribert. "Fortentwicklung des Verwaltungsverfahrensgesetzes: Konkrete Gesetzgebungspläne und weitere Perspektiven." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 136-155. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 146.
[309] Schmitz, Heribert. "Fortentwicklung des Verwaltungsverfahrensgesetzes: Konkrete Gesetzgebungspläne und weitere Perspektiven." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 136-155. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 146.
[310] Schmitz, Heribert. "Fortentwicklung des Verwaltungsverfahrensgesetzes: Konkrete Gesetzgebungspläne und weitere Perspektiven." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 136-155. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 146.

discretionary judgment is required[311]. Automated decisions can be conceptualised as processes in which outcomes are generated through source code, requiring the translation of legal norms into code[312]. Accordingly, responsibility for legality remained with the public authority deploying such systems, rather than with the technology itself[313]. The doctrines of Vorrang des Gesetzes (primacy of law) and Vorbehalt des Gesetzes (requirement of a statutory legal basis) continue to apply.

While initial debates reflected concerns about the potential erosion of legal safeguards through automation[314], an examination of the German legislative framework indicates that the principle of legality has been strictly preserved in the digitalisation process. Automation has indeed been promoted to enhance administrative efficiency, yet it has not displaced the legal guarantees that underpin administrative legitimacy. The insistence upon explicit statutory authorisation whenever individual rights or public interests are affected remains central, ensuring that technological innovation operates within constitutional boundaries and does not compromise the normative foundations of administrative law.

3.4.1.3. Procedural Flexibility and the Curing of Defects

The principle of legality is operationalised through a range of procedural requirements. A critical mechanism in this regard, particularly in the context of automated administrative decision-making within e-government systems, is the principle of the irrelevance of defects in procedure and form, as codified in § 45 VwVfG. This provision enables authorities to subsequently remedy certain procedural flaws in an administrative act—for example, by supplying a missing justification or conducting a hearing at a later stage—provided that the omission did not demonstrably affect the outcome and can be rectified without infringing procedural fairness. The judiciary has confirmed this interpretation, as illustrated by a 2023 decision of the Administrative Court of Aachen, which held that the failure to conduct a hearing prior to issuing a decision did not invalidate the act

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[311] Germany, *Verwaltungsverfahrensgesetz (VwVfG)*, § 35a, "Automatisierte Entscheidungen," BGBl. I S. 1253 (2016).
[312] Igor Gontarz, "Judicial Review of Automated Administrative Decision-making: The Role of Administrative Courts in the Evaluation of Unlawful Regimes," ELTE Law Journal 2023, 151–162, 157 https://ojs.elte.hu/eltelj/article/download/5283/4288/11372
[313] Igor Gontarz, "Judicial Review of Automated Administrative Decision-making: The Role of Administrative Courts in the Evaluation of Unlawful Regimes," ELTE Law Journal 2023, 151–162, 157 https://ojs.elte.hu/eltelj/article/download/5283/4288/11372
[314] Siegel, Thorsten. "Elektronisches Verwaltungshandeln–Zu den Auswirkungen der Digitalisierung auf das Verwaltungsrecht." JURA-Juristische Ausbildung 42, no. 9 (2020): 920-931.

if the omission was capable of being remedied[315].

The capacity to "cure" such defects is particularly relevant in e-government frameworks, where administrative processes often rely on automated systems. Minor technical errors, such as a delayed notification to an applicant, should not automatically render a decision invalid. Yet this legal flexibility is not without controversy. As Schmitz (2013) argues, if procedural defects—such as the omission of a hearing before an automated decision is issued—are too readily overlooked, there is a significant risk that citizens' procedural rights may be weakened or insufficiently respected within digital administrative systems[316].

Accordingly, e-government platforms must integrate these requirements effectively, ensuring that electronic hearings are facilitated, that access to online files is guaranteed, and that digital notifications clearly outline available legal remedies, as required by §§ 79 and 58 VwGO[317]. These considerations highlight the need for careful legal calibration. As Voßkuhle (2010) emphasises, efficiency gains must not come at the expense of procedural safeguards, which remain the backbone of democratic administrative governance[318].

3.4.1.4. Legal Certainty and Procedural Safeguards

Closely linked to legality is the principle of legal certainty (Rechtssicherheit), derived from Article 20(3) of the Basic Law. Legal certainty requires that individuals be able to anticipate the legal consequences of administrative action and rely on the stability and clarity of applicable norms. The rise of automation complicates this guarantee. Whereas traditional administrative procedures allowed for interpretive discretion by officials, digital systems operate through rigid, predefined parameters. This rigidity can promote consistency but may simultaneously reduce transparency and make decisions more difficult to challenge[319].

Paulin (2013) observes that traditional analogue procedures afforded public officials a degree of interpretive discretion. By contrast, digital systems necessitate a more rigid and standardised structure. Electronic applications must adhere to specific technical protocols,

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[315] Administrative Court of Aachen (Verwaltungsgericht), judgment of 16 January 2023 – 7 K 327/21.
[316] Schmitz, Thomas. "The administrative procedure in German administrative law." *Administrative Decision and Administrative Procedure under German, French and Vietnamese Law* (2013). 5-8
[317] Schmitz, Thomas. "The administrative procedure in German administrative law." *Administrative Decision and Administrative Procedure under German, French and Vietnamese Law* (2013). 5-8
[318] Andreas Voßkuhle, "The Rule of Law in Transition: On the Functional Change of Administrative Law in the Age of Digitalisation," Rechtsstaatlichkeit im Wandel: Zum Funktionswandel des Verwaltungsrechts im Zeitalter der Digitalisierung," Die Verwaltung 43, no. 2 (2010): 140.
[319] See *Verwaltungsverfahrensgesetz* (VwVfG), BGBl. I S. 102, last amended 2023, § 35a; Tuomas Pöysti, "Legislating for Legal Certainty, with a Right to a Human Face, in an Automated Public Administration," in *The Rule of Law and Automated Decision-Making*, ed. M. Eliantonio et al. (Cham: Springer, 2023), 33–63 https://link.springer.com/chapter/10.1007/978-3-031-30142-1_3

uniform formats, and designated network pathways. These operational constraints underscore the imperative of designing e-government systems that uphold procedural transparency and reinforce legal certainty[320].

Absent a clear and explicit legal foundation, algorithmic decisions risk becoming opaque and difficult to contest. This lack of transparency not only undermines legality but also erodes public trust in administrative institutions. When the legal basis of a decision is embedded in technical code rather than accessible statutory language, affected individuals may struggle to understand, challenge, or seek redress. In such cases, the procedural safeguards that legality is intended to uphold are weakened[321].

This concern becomes even more pressing when considering the inevitability of errors in digital systems. Algorithmic decisions, like those made by humans, remain vulnerable to both factual and legal inaccuracies. To mitigate this risk, Engstrom (2020) proposes a pragmatic solution: randomly allocating a subset of algorithmic decisions for human review. Such a strategy would enable administrative authorities and affected individuals to identify and correct systemic errors before they become entrenched[322].

Nevertheless, it has been argued that only rule-based systems of automated decision-making can be regarded as compatible with the requirements of the rule of law. From this perspective, there is a broader public interest in avoiding a shift towards governance dominated by algorithms, as such a development could undermine legal certainty and democratic accountability[323]. From another standpoint, Markku (2021) advocates embedding legal safeguards directly into the architecture of automated systems. By integrating statutory requirements during the design phase, such systems can produce legally sound decisions from the outset. This reframes legality not as a reactive mechanism of post-hoc review but as a proactive design principle—one that ensures transparency, accountability, and rights protection are upheld by default[324].

3.4.1.5. The Role of Human Involvement

A central issue in the digitalisation of administrative procedures concerns the degree

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[320] Paulin, Alois. "Towards Self-Service Government-A Study on the Computability of Legal Eligibilities." *J. Univers. Comput. Sci.* 19, no. 12 (2013): 1761-1791. 1770

[321] Suksi, Markku, ed. The Rule of Law and automated decision-making: Exploring fundamentals of algorithmic governance. Springer Nature, 2023.

[322] Engstrom, David Freeman, and Daniel E. Ho. "Algorithmic accountability in the administrative state." Yale J. on Reg. 37 (2020): 800. 801

[323] Suksi, Markku. "Administrative due process when using automated decision-making in public administration: some notes from a Finnish perspective." *Artificial Intelligence and Law* 29, no. 1 (2021): 87-110.107

[324] Suksi, Markku. "Administrative due process when using automated decision-making in public administration: some notes from a Finnish perspective." Artificial Intelligence and Law 29, no. 1 (2021): 87-110. 95.

of human oversight required in automated processes. Markku (2021) emphasises that administrative procedures have traditionally presupposed the involvement of human actors, an assumption directly challenged by the prospect of full automation[325]. Similarly, Zalnieriute et al. (2021) argue that automation operates along a spectrum and that human supervision remains necessary at all stages[326]. The removal of discretion creates what some describe as a "legal vacuum," in which the absence of human judgment threatens procedural guarantees such as transparency and intelligibility. From a legal perspective, this debate underscores that human involvement is not merely a technical safeguard but a constitutional necessity for preserving fundamental rights and ensuring accountability.

The European Parliament (2023) further highlights that a human-centred design philosophy, anchored in robust legal frameworks, is indispensable. Without such foundations, automated systems risk undermining core tenets of administrative law, including legality, transparency, and the protection of individual rights[327].

3.4.1.6. Protection of Legitimate Expectations

The principle of legitimate expectations (Vertrauensschutz) plays a pivotal role in safeguarding legal certainty within digitalised administrative processes, particularly in cases involving long-term effects on individuals or businesses. Rooted in the broader framework of the rule of law, it requires that individuals be able to trust in the continuity, reliability, and integrity of administrative conduct[328]. In German law, legitimate expectations are protected when public authorities create a factual or legal situation—through regulations, procedures, communications, or promises—upon which individuals have reasonably relied in shaping their personal or economic decisions[329].

This protection is not absolute but is subject to the requirements of procedural fairness and proportionality. Administrative decisions that disrupt such expectations must be justified by overriding public interests and accompanied by adequate legal remedies. In the context of

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[325] Suksi, Markku. "Administrative due process when using automated decision-making in public administration: some notes from a Finnish perspective." Artificial Intelligence and Law 29, no. 1 (2021): 87-110. 95.
[326] Zalnieriute, Monika, Lyria Bennett Moses, and George Williams. "Automating Government Decision-Making: Implications for the Rule of Law." Technology, Innovation and Access to Justice: Dialogues on the Future of Law, Edinburgh University Press, Edinburgh (2021): 91-111. 93
[327] European Parliament. Digitalisation and Administrative Law. European Parliament Resolution of 22 November 2023 with Recommendations to the Commission on Digitalisation and Administrative Law (2021/2161(INL)). P9_TA(2023)0426. Strasbourg: European Parliament, 2023.
[328] Schmitz, Heribert. "Fortentwicklung des Verwaltungsverfahrensgesetzes: Konkrete Gesetzgebungspläne und weitere Perspektiven." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 136-155. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 146.
[329] Robert, Thomas, Legitimate Expectations and Proportionality in Administrative Law, Oxford, Hart Publishing, 2000, p. 41. as cited in Petoft, Arian. "The concept and instances of general principles of administrative law: Towards a global administrative law." Cuestiones constitucionales 42 (2020): 309-355. (339)

digital governance, the principle becomes increasingly complex. Automated systems may lack the nuance and contextual awareness necessary to account for prior communications or informal assurances that traditionally shaped legitimate expectations. Accordingly, the design and deployment of algorithmic decision-making must incorporate mechanisms to recognise and preserve these expectations, especially where prior administrative conduct has induced reliance.

European jurisprudence reinforces this view. The Court of Justice of the European Union (CJEU) has consistently held that legitimate expectations arise when an EU authority has given precise, unconditional, and consistent assurances, and the individual has relied on them in good faith (see Mulder v. Minister van Landbouw en Visserij, Case 120/86, ECLI:EU:C:1988:213)[330]. Member States are bound by this position, which is not limited to Germany. For example, British administrative law recognizes this principle both procedurally and substantively, requiring authorities to honor promises or established practices unless there is a compelling reason to depart from them[331].

In Germany, the principle is embedded in the doctrine of Vertrauensschutz and reflected in provisions such as §§ 48 and 49 of the Verwaltungsverfahrensgesetz (VwVfG), which regulate the withdrawal and revocation of administrative acts[332]. These provisions aim to balance legal certainty with administrative flexibility, ensuring that individuals are not arbitrarily deprived of rights or benefits previously conferred.

In digital administration, the challenge lies in ensuring that automated systems do not inadvertently override legitimate expectations due to rigid programming or a lack of contextual awareness. As Suksi (2021) argues, embedding legal safeguards into the architecture of automated systems is essential to preserving trust and accountability[333]. This includes designing algorithms capable of recognising prior administrative conduct and flagging decisions that may conflict with established expectations.

3.4.1.7. Intersection and Conclusion

Ultimately, the process of digitalisation does not, in itself, modify the substantive legal standards applicable to administrative action; rather, it requires their consistent application within procedures increasingly shaped by technological innovation. Accordingly, the digitalisation of administrative processes does not fundamentally alter the criteria by

[330] Court of Justice of the European Union. Mulder v. Minister van Landbouw en Visserij, Case 120/86, ECLI:EU:C:1988:213.
[331] Craig, Paul. Administrative Law. 7th ed. London: Sweet & Maxwell, 2012.
[332] Verwaltungsverfahrensgesetz (VwVfG), §§ 48–49.
[333] Suksi, Markku, "Automated Decision-Making and the Rule of Law." European Journal of Law and Technology 12, no. 3 (2021).

which legality is assessed. Whether a decision is issued by a human official or generated through an automated system, the legal scrutiny applied by administrative courts remains firmly focused on the outcome itself. In other words, the method of issuance—manual or algorithmic—does not exempt the administrative act from meeting established legal requirements. This core tenet reinforces the notion that while digitalisation is transformative in form, it does not redefine the substantive requirements of legality (Gesetzmäßigkeit)[334].

The principles of legality, legal certainty, and legitimate expectations therefore function not as isolated mandates but as an integrated normative framework derived from the constitutional rule of law (Rechtsstaatsprinzip). The analytical benefit of examining this intersection lies in establishing a layered defence against the systemic challenges posed by automation, particularly the risks it presents to the stability and predictability of the administrative relationship. This multi-layered approach is necessitated by the inherent limitations of each principle when considered in isolation. Legality (Gesetzmäßigkeit) addresses the challenge of competence by demanding the existence of a statutory basis for delegation. Legal certainty (Rechtssicherheit) extends this requirement by insisting on the transparency and predictability of the applied code, thereby confronting the challenge of opacity.

Furthermore, legitimate expectations (Vertrauensschutz) insist upon the stability and non-retroactivity of administrative outcomes upon which reliance has been established, thereby addressing the challenge of algorithmic dynamism and trust.

3.4.2. Proportionality and discretion

3.4.2.1 Relevance of Proportionality

One of the central challenges posed by digitalisation lies in ensuring that automated administrative procedures remain compatible with the principle of proportionality. In administrative law, proportionality requires that any measure adopted by a public authority be suitable to achieve a legitimate aim, necessary in the sense that no less restrictive alternative is available, and balanced so that the burden imposed does not outweigh the intended benefit. This principle operates as a safeguard against excessive or unjustified interference with individual rights and is particularly significant in contexts where discretion plays a decisive

[334] Gontarz, Igor"Judicial Review of Automated Administrative Decision-making: The Role of Administrative Courts in the Evaluation of Unlawful Regimes," ELTE Law Journal 2023, 151–162, https://ojs.elte.hu/eltelj/article/download/5283/4288/11372

role[335].

Automation, by its very nature, tends to rely on uniform standards and predefined rules. While such reliance may enhance efficiency and consistency, it also risks disregarding the diversity of individual circumstances. Discretionary authority enables civil servants to assess the specific facts of a case and, where appropriate, depart from rigid norms in order to reach a more proportionate outcome. In this respect, discretion functions as the mechanism through which proportionality is operationalised, ensuring that administrative decisions remain sensitive to context and aligned with the broader constitutional commitment to fairness and rights protection[336].

3.4.2.2 Legal Framework in German Administrative Law

The legal framework governing automation in Germany reflects the tension between efficiency and constitutional safeguards. As Martini and Nink (2017) explain, § 35a of the Verwaltungsverfahrensgesetz (VwVfG) permits fully automated decisions only in cases where no discretionary judgment or evaluative assessment is required (Ermessens- oder Beurteilungsspielraum). This limitation is grounded in the principle of Normvorbehalt, which mandates that a higher-level legal provision must explicitly authorise full automation. The intent is to ensure that automated procedures do not encroach upon areas of law requiring human judgment, thereby preserving proportionality and preventing arbitrary outcomes[337].

Peeters and Widlak (2018) highlight that even seemingly routine changes in vital records, such as marital status or name, can produce unintended consequences across interconnected systems. These cascading effects complicate proportionality analysis, particularly when outcomes are not foreseeable at the time the administrative decision is made[338].

The statutory restriction of automation to non-discretionary decisions (§ 35a VwVfG) has, however, been subject to criticism. Swoboda (2025) argues that the exclusion of discretionary decisions overlooks the reality of administrative practice. Discretion is

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[335] Enqvist, Lena, and Markus Naarttijärvi. "Discretion, automation, and proportionality." In The rule of law and automated decision-making: Exploring fundamentals of algorithmic governance, pp. 147-178. Cham: Springer International Publishing, 2023.

[336] Oswald, Marion. "Algorithm-assisted decision-making in the public sector: framing the issues using administrative law rules governing discretionary power." Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences 376, no. 2128 (2018): 20170359.

[337] Martini, Mario, and David Nink. "Wenn Maschinen entscheiden...-vollautomatisierte Verwaltungsverfahren und der Persönlichkeitsschutz." Neue Zeitschrift für Verwaltungsrecht-Extra 36, no. 10 (2017): 1-14.

[338] Peeters, Rik, and Arjan Widlak. "The digital cage: Administrative exclusion through information architecture–The case of the Dutch civil registry's master data management system." *Government Information Quarterly* 35, no. 2 (2018): 175-183.

frequently standardised through regulations, internal guidelines, and catalogues of criteria, which are employed to ensure uniformity in collective procedures and to guide clerical staff. As a result, the scope for individual judgment is significantly narrowed in many fields. In effect, the exercise of discretion often comes close to a binding decision, even if formally conferred. The reality of highly regulated discretion and the reliance on rules is thus largely disregarded, despite the fact that such discretion may be structured to an extent that it could be translated into algorithmic programming. Indeed, the level of regulation of discretionary powers may at times render algorithmic coding even simpler than in the case of certain binding decisions that rely on indeterminate legal concepts[339].

3.4.2.3 Responsibility and Control in Automated Systems

Even in non-discretionary contexts, proportionality remains a binding legal requirement. As Widlak (2020) observes, public authorities cannot absolve themselves of responsibility merely by invoking compliance with automated systems or relying on generalised legal frameworks. They remain under a duty to ensure that the data underpinning algorithmic decision-making accurately reflects the material facts of each case. This obligation is crucial to prevent disproportionate outcomes that may result from incomplete or misleading inputs[340].

The frequently cited phrase “the computer says no,” discussed by Van Eck (2018), encapsulates the concern that algorithmic systems may foster a perception of inevitability in administrative decisions[341]. Left unchecked, such systems risk undermining the flexibility and contextual sensitivity that proportionality demands. The central challenge, therefore, is how to embed responsibility and control mechanisms into automated processes so that proportionality is not eroded in practice.

3.4.2.4 Proportionality as a Design Principle in Digital Governance

This challenge has led scholars to emphasise the importance of considering proportionality not only at the stage of applying administrative decisions but also at the stage of designing automated systems. As Suksi (2023) argues, proportionality should be understood as a constitutional imperative that must guide the very architecture of algorithmic

[339] Swoboda, Jan Christian. “Künstliche Intelligenz in der Verwaltung: Keine Ermessensausübung durch die Maschine?” Legal Tribune Online, May 13, 2025. https://www.lto.de/persistent/a_id/57181

[340] Widlak, Arjan, Marlies van Eck, and Rik Peeters. "Towards principles of good digital administration: Fairness, accountability 2020.8.

[341] van Eck, Marlies. "Geautomatiseerde ketenbesluiten & rechtsbescherming: Een onderzoek naar de praktijk van geautomatiseerde ketenbesluiten over een financieel belang in relatie tot rechtsbescherming." (2018). cited in Widlak, Arjan, Marlies van Eck, and Rik Peeters. "Towards principles of good digital administration: Fairness, accountability and proportionality in automated decision-making." In *The Algorithmic Society*, pp. 67-83. Routledge, 2020.8.

governance[342]. By embedding proportionality into the design and deployment of digital systems, public authorities can ensure that decisions remain legally justified, contextually appropriate, and sensitive to individual circumstances.

Brown (2005) further highlights that the transition to e-government reconfigures traditional accountability relationships, shifting civil servants from hierarchical command structures toward more citizen-oriented service models. While this transformation may enhance responsiveness, it simultaneously raises concerns about the dilution of political and administrative accountability—concerns closely tied to how proportionality is operationalised in digital governance[343].

3.4.2.5 Normative Implications

In light of these developments, it becomes evident that any legal framework for automated decision-making must reconcile technological efficiency with the foundational guarantees of administrative law. Ensuring that the least restrictive yet suitable means are employed to achieve legitimate objectives remains a core requirement[344]. Proportionality, therefore, must not be sidelined in the pursuit of digital optimisation; rather, it must be embedded into the design, implementation, and oversight of automated administrative systems as a condition of legality and a safeguard of individual rights.

These considerations underscore that proportionality, while traditionally viewed as a constraint on administrative discretion, now assumes a broader role in the digital age. It functions not only as a substantive legal principle but also as a benchmark for evaluating the legitimacy of automated decision-making systems.

Additionally, the increasing reliance on automated decision-making has altered the traditional allocation of responsibility. According to Widlak et al. (2020), the role of human judgment has largely shifted to the stage of objections and appeals, requiring individuals to identify errors or invoke exceptional circumstances. This stands in contrast to the conventional view that public authorities should safeguard proportionality proactively. Nonetheless, automation may also serve a constructive role: it can be employed to identify cases requiring human assessment, thereby supporting rather than undermining proportionate

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[342] Suksi, Markku, ed. The Rule of Law and automated decision-making: Exploring fundamentals of algorithmic governance. Springer Nature, 2023.

[343] Brown, David. "Electronic government and public administration." *International Review of Administrative Sciences* 71, no. 2 (2005): 241-254.251

[344] Sommermann, Karl-Peter. "Constitutional state and public administration." *Public administration in Germany* (2021): 17-33. 21

outcomes[345].

In the context of e-government, proportionality requires that digital administrative measures—such as automated decision-making, electronic communication, and data processing—be suitable, necessary, and appropriate in relation to their intended public objectives. As digitalisation introduces new forms of administrative efficiency, it also raises concerns about the potential for excessive or opaque interventions. For example, the use of algorithmic systems must be carefully assessed to ensure that they do not impose disproportionate burdens on individuals or undermine procedural safeguards. Scholars have noted that the application of proportionality in digital governance demands a renewed focus on transparency, contestability, and the preservation of individual rights. In this regard, e-government does not diminish the relevance of proportionality; rather, it intensifies the need for its rigorous application to ensure that technological innovation remains accountable to constitutional standards[346].

In certain respects, the move toward automated administration can be viewed as an extension of the principles underpinning administrative law. A central concern of administrative law has long been the risks associated with discretion exercised by human officials under delegated authority. Automation has the potential to mitigate some of these risks by constraining discretion and embedding clearer rules into the performance of specific governmental tasks[347].

In conclusion, a closer examination of § 35a VwVfG demonstrates that the principle of proportionality (Verhältnismäßigkeit) has been explicitly safeguarded within the German legislative framework. By excluding discretionary decisions from full automation, the legislator ensured that proportionality—requiring suitability, necessity, and fairness in the balancing of interests—remains effectively applied. In other words, digitalisation has not altered the substantive requirements of proportionality; rather, it has reinforced the need for human involvement wherever contextual assessment and balancing of competing interests are indispensable.

3.4.3. Equality, Procedural Fairness and Public Participation

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[345] Widlak, Arjan, Marlies van Eck, and Rik Peeters. "Towards principles of good digital administration: Fairness, accountability and proportionality in automated decision-making." In *The Algorithmic Society*, pp. 67-83. Routledge, 2020.10.

[346] Yutaka Arai-Takahashi, "Proportionality – A German Approach," *School of Advanced Study*, University of London, 2010, https://sas-space.sas.ac.uk/3907/1/1458-1702-1-SM.pdf; Christoph Möllers, *The Administrative Constitution: Administrative Law in Germany* (Oxford: Oxford University Press, 2013), 89–95

[347] Coglianese, Cary. "Administrative law in the automated state." Daedalus 150, no. 3 (2021): 104-120. 110

In administrative law, the principles of equality, procedural fairness, and public participation are central to ensuring that public power is exercised in a just and legitimate manner. While each principle addresses a distinct dimension of administrative action—from the equal treatment of individuals, to the due process guarantees of a hearing, and the broader democratic engagement of citizens—they are fundamentally interconnected. The rise of digital governance intensifies scrutiny on all three, presenting both opportunities for enhancement and risks of erosion. As administrative processes become increasingly mediated by technology, it is imperative to analyse how these core principles are being reinterpreted, challenged, and reshaped in the digital era.

3.4.3.1. Procedural Fairness

Procedural fairness encompasses the right of individuals to be heard, to present evidence, and to receive reasoned decisions from impartial authorities. In the context of digital administration, this principle faces renewed scrutiny. As public authorities increasingly rely on automated systems to process applications, allocate benefits, or issue decisions, concerns arise as to whether such systems can adequately guarantee the procedural rights traditionally afforded in analogue settings.

The German legal framework provides a clear illustration. Procedural fairness (Verfahrensgerechtigkeit) is a foundational principle, closely tied to the rule of law and the protection of individual rights. It encompasses core procedural guarantees such as the right to be heard, the duty to investigate, and the obligation to provide reasons, as codified in §§ 24, 28, and 39 of the Verwaltungsverfahrensgesetz (VwVfG). The right to inspect files (Akteneinsichtsrecht) under § 29 VwVfG further strengthens procedural safeguards by obliging authorities to maintain proper records that document the course of administrative events truthfully and completely. This obligation ensures lawful administrative action by making official decisions verifiable over time, particularly when certified with a qualified electronic signature, as regulated by provisions such as § 37(4) VwVfG[348]. Jurisprudence and scholarship underline that the right to inspection necessarily entails a duty to compile truthful and comprehensive documentation of the procedure[349].

The right to inspect administrative files, as regulated by § 29 VwVfG, also poses challenges for internal administrative practice. While at first glance the provision appears limited to granting parties access to relevant files, it simultaneously functions as a mediating mechanism between the administration's external legal relations and the organisation of its

[348] German federal Administrative Procedure (VwVfG) §§ 24, 28, 29, 37, and 39.
[349] Britz, Gabriele. "Reaktionen des Verwaltungsverfahrensrechts auf die informationstechnischen Vemetzungen der Verwaltung." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 214-277. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 250.

internal workflows. Proper file management is therefore not merely a matter of administrative order but a substantive guarantee of legality, ensuring both effective external legal protection for those affected and the structuring of internal processes in accordance with lawful action[350].

The challenges of ensuring fairness in digitalised procedures are illustrated by a documented case from the Netherlands, where a data linkage error erroneously assigned a citizen ownership of a second property, resulting in a wrongful tax assessment. Her formal complaint was addressed only after a significant delay, and the burden of disproving the error fell entirely on her. The administrative process failed to provide timely review, transparency, or meaningful engagement—highlighting the need to embed procedural fairness into digital governance systems[351]. Fraenkel-Haeberle (2020) argues that digitalisation must not erode the inclusive and dialogic nature of administrative procedure, and that procedural safeguards must be adapted to ensure transparency and contestability in digital environments[352]. Alpar and Olbrich (2005) further underscore that successful e-government implementation requires a careful analysis of administrative processes within their legal context, ensuring that "legal constraints on public processes must be respected"[353].

In addition, the purpose of this obligation is not merely administrative order, but rather the truthful and comprehensive recording of the relevant course of events. In this way, file management contributes to ensuring legality in two interrelated respects: by enabling effective external legal protection for those affected and by structuring internal administrative processes in accordance with the principles of lawful action[354].

For certain administrative acts, where statutory provisions expressly require written form—particularly those producing long-term legal effects—additional requirements regarding the signature may be imposed (§ 37(4) draft VwVfG). In order to establish procedural mechanisms for electronic administrative decisions that are equivalent to the

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[350] Britz, Gabriele. "Reaktionen des Verwaltungsverfahrensrechts auf die informationstechnischen Vemetzungen der Verwaltung." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 214-277. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 250.

[351] Widlak, Arjan, Marlies van Eck, and Rik Peeters. “Towards Principles of Good Digital Administration: Fairness, Accountability and Proportionality in Automated Decision-Making.” In The Algorithmic Society, 1st ed., 17. London: Routledge, 2020. 11. https://doi.org/10.4324/9780429261404

[352] Dadurch gelangen Sie zu *Verwaltungsverfahrensgesetz* (VwVfG), BGBl. I S. 102, last amended 2023, §§ 24, 28, 39; Cristina Fraenkel-Haeberle, “Fully Digitalized Administrative Procedures in the German Legal System,” *European Review of Digital Administration & Law* 1, no. 1–2 (2020): 105–111 https://www.erdalreview.eu/free-download/978882553896010.pdf

[353] Alpar, Paul, and Sebastian Olbrich. Legal Requirements and Modelling of Processes in e-Government. University of Marburg, 2005.

[354] Britz, Gabriele. "Reaktionen des Verwaltungsverfahrensrechts auf die informationstechnischen Vemetzungen der Verwaltung." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 214-277. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 250.

written form, it is necessary that such acts remain verifiable in their entirety over an extended period of time, in much the same way as written administrative acts[355].

3.4.3.2. Equality in algorithmic systems

The principle of equality (Gleichbehandlungsgrundsatz), codified in Article 3 of the Basic Law (Grundgesetz), constitutes a fundamental element of German administrative law and serves as a central reference point in shaping contemporary e-government frameworks. As administrative authorities increasingly employ algorithmic systems to support, and in some cases to automate, decision-making processes, new questions arise concerning the risk of unequal treatment[356].

Particular attention has been drawn to the use of machine learning applications, which depend on large datasets for training purposes. Since such data may reflect existing societal patterns and biases, there is a possibility that algorithms unintentionally reproduce or even intensify these distortions. This, in turn, could lead to forms of discrimination or unequal treatment of individuals, either on the basis of legally protected attributes or through proxy variables that indirectly correlate with such attributes[357]. Conversely, it has been argued that algorithm-based systems also provide governments with new opportunities to reduce undesired biases by introducing mathematical adjustments, sometimes without significant loss of accuracy. The challenge, therefore, lies not only in mitigating bias but also in leveraging the capacity of algorithms to enforce a higher and more consistent standard of equality than human-led processes[358].

In this context, digital equality has emerged as a contemporary expression of the broader principle of equality[359]. As Bogdanovskaya (2022) contends, one of the most pressing issues is the digital divide, defined as the gap between individuals who have effective access

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[355] Schmitz, Heribert. "Fortentwicklung des Verwaltungsverfahrensgesetzes: Konkrete Gesetzgebungspläne und weitere Perspektiven." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 136-155. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 146.

[356] Grundgesetz für die Bundesrepublik Deutschland [Basic Law], Art. 3; Allgemeines Gleichbehandlungsgesetz (AGG), BGBl. I S. 1897, last amended 2023; Indra Spiecker gen. Döhmann and Emanuel V. Towfigh, Coded Bias: The General Equal Treatment Act and Protection Against Discrimination by Algorithmic Decision-Making Systems, Legal Opinion for the Federal Anti-Discrimination Agency, April 2023. https://www.antidiskriminierungsstelle.de/SharedDocs/downloads/EN/publikationen/ki_study.pdf?__blob=publicationFile&v=2

[357] Grundgesetz für die Bundesrepublik Deutschland [Basic Law], Art. 3; Allgemeines Gleichbehandlungsgesetz (AGG), BGBl. I S. 1897, last amended 2023; Indra Spiecker gen. Döhmann and Emanuel V. Towfigh, Coded Bias: The General Equal Treatment Act and Protection Against Discrimination by Algorithmic Decision-Making Systems, Legal Opinion for the Federal Anti-Discrimination Agency, April 2023. https://www.antidiskriminierungsstelle.de/SharedDocs/downloads/EN/publikationen/ki_study.pdf?__blob=publicationFile&v=2

[358] Coglianese, Cary. "Administrative law in the automated state." Daedalus 150, no. 3 (2021): 104-120. 112

[359] Bogdanovskaya, Irina Yurievna. "E-Government: Legal Aspects." *Legal Issues Digit. Age* 3 (2022): 4.9

to digital technologies and those who do not[360]. This divide frequently correlates with factors such as age, education level, income, disability, and geographic location. The European Commission's 2022 report on digital inclusion highlights, for example, that 42% of individuals aged 65 and older in the EU lack basic digital skills[361]. These disparities pose a serious challenge to equality in public administration, as they risk excluding vulnerable populations from participating fully in digitalised administrative processes. In this sense, e-government is not merely a technical reform but also a means of promoting inclusivity and equal participation in public life, analogous to the welfare state's role in ensuring social equity.

German anti-discrimination law, particularly the General Equal Treatment Act (Allgemeines Gleichbehandlungsgesetz, AGG), establishes the statutory framework for addressing risks of unequal treatment. Yet several commentators have argued that the enforcement mechanisms provided under the AGG are not fully adapted to the opacity and technical complexity of algorithmic decision-making. A recent legal opinion commissioned by the Federal Anti-Discrimination Agency similarly stresses the importance of developing clearer accountability structures and introducing stronger safeguards to prevent indirect or intersectional discrimination that may arise in the context of digital administration[362].

3.4.3.3. Public Participation

The principle of citizen participation has increasingly been recognised as a core norm within administrative law, obliging public authorities to involve the public in decision-making on matters of substantial social significance. Public participation (öffentliche Beteiligung) is a well-established procedural principle in German administrative law, particularly in planning and infrastructure-related decisions, where frameworks such as Section 26 of the Municipal Code of North Rhine-Westphalia explicitly provide for citizen involvement[363].

In practice, however, legislators may be tempted to narrowly define what constitutes a

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[360] Bogdanovskaya, Irina Yurievna. "E-Government: Legal Aspects." *Legal Issues Digit. Age* 3 (2022): 4.9

[361] European Commission (2022). Digital Economy and Society Index (DESI) 2022 – Human Capital. https://digital-strategy.ec.europa.eu/en/library/digital-economy-and-society-index-desi-2022

[362] Grundgesetz für die Bundesrepublik Deutschland [Basic Law], Art. 3; Allgemeines Gleichbehandlungsgesetz (AGG), BGBl. I S. 1897, last amended 2023; Indra Spiecker gen. Döhmann and Emanuel V. Towfigh, Coded Bias: The General Equal Treatment Act and Protection Against Discrimination by Algorithmic Decision-Making Systems, Legal Opinion for the Federal Anti-Discrimination Agency, April 2023. https://www.antidiskriminierungsstelle.de/SharedDocs/downloads/EN/publikationen/ki_study.pdf?__blob=publicationFile&v=2

[363] Baummar, Mael. "Modernising Public Administration-Reimagining Public Administration for the Digital Age." Közigazgatási és Infokommunikációs Jogi PhD Tanulmányok 5, no. 1 (2024): 5-15.

matter of high social importance, often as a means of limiting administrative burdens. Developments in digital governance offer a potential resolution to this tension. By leveraging digital platforms, administrations can facilitate public engagement more efficiently, streamline services, and even enable electronic voting. Consequently, the range of issues on which citizens can participate meaningfully is broadened, illustrating how digital technologies can strengthen the principle of participation while simultaneously supporting administrative efficiency[364].

At the same time, developments in digital governance provide notable opportunities to strengthen and broaden participation. For instance, § 18 of the E-Government-Gesetz NRW explicitly institutionalises the use of electronic channels for participation, requiring transparent procedures and the disclosure of results through portals such as Beteiligung NRW[365]. At the federal level, § 12a EGovG on Open Data reinforces this principle by promoting indirect public scrutiny, enabling citizens and civil society to access and analyse raw administrative data, thereby deepening the epistemic legitimacy of governance.

In this context, e-government reform must not only preserve existing participation mechanisms but also adapt them to ensure transparency, traceability, and legal certainty in digital environments[366].

3.4.3.4. Conclusion: The Intersecting Challenges of Digital Governance

Fundamental guarantees such as equality, procedural fairness, and proportionality cannot be fully safeguarded through traditional reactive mechanisms alone. Digital governance requires a proactive legal response that embeds these principles directly into the design and implementation of administrative systems[367]. This proactive orientation is driven by practical tensions. For instance, the balance between efficiency and cost emerges in the requirement to maintain both analogue and digital communication channels. While such

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[364] Baummar, Mael. "Modernising Public Administration-Reimagining Public Administration for the Digital Age." Közigazgatási és Infokommunikációs Jogi PhD Tanulmányok 5, no. 1 (2024): 5-15.

[365] Federal Ministry of the Interior and Home Affairs (BMI), "The Federal E-Government Act," Verwaltung Innovativ (accessed October 5, 2025), https://www.verwaltung-innovativ.de/DE/Verwaltungsdigitalisierung/E-Government-Gesetz/e-government-gesetz_node.html

[366] See *Verwaltungsverfahrensgesetz* (VwVfG), BGBl. I S. 102, last amended 2023, § 35a; Elena Buoso, "Fully Automated Administrative Acts in the German Legal System," *European Review of Digital Administration & Law* 1, no. 1–2 (2020): 113–122 https://www.erdalreview.eu/free-download/978882553896011.pdf

[367] Grundgesetz für die Bundesrepublik Deutschland [Basic Law], Art. 3; Allgemeines Gleichbehandlungsgesetz (AGG), BGBl. I S. 1897, last amended 2023; Indra Spiecker gen. Döhmann and Emanuel V. Towfigh, Coded Bias: The General Equal Treatment Act and Protection Against Discrimination by Algorithmic Decision-Making Systems, Legal Opinion for the Federal Anti-Discrimination Agency, April 2023. https://www.antidiskriminierungsstelle.de/SharedDocs/downloads/EN/publikationen/ki_study.pdf?__blob=publicationFile&v=2

parallel structures aim to preserve accessibility, they simultaneously raise questions concerning their long-term sustainability. At the same time, the notion of digital equality underscores the individual's right to choose the means by which they engage with public authorities. This creates an obligation for administrations to ensure that services remain accessible to all, irrespective of citizens' level of digital literacy or socio-economic status[368].

Recent reports, such as the 2024 report of the German Federal Digital Service Coordinator, further emphasise that inclusive design and proactive risk mitigation are indispensable. These measures are necessary to ensure that technological innovation does not inadvertently exclude or disadvantage particular social groups, thereby undermining the principle of equality within public administration[369].

Ultimately, these interconnected challenges suggest that digital transformation not only tests the adaptability of administrative law but also compels it to re-examine its normative foundations. Yet the analysis above indicates that the principle of equality has retained its centrality throughout this process. The German legislator has remained attentive to its implications and has consistently incorporated equality considerations into the statutory frameworks governing administrative automation. In this way, the move toward digitalisation has been shaped not as an exception to equality guarantees but as a domain in which those guarantees continue to guide and constrain regulatory design.

In this respect, the move toward digitalisation has not been conceived as an exception to equality guarantees but rather as a domain in which those guarantees continue to guide and constrain regulatory design. By embedding equality into the architecture of digital governance, the legislator underscores that technological innovation must remain accountable to constitutional principles, ensuring that efficiency gains do not come at the expense of fairness and inclusivity.

3.4.4. Transparency and Accountability

Transparency and accountability constitute fundamental pillars of administrative law, and their significance has been renewed in the context of digital transformation. The transparency of administrative procedures and decisions provides an indispensable foundation for ensuring both legal and democratic accountability in the digital environment.

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[368] Bogdanovskaya, Irina Yurievna. "E-Government: Legal Aspects." *Legal Issues Digit. Age* 3 (2022): 4.9

[369] ISD Germany. Identification, Assessment and Mitigation of Systemic Risks in the Context of the Digital Services Act. Report for the German Digital Service Coordinator (Bundesnetzagentur), November 2024. Accessed September 7, 2025. https://www.dsc.bund.de/DSC/DE/Aktuelles/studien/KeyFindings_ISD.pdf

3.4.4.1. Transparency

Transparency has traditionally served to enable individuals to understand how public authorities operate and make decisions, thereby supporting democratic oversight and legal accountability. In the digital era, however, this principle extends beyond access to information to include the traceability of administrative processes, particularly when decision-making is supported or executed by automated systems.

The increasing technical and organisational interconnection among actors involved in administrative decision-making carries the risk of diminishing both transparency and legitimacy. Digital administrative environments may incorporate staff members without formal competence, or even private actors, into virtual decision-making units, potentially obscuring key stages of the process[370]. Such opacity raises legitimate concerns for democratic legitimacy, especially as traditional forms of hierarchical accountability are being challenged by more complex and fragmented organisational structures. These developments may complicate the attribution of responsibility for individual decisions and thereby weaken accountability mechanisms.

A robust legal framework is therefore essential. The German Federal E-Government Act plays a central role in operationalising transparency within the digital administrative landscape. Section 3 requires public authorities to provide essential information about their roles and procedures in clear and accessible terms through publicly available networks. Section 9 further obliges federal authorities to analyse and optimise administrative procedures before introducing IT systems, ensuring that workflows allow individuals to track their applications electronically[371]. At the European level, the General Data Protection Regulation (GDPR) reinforces transparency in the processing of personal data. Articles 5, 13, and 14 oblige public authorities and other controllers to inform individuals about the purposes of data collection, the handling processes involved, and the entities responsible for ensuring secure and lawful data management[372].

Despite these regulatory efforts, substantial challenges remain. Technology does not inherently promote transparency; complex systems—particularly machine-learning models

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[370] Britz, Gabriele. "Reaktionen des Verwaltungsverfahrensrechts auf die informationstechnischen Vemetzungen der Verwaltung." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 214-277. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 253.

[371] *Online Access Act (Onlinezugangsgesetz – OZG)*. Section 3. and 9. Federal Law Gazette I 2017.

[372] General Data Protection Regulation (GDPR), European Union. Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the Protection of Natural Persons with Regard to the Processing of Personal Data and on the Free Movement of Such Data (General Data Protection Regulation). Official Journal of the European Union L119, May 4, 2016. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32016R0679

often characterised as “black boxes”—may obscure the reasoning underlying specific outcomes[373]. While data scientists may articulate an algorithm’s general design, identifying the precise rationale behind a particular decision can be difficult[374]. This limitation heightens the responsibility of public administrations to ensure the explainability of automated decisions so that individuals can understand and, where appropriate, challenge them. In addition, transparency can conflict with other legal principles, such as privacy and data secrecy. This tension is evident in the “transparency–anonymity dilemma” described by Weiler (2021) in relation to electronic voting in Germany, where the Bundesverfassungsgericht held that transparency must enable an average citizen to comprehend and verify the voting process without undermining the constitutional guarantee of ballot secrecy[375].

Hohmann (2021) further emphasises that clear and effective communication between administrations and clients is essential for ensuring transparency and fostering long-term trust. While remote interactions have long been recognised as acceptable in certain administrative matters through representation, Hohmann highlights that a client’s physical presence cannot be fully substituted by written procedures when making formal statements before the administration. Electronic methods only partially address this problem. Guaranteeing transparency in administrative procedures should therefore be a fundamental objective in the advancement of technical information tools and digital infrastructure, and a responsibility of public authorities[376].

From another perspective, Margetts (2006) argues that Information and Communication Technology can contribute to greater transparency by enabling the management of large volumes of data, encouraging the formalisation of administrative rules, and facilitating easier access to information. However, she identifies obstacles such as limited user competence and the lack of effective digital tools, although these challenges have gradually diminished. Crucially, Margetts cautions that technological advancement alone does not guarantee improved transparency; advanced infrastructures have not always resulted in greater administrative openness[377].

This concern is reflected in the European Commission’s 2020 benchmarking of

[373] Coglianese, Cary. "Administrative law in the automated state." Daedalus 150, no. 3 (2021): 104-120. 108
[374] Coglianese, Cary. "Administrative law in the automated state." Daedalus 150, no. 3 (2021): 104-120. 108
[375] Weiler, Thomas. "How to Solve the Transparency-Anonymity Dilemma?." E-Vote-ID 2018 (2018): 345.
[376] Hohmann, Balázs. "The Impact of the Government's Restrictive Measures on the Transparency of the Administrative Proceeding in the Context of the COVID-19 Pandemic." In Expanding Edges of Today's Administrative Law, January 2021. ADJURIS..
[377] Margetts, Helen. "Transparency and digital government." In Proceedings-British Academy, vol. 1, no. 135, pp. 197-210. Oxford University Press, 2006.

e-Government services, which found that many citizens still face difficulties in understanding how their personal data is used by national administrations. Limited access to information about data usage and responsible entities, combined with low adoption of national e-ID schemes, continues to hinder transparency and ease of interaction[378]. These findings highlight the persistent gap between digital infrastructure and the principle of transparency, particularly in automated systems where algorithmic decision-making may further obscure accountability.

These observations lead to a critical finding: while the legal framework provides a robust foundation for transparency—particularly through instruments such as the GDPR and national freedom of information laws—its effectiveness is constrained by infrastructural limitations and the absence of detailed standards for algorithmic accountability. Bridging this gap requires not only legal refinement but also investment in digital infrastructure and user-centred design to ensure that transparency is both technically feasible and meaningfully accessible.

Transparency concerns are therefore understandable when considering an administrative system that increasingly relies on machine-learning models. Nevertheless, these concerns do not appear to constitute an inherent obstacle to the adoption of such systems, nor do they necessarily require a fundamental restructuring of administrative law. This is particularly evident in light of the fact that administrative law has never required absolute transparency or fully exhaustive reasoning[379].

Within this framework, administrative bodies employing machine-learning systems may continue to fulfil their established duties to provide reasons by offering general explanations of how these systems are designed to function and demonstrating that they have been validated accordingly. A legally adequate explanation does not require disclosure of every technical detail; rather, it may be sufficient to describe the type of algorithm used, specify the objective it was developed to achieve, and demonstrate that the system processes relevant categories of data in a manner that meets this objective as reliably as, or more reliably than, existing administrative practices[380].

Recent proposals for a Federal Transparency Law (Transparenzgesetz des Bundes) and a statutory right to Open Data reflect a growing recognition that transparency must evolve alongside technological innovation. In this sense, e-Government not only reinforces

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[378] European Commission, eGovernment Benchmark 2020: eGovernment That Works for the People – Insight Report (Luxembourg: Publications Office of the European Union, 2020), https://op.europa.eu/en/publication-detail/-/publication/c0bd38e3-f98e-11ea-b44f-01aa75ed71a1.
[379] Coglianese, Cary. "Administrative law in the automated state." Daedalus 150, no. 3 (2021): 104-120. 108
[380] Coglianese, Cary. "Administrative law in the automated state." Daedalus 150, no. 3 (2021): 104-120. 108

existing transparency obligations but also reshapes them, requiring new legal and institutional mechanisms to preserve public oversight in a digital administrative environment[381].

Ultimately, the aim is not to achieve full transparency in an absolute sense—a standard that is conceptually and practically unattainable—but to realise meaningful transparency: a degree of openness that enables individuals to understand, engage with, and, where necessary, challenge administrative processes in a manner consistent with democratic values and legal guarantees.

3.4.4.2. Accountability

The principle of accountability requires that administrative decisions be accompanied by legitimate justification, thereby enabling citizens to demand explanations and challenge actions where necessary[382]. Yet, the challenges posed to transparency—particularly the opacity of automated decision-making and algorithmic processes—directly affect the attribution of responsibility. Accountability, in this sense, is inseparable from the capacity to identify the actor responsible for potential errors and to guarantee the availability of effective legal remedies[383]. Although digitalisation raises questions about whether automation might alter established administrative principles, an examination of German law suggests that core doctrines of liability and judicial oversight remain fundamentally unaffected.

German administrative law, as articulated in Article 34 of the Grundgesetz, holds the state or the public body liable for wrongful acts, even if committed by an individual official. This model of indirect state liability attributes the wrongful act of the individual to the state itself, thereby safeguarding accountability without undermining the functional independence of the official[384]. Importantly, this principle extends to automated decisions. As Langer (2024) observes, public authorities cannot evade their constitutional obligations by outsourcing responsibilities to private contractors or algorithmic tools: “the principle of non-delegation

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[381] *E-Government-Gesetz des Bundes* (EGovG), BGBl. I S. 2749, last amended 2023; Heiko Richter, “Federal Transparency Law and ‘Right to Open Data’: Conceptual Perspectives Beyond the Reinvention of the Wheel,” Max Planck Institute for Innovation and Competition, Discussion Paper No. 22, 2023, analysis of transparency reform; Peter Schaar, *Freedom of Information and Transparency in Germany*, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), 2019, GIZ publication.
Research – Improving Transparency and the Right to Open Data – Max Planck Institute for Innovation and Competition (mpg.de)
https://www.reformgestaltung.de/fileadmin/user_upload/Dokumente/GIZ_Informationsfreiheit_en.pdf

[382] Petoft, Arian. "The concept and instances of general principles of administrative law: Towards a global administrative law." Cuestiones constitucionales 42 (2020): 309-355.348.

[383] Langer, Charlotte. "Decision-making power and responsibility in an automated administration." Discover Artificial Intelligence 4, no. 1 (2024): 59.

[384] Papier, Hans-Jürgen, and Shervin Shirvani. *In* Michael Dürig, Roman Herzog, and Rupert Scholz, *Grundgesetz: Kommentar*, 95th ed., 2021, Art. 34 GG, para. 17 ff.

prohibits the transfer of legal responsibility to external entities"[385]. Consequently, governmental decisions must remain subject to continuous accountability and judicial review, compelling administrations to strengthen their capacity to oversee and manage technological processes[386].

Empirical experience further suggests that digitalisation, when effectively integrated into public administration, may reinforce rather than weaken accountability mechanisms. Its potential lies in enhancing transparency, traceability, and responsiveness in decision-making. Research from Indonesia illustrates this point: the implementation of digital administrative systems at the district level was associated with measurable improvements in accountability, as districts with more advanced e-Government practices demonstrated stronger institutional responsibility and clearer lines of oversight. Such findings indicate that digitalisation, if properly embedded within legal and institutional structures, can catalyze more robust accountability[387].

Additionally, more recent scholarship has emphasised the need to clarify the legal status of those exercising authority through automated decision-making. As Markku (2024) argues, human actors must ultimately retain responsibility for the consequences arising from the use of automated decision-making technologies. This includes ensuring that data processing within such systems complies fully with applicable legal standards[388].

3.4.4.3. Interrelation and Conclusion

As Shasivari and Hohmann (2021) observe, full transparency—understood as the complete visibility of administrative processes and decision-making—is ultimately unattainable, even in a system strictly governed by the principle of legality[389]. Accordingly, when the use of information technology extends to automation in decision-making, the implications for public administration become increasingly complex. While automation does not negate the principle of accountability, it necessitates its reconfiguration. The opacity of

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[385] Langer, Charlotte. "Decision-making power and responsibility in an automated administration." Discover Artificial Intelligence 4, no. 1 (2024): 59.
[386] Langer, Charlotte. "Decision-making power and responsibility in an automated administration." Discover Artificial Intelligence 4, no. 1 (2024): 59.
[387]Irwansyah, Tetra Hidayati, and Syarifah Hudayah. "The Effect of E-Government on Local Government Performance Accountability In Indonesia." International Journal of eBusiness and eGovernment Studies 14, no. 2 (2022): 217-246.
[388] Markku, Suksi. "Administrative due process when using automated decision-making in public administration: some notes from a Finnish perspective." Artificial Intelligence and Law 29, no. 1 (2021): 87-110.98
[389] Shasivari, Jeton, and Balázs Hohmann, eds. *Expanding Edges of Today's Administrative Law: Contributions to the 4th International Conference „Contemporary Challenges in Administrative Law from an Interdisciplinary Perspective", May 21, 2021, Bucharest*. ADJURIS–International Academic Publisher, 2021. 50.

algorithmic processes challenges traditional mechanisms of responsibility, making it essential to adapt legal frameworks so that liability remains clearly defined[390].

In this respect, accountability must be understood not only as the attribution of responsibility for errors but also as the assurance that review mechanisms remain accessible and effective. The safeguarding of individual rights is therefore central, even when decisions are generated through automated systems.

The interrelation of transparency and accountability reveals a dynamic tension: transparency provides the conditions for oversight, while accountability ensures that responsibility can be enforced. In the digital administrative state, neither principle can be realised in isolation. Instead, they must evolve together, with transparency enabling citizens to comprehend and contest administrative processes, and accountability ensuring that public authorities remain answerable for their actions.

Ultimately, the conclusion to be drawn is that digitalisation does not diminish the relevance of these principles but reshapes their application. Legal frameworks must continue to guarantee meaningful transparency and enforceable accountability, thereby ensuring that technological innovation does not erode constitutional safeguards but rather reinforces them in new institutional contexts.

3.4.5. Efficiency and Timeliness

It may be inferred that the notion of efficiency, although not explicitly codified as an autonomous principle, is embedded in the traditional procedural norms of German administrative law. The principle of timeliness, operationalised through Section 42a VwVfG's fictitious approval mechanism, seeks to prevent undue delays in administrative decisions. The principle of informality (§10 VwVfG)[391] grants authorities discretion to conduct procedures flexibly, while the official investigation principle (§24 VwVfG)[392] ensures the ex officio determination of relevant facts. These provisions are complemented by the principles of simplicity and appropriateness, which require that administrative measures remain proportionate, necessary, and streamlined. In practice, this means refraining from unwarranted summons, irrelevant documentation requests, or excessive paperwork, thereby preventing procedural overreach and undue burdens on citizens. Taken together, these norms

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[390] Smith, M. L., M. E. Noorman, and A. K. Martin. "Automating the Public Sector and Organizing Accountabilities." Communications of the Association for Information Systems 26, no. 1 (2010): 1–16. as cited in Markku, Suksi. "Administrative due process when using automated decision-making in public administration: some notes from a Finnish perspective." Artificial Intelligence and Law 29, no. 1 (2021): 87-110.98

[391] Germany, *VwVfG*, § 10

[392] Germany, *VwVfG*, § 24

demonstrate that efficiency is not merely a policy aspiration but a value embedded within the very structure of administrative procedure[393].

Moreover, although the term efficiency (Effizienz) is not explicitly codified as a legal objective within the Federal E-Government Act (EGovG)[394] or the Online Access Act (OZG)[395], it is widely recognised as an implicit goal underpinning both legislative instruments. Official commentaries and government communications consistently frame these laws as instruments to simplify administrative procedures, reduce bureaucratic burdens, and improve service delivery through digital transformation. In this sense, efficiency functions less as a formal legal principle than as a policy-driven aspiration aligned with broader efforts at administrative modernisation. The Federal Ministry of the Interior, for example, describes the EGovG as enabling "simpler, more user-friendly, and more efficient" public services, while the OZG is promoted as a means to meet citizens' expectations for "digital and efficient" administrative interactions[396].

Despite these legislative ambitions, empirical studies suggest that the anticipated benefits have not always materialised. Röhl (2023) observes that many e-government initiatives merely digitise front-end forms without integrating back-office processes, thereby creating additional complexity rather than reducing it. Moreover, the lack of interoperability and standardisation between federal and state systems continues to limit efficiency at scale. These findings highlight that technological deployment alone is insufficient; efficiency requires coherent legal frameworks, institutional coordination, and sustained investment in infrastructure and administrative capacity[397]. Alpar and Olbrich (2005) similarly emphasise that the introduction of digital tools must be accompanied by careful analysis of how ICT can improve administrative processes, both internally and in relation to citizen-facing services[398].

This dual focus on internal workflows and external service delivery illustrates the broader understanding of efficiency in administrative law, which encompasses not only cost-effectiveness but also institutional performance and the quality of citizen interactions.

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[393] Schmitz, Thomas. "The administrative procedure in German administrative law." *Administrative Decision and Administrative Procedure under German, French and Vietnamese Law* (2013). 4

[394] Federal e-Government Act (E-Government-Gesetz, EGovG)

[395] Online Access Act (Onlinezugangsgesetz, OZG

[396] Inner and Heimat Bundesministerium. "E-Government-Gesetz." Accessed September 18, 2025. https://www.bmi.bund.de/DE/themen/moderne-verwaltung/e-government/e-government-gesetz/e-government-gesetz-node.html

[397] Röhl, Klaus-Heiner, "Administrative Digitization in Germany: The Status at the Target Date of the Online Access Act at the Beginning of 2023," *IW Report No. 20*, German Economic Institute, March 2023 https://www.iwkoeln.de/en/studies/klaus-heiner-roehl-the-status-at-the-target-date-of-the-online-access-act-at-the-beginning-of-2023.html

[398] Alpar, Paul, and Sebastian Olbrich. Legal Requirements and Modelling of Processes in e-Government. University of Marburg, 2005.

Windoffer (2020) reinforces this perspective, noting that administrative action should be evaluated not only on its legal foundations but also with regard to its practical and economic consequences[399].

Digitalisation and automation can thus be understood as extensions of the efficiency-oriented approach. They facilitate the parallel processing of administrative files, shorten transaction times, and optimise the allocation of resources across different offices and authorities. These technological developments also enable continuous access to specific administrative procedures by multiple actors simultaneously. As a result, physical transfer of file folders or the production of photocopies for concurrent processing is no longer necessary; instead, documents can be accessed securely and in real time at any authorised location through networked systems[400].

In practical terms, digitisation has also transformed communication within administrative hierarchies. In policy-making and municipal administration, email and other electronic communication channels often facilitate direct contact between case officers and senior management[401]. While this does not dismantle hierarchical structures, it enables a more efficient upward flow of information, thereby allowing administrative leadership to harness creative potential at lower organisational levels. The downward flow of authority, including the capacity to issue binding instructions, remains unaffected, preserving the legitimacy and formal command structure of administrative governance[402].

A particularly salient innovation supporting both efficiency and legal certainty is the electronic signature under Regulation (EU) No 910/2014 (eIDAS Regulation)[403]. By granting qualified electronic signatures (QES) the same legal effect as handwritten signatures, this regulation enables fully digital administrative procedures, including applications, notifications, and decisions. Integrating eIDAS standards into German administrative practice

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[399] Windoffer, Verwaltungswissenschaft, 2020, S. 12

[400] Lenk, Außerrechtliche Grundlagen für das Verwaltungsrecht in der Informationsgesellschaft: Zur Bedeutung von Information und Kommunikation in der Verwaltung, in Hoffinann-Riem/Schmidt-Aßmann (Hg.), Verwaltungsrecht in der Informationsgesellschaft, 2000, 93 as cited in Britz, Gabriele. "Reaktionen des Verwaltungsverfahrensrechts auf die informationstechnischen Vemetzungen der Verwaltung." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 214-277. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 244.

[401] Britz, Gabriele. "Reaktionen des Verwaltungsverfahrensrechts auf die informationstechnischen Vemetzungen der Verwaltung." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 214-277. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 255.

[402] Britz, Gabriele. "Reaktionen des Verwaltungsverfahrensrechts auf die informationstechnischen Vemetzungen der Verwaltung." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 214-277. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 255.

[403] European Commission. “What Is the Legislation – eSignature.” eSignature Digital Building Blocks, European Commission. Accessed September 13, 2025. https://ec.europa.eu/digital-building-blocks/sites/spaces/DIGITAL/pages/467109076/What+is+the+legislation+-+eSignature

demonstrates how technological and legal innovations can reinforce efficiency by facilitating secure, end-to-end digital workflows without compromising procedural legitimacy.

Nevertheless, the pursuit of efficiency through digitalisation also raises normative and procedural challenges. As public services increasingly shift to online-only formats—such as digital tax filings, electronic identity systems, or algorithmically determined welfare benefits—digitally marginalised individuals risk de facto exclusion from essential services. This outcome conflicts with constitutional principles of equality and effective access to public administration[404]. Moreover, algorithmic decision-making introduces the risk of bias and indirect discrimination, as exemplified by the Dutch SyRI case, in which social security profiling disproportionately targeted migrants[405]. To address these concerns, German legal scholars and regulatory bodies advocate for inclusive strategies, including maintaining analogue access channels, ensuring interface accessibility, and conducting algorithmic impact assessments to safeguard fundamental rights and accountability[406].

Taken together, these frameworks demonstrate that efficiency functions both as a guiding principle of digital transformation and as a normative standard embedded within German administrative law. It is not merely a policy aspiration but a multidimensional concept that shapes the design of administrative procedures, informs the evaluation of technological innovations, and interacts with constitutional guarantees of equality and access.

3.5. Conclusion

The integration of automated administrative procedures, as introduced by § 35a of the Federal Administrative Procedure Act[407], represents a profound procedural shift that places considerable pressure on the resilience of established administrative guarantees. This legal innovation, which permits decisions without human intervention, must be reconciled with the principle of procedural fairness and the constitutional requirement that the individual be treated as a subject of rights (Rechtssubjekt) rather than merely as an object of state processing (Objekt staatlicher Verarbeitung). The concern arises from the structural risks inherent in delegating sovereign power to algorithms. As Martini and Nink (2017) caution,

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[404] Sofia Ranchordás (2022) The Digitization of Government and Digital Exclusion: Setting the Scene, in The Rule of Law in Cyberspace, Springer.
[405] District Court of The Hague. Judgment in Case No. C/09/550982 / HA ZA 18-388 (SyRI). February 5, 2020. Accessed September 7, 2025. https://www.loc.gov/item/global-legal-monitor/2020-03-13/netherlands-court-prohibits-governments-use-of-ai-software-to-detect-welfare-fraud/
[406] Kaminski, Margot E., and Gianclaudio Malgieri. "Algorithmic Impact Assessments under the GDPR: Producing Multi-Layered Explanations." International Data Privacy Law 11, no. 2 (2021): 125–144. https://doi.org/10.1093/idpl/ipaa020..
[407] German federal Administrative Procedure Act, §35a

the pursuit of efficiency through automated systems risks eroding the human-centred focus that has historically defined legitimate administrative action, thereby challenging the normative foundation of the administrative act itself.

The German legislative approach operates within the strict confines of Article 22 GDPR, which establishes a near-total prohibition (grundsätzliches Verbot) on decisions based solely on automated processing where such decisions produce significant legal effects. To invoke the necessary exception under Union law, the national framework must incorporate robust minimum guarantees (Mindestgarantien) that safeguard personality rights (Persönlichkeitsschutz). The architecture of § 35a VwVfG seeks to achieve this equilibrium by mandating key procedural safeguards. Most notably, the statutory exclusion of fully automated processes from cases involving discretionary power (Ermessen) or assessment margins (Beurteilungsspielraum) ensures that complex, individualised circumstances requiring fairness in the individual case (Einzelfallgerechtigkeit) remain under human control. In this way, the principle of proportionality continues to function as a safeguard against arbitrary outcomes in administrative action.

The integrity of automated procedures also requires the adaptation of traditional citizen rights. Individuals must be granted an effective, low-threshold right to demand the intervention of a natural person (Eingreifen einer Person) capable of substantively reviewing and, where necessary, altering the automated outcome. This procedural right prevents the human role from degenerating into a purely formal exercise, thereby maintaining accountability for the resulting administrative act. Equally vital is the adaptation of the right to be heard (Anhörungsrecht), which must allow individuals to present complex or unanticipated case-specific circumstances that an algorithm cannot reliably anticipate. For automated systems to comply with procedural fairness, they must go beyond simple tick-box mechanisms, enabling freely formulated submissions to ensure that the unique facts of each case are adequately considered before a final determination is made.

In sum, while § 35a VwVfG accelerates the pursuit of efficiency, its normative legitimacy depends on the meticulous embedding of procedural and personality-protective safeguards. Automation may standardise simple cases, but it must never compromise the fundamental fairness demanded in all administrative matters[408].

The broader analysis of e-governance suggests that the integration of digital

[408] Mario Martini and David Nink, "Wenn Maschinen entscheiden… – vollautomatisierte Verwaltungsverfahren und der Persönlichkeitsschutz," When machines decide… – fully automated administrative procedures and the protection of personal rights," Neue Zeitschrift für Verwaltungsrecht – Extra 36, no. 10 (2017): 1.

technologies has not required the abandonment of administrative law's foundational principles. Instead, it has triggered a process of re-conceptualisation and technological adaptation. The central tension lies in reconciling the drive for technological efficiency with the enduring normative commitments of the rule of law[409]. The resilience of these principles is rooted in their inherent attributes: their generality and comprehensiveness enable them to encompass novel algorithmic phenomena unforeseen by prior statutes, while their perpetuity ensures that underlying legal and political values maintain normative stability amidst rapid technological change.

This adaptive resilience is demonstrably realised through the principles' core operational features. The attribute of Optimization provides the crucial legal mechanism for adjusting abstract norms to concrete circumstances, ensuring that automated systems, despite their binary logic and predetermined structures, remain subject to the nuanced requirements of Legality and individualised legal scrutiny. Furthermore, the characteristic of Performance Relativity is indispensable, as it facilitates the axiological competition necessary to manage the fundamental tension between the pursuit of managerial Efficiency and the enduring commitment to Procedural Fairness and Proportionality. This function ensures that the inherent flexibility of the administrative process is maintained, preventing the dominance of technological efficiency from compromising fundamental rights-based protections.

Consequently, the shift from paper-based procedures to digital platforms necessitates legislative and judicial responses that secure the functional equivalence of electronic processes, thereby preserving legal certainty and the integrity of official records. At the same time, the reliance on data processing and algorithmic governance reinforces the demand for robust frameworks governing data protection and the ethical implementation of algorithmic structures. These findings affirm that the enduring function of administrative law is not to resist digital change, but to act as the normative framework guiding this transformation.

Yet the necessity of achieving these normative goals amidst technological change reveals a core challenge: the transition from reactive legal oversight to proactive, design-based governance. Traditionally, administrative law provided a framework for ex post review, allowing courts to scrutinise decisions after they were made. In the digital age, however, where algorithms generate decisions with speed and scale, this reactive model is often insufficient. The risk is that the drive for technological efficiency undermines the individualised scrutiny, contextual sensitivity, and human-centred nature that have long

[409] Sommermann, Karl-Peter. "Constitutional state and public administration." *Public administration in Germany* (2021): 17-33. 21

defined legitimate administrative action[410].

As the analysis of proportionality and accountability has shown, legal principles must be embedded into the very architecture of digital systems. This requires a new approach: one in which legality functions as a design principle, procedural fairness is integrated as a feature of the software, and accountability is ensured through built-in traceability[411].

Looking forward, the future of administrative law must therefore be defined not by a retreat from digitalisation, but by a thoughtful and deliberate recalibration of its normative compass. This involves several key areas of reform:

a. Legal clarity for algorithmic systems: Establishing a clear framework that defines the limits of automation, sets standards for transparency and explainability, and delineates responsibility for automated decisions[412].

b. Human-in-the-loop safeguards: Mandating meaningful human involvement in administrative processes, ensuring that officials retain the capacity to override automated decisions based on individual circumstances and contextual judgment[413].

c. A "principles-by-design" approach: Embedding proportionality, transparency, and fairness directly into the design phase of digital systems, ensuring that technological innovation aligns with the core values of public law from the outset[414].

Ultimately, while the analysis has established that core principles remain relevant, it has also shown that their practical application is often subject to significant challenges. To move beyond this theoretical framework, the following chapter will shift from the conceptual analysis to a focused case study. It will examine the legal and regulatory landscape of e-government in North Rhine-Westphalia, exploring the extent to which the principles discussed here have concretely shaped the substance of its legislation.

The conclusions of Chapter Three, though primarily conceptual, establish the

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[410] Bovens, Mark, and Stavros Zouridis. "From street-level to system-level bureaucracies: how information and communication technology is transforming administrative discretion and constitutional control." Public administration review 62, no. 2 (2002): 174-184.

[411] Suksi, Markku. "Administrative due process when using automated decision-making in public administration: some notes from a Finnish perspective." Artificial Intelligence and Law 29, no. 1 (2021): 87-110. 95.

[412] Suksi, Markku, ed. The Rule of Law and automated decision-making: Exploring fundamentals of algorithmic governance. Springer Nature, 2023.

[413] Engstrom, David Freeman, and Daniel E. Ho. "Algorithmic accountability in the administrative state." Yale J. on Reg. 37 (2020): 800. 801. and Suksi, Markku. "Administrative due process when using automated decision-making in public administration: some notes from a Finnish perspective." Artificial Intelligence and Law 29, no. 1 (2021): 87-110. 95. and Zalnieriute, Monika, Lyria Bennett Moses, and George Williams. "Automating Government Decision-Making: Implications for the Rule of Law." Technology, Innovation and Access to Justice: Dialogues on the Future of Law, Edinburgh University Press, Edinburgh (2021): 91-111. 93

[414] Suksi, Markku. "Administrative due process when using automated decision-making in public administration: some notes from a Finnish perspective." Artificial Intelligence and Law 29, no. 1 (2021): 87-110. 95. 107. and Suksi, Markku, ed. The Rule of Law and automated decision-making: Exploring fundamentals of algorithmic governance. Springer Nature, 2023.

normative foundation for the subsequent case study. The analysis of § 35a VwVfG demonstrated that algorithmic governance requires not only procedural safeguards but also a recalibration of administrative principles to secure fairness, proportionality, and accountability. These findings underscore the necessity of embedding legality and rights protection into the very architecture of digital systems, thereby ensuring that technological innovation remains aligned with constitutional guarantees. Building on this doctrinal framework, Chapter Four turns to the regional experience of North Rhine-Westphalia. By examining the E-Government Act (EGovG NRW), the following chapter investigates how the principles identified at the federal level are concretely implemented within a state context, and how structural, institutional, and political realities influence the delicate balance between legality and innovation in practice.

Chapter 4: Legal Frameworks for E-Government in North Rhine-Westphalia: An Assessment of Fundamental Administrative Law Principles in the EGovG NRW

4.1. Introduction

The preceding chapters have established the theoretical and institutional foundations for understanding Germany's approach to e-government. Chapter Two outlined the broader legal and administrative context of digitalisation within the federal system, while Chapter Three examined the conceptual redefinition of fundamental administrative law principles in the digital age. Building on this groundwork, the present chapter shifts from theoretical reflection to a focused case study, analysing how these principles are concretely applied and operationalised within a specific legislative framework.

North Rhine-Westphalia (NRW) provides a particularly compelling case for such an assessment, given its proactive legislative approach to e-government. The enactment of the E-Government Act of North Rhine-Westphalia (EGovG NRW)[415] in 2020 constitutes a significant legal foundation for administrative digital transformation. The Act was introduced with the stated aims of adapting public administration to the demands of a digital society and enhancing the quality of services for citizens and businesses. It thus exemplifies how a German state seeks to balance administrative efficiency with the preservation of core legal safeguards.

The genesis of the EGovG NRW was marked by a procedural commitment to transparency and public engagement. This is evidenced by the State's decision to conduct an online expert consultation on the draft law, the findings of which were documented in the Final Report on the Online Consultation in April 2016 (NRW 2016). This early stage demonstrated an explicit intent to integrate principles of procedural fairness and public participation into the legislative process itself[416]. Accordingly, the analysis must begin by assessing how this initial normative commitment was translated into the substantive provisions of the Act, particularly in light of the persistent tension between the legal demand for individualised scrutiny and the technological drive towards standardised efficiency.

This chapter examines the legal and regulatory framework for e-government in North Rhine-Westphalia. It reviews the key provisions of the EGovG NRW and identifies the legal and administrative challenges that have arisen during its implementation. The chapter also

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[415] Land Nordrhein-Westfalen, E-Government-Gesetz Nordrhein-Westfalen (EGovG NRW), §1, enacted July 8, 2016, accessed October 8, 2025, https://recht.nrw.de/lmi/owa/br_text_anzeigen?v_id=73520171220150354215

[416] NRW, Final report on the online consultation on the e-government law NRW (Düsseldorf: The Commissioner of the State Government of North Rhine-Westphalia for Information Technology, 2016): 2.

explores the implications of the requirements, with a particular focus on compliance with the general principles of administrative law.

The legislative commitment underlying the EGovG NRW was preceded by a robust political and administrative dialogue emphasising the necessity of a paradigm shift. The proceedings of the "e-nrw" Congress in 2018 illustrate this dynamic. Political actors stressed that digital transformation must prioritise "concrete benefit for the people" (Pinkwart 2018), while administrative leaders underscored the need for "courageous participation" and enhanced municipal cooperation (Petrauschke 2018). The critical call to overcome bureaucratic inertia—including the self-reflective assertion that jurists have traditionally been "laggards of progress" (Petrauschke 2018)—underscored the depth of cultural change required for digitalisation. This discourse confirms that the ensuing legislation was driven by a strategic intention to break with administrative inertia, making it essential to assess whether the legal text successfully translated this ambition into enforceable principles of administrative law[417].

To achieve these objectives, the chapter is structured into four main sections. It begins with a comprehensive overview of the legal and regulatory framework for e-government in NRW. It then proceeds to a critical analysis of the Act's provisions in light of core administrative law principles. This analysis assesses the extent to which these abstract principles have been translated into binding legislative text. The chapter then examines practical challenges and gaps that have emerged during implementation, such as issues related to the digital divide and data protection. Finally, the conclusion summarises the key findings of the case study and links them back to the broader conceptual debates of the dissertation.

4.2. Overview of the Legal and Regulatory Framework for E-Government in North Rhine-Westphalia

This section sets the stage for the detailed analysis by identifying and describing the core legal instruments at the state level. The focus here is to outline the structure of the legal framework, explaining how its various components—from state legislation to federal and EU laws—interact to form a comprehensive legal environment for administrative digitalisation.

[417] Wilfried Kruse and Benjamin Bauer, eds., Yearbook Germany Digital 2020: E-Government and Modernization at Federal, State and Local Levels (Bonn: Behörden Spiegel, 2020), 8-26

4.2.1. The E-Government Act of North Rhine-Westphalia (EGovG NRW)

The E-Government Act of North Rhine-Westphalia (EGovG NRW) was enacted with the explicit objective of modernising public services and adapting administrative processes to the demands of the digital age[418].

The EGovG NRW must also be understood within the broader legislative landscape of German federalism. Following the adoption of the Federal EGovG in 2013, the Länder responded unevenly: some hesitated, others lagged behind, while a few went beyond the federal framework. Saxony was the first to enact its own EGovG in 2014, largely mirroring the federal provisions but adapting deadlines. In subsequent years, nearly all Länder adopted similar legislation—NRW on 8 July 2016—while Hamburg remained the sole exception, arguing that technical implementation sufficed without additional statutory regulation[419].

4.2.1.1. Key Provisions

The EGovG NRW's core objectives and scope are set out in § 1, which explicitly aims to facilitate electronic communication with and within public authorities, ensuring that administrative processes can be conducted electronically and without media discontinuity[420].

While the Act promotes a uniform digital approach, the scope of its mandatory application is structurally defined: municipalities are explicitly permitted to implement the Act's non-compulsory requirements on their own responsibility (§1 Abs. 1 EGovG NRW)[421]. This provision provides a vital flexibility clause that legally respects the constitutional principle of municipal self-governance, allowing them discretion over specific requirements not externally mandated by superior law.

The most significant procedural obligations are contained in § 2. This section establishes fundamental procedural rights and requirements for digital interaction. At its core is the provision for electronic access to the administration, obliging public authorities to open an electronic route for document submission. This is complemented by rules on electronic communication and electronic administrative procedures, aligning administrative practice with contemporary forms of interaction and accessibility. Equally important is the requirement of electronic file management, which is established as the standard procedure for

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[418] Land Nordrhein-Westfalen, E-Government-Gesetz Nordrhein-Westfalen (EGovG NRW), §1, enacted July 8, 2016, accessed October 8, 2025, https://recht.nrw.de/lmi/owa/br_text_anzeigen?v_id=73520171220150354215

[419] Bernhardt, Wilfried. E-Government-Gesetzgebung von Bund und Ländern im Vergleich und Best-Practices-Leitlinie. Berichte des NEGZ Nr. 21. Berlin: Nationales E-Government Kompetenzzentrum e. V., 2021, 11.

[420] Land Nordrhein-Westfalen, E-Government-Gesetz Nordrhein-Westfalen (EGovG NRW), §1, enacted July 8, 2016, accessed October 8, 2025, https://recht.nrw.de/lmi/owa/br_text_anzeigen?v_id=73520171220150354215

[421] EGovG NRW §1 Abs. 1

administrative processes. This obligation is supported by mandates for structural process optimisation and electronic case processing. Additional provisions regulate electronic payments, electronic invoicing, and inter-agency electronic collaboration[422].

Initially, the scope of the EGovG NRW was structurally defined to allow municipalities discretion over non-mandatory requirements. However, subsequent legislative amendments have clarified and expanded this framework. As of 14 July 2020, Section 1 Paragraph 2 explicitly extends the Act's application to municipalities and municipal associations, thereby ensuring that local authorities are largely included within the binding framework of e-government regulation[423].

Beyond these core procedural requirements, the Act addresses governance elements that directly implicate administrative law principles. Within § 2, specific obligations are imposed regarding Open Data and the georeferencing of registers. The Act also regulates electronic participation and the legal validity of official electronic publications—provisions essential for ensuring legality and public access to norms. Section 3 establishes a binding framework for enforcing federal IT standards and details the structure of the IT Cooperation Council. Finally, Section 4 introduces obligations for reviewing existing legal provisions and, most notably, the Experimentation Clause (§ 25a), which permits time-limited regulatory exceptions to foster innovation[424].

4.2.1.2. The Stated Objectives

The E-Government Act of North Rhine-Westphalia (EGovG NRW) is driven by a comprehensive and multi-layered set of legislative objectives, strategically segmented to address the needs of citizens, businesses, and public administration.

4.2.1.2.1. Citizen and Business-Centric Goals

From the perspective of external users, including citizens and businesses, the Act serves as a key instrument for optimising administrative interaction. A central objective is the fundamental improvement of service quality (Servicequalität) and the enhancement of user-friendliness (Nutzerfreundlichkeit)[425].

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[422] Ibid, Section 2.
[423] Bernhardt, Wilfried. E-Government-Gesetzgebung von Bund und Ländern im Vergleich und Best-Practices-Leitlinie. Berichte des NEGZ Nr. 21. Berlin: Nationales E-Government Kompetenzzentrum e. V., 2021, 12.
[424] EGovG NRW §1 Abs. 1
[425] Ministerium für Heimat, Kommunales, Bau und Digitalisierung des Landes Nordrhein-Westfalen, "E-Government-Gesetz NRW," accessed September 25, 2025, https://www.mhkbd.nrw/themen/digitalisierung/e-government-gesetz-nrw.

Equally important is the elimination of "media discontinuities" (Medienbrüche)—the disruptive need to switch between digital and analogue communication channels, such as repeatedly entering personal data or submitting physically signed documents. For businesses, the Act aims to make cooperation with the administration more efficient and economically viable, notably through the introduction of the E-Rechnungsportal NRW, which requires electronic invoices to be submitted using the "XRechnung" standard—the mandatory, standardised data format for electronic invoicing in Germany[426].

4.2.1.2.2. Internal Administrative Transformation and Efficiency

In parallel with these external objectives, the EGovG NRW serves as a cornerstone for the internal digital transformation of public administration. The primary internal goal is process optimisation and quality enhancement, ensuring that administrative action is conducted more efficiently. This is achieved through firm obligations on governmental bodies, most notably the mandatory adoption of electronic file management (elektronische Aktenführung) and electronic case processing. These mandates drive structural change, leveraging e-government to enhance the administration's innovative capacity and modernise procedural operations.

To reinforce this internal shift, the Act introduces a Digitalisation Check (E-Government-Check) for all new legislative drafts, ensuring that new laws are conceived with digital implementation and the avoidance of media discontinuities in mind from the outset[427].

4.2.1.2.3. Flexibility and Continuous Improvement

This commitment is most clearly reflected in the Experimentation Clause (§ 25a), which authorises Ministries to issue time-limited regulatory exceptions to overcome legal impediments stemming from outdated form or competency regulations. Importantly, municipalities—the principal actors in front-line service delivery—are empowered to apply for such exemptions (§ 25a(2)), thereby leveraging local experience to identify and mitigate barriers to media-discontinuity-free processes[428].

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[426] Ministerium für Heimat, Kommunales, Bau und Digitalisierung des Landes Nordrhein-Westfalen, "E-Government-Gesetz NRW," accessed September 25, 2025, https://www.mhkbd.nrw/themen/digitalisierung/e-government-gesetz-nrw.

[427] Annex 10 to the Joint Rules of Procedure of the Ministries of North Rhine-Westphalia. Accessed October 14, 2025. https://recht.nrw.de/lmi/owa/br_text_anzeigen?v_id=12345

[428] North Rhine-Westphalia. Law on the Promotion of Electronic Administration in North Rhine-Westphalia (E-Government Law NRW), §25a, accessed November 24, 2025, https://recht.nrw.de/lmi/owa/br_text_anzeigen?v_id=73520171220150354215.

The iterative nature of this mechanism is supported by the State's commitment to the "One for All" (EfA) principle, established by the OZG, whereby results are intended for systemic reuse. Oversight of this scaling process is entrusted to the IT-Cooperation Council (§ 21)[429], mandated to ensure cross-level cooperation. The realisation of the EfA principle, however, requires complex inter-administrative coordination across four critical dimensions: legal, organisational, financial, and technical. These dimensions collectively define the structural challenges of adopting digital solutions across different administrative levels, transforming EfA implementation into a fundamental issue of multi-level administrative law coordination[430].

This dynamic approach is further supported by the establishment of a Digital Reporting Office (Digitale Meldestelle), designed to solicit feedback from citizens and businesses on obstacles encountered in electronic administrative offerings[431].

4.2.1.3. Scope of Application

The scope of application of the E-Government Act of North Rhine-Westphalia (EGovG NRW) encompasses all state authorities as well as municipalities and associations of municipalities under the direct legal supervision of the state (§ 1(2) EGovG NRW)[432]. In essence, the geographical reach of the Act remains firmly rooted in the classical principles of territorial sovereignty and administrative competence; the internet merely provides the medium through which the regulated actions are carried out.

In addition to this general territorial scope, the EGovG NRW—like the federal and most Länder e-government laws—also contains provisions on georeferencing in registers. Registers relating to domestic properties must be supplemented with coordinate data, thereby reducing administrative effort and enhancing interoperability of geodata. While Schleswig-Holstein regulates this matter separately in its Geodateninfrastrukturgesetz, NRW integrates georeferencing into the EGovG framework, albeit with exceptions where disproportionate economic effort would result. This illustrates that the scope of application

[429] see Chapter 2, 2.6.2 The Online Access Act (OZG)
[430] Service Portal NRW: Overview of the EfA principle, https://service.wirtschaft.nrw/hilfe/efa/nachnutzung/mitnutzung/ueberblick/
[431] Ministerium für Heimat, Kommunales, Bau und Digitalisierung des Landes Nordrhein-Westfalen, "E-Government-Gesetz NRW," accessed September 24, 2025, https://www.mhkbd.nrw/themen/digitalisierung/e-government-gesetz-nrw.
[432] Gesetz zur Neuregelung der E-Government-Anforderungen für das Land Nordrhein-Westfalen (E-Government Act North Rhine-Westphalia – EGovG NRW) of December 16, 2020, § 1 Abs. 2.

extends into specialised domains of register management, aligning administrative digitalisation with broader goals of data usability and standardisation[433].

4.2.1.3.1. Jurisdictional Coverage and Administrative Tiers

This broad jurisdictional coverage ensures that digital transformation is implemented uniformly across all territorial and functional administrative tiers within North Rhine-Westphalia. The inclusion of municipalities is particularly significant from an administrative law perspective, as it directly binds the local level—where the majority of citizen-facing services are delivered—to the state's digital standards. Moreover, the Act explicitly extends its application to the entirety of administrative activity, imposing requirements that span from the initial receipt of an electronic application to the final archival process[434].

In addition, all state e-government laws—including the EGovG NRW—apply to court administrations and judicial authorities only insofar as their activities are subject to review by administrative courts or by courts competent in administrative law matters involving lawyers, patent attorneys, and notaries. Judicial functions in the strict sense remain excluded, as do criminal prosecution, the enforcement of administrative offences, international judicial assistance in criminal and civil matters, and measures relating to judicial service law. This delineation reflects the constitutional separation of powers, ensuring that the judiciary's core adjudicative functions are not subsumed under e-government regulation, while administrative tasks within the judicial sphere remain subject to digitalisation requirements[435].

4.2.1.3.2. Substantive Obligations and Procedural Dictates

Substantively, the Act imposes several core obligations essential to administrative procedure. These include detailed requirements for the digital management of documents and records, the mandatory use and acceptance of qualified electronic signatures as a substitute for the written form, and strict adherence to data security and accessibility standards. In this way, the EGovG NRW functions as the central regulatory mechanism governing not only the technical platforms but also the procedural and organisational dimensions of digitalisation,

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[433] Bernhardt, Wilfried. E-Government-Gesetzgebung von Bund und Ländern im Vergleich und Best-Practices-Leitlinie. Berichte des NEGZ Nr. 21. Berlin: Nationales E-Government Kompetenzzentrum e. V., 2021, 48.

[434] North Rhine-Westphalia. Gesetz zur Förderung der elektronischen Verwaltung in Nordrhein-Westfalen (E-Government-Gesetz NRW), § 1(2), accessed November 24, 2025, https://recht.nrw.de/lmi/owa/br_text_anzeigen?v_id=73520171220150354215.

[435] Bernhardt, Wilfried. E-Government-Gesetzgebung von Bund und Ländern im Vergleich und Best-Practices-Leitlinie. Berichte des NEGZ Nr. 21. Berlin: Nationales E-Government Kompetenzzentrum e. V., 2021, 14.

ensuring that electronic processes maintain the same legal rigour as their paper-based counterparts[436].

4.2.1.3.3. Strategic Transitional Provisions

The Act's broad applicability is tempered by transitional provisions designed to accommodate varying levels of technical readiness and the constitutional status of different administrative bodies. These provisions, primarily set out in § 26 EGovG NRW, are not mere exceptions but rather a legal mechanism for phased implementation. This differentiated approach reflects a legal recognition of the complex technical and financial challenges inherent in local administrative transformation, deliberately balancing the state's imperative for consistent digital service delivery with the principle of municipal self-governance[437].

4.2.1.4. Core Legal Requirements for Public Authorities

The EGovG NRW establishes a set of binding and actionable requirements that fundamentally redefine the duties of public authorities throughout North Rhine-Westphalia.

A central obligation is the duty to provide electronic access to administrative services (elektronischer Zugang). Pursuant to § 3 EGovG NRW[438], public authorities are required to create and maintain digital access points, thereby ensuring that citizens and businesses can communicate with the administration electronically and initiate procedures online. This obligation is complemented by provisions governing electronic communication and the electronic processing of administrative procedures, which collectively establish the legal foundation for accessible and user-friendly digital interaction[439].

Comparable provisions exist across all German e-government laws, which uniformly require public authorities to open electronic access channels for the transmission of electronic documents, including those bearing qualified electronic signatures. In Bavaria, Article 2 BayEGovG even grants an explicit right of access, while Berlin imposes design-specific requirements by mandating the use of the state's corporate design and information system (§ 15). These variations illustrate that, although the EU Services Directive already required such access, the Länder legislation has slightly expanded the obligation and left authorities

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[436] North Rhine-Westphalia. Gesetz zur Förderung der elektronischen Verwaltung in Nordrhein-Westfalen (E-Government-Gesetz NRW), § 2, accessed November 24, 2025, https://recht.nrw.de/lmi/owa/br_text_anzeigen?v_id=73520171220150354215.
[437] North Rhine-Westphalia. Gesetz zur Förderung der elektronischen Verwaltung in Nordrhein-Westfalen (E-Government-Gesetz NRW), § 26, accessed November 24, 2025, https://recht.nrw.de/lmi/owa/br_text_anzeigen?v_id=73520171220150354215.
[438] EGovG NRW, § 3.
[439] EGovG NRW, § 4-5.

discretion regarding the technical form of access, without conferring an individual entitlement to a specific channel[440].

Equally significant are the strict technical and procedural requirements for the handling of digital documents. Authorities must accept electronic documents that meet the prescribed legal standards, including those bearing a qualified electronic signature or official electronic seal, thereby granting them full legal equivalence with paper-based documents[441].

The Act also specifies the conditions under which administrative acts may be issued in electronic form. The formal requirements for notification and delivery must adhere to the principles of procedural fairness and legal certainty. These obligations are governed by the provisions on delivery in state law (§ 5 Landeszustellungsgesetz)[442], read together with the formal requirements for administrative acts under § 37(3) VwVfG NRW[443] and the specific rules for electronic issuance under § 4 EGovG NRW[444]. In this way, the Act ensures that electronic administrative acts retain the same procedural legitimacy as their traditional counterparts.

Finally, reflecting the constitutional imperative of data protection, the Act imposes explicit obligations to implement robust data security and information security measures. Public authorities must guarantee the integrity, confidentiality, and availability of digital data and systems, ensuring compliance with both state and federal data protection law, including the GDPR[445].

4.2.2. Interaction with Federal Law

4.2.2.1. Vertical Interaction: State Implementation of Federal Law

The legal framework for e-government in North Rhine-Westphalia is necessarily defined by its position within the German federal system. The EGovG NRW primarily functions as the implementing layer for overarching federal legislation, notably the Online

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[440] Bernhardt, Wilfried. E-Government-Gesetzgebung von Bund und Ländern im Vergleich und Best-Practices-Leitlinie. Berichte des NEGZ Nr. 21. Berlin: Nationales E-Government Kompetenzzentrum e. V., 2021, 17.
[441] EGovG NRW, § 3.
[442] North Rhine-Westphalia. Landeszustellungsgesetz NRW. § 5. Accessed November 24, 2025. https://recht.nrw.de/lmi/owa/br_bes_detail?print=1&anw_nr=2&gld_nr=%200&ugl_nr=0&val=8844&ver=0&aufgehoben=N&keyword=&bes_id=8844&det_id=673466
[443] VwVfG §37(3).
[444] EGovG NRW, § 4.
[445] North Rhine-Westphalia. Gesetz zur Förderung der elektronischen Verwaltung in Nordrhein-Westfalen (E-Government-Gesetz NRW), § 2, accessed November 24, 2025, https://recht.nrw.de/lmi/owa/br_text_anzeigen?v_id=73520171220150354215.

Access Act (OZG)[446] and the Federal E-Government Act (EGovG Bund), operating within the constitutional distribution of powers (cf. Articles 84 and 85 of the Basic Law). While these federal acts often provide broad guidance or reserve areas of administrative discretion, state legislation leverages its autonomy to impose more specific and, in some cases, heightened requirements[447].

The core duty to provide administrative services electronically—stemming from § 1a Abs. 1 OZG[448]—is a legally compulsory obligation that overrides regional discretion. For example, § 3(1) EGovG NRW[449] mandates the acceptance of electronic documents bearing a qualified electronic signature, thereby transforming broad federal permissibility into explicit regional enforcement. Similarly, § 20 EGovG NRW[450] requires adherence to interoperability and security standards issued by the IT-Planungsrat, directly converting the federal standardisation mandate into a binding state duty.

At the same time, the EGovG NRW introduces an explicit flexibility clause for municipalities. § 1 Abs. 1 S. 3 EGovG NRW stipulates that municipalities may implement non-compulsory requirements on their own responsibility. This provision distinguishes between federally imposed obligations (such as the OZG service mandate) and state-specific digital ambitions (such as Open Data initiatives or internal procedures like elektronische Aktenführung under § 9 EGovG NRW)[451]. In doing so, the Act provides a mechanism that respects the constitutional principle of municipal self-governance, granting local authorities discretion over state-only objectives while binding them to superior federal obligations.

4.2.2.2. Horizontal Interaction: Relationship with State Administrative Procedure Law

Beyond its vertical alignment with federal law, the EGovG NRW engages in a critical horizontal interaction with the state's administrative law, the Verwaltungsverfahrensgesetz NRW (VwVfG NRW)[452]. In this relationship, the EGovG NRW operates as lex specialis, defining specific procedural rules that take precedence over the general provisions of the VwVfG NRW in matters of digital administrative action.

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[446] Gesetz zur Förderung der elektronischen Verwaltung sowie zur Änderung weiterer Vorschriften (Federal E-Government Act – EGovG [Bund]) of July 25, 2013, § 1; Gesetz zur Verbesserung des Onlinezugangs zu Verwaltungsleistungen (Online Access Act – OZG) of August 14, 2017, § 1.
[447] See Chapter Two, Section 2.4.3.
[448] Gesetz zur Förderung der elektronischen Verwaltung sowie zur Änderung weiterer Vorschriften (Federal E-Government Act – EGovG [Bund]) of July 25, 2013, § 1; Gesetz zur Verbesserung des Onlinezugangs zu Verwaltungsleistungen (Online Access Act – OZG) of August 14, 2017, § 1.
[449] EGovG NRW §3(1)
[450] EGovG NRW §20
[451] EGovG NRW, § 3-9.
[452] Administrative Procedure Act of North Rhine-Westphalia (VwVfG NRW)

This distinction is essential for legal clarity. For instance, the general requirements for written form in the VwVfG NRW[453] are superseded or modified by the EGovG NRW provisions governing electronic form replacement (§ 3 EGovG NRW)[454].

4.2.2.3. The Principle of Inter-State Cooperation and Comparative Experience

The effectiveness of the EGovG NRW, and the national implementation of the OZG more broadly, depends on successful inter-jurisdictional cooperation and the capacity of states to learn from each other's experiences. Regional platforms, such as the Bavaria Future Congress in 2019, highlight shared federal challenges in realising the vision of a "Digital Homeland" for citizens and businesses. The Bavarian experience underscores the tension between central standardisation—exemplified by user accounts such as BayernID and Servicekonto.NRW—and the preservation of municipal self-governance (kommunale Selbstbestimmung), a tension explicitly addressed in § 1 Abs. 1 S. 3 EGovG NRW[455].

This comparative perspective contextualises NRW's actions by illustrating common difficulties, including infrastructure provision in rural areas and the need to shift the legal focus from a "paper-based norm" to one that is "online-ready." Reports further emphasise the systemic challenge posed by the principle of "Once Only," which requires comprehensive register connectivity and overcoming fragmentation caused by ministerial autonomy (Ressorthoheit) at the federal level. This fragmentation directly impedes the objectives of both the OZG and the EGovG NRW[456].

4.2.3. Influence of EU Law

The legal landscape governing e-government in North Rhine-Westphalia is significantly shaped by binding regulations of the European Union, particularly the General Data Protection Regulation (GDPR) and the eIDAS Regulation (Electronic Trust Services).

4.2.3.1. The General Data Protection Regulation (GDPR)

The General Data Protection Regulation (GDPR), as a directly applicable European Regulation (Verordnung), sets the mandatory Union-wide standard for the processing of personal data and privacy. Unlike a Directive (Richtlinie), which requires national transposition, the GDPR applies immediately in all Member States, thereby overriding any

[453] Administrative Procedure Act of North Rhine-Westphalia (VwVfG NRW)
[454] EGovG NRW, § 3.
[455] Wilfried Kruse and Benjamin Bauer, eds., Yearbook Germany Digital 2020: E-Government and Modernization at Federal, State and Local Levels (Bonn: Behörden Spiegel, 2020), 26-37
[456] Wilfried Kruse and Benjamin Bauer, eds., Yearbook Germany Digital 2020: E-Government and Modernization at Federal, State and Local Levels (Bonn: Behörden Spiegel, 2020), 26-37

conflicting national or state law[457]. In Germany, the federal legislature enacted the Federal Data Protection Act (BDSG), adapting the framework to national contexts[458].

North Rhine-Westphalia (NRW) also enacted its own Data Protection Act (DSG NRW). The relationship between the GDPR, the BDSG, and the DSG NRW is hierarchical: the GDPR establishes core rights and obligations; the BDSG implements federal options and exemptions; and the DSG NRW regulates data processing by state and municipal authorities, ensuring compliance with both federal and European frameworks. While substantive principles remain identical due to the GDPR's direct effect, the DSG NRW is essential for specifying procedural rules and designating competent supervisory authorities within the state[459].

GDPR principles such as data minimisation, purpose limitation, and privacy by design and by default (cf. Article 25 GDPR) necessitate significant procedural and technical adjustments within state and municipal authorities. The DSG NRW translates these principles into binding organisational requirements, ensuring, for example, that the mandatory use of electronic files (§ 9 EGovG NRW)[460] complies with standards of integrity and confidentiality. Moreover, the EGovG NRW itself explicitly addresses data protection and security, imposing obligations to adhere to IT security standards. § 20 EGovG NRW[461] requires compliance with binding security standards decreed by the Federal-State IT-Planungsrat, while § 22 Abs. 3 Nr. 5 designates the coordination of information security as a key duty of the State's IT Representative[462]. Collectively, these provisions ensure that the pursuit of administrative efficiency through digitalisation is systematically balanced against the fundamental right to data protection, thereby safeguarding transparency and citizen control in digital interactions with the state.

4.2.3.2. The eIDAS Regulation (Electronic Trust Services)

Regulation (EU) No. 910/2014 on electronic identification and trust services (eIDAS) provides the binding framework for electronic identification and trust services across the

[457] European Union, General Data Protection Regulation (GDPR), Regulation (EU) 2016/679, Article 25, accessed October 10, 2025, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32016R0679
[458] Germany. Bundesdatenschutzgesetz (BDSG), Federal Law Gazette I, 2017, 2097.
[459] Datenschutzgesetz Nordrhein-Westfalen (DSG NRW) – the State Data Protection Act of North Rhine-Westphalia, which regulates data processing by state and municipal authorities and designates supervisory authorities within NRW.
[460] Land Nordrhein-Westfalen, *E-Government-Gesetz Nordrhein-Westfalen (EGovG NRW)*, §9, enacted July 8, 2016.
[461] Land Nordrhein-Westfalen, *E-Government-Gesetz Nordrhein-Westfalen (EGovG NRW)*, §20, enacted July 8, 2016.
[462] Land Nordrhein-Westfalen, *E-Government-Gesetz Nordrhein-Westfalen (EGovG NRW)*, § 22 Abs 3 No 5, enacted July 8, 2016.

Union. The eIDAS ensures legal certainty of digital processes and guarantees cross-border interoperability across the Union[463].

Article 25 eIDAS stipulates that an electronic signature shall not be denied legal effect solely because it is electronic. It further establishes that a Qualified Electronic Signature (QES) has the same legal effect (Rechtswirkung) as a handwritten signature[464]. This provision is found in the requirements in § 3 EGovG NRW mandating acceptance of electronically signed documents[465].

In addition, Article 6 eIDAS requires Member States to recognise notified electronic identification schemes for cross-border administrative services. This obligation is vital for the functional implementation of the OZG mandate, ensuring that services can be accessed independently of location. By enforcing uniform standards for electronic seals, time stamps, and delivery services, eIDAS creates a trusted environment for trans-European digital administration, thereby imposing on the EGovG NRW a duty to maintain compliance with supranational interoperability standards.

Beyond electronic signatures, eIDAS also frames the use of electronic identification as a substitute for the written form. Pursuant to § 3a Abs. 2 VwVfG, the combination of structured data input into an electronic form with the use of the eID constitutes a legally valid Schriftformersatz. This mechanism has been implemented across federal authorities and most Länder under § 18 PAuswG, with further sector-specific extensions such as the electronic health professional card in Saarland (§ 3(3) EGovG SL). North Rhine-Westphalia introduces a distinctive rule in § 3(4) EGovG NRW, permitting the IT service provider to transmit eID master data to providers of services of general economic interest under Art. 14 TFEU, subject to explicit consent and GDPR compliance. Expert evaluations of the Federal EGovG have recommended replacing the explicit enumeration of identification methods with neutral trust and security requirements aligned with eIDAS, thereby ensuring flexibility for future innovations in authentication[466].

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[463] Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market (eIDAS Regulation), Art. 25.
[464] Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market (eIDAS Regulation), Art. 25.
[465] EGovG NRW, § 3.
[466] Bernhardt, Wilfried. E-Government-Gesetzgebung von Bund und Ländern im Vergleich und Best-Practices-Leitlinie. Berichte des NEGZ Nr. 21. Berlin: Nationales E-Government Kompetenzzentrum e. V., 2021, 22.

4.2.3.3. Status as Binding Baseline: German and Regional Response

Taken together, the GDPR and eIDAS Regulation function as a binding supra-national baseline for Germany's digital legal framework. They restrict Länder autonomy to enact conflicting provisions, ensuring that technical standards and fundamental rights are uniformly guaranteed.

As Fábián and Kollár (2023) observe, the urgency of digital integration was accelerated by external factors; the COVID-19 pandemic, for instance, forced a global "time leap" in digitisation, sharply increasing demand for seamless online administration[467].

4.2.4. Strategic Initiatives and Financial Mechanisms

While the EGovG NRW establishes the normative legal duties for administrative digitalisation, the successful implementation of these mandates—particularly at the municipal level—depends critically on state-level strategic initiatives and financial support. North Rhine-Westphalia's response to this operational challenge has been institutionalised through comprehensive programmes that complement the legislative framework and provide the necessary political and financial enablement. These initiatives bridge the gap between abstract legal obligation and practical administrative reality[468].

4.2.4.1. The Overarching Strategic Framework: Digitalstrategie 2.0:

The principal strategic framework guiding North Rhine-Westphalia's digital transformation is the Digitalstrategie 2.0, adopted in November 2021. This policy document articulates a comprehensive, cross-ministerial vision for digitalisation encompassing public administration, the economy, society, and infrastructure. It represents the State's coordinated effort to align sectoral initiatives under a unified strategic direction[469].

According to the strategy's progress report, the first phase—focused on conceptual planning and foundational implementation—has largely been completed. This stage provided the political and organisational blueprint for resource allocation and mandated administrative reform across multiple levels of government. Initial achievements underscore the State's institutional commitment to digital transformation, including the amendment of the

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[467] Adrián Fábián and Gergő Kollár, "Trends in the Digitalisation of Public Administrations – In Light of EU Legislation and Domestic Developments," *Central European Public Administration Review* 21, no. 2 (2023): 121–125.

[468] State Government of North Rhine-Westphalia. Cabinet adopts new E-Government Act, press release, March 3, 2020, accessed November 24, 2025, https://www.land.nrw/pressemitteilung/kabinett-verabschiedet-neues-e-government-gesetz.

[469] Land Nordrhein-Westfalen, *Strategie für das digitale Nordrhein-Westfalen 2.0: Teilhabe ermöglichen – Chancen eröffnen* (Düsseldorf: Ministerium für Wirtschaft, Innovation, Digitalisierung und Energie, 2021) 6–7.

E-Government Act, significant advances in the expansion of Gigabit and LTE networks, and the creation of digital model authorities and regions[470].

Building upon these foundations, the successful realisation of pilot initiatives such as the Virtuelles Krankenhaus (Virtual Hospital), the mobil.nrw App, and the digitale Gewerbeamt (digital business registration office) has paved the way for the next stage of implementation. This second phase, as defined in the Digitalstrategie 2.0, focuses on scaling up and accelerating proven model solutions while transitioning from conceptual frameworks to regular administrative operation (Regelbetrieb)[471].

4.2.4.2. Internal Compliance and Procedural Mandates (DVN/EVA):

To operationalise the procedural obligations established by the EGovG NRW of 2016, the State has implemented the Digitale Verwaltung Nordrhein (DVN) programme, which functions as the strategic coordinating body for all EGovG NRW initiatives under the oversight of the Chief Information Officer of NRW (CIO NRW). This programme primarily targets internal administrative processes, providing a structured framework for the digital transformation of state authorities[472].

At the heart of DVN lies the Elektronisches Verwaltungshandeln (EVA) initiative, one of the most extensive digitalisation projects in the State. EVA directly translates the Act's internal procedural mandates into practice and is built upon three foundational components, each designed to establish a media-discontinuity-free and legally compliant digital workflow[473]:

E-Akte (Electronic File): Constitutes the backbone of e-government operations, providing audit-proof (revisionssicher) storage of electronic files, documents, and associated processes. It satisfies the legal requirement under § 9 Abs. 3 EGovG NRW mandating exclusive electronic file management for most state administrative bodies from 2022 onwards. By centralising file-relevant information—including documents, emails, and status

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[470] Land Nordrhein-Westfalen, *Strategie für das digitale Nordrhein-Westfalen 2.0: Teilhabe ermöglichen – Chancen eröffnen* (Düsseldorf: Ministerium für Wirtschaft, Innovation, Digitalisierung und Energie, 2021), 7–8.
[471] Land Nordrhein-Westfalen, *Strategie für das digitale Nordrhein-Westfalen 2.0: Teilhabe ermöglichen – Chancen eröffnen* (Düsseldorf: Ministerium für Wirtschaft, Innovation, Digitalisierung und Energie, 2021), 7–8.
[472] Ministerium für Wirtschaft, Innovation, Digitalisierung und Energie des Landes Nordrhein-Westfalen, "Elektronische Verwaltungsarbeit," accessed October 11, 2025, https://www.wirtschaft.nrw/elektronische-verwaltungsarbeit. The Digitale Verwaltung Nordrhein programme is tasked with the strategic control (strategische Steuerung) of all EGovG NRW projects.
[473] Ministerium für Wirtschaft, Innovation, Digitalisierung und Energie des Landes Nordrhein-Westfalen, "Elektronische Verwaltungsarbeit," accessed October 11, 2025, https://www.wirtschaft.nrw/elektronische-verwaltungsarbeit. The Digitale Verwaltung Nordrhein programme is tasked with the strategic control (strategische Steuerung) of all EGovG NRW projects.

updates from the E-Laufmappe—it enhances transparency and accessibility for authorised personnel[474].

E-Laufmappe (Electronic Workflow Folder): Replaces traditional paper circulation folders, implementing the electronic case processing obligations under § 12 Abs. 1 EGovG NRW. Its functions include inbox processing (Posteingangsbearbeitung), such as attaching viewing notes to correspondence, and case steering (Vorgangssteuerung) through disposition points (Verfügungspunkte), which support internal endorsements and collaborative editing[475].

Ersetzendes Scannen (Substitutive Scanning): Ensures the legally compliant transfer (rechtssichere Übertragung) of incoming paper documents into digital form. Strategically significant, it allows for the lawful destruction of original paper documents, thereby completing the digital transition and fulfilling the objectives of electronic processing and storage mandated by the E-Akte system[476].

The coordinated interaction of these three services creates a coherent digital workflow, reducing redundancies and expediting administrative procedures. EVA thus serves as the principal instrument for enhancing efficiency and quality in administrative action (Verwaltungshandeln) by structurally modernising internal processes and promoting effective cross-level coordination[477].

4.2.4.3. External Service Delivery and Federal Mandates (OZG Implementation):

The DVN programme also extends its strategic focus to the external interface of service delivery, ensuring compliance with the Federal Online Access Act (Onlinezugangsgesetz, OZG). The OZG mandates the provision of 575 defined administrative services online for citizens and businesses, translating into over 5,000 distinct

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[474] Ministerium für Wirtschaft, Innovation, Digitalisierung und Energie des Landes Nordrhein-Westfalen, "Elektronische Verwaltungsarbeit," accessed October 11, 2025, https://www.wirtschaft.nrw/elektronische-verwaltungsarbeit. The Digitale Verwaltung Nordrhein programme is tasked with the strategic control (strategische Steuerung) of all EGovG NRW projects.
[475] Ministerium für Wirtschaft, Innovation, Digitalisierung und Energie des Landes Nordrhein-Westfalen, "Elektronische Verwaltungsarbeit," accessed October 11, 2025, https://www.wirtschaft.nrw/elektronische-verwaltungsarbeit. The Digitale Verwaltung Nordrhein programme is tasked with the strategic control (strategische Steuerung) of all EGovG NRW projects.
[476] Ministerium für Wirtschaft, Innovation, Digitalisierung und Energie des Landes Nordrhein-Westfalen, "Elektronische Verwaltungsarbeit," accessed October 11, 2025, https://www.wirtschaft.nrw/elektronische-verwaltungsarbeit. The Digitale Verwaltung Nordrhein programme is tasked with the strategic control (strategische Steuerung) of all EGovG NRW projects.
[477] Ministerium für Wirtschaft, Innovation, Digitalisierung und Energie des Landes Nordrhein-Westfalen, "Elektronische Verwaltungsarbeit," accessed October 11, 2025, https://www.wirtschaft.nrw/elektronische-verwaltungsarbeit. The Digitale Verwaltung Nordrhein programme is tasked with the strategic control (strategische Steuerung) of all EGovG NRW projects.

individual services. NRW manages this federal obligation through structured technical and collaborative mechanisms[478].

A central technical component is the Serviceportal.NRW, the primary digital access point for users seeking mandated OZG services. These provisions are supported by the "Einer für Alle" (EfA) principle. Through EfA, NRW digitalises specific services in a manner that allows other federal states to reuse the solutions without redeveloping the process, conserving time, resources, and costs. NRW leads digitisation efforts in the thematic fields of Labour and Retirement (Arbeit und Ruhestand) and Engagement and Hobby (Engagement und Hobby)[479].

The technical execution of this external mandate is anchored by the state's central IT service provider, IT.NRW. This entity develops and operates critical platforms—including the Familienportal (Family Portal), the Sozialplattform (Social Platform), and the Serviceportal.NRW—and supplies the Central Data Exchange Infrastructure (ZDI). The ZDI is essential for the legally compliant and media-discontinuity-free transfer of online applications to the correct processing authorities[480].

Collectively, these instruments—the strategic steering of DVN, the technical operations of IT.NRW, and the legal foundation of the EGovG NRW and OZG—form the institutional infrastructure supporting the regulatory framework. This demonstrates that NRW's administrative digitalisation is not merely normative but involves concrete, resource-backed measures designed to bridge the gap between statutory mandates and the practical realisation of efficiency, user-friendliness, and procedural compliance (cf. EGovG NRW objectives)[481].

4.2.5. Legislative Dynamics: Strategic Amendments and Regulatory Strengthening

The Supplementary Report of the Ministry of Economic Affairs, Innovation, Digitalisation and Energy (MWIDE), published in August 2021, provides authoritative

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[478] IT.NRW, "Onlinezugangsgesetz (OZG)," Landesbetrieb Information und Technik Nordrhein-Westfalen, accessed October 11, 2025, https://www.it.nrw/informationstechnik/digitale-gesellschaft/onlinezugangsgesetz-ozg.
[479] IT.NRW, "Onlinezugangsgesetz (OZG)," Landesbetrieb Information und Technik Nordrhein-Westfalen, accessed October 11, 2025, https://www.it.nrw/informationstechnik/digitale-gesellschaft/onlinezugangsgesetz-ozg.
[480] IT.NRW, "Onlinezugangsgesetz (OZG)," Landesbetrieb Information und Technik Nordrhein-Westfalen, accessed October 11, 2025, https://www.it.nrw/informationstechnik/digitale-gesellschaft/onlinezugangsgesetz-ozg.
[481] IT.NRW, "Onlinezugangsgesetz (OZG)," Landesbetrieb Information und Technik Nordrhein-Westfalen, accessed October 11, 2025, https://www.it.nrw/informationstechnik/digitale-gesellschaft/onlinezugangsgesetz-ozg.

insight into these legislative dynamics and highlights the State's commitment to recalibrating its regulatory framework in response to practical challenges (MWIDE 2021)[482].

4.2.5.1. The Comprehensive Novella and Acceleration Mandate

The last amendment of the e-government law in 2020 had a profound impact on both the scope and the timeline of the Act. First, it significantly extended the Act's coverage to include almost all state authorities and institutions (cf. § 1, § 9 Abs. 3 S. 3, and § 12 Abs. 3 EGovG NRW). Second, it accelerated the full digitalisation mandate from 2031 to 2025 (§ 12 EGovG NRW). While this aggressive timeline aligned with the political objective of expediting the State's digital transformation, it simultaneously heightened institutional pressure and posed significant challenges to maintaining procedural quality and proportionality during the transition[483].

4.2.5.2. Institutionalizing Transparency and Control

The legislative response also sought to embed accountability and transparency more firmly within the governance framework. The Novella introduced a binding Open Data provision (§ 16a EGovG NRW), transforming transparency from a policy aspiration into a legally enforceable duty to publish data in open formats. Complementing this, the introduction of the E-Government-Check (Digitalisierungsprüfung) for all new legislative drafts in 2021 established a proactive mechanism to uphold legality. By requiring that future laws be conceived with digital implementation and the avoidance of media discontinuities as preconditions, this measure aims to prevent the inadvertent creation of new legal barriers to digital services. In this way, transparency and legality are institutionalised not only as guiding principles but as enforceable procedural safeguards[484].

4.2.5.3. Evolving Procedural Flexibility

Finally, the Act has been adapted to address the rigidities inherent in traditional administrative form requirements. The temporary § 25a EGovG NRW, introduced during the COVID-19 pandemic, demonstrated the necessity of procedural flexibility in times of crisis.

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[482] Ministerium für Wirtschaft, Innovation, Digitalisierung und Energie des Landes Nordrhein-Westfalen (MWIDE), *Sitzung des Ausschusses für Digitalisierung und Innovation am 24. Juni 2021: Digitalstrategie als Nutzen für die Menschen in NRW* (Düsseldorf: MWIDE, 31. August 2021): 10-20

[483] Ministerium für Wirtschaft, Innovation, Digitalisierung und Energie des Landes Nordrhein-Westfalen (MWIDE), *Sitzung des Ausschusses für Digitalisierung und Innovation am 24. Juni 2021: Digitalstrategie als Nutzen für die Menschen in NRW* (Düsseldorf: MWIDE, 31. August 2021): 10-20

[484] Ministerium für Wirtschaft, Innovation, Digitalisierung und Energie des Landes Nordrhein-Westfalen (MWIDE), *Sitzung des Ausschusses für Digitalisierung und Innovation am 24. Juni 2021: Digitalstrategie als Nutzen für die Menschen in NRW* (Düsseldorf: MWIDE, 31. August 2021): 10-20

Its planned replacement with a permanent Experimentation Clause, as outlined in the draft GSMD Law, signals a shift toward a more adaptable and iterative model of continuous improvement. This clause is designed to permit temporary exceptions to form and competency regulations for the purpose of testing new digital modes of task fulfilment. By allowing measured, time-limited deviations from strict formal rules, the provision directly engages the principle of proportionality, enabling innovation and efficiency while safeguarding fairness[485].

This dynamic legislative history confirms that the EGovG NRW is not merely a static statute but a living legal framework. It continuously negotiates the tension between administrative tradition and digital necessity, embedding flexibility, transparency, and legality into the evolving architecture of public administration.

4.3. Analysis of the EGovG NRW in Light of Core Administrative Law Principles

The preceding discussion has outlined the declared objectives of the E-Government Act of North Rhine-Westphalia (EGovG NRW), which primarily aim to enhance administrative efficiency and user orientation. From an academic perspective in administrative law, however, these policy aims and implementation mechanisms require critical scrutiny to assess their practical and legal implications.

This analysis proceeds from the normative framework of the general principles of administrative law, which provide a lens through which the legal and institutional design of the EGovG NRW can be evaluated. The purpose is not to suggest that the Act was explicitly conceived with these principles in mind, but rather to examine whether its provisions and related initiatives are consistent with, or potentially challenge, fundamental doctrines. Accordingly, the discussion moves beyond a descriptive account of legislative measures toward a critical and normative evaluation of their broader administrative and constitutional significance.

By systematically evaluating the Act's provisions against the fundamental principles of administrative law, the analysis seeks to offer a balanced assessment of its legal and institutional consequences. In doing so, it aims to identify potential inconsistencies or regulatory gaps and thereby establish a foundation for reform-oriented recommendations in the concluding chapter.

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[485] Ministerium für Wirtschaft, Innovation, Digitalisierung und Energie des Landes Nordrhein-Westfalen (MWIDE), *Sitzung des Ausschusses für Digitalisierung und Innovation am 24. Juni 2021: Digitalstrategie als Nutzen für die Menschen in NRW* (Düsseldorf: MWIDE, 31. August 2021): 10-20

4.3.1. Legal Certainty (Rechtssicherheit) and Legality (Gesetzmäßigkeit)

The following analysis examines the extent to which the Act's central provisions succeed in embedding digital administrative practices within a framework that ensures both predictability and legal validity. Particular attention will be given to how the Act regulates formal administrative acts central to lawful operation—namely, the legal equivalence of electronic communication and signature, the legally compliant archiving of records through the E-Akte, and the procedural integrity of document conversion under Ersetzendes Scannen.

Furthermore, this section will assess whether the implementation structure—characterised by a division of responsibilities between the State and its central IT service provider (IT.NRW)—maintains the degree of competence clarity (Zuständigkeit) required by the principle of legality. By analysing these concrete mechanisms, the discussion seeks to determine whether the EGovG NRW offers a sufficiently explicit and coherent legislative framework capable of withstanding the formal and constitutional demands imposed by administrative digitalisation.

4.3.1.1. Legal Equivalence between electronic and analogue forms

Paragraph 3(1) EGovG NRW[486] addresses this requirement by establishing an obligation for all state and municipal authorities to accept electronic documents. This legislative alignment is crucial for enabling the substitution of the constitutionally required written form in digital contexts, while safeguarding procedural integrity and reliability.

4.3.1.1.1. Statutory Mandate and Legal Certainty

At the core of this obligation lies the non-discretionary nature of § 3(1) EGovG NRW. The provision requires that any document bearing a QES or an official electronic seal be granted the same legal validity (Rechtswirkung) and evidentiary weight as a handwritten paper document, thereby satisfying the constitutional requirement of Schriftform.

This clarity strengthens legal certainty by removing procedural uncertainty (Unklarheit) for both citizens and authorities concerning the validity and admissibility of digital submissions (cf. eIDAS Regulation, Art. 25)[487].

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[486] North Rhine-Westphalia. *E-Government-Gesetz Nordrhein-Westfalen (EGovG NRW).* Gesetz- und Verordnungsblatt für das Land Nordrhein-Westfalen, 2016. §3.

[487] European Union. *Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market (eIDAS Regulation).* Official Journal of the European Union, L 257, 28 August 2014.

Nevertheless, while the law theoretically permits the replacement of paper form with electronically signed documents—and, in some instances, allows the simple electronic form—the framework does not entirely eliminate obstacles associated with Schriftform. The most significant barrier lies in the high security requirements stipulated by § 3a (2) VwVfG. Although the law equates the simple electronic form with written form in certain contexts, numerous Schriftformerfordernisse remain in specialised technical laws (Fachgesetze). According to § 3a II VwVfG in conjunction with § 1 I a.E. VwVfG, a statutory requirement for written form does not preclude electronic communication; however, the electronic form must invariably be linked to a QES. This necessity, demanding a high security standard even for routine communication, constitutes a practical barrier that limits the potential for a complete and unhindered transition to fully digitalised administrative relationships[488].

This doctrinal alignment reflects what Stelkens (2024) has described as the constitutional framework of digitalised administrative procedures, emphasising that digitalisation must remain embedded within principles of legality, democratic legitimacy, and effective legal protection[489].

As Stelkens (2024) further notes, the constitutional requirement of legislative determinacy ensures that legislatures are aware of the scope of regulation and the responsibility for fundamental rights interferences, that administrations know precisely what they may, must, and shall do, and that citizens can foresee what is required of them. This principle also enables judicial review by providing clear standards against which administrative decisions can be measured[490].

4.3.1.1.2. Shifting Implementation Framework and Available Options

Although the legal mandate of § 3 EGovG NRW remains unchanged, the operational framework for high-trust authentication has evolved. The Servicekonto.NRW-Verordnung, which previously governed the technical implementation of the state identity service, was repealed on 31 May 2024, with its functions transferred to the federal BundID platform. This

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[488] Britz, Gabriele. "Reaktionen des Verwaltungsverfahrensrechts auf die informationstechnischen Vemetzungen der Verwaltung." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 214-277. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 223-224.

[489] Ulrich Stelkens, Verfassungsrechtliche Rahmenbedingungen des digitalisierten Verwaltungsverfahrens, presentation at the Online Winter Conference of the Arbeitsgemeinschaft für Verwaltungsrecht im Deutschen Anwaltverein, Landesgruppe Nordrhein-Westfalen, 2024. Einführung Verwaltungsrecht (arbeitsgemeinschaft-verwaltungsrecht-nrw.de)

[490] Ulrich Stelkens, Verfassungsrechtliche Rahmenbedingungen des digitalisierten Verwaltungsverfahrens, presentation at the Online Winter Conference of the Arbeitsgemeinschaft für Verwaltungsrecht im Deutschen Anwaltverein, Landesgruppe Nordrhein-Westfalen, 2024. Einführung Verwaltungsrecht (arbeitsgemeinschaft-verwaltungsrecht-nrw.de)

reform enhances legal certainty by promoting nationwide interoperability (Interoperabilität) and providing a unified identification infrastructure for administrative services across Germany[491].

4.3.1.1.3. Maintaining Legality: The Transfer of Procedural Safeguards

The procedural safeguards contained in § 7 Servicekonto.NRW-Verordnung illustrate the close relationship between legal certainty and data protection. Under § 7(1)–(4), authorities were required to specify the intended purpose, ensure data minimisation, and obtain user consent[492].

Although these provisions were repealed, their normative essence—that identity data must be processed lawfully and remain purpose-bound—continues to apply under the GDPR[493] and the broader principles of legality and procedural fairness. The BundID system integrates these safeguards through explicit user consent requirements for data pre-filling and by linking authentication to defined confidence levels. Hence, while the regulatory instrument has changed, the underlying guarantees of data protection and purpose limitation remain preserved within the new federal infrastructure.

By relying on a sovereignly issued digital identity instrument, the legal framework ensures both legal certainty and equality of access in digital administration. This approach exemplifies a balanced model of procedural legality, technological interoperability, and social inclusion.

In summary, § 3 EGovG NRW represents a cornerstone of legal certainty in the digital administrative landscape of North Rhine-Westphalia. Its successful implementation—through instruments such as the QES, eID, and BundID platform—illustrates a coherent synthesis of normative precision, technical reliability, and procedural fairness. The integration of eIDAS-compliant mechanisms into federal and state practice demonstrates that legal equivalence between electronic and paper-based procedures is not merely declarative but operationally embedded in the evolving structure of German administrative law.

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[491] NRW Serviceportal, "Das Servicekonto.NRW wurde durch die BundID abgelöst," accessed October 13, 2025, https://meineverwaltung.nrw/inhalt/a483a79a-aea2-43d1-8fd6-7814eb640eb3

[492] Nordrhein-Westfalen, Gesetzgebungsblatt für das Land Nordrhein-Westfalen, Gesetz- und Verordnungsblatt (NRW), "Besoldungsrechtliche Ergänzungen 2021: Bescheid Nr. 36427," accessed October 11, 2025, https://recht.nrw.de/lmi/owa/br_bes_detail?sg=0&menu=0&bes_id=36427&anw_nr=2&aufgehoben=N&det_id=592241

[493] European Union. *General Data Protection Regulation (GDPR),* Regulation (EU) 2016/679, 27 April 2016.

4.3.1.2. Formal Requirements for Electronic Administrative Acts (Verwaltungsakte)

While the acceptance of electronic submissions and the legal parity of the Qualified Electronic Signature (QES) establish the validity of input documents (as discussed above), the implementation of digital governance requires an equally careful examination of how the formal requirements for administrative acts are fulfilled when such acts are issued electronically. The legal validity of an electronic administrative act depends fundamentally on compliance with the conditions set out in § 37 VwVfG—mirrored in state administrative law—concerning both substantive content and authenticated origin[494].

Beyond QES and eID, § 3a Abs. 2 Satz 3 Nr. 4 VwVfG recognises 'other secure procedures' defined by federal regulation with Bundesrat approval as valid substitutes for the written form. These procedures must authenticate the sender, ensure data integrity, and guarantee accessibility, with the IT-Planning Council issuing recommendations. Länder have adopted differentiated approaches: Saxony introduced a delayed obligation to allow self-governing bodies sufficient time, while Saxony-Anhalt and Lower Saxony permit such procedures as alternatives to De-Mail. North Rhine-Westphalia has gone further with § 25a EGovG NRW, empowering authorities to authorise additional forms of electronic communication to replace statutory written form, subject to discretion and without conferring an individual entitlement[495]. This innovation underscores the dynamic interplay between federal baselines and Länder experimentation in safeguarding legality in digital administration.

4.3.1.2.1. The Role of the Qualified Electronic Seal in Legality

The introduction of the Qualified Electronic Seal under the eIDAS Regulation corrected a structural imbalance in German law. Under the former Signaturgesetz, only natural persons could generate a QES, forcing administrative staff to sign official acts with their personal signature keys, even though they were acting on behalf of the authority. This organisational workaround suggested a personal declaration of will where none existed. By contrast, the QESeal does not express individual intent but authenticates the legal entity itself, thereby serving as the digital counterpart of the official stamp. As Vogt (2016) emphasises, this distinction opens up comprehensive potential for administrative practice, ensuring that

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[494] Administrative Procedure Act (VwVfG) §37.

[495] Bernhardt, Wilfried. E-Government-Gesetzgebung von Bund und Ländern im Vergleich und Best-Practices-Leitlinie. Berichte des NEGZ Nr. 21. Berlin: Nationales E-Government Kompetenzzentrum e. V., 2021, 23.

electronic acts verifiably originate from the competent authority and satisfy the principle of legality[496].

Beyond technical authentication, electronic administrative acts must satisfy all traditional content requirements stipulated by administrative law[497].

4.3.1.2.2. Technical and Organisational Safeguards

To prevent procedural deficiencies that could render an administrative act voidable or null, electronic decision-making must be conducted within systems that technically ensure permanence and integrity. Subordinate regulations and ministerial directives play a crucial role in operationalising the statutory framework. For instance, the Verwaltungsvorschrift zur elektronischen Aktenführung (VV E-Akte NRW) establishes detailed technical and organisational requirements for secure, traceable, and compliant electronic record-keeping within state administration[498].

These instruments collectively underpin the formal validity and procedural reliability of electronic administrative acts, translating abstract legal mandates into enforceable administrative practice. In doing so, they ensure that the transition from paper-based to digital procedures does not erode the constitutional guarantees of legality and legal certainty, but rather embeds them within the evolving architecture of digital administration.

4.3.1.3. Clarity of Procedural Law in Digital Archiving and Access

The formal requirements governing electronic administrative acts do not conclude with their lawful creation and transmission; rather, the principles of legality and legal certainty extend throughout the entire lifecycle of the document. This continuity necessitates comprehensive frameworks for digital archiving and access. Preserving the legal certainty of a digital decision demands procedural clarity that guarantees the integrity of the electronic record, a safeguard derived from the constitutional principle of the Rule of Law. Within this context, the E-Government Act of North Rhine-Westphalia (EGovG NRW) provides the legal and technical foundation for such protection.

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[496] Theresa Vogt, "Die neue eIDAS-Verordnung – Chance und Herausforderung für die öffentliche Verwaltung in Deutschland," "The new eIDAS Regulation – Opportunity and challenge for public administration in Germany," Information – DEGRUYTER, Wissenschaft & Praxis 67, no. 1 (2016): 61–68: 64, https://doi.org/10.1515/iwp-2016-0011.

[497] Administrative Procedure Act (VwVfG) §39.

[498] North Rhine-Westphalia, Law and Ordinance Gazette for the State of North Rhine-Westphalia, "Law regulating electronic legal transactions with authorities in North Rhine-Westphalia (ERV Law NRW)", https://recht.nrw.de/lmi/owa/br_bes_text?anw_nr=1&gld_nr=2&ugl_nr=2006&bes_id=53709&val=53709&ver=7&sg=2&aufgehoben=N&menu=0

Specifically, § 9 EGovG NRW[499] establishes the legality of purely electronic file management, subject to strict adherence to the "principles of proper file management". This provision serves as the legal basis for enforcing immutability and traceability through detailed technical requirements defined in implementing regulations, such as the Verwaltungsvorschrift zur elektronischen Aktenführung (VV E-Akte NRW)[500]. Moreover, § 11 EGovG NRW addresses the technical dimension of procedural law by requiring that electronic records be converted into suitable formats to ensure long-term readability. Compliance with such standards forms an integral element of procedural legality, since any failure to preserve durability directly undermines evidentiary reliability. To fulfil its documentation function permanently, the electronic file must be preserved until final archiving in accordance with federal and state archive laws and remain accessible throughout[501].

The effective realisation of these Grundsätze ordnungsgemäßer Aktenführung points to the necessity of further legislative codification to explicitly define technical and procedural requirements for electronic files. For example, the criterion of completeness suggests the need for clear rules on the inclusion of emails, the permissibility of deleting documents, and the documentation of processing workflows to ensure attribution of specific work steps to the responsible processor. Similarly, to satisfy comprehensibility, legislation could mandate user-friendly interface design, systematic file designation, and the maintenance of a comprehensive index of records. With respect to permanence, any full transition to electronic file management should be permitted only under the strict precondition that technical measures are explicitly legislated to guarantee immutability and readability, notwithstanding the volatility of hardware and software[502].

Furthermore, procedural law must provide explicit guarantees for the citizen's right of access to administrative files (Akteneinsicht), which is fundamentally established under § 29 VwVfG[503]. The transition to electronic record-keeping must not diminish the principle of

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[499] EGovG NRW §9

[500] North Rhine-Westphalia, Law and Ordinance Gazette for the State of North Rhine-Westphalia, "Law regulating electronic legal transactions with authorities in North Rhine-Westphalia (ERV Law NRW)", https://recht.nrw.de/lmi/owa/br_bes_text?anw_nr=1&gld_nr=2&ugl_nr=2006&bes_id=53709&val=53709&ver=7&sg=2&aufgehoben=N&menu=0

[501] Britz, Gabriele. "Reaktionen des Verwaltungsverfahrensrechts auf die informationstechnischen Vemetzungen der Verwaltung." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 214-277. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 260.

[502] Britz, Gabriele. "Reaktionen des Verwaltungsverfahrensrechts auf die informationstechnischen Vemetzungen der Verwaltung." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 214-277. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 261.

[503] German Administrative Procedure Act (VwVfG), §29

procedural fairness; rather, it should reinforce transparency within the legal framework. Accordingly, § 13 EGovG NRW[504] stipulates that when files are maintained electronically, inspection rights may be exercised digitally, including through the transmission of electronic documents or the granting of secure online access.

4.3.1.4. The Supranational Dimension: European Influence on Administrative Legality

Building upon national efforts to ensure legislative clarity in digital administrative law, it is necessary to consider the intensifying influence of European Union law on domestic administrative frameworks. Member States are increasingly required to examine critically how Union law permeates their legal systems. Germany, in particular, has a significant interest in shaping and guiding these developments to contribute meaningfully to legislative evolution[505].

As Hoffmann-Riem (2002) observes, European integration has significantly reshaped administrative law, introducing new procedural concepts and legal figures into the German system. This Europeanisation necessitates the incorporation of European procedural principles into national practice, particularly given the complex interplay between EU law and domestic frameworks[506].

4.3.2. Equality (Gleichheit) and Proportionality (Verhältnismäßigkeit)

Equality and proportionality are discussed jointly in this section, as one of the core challenges of e-governance lies in reconciling two complementary yet occasionally conflicting legal objectives. From a normative standpoint, the pursuit of administrative efficiency through digitalisation must be balanced against the need to avoid imposing disproportionate burdens on individuals. At the same time, the shift towards digital procedures must not result in exclusionary effects or unequal treatment.

Crucially, the traditional application of proportionality—which governs the discretion (Ermessen) in substantive administrative decisions—is largely excluded from the automation process under the EGovG NRW, as the legislation limits automated decision-making to matters where there exists administrative discretion or even a margin of discretion[507].

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[504] EGovG NRW §13

[505] Hofmann, Hans. "Europeanisation and German Public Administration." *Public Administration in Germany* (2021): 53-60. 58-59

[506] Hoffmann-Riem, Wolfgang. "Verwaltungsverfahren und Verwaltungsverfahrensgesetz-Einleitende Problemskizze." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 10-67. Nomos Verlagsgesellschaft mbH & Co. KG, 2003.

[507] German Administrative Procedure Act [VwVfG], Section 35a, accessed October 13, 2025, https://www.gesetze-im-internet.de/vwvfg/__35a.html

Instead, the proportionality test is recast here as a mechanism for assessing the constitutional legitimacy of procedural and organisational regulations imposed by digitalisation. It evaluates the appropriateness, necessity, and adequacy of new digital administrative measures, particularly in relation to the imposition of obligatory channels or the extent of data processing.

Simultaneously, the principle of equality functions as a safeguard ensuring inclusive access and non-discrimination across administrative interfaces. It requires that digitalisation neither reinforce existing inequalities nor generate new forms of procedural disadvantage, such as the digital divide (digitale Spaltung). In this context, equality becomes not only a constitutional guarantee but also a guiding criterion for fair algorithmic governance and equitable service provision.

Accordingly, the following analysis will proceed by sequentially addressing the constitutional implications of digitalisation across three critical dimensions that emerge from the legislative framework. This structure, which reflects the central tension between efficiency and constitutional safeguards, is organised as follows: first, an examination of equal access in the provision of digital administrative services; second, an assessment of the proportionality of mandatory digital communication, viewed as a regulatory constraint on citizens' procedural freedom; and third, an investigation into the implications for equality arising from differentiated implementation timelines and municipal experimentation clauses.

4.3.2.1. The Principle of Equal Access in Digital Service Provision

The principle of equality entails that every citizen must enjoy equal access to administrative services. While the digitalisation of administrative procedures aims to enhance efficiency and transparency, it simultaneously raises the risk of a digital divide that disadvantages individuals lacking adequate technical resources or digital literacy[508].

Nonetheless, characterising the digital transformation of public administration as a failure is perhaps too hasty, as the process represents an incremental transformation rather than a sudden revolution, with many innovations currently transitioning from the development to the diffusion phase[509].

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[508] See above section 2.2.2.1. Substantive Principles d. Principle of Equality.

[509] Klenk, Tanja, Samuel Greef, and Carla Lucks. "Digitalisierung der Daseinsvorsorge als kommunale Herausforderung: Wie unterschiedliche administrative Kapazitäten, digitaler Verwaltungszugang und Ungleichheit zusammenhängen." Zeitschrift für Politikwissenschaft (2025): 1-26.

This context underscores the critical need for robust institutional work to consciously reshape the administrative framework to ensure new digital solutions are integrated equitably into daily structures and processes[510].

The traditional framework, exemplified by the German Administrative Procedure Act (VwVfG), guarantees a certain "access standard" through the interplay of provisions that rely on written paper communication and oral interaction. This traditional framework presupposes only mastery of written and spoken language—a requirement emphasised by § 23 VwVfG regarding the German language—and thereby protects those without digital proficiency from exclusion. While even these "de lege lata forms" (the law in force) of interaction are not equally mastered by all, they nonetheless guarantee a significant level of access equality encompassing the overwhelming majority of the population[511].

By contrast, electronic interaction relationships fall short of this standard. A considerable segment of the population still lacks internet access or the skills necessary to effectively utilise electronic interaction with the administration, which in practice amounts to "no access." Thus, with the introduction of electronic interaction, procedural law risks losing part of its function as a guarantor of access[512], access, notwithstanding the potential of digital solutions to support the constitutional (Gleichwertigkeit der Lebensverhältnisse) by bridging structural gaps, particularly in rural areas[513].

In legal terms, the requirement to ensure inclusive access is expressed through the principle of form equivalence. This safeguard finds statutory embodiment in § 3a(1) VwVfG NRW, which stipulates that documents "*may be transmitted electronically*". The deliberate use of permissive language reflects a cautious legislative approach, electronic communication is made available as an additional channel rather than imposed as mandatory[514].

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[510] Lawrence, Thomas B., und Roy Suddaby. 2006. Institutions and institutional work. In The SAGE handbuch policy of organization studies, 215–254. London: SAGE. cited in Klenk, Tanja, Samuel Greef, and Carla Lucks. "Digitalisierung der Daseinsvorsorge als kommunale Herausforderung: Wie unterschiedliche administrative Kapazitäten, digitaler Verwaltungszugang und Ungleichheit zusammenhängen." Zeitschrift für Politikwissenschaft (2025): 1-26.

[511] Klenk, Tanja, Samuel Greef, and Carla Lucks. "Digitalisierung der Daseinsvorsorge als kommunale Herausforderung: Wie unterschiedliche administrative Kapazitäten, digitaler Verwaltungszugang und Ungleichheit zusammenhängen." Zeitschrift für Politikwissenschaft (2025): 1-26.

[512] Britz, Gabriele. "Reaktionen des Verwaltungsverfahrensrechts auf die informationstechnischen Vemetzungen der Verwaltung." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 214-277. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 231.

[513] Klenk, Tanja, Samuel Greef, and Carla Lucks. "Digitalisierung der Daseinsvorsorge als kommunale Herausforderung: Wie unterschiedliche administrative Kapazitäten, digitaler Verwaltungszugang und Ungleichheit zusammenhängen." Zeitschrift für Politikwissenschaft (2025): 1-26.

[514] Britz, Gabriele. "Reaktionen des Verwaltungsverfahrensrechts auf die informationstechnischen Vemetzungen der Verwaltung." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 214-277. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 232.

Consequently, citizens retain the freedom to choose between analogue and digital forms of interaction, ensuring that access to administrative services does not depend on individual technological capacity. This flexibility serves as a procedural mechanism to uphold the constitutional Gleichheitssatz by preventing unequal treatment between digitally proficient and digitally excluded individuals[515].

It should be noted, however, that the scope of protection offered by this statutory provision is not absolute. While § 3a(1) VwVfG ensures protection for those lacking access—prohibiting authorities from communicating electronically unless a channel has been opened by the addressee—it cannot fully mitigate unequal access in the informal domain. Those without access remain deprived insofar as they are excluded from informal electronic interaction, particularly general information services offered online. Valuable information available on administrative websites remains inaccessible to these citizens, despite the protective clause of § 3a(1) VwVfG. This is because the provision restricts only the "transmission" of electronic documents (i.e., sender-initiated communication), whereas online information services are typically "collected" by recipients. Consequently, administrations may offer information without ensuring that all potentially interested parties have access to it. Unequal starting conditions in dealing with information technology persist in the informal domain, notwithstanding statutory safeguards[516].

Additionally, the commitment to equality is reinforced through specific implementing measures designed to ensure accessibility in practice. The Verordnung über barrierefreie Informationstechnik (BITV NRW), for example, establishes binding technical standards to guarantee that public digital services remain accessible to persons with disabilities[517].

At the same time, broader analysis reveals that the pursuit of Digital Era Governance (DEG)[518] is frequently advanced through mechanisms rooted in the New Public Management (NPM) paradigm, notably via competitively allocated financial incentives. This has led to

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[515] Britz, Gabriele. "Reaktionen des Verwaltungsverfahrensrechts auf die informationstechnischen Vemetzungen der Verwaltung." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 214-277. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 232.

[516] Britz, Gabriele. "Reaktionen des Verwaltungsverfahrensrechts auf die informationstechnischen Vemetzungen der Verwaltung." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 214-277. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 232.

[517] Barrier-free Information Technology Ordinance (BITV 2.0), Federal Law Gazette 184300011, accessed October 14, 2025, https://www.gesetze-im-internet.de/bitv_2_0/BJNR184300011.html.

[518] Tanja Klenk, Samuel Greef and Carla Lucks refer to Dunleavy et al. (2005) as the first authors to use the term 'Digital Era Governance'. Dunleavy, P., Helen Margetts, Simon Bastow, und Jane Tinkler. 2005. New public management is dead—Long live digital-era governance. Journal of Public Administration Research and Theory 16:467–494. cited in Klenk, Tanja, Samuel Greef, and Carla Lucks. "Digitalisierung der Daseinsvorsorge als kommunale Herausforderung: Wie unterschiedliche administrative Kapazitäten, digitaler Verwaltungszugang und Ungleichheit zusammenhängen." Zeitschrift für Politikwissenschaft (2025): 1-26.

fragmented, hybrid governance settings in which competing logics coexist. Although the concept of institutional work provides a theoretical lens for active steering, the empirical reality of implementing the Onlinezugangsgesetz across various counties indicates that transformation often unfolds as cumulative change. Crucially, the uneven distribution of administrative capacity and technical competencies among local authorities—frequently compounded by path-dependency from prior NPM-driven digitalisation efforts—means that digital transformation is occurring at different speeds. This divergence produces a serious unintended consequence: rather than reducing structural inequalities in the provision of essential public services, the heterogeneous pace of administrative digitalisation risks exacerbating existing social and regional disparities by widening the gap between technologically advanced and resource-constrained municipalities[519].

A growing body of empirical research reinforces this concern. Recent studies on the implementation of the Onlinezugangsgesetz (OZG) demonstrate that the heterogeneous pace of digital transformation across municipalities is not merely a technical or managerial issue but is structurally rooted in unequal administrative capacities, divergent personnel resources, and entrenched institutional path-dependencies. These findings show that financially stronger or organisationally innovative municipalities are able to adopt and diffuse digital services more rapidly, while resource-constrained or structurally disadvantaged municipalities progress more slowly. As a result, digitalisation—rather than functioning as a levelling instrument that promotes equal living conditions—risks amplifying existing regional disparities by creating uneven access to digital administrative services. This dynamic aligns with the broader observation that digital transformation in Germany unfolds as cumulative, hybrid change shaped by competing governance logics, where the coexistence of NPM-inspired competitive funding mechanisms and emerging Digital-Era-Governance structures produces fragmented implementation trajectories. Consequently, the constitutional requirement of equality becomes directly implicated: unequal administrative capacity translates into unequal digital access, thereby challenging the premise that digitalisation can be introduced without generating new forms of procedural disadvantage[520].

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[519] Klenk, Tanja, Samuel Greef, and Carla Lucks. "Digitalisierung der Daseinsvorsorge als kommunale Herausforderung: Wie unterschiedliche administrative Kapazitäten, digitaler Verwaltungszugang und Ungleichheit zusammenhängen." Zeitschrift für Politikwissenschaft (2025): 1-26. https://doi.org/10.1007/s41358-025-00437-6.

[520] Klenk, Tanja, Samuel Greef, and Carla Lucks. "Digitalisierung der Daseinsvorsorge als kommunale Herausforderung: Wie unterschiedliche administrative Kapazitäten, digitaler Verwaltungszugang und Ungleichheit zusammenhängen." Zeitschrift für Politikwissenschaft (2025): 1-26. https://doi.org/10.1007/s41358-025-00437-6.

4.3.2.2. Proportionality of Obligatory Digital Communication

The principle of proportionality functions as a constitutional safeguard against disproportionate administrative intervention, ensuring that compulsory measures are suitable, necessary, and reasonable in relation to their objectives[521].

It is important to emphasise that the proportionality assessment in this context concerns the legality of the procedural obligation itself, rather than the exercise of discretion within a substantive administrative decision. The central question is whether the legislature may legitimately require the use of digital formats—even in the absence of administrative discretion—when such a requirement potentially restricts procedural autonomy or imposes additional burdens on individuals.

Importantly, the measure must be appropriate, requiring a constitutional balancing of the public interest in efficiency against the burden imposed on the individual. This burden includes not only the risk of digital exclusion but also the costs associated with acquiring secure identity tools, such as a commercially sourced Qualified Electronic Signature (QES). The proportionality assessment must therefore evaluate whether the tangible benefits of reduced administrative costs justify the intrusion on procedural freedom and the financial or technical burdens placed upon citizens[522].

4.3.2.3. Differentiated Implementation and Communal Experimentation

The implementation of e-governance legislation in North Rhine-Westphalia introduces a degree of variability within the state's administrative framework. This variability arises primarily from differentiated implementation deadlines and communal experimentation clauses, designed to accommodate the diverse capacities of local administrations. Although politically and logistically pragmatic, these mechanisms raise complex constitutional considerations, particularly in relation to the principle of equality enshrined in Article 3 of the Basic Law[523].

Differentiated implementation deadlines—commonly granting municipalities longer periods to achieve mandatory digitalisation than those afforded to state authorities—may result in citizens across different regions experiencing unequal levels of digital service delivery. Such temporal disparities can, in effect, lead to unequal access to administrative

[521] see above section 2.2.2.1. Substantive Principles b. Principle of Proportionality.
[522] see above section 2.2.2.1. Substantive Principles b. Principle of Proportionality.
[523] German Basic Law Article 3.

efficiency and procedural fairness[524]. From a constitutional standpoint[525], these variations require careful justification under the Gleichheitssatz, as they amount to unequal treatment among citizens based solely on geographical location. To withstand constitutional scrutiny, the state must demonstrate that the objective grounds for such differentiation—particularly the varying financial capacity, infrastructural readiness, and human resource constraints of municipalities—are sufficiently compelling to justify temporary divergence[526].

From a doctrinal perspective, such clauses necessitate a delicate balancing exercise between two competing constitutional values: the principle of local self-government and the right of citizens to equal access to an effective and modern administration. In general, transitional inequalities can be justified only if they are clearly temporary and accompanied by a demonstrable commitment to eventual harmonisation.

4.3.2.4. Conclusion to Proportionality and Equality

In conclusion, the examination of proportionality and equality within the framework of North Rhine-Westphalian administrative law demonstrates that digital transformation remains inherently bound by these constitutional safeguards. The VwVfG NRW, complemented by implementing regulations, upholds the principle of equal access by maintaining analogue alternatives, thereby ensuring that digital participation represents an option rather than an exclusion. At the same time, proportionality continues to serve as a critical instrument of judicial and administrative control, requiring detailed justification for any move towards obligatory digital communication. While differentiated implementation deadlines and local experimentation clauses may temporarily produce disparities in digital service levels across municipalities, such variation remains constitutionally permissible only where objectively justified and accompanied by a clear path toward harmonisation. This ensures that individual procedural autonomy is not subordinated to administrative efficiency alone, but remains protected within the evolving architecture of digital administration.

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[524] Klenk, Tanja, Samuel Greef, and Carla Lucks. "Digitalisierung der Daseinsvorsorge als kommunale Herausforderung: Wie unterschiedliche administrative Kapazitäten, digitaler Verwaltungszugang und Ungleichheit zusammenhängen." Zeitschrift für Politikwissenschaft (2025): 1-26. doi:10.1007/s41358-025-00437-6.

[525] Basic Law for the Federal Republic of Germany, Article 3.

[526] Wissenschaftlicher Dienst des Deutschen Bundestages, Verfassungsrechtliche Rechtfertigung von gesetzlichen Ungleichbehandlungen aufgrund persönlicher Merkmale, (Research Service of the German Bundestag, Constitutional justification of statutory unequal treatment based on personal characteristics) Aktenzeichen: WD 3 - 3000 - 220/14 (Berlin: Deutscher Bundestag, 29. September 2014).

4.3.3. Transparency and Accountability

Within the framework of the EGovG NRW, transparency encompasses the provision of citizen access to information and electronic file management, whereas accountability emphasises the clear attribution of responsibility, particularly when administrative decisions are mediated by complex automated systems. Accordingly, the following analysis will proceed by sequentially addressing the constitutional implications of digitalisation across three key applications that emerge from the legislative framework. This structure is organised as follows: first, regulatory provisions on transparency in electronic file management; second, the challenges of ensuring public accountability in automated decision-making; and third, the structural mechanism intended to strengthen legislative transparency, namely the Digitalisation Check.

4.3.3.1. Transparency in Electronic File Management (*Elektronische Aktenführung*)

The principle of transparency finds a critical application in the context of electronic file management. In the analogue world, transparency was partially assured by the physical accessibility and traceability of paper files. The shift to digital administration requires that the legal framework—particularly the EGovG NRW—not only preserve but also enhance this level of transparency[527].

This is achieved by ensuring that the E-Akte adheres to the principles of proper file management, which legally demands that every procedural step, document inclusion, or modification be logged and irreversible, thereby preventing arbitrary administrative action and reinforcing Legal Certainty[528].

The most direct manifestation of transparency is the citizen's right of access to the file. As established by § 13 EGovG NRW[529], the administration is explicitly mandated to facilitate access to electronic files through secure and efficient digital means, ensuring that the transition to electronic storage does not obstruct this right. Furthermore, implementing regulations such as the VV E-Akte NRW[530] contribute to transparency by requiring strict technical documentation and audit logs (Audit Trails). These measures ensure that the full

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[527] EGovG NRW, § 9

[528] Sannwald, Wolfgang. Professionelle Aktenführung in der Kommunalverwaltung: E-Akten und Papierakten nach dem Kommunalen Aktenplan 21. Professional record keeping in local government: Electronic and paper files according to the Municipal Records Management Plan 21. Richard Boorberg Verlag, 2024. 32.

[529] EGovG NRW, §13

[530] North Rhine-Westphalia, Law and Ordinance Gazette for the State of North Rhine-Westphalia, "Law regulating electronic legal transactions with authorities in North Rhine-Westphalia (ERV Law NRW)", https://recht.nrw.de/lmi/owa/br_bes_text?anw_nr=1&gld_nr=2&ugl_nr=2006&bes_id=53709&val=53709&ver=7&sg=2&aufgehoben=N&menu=0

decision-making history—from initial input to final issuance—is preserved and verifiable, allowing citizens not only to inspect documents but also to confirm the integrity and sequence of the electronic procedure[531].

4.3.3.2. Public Accountability in Automated Decision-Making Processes

The democratic principle of public accountability requires that all administrative actions—whether performed by human officials or automated systems—remain transparent, traceable, and attributable to a responsible public authority.

This challenge is amplified by the complexity of modern generative AI (GAI) systems, exemplified by the state's pilot phase of the AI administrative assistant "NRW.Genius" (launched in October 2024). While this system is currently limited to supportive tasks—such as summarising documents and generating drafts—its direct interaction with administrative texts necessitates rigorous legal oversight[532].

The central challenge lies in preventing algorithmic procedures from turning administrative decision-making into an opaque "black box"[533]. To preserve accountability and counter this opacity, the legal framework compels NRW authorities to adhere to several safeguards. First, the administration must maintain explainability to ensure that the decision logic can be traced. Accordingly, legal scrutiny must extend beyond the code itself to encompass potential sources of bias, including unconscious preferences of system developers and discriminatory patterns embedded in training data, which risk perpetuating existing social inequalities[534].

Furthermore, accountability is reinforced by international principles requiring auditability of models and rigorous validation to assess whether systems generate discriminatory harm. Accordingly, the implementation of ADM systems under the EGovG NRW must be rigorously documented and monitored to demonstrate alignment with

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[531] Sannwald, Wolfgang. Professionelle Aktenführung in der Kommunalverwaltung: E-Akten und Papierakten nach dem Kommunalen Aktenplan 21. Professional record keeping in local government: Electronic and paper files according to the Municipal Records Management Plan 21. Richard Boorberg Verlag, 2024. 24.
[532] Ministry of Local and Community Affairs, Building and Digitalization of North Rhine-Westphalia (MHKBD NRW), Press Release No. 28.10.2024, available at: [https://www.mhkbd.nrw/themenportal/ki-made-in-nordrhein-westfalen-testphase-fuer-ki-assistenten-in-der-oeffentlichen-verwaltung-in-nordrhein-westfalen-startet].
[533] Niklas Kossow, Svea Windwehr, and Matthew Jenkins, *Algorithmic Transparency and Accountability* (Berlin: Transparency International, February 5, 2021), https://knowledgehub.transparency.org/assets/uploads/kproducts/Algorithmic-Transparency_2021.pdf
[534] Niklas Kossow, Svea Windwehr, and Matthew Jenkins, *Algorithmic Transparency and Accountability* (Berlin: Transparency International, February 5, 2021), https://knowledgehub.transparency.org/assets/uploads/kproducts/Algorithmic-Transparency_2021.pdf

procedural safeguards. This ensures that accountability is seamlessly transferred from human officials to digital systems without eroding citizen rights[535].

However, it must be clear that North Rhine-Westphalian legislation does not contain any explicit requirement of algorithmic transparency or explainability. Instead, the legal framework relies on traditional procedural duties—most notably the obligation to provide reasons (§ 39 VwVfG NRW)[536], the duty of comprehensive fact-finding (§ 24 VwVfG NRW)[537], and the right to inspect files (§ 29 VwVfG NRW)[538].

From a critical perspective, this reliance is problematic. These provisions were developed for analogue procedures and presuppose that the authority is itself capable of understanding, reconstructing, and documenting the decision-making process. In the context of machine-learning systems, however, this assumption becomes increasingly difficult to sustain[539]. The statutory duties may formally require decisions to remain intelligible and reviewable, but they do not provide concrete tools to ensure that complex algorithmic models can, in practice, be explained, audited, or challenged[540].

Moreover, although judicial review in principle extends to all relevant factors—including biased training data or assumptions embedded in system design—the absence of explicit statutory standards leaves authorities with wide discretion and may result in significant accountability gaps. The current framework therefore risks creating the illusion of transparency while failing to ensure substantive oversight[541].

Stelkens (2024) has highlighted that digitalisation laws face inherent problems of legislative determinacy. Technical requirements must often be formulated at an extreme level of abstraction, resembling a 'Pflichtenheft', and relate to virtual objects that need to be demonstrated to users before they can understand what is required. As software mediates between law and execution, but cannot itself be 'read' in legal terms, the risk arises that

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[535] Niklas Kossow, Svea Windwehr, and Matthew Jenkins, *Algorithmic Transparency and Accountability* (Berlin: Transparency International, February 5, 2021), https://knowledgehub.transparency.org/assets/uploads/kproducts/Algorithmic-Transparency_2021.pdf

[536] VwVfG NRW, § 39

[537] VwVfG NRW, § 24

[538] VwVfG NRW, § 29

[539] Williams, Rebecca. "Rethinking Administrative Law for Algorithmic Decision Making." Oxford Journal of Legal Studies 42, no. 2 (2022): 468–494. doi:10.1093/ojls/gqab032. OP-OJLS210034 468..494 https://academic.oup.com/ojls/article/42/2/468/6414566?login=false

[540] Cluzel-Métayer, Lucie. "The Judicial Review of the Automated Administrative Act." European Review of Digital Administration & Law 1, no. 1–2 (2020): 101–103. doi:10.4399/97888255389609. https://www.erdalreview.eu/free-download/97888255389609.pdf

[541] Cluzel-Métayer, Lucie. "The Judicial Review of the Automated Administrative Act." European Review of Digital Administration & Law 1, no. 1–2 (2020): 101–103. doi:10.4399/97888255389609. https://www.erdalreview.eu/free-download/97888255389609.pdf

digitalisation statutes may become unintelligible and thereby misdirect administrative practice. This underscores the challenge of ensuring that legal certainty is not undermined by technical opacity[542].

In this sense, NRW law indirectly expects algorithmic transparency through general procedural safeguards, yet it does not establish a dedicated regulatory regime capable of addressing the structural opacity of modern algorithmic systems.

4.3.3.3. The Role of the Digitalisation Check (*E-Government-Check*) in Legislative Transparency

The principle of transparency extends beyond administrative acts to encompass the legislative process underpinning digital transformation. In North Rhine-Westphalia, the Digitalisation Check (E-Government-Check)[543] operates as an integral part of the legally mandated legislative impact assessment, explicitly anchored in § 38 Abs. 2 Satz 4 of the Rules of Procedure for the State Government.

This mechanism ensures legislative transparency by evaluating proposed regulations for their impact on digitisation. It enforces the creation of digitally friendly law through a mandatory checklist examining compatibility with existing digital laws (EGovG NRW), achievement of media-free communication, and compliance with accessibility and data protection requirements. The mandatory nature of this assessment ensures that digital concerns are uniformly considered, with results documented in the Gesetzesvorblatt (explanatory memorandum) accompanying the bill[544].

Administered primarily by the Ministry for Regional Identity, Communities and Local Government, Building and Digitalisation (MHKBD), the Digitalisation Check renders the digital implications of legislative proposals visible prior to enactment. Drafting ministries must document whether proposed laws are technically implementable and compatible with existing e-government infrastructure, including platforms such as the state service portal and electronic file management systems (E-Akte). Simultaneously, the assessment evaluates whether legislation facilitates or complicates digital interactions for citizens and businesses,

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[542] Ulrich Stelkens, Verfassungsrechtliche Rahmenbedingungen des digitalisierten Verwaltungsverfahrens, presentation at the Online Winter Conference of the Arbeitsgemeinschaft für Verwaltungsrecht im Deutschen Anwaltverein, Landesgruppe Nordrhein-Westfalen, 2024. Einführung Verwaltungsrecht (arbeitsgemeinschaft-verwaltungsrecht-nrw.de)

[543] Annex 10 to the Joint Rules of Procedure of the Ministries of North Rhine-Westphalia. Accessed October 14, 2025. https://recht.nrw.de/lmi/owa/br_text_anzeigen?v_id=12345

[544] Annex 10 to the Joint Rules of Procedure of the Ministries of North Rhine-Westphalia. Accessed October 14, 2025. https://recht.nrw.de/lmi/owa/br_text_anzeigen?v_id=12345

with particular attention to avoiding media discontinuities. Financial implications and potential efficiencies are also considered[545].

By integrating this evaluation formally into the legislative procedure and requiring its inclusion in explanatory memoranda, the Digitalisation Check transforms the traditionally opaque process of digital law-making into a documented, transparent procedure. This approach provides the Landtag of NRW with a concrete evaluative tool and enables public scrutiny of the executive's approach to digital governance. Through the binding force of ministerial decrees, the Digitalisation Check ensures that legislative transparency in digital policy is not voluntary but a mandatory prerequisite for new laws, thereby embedding accountability at the normative level of the state's legal framework[546].

4.3.3.4. Conclusion to Transparency and Accountability

In conclusion, the analysis of transparency and accountability within the North Rhine-Westphalian framework demonstrates that these democratic principles are not merely aspirational but embedded as binding procedural requirements. The provisions of the EGovG NRW, complemented by supplementary regulations, reinforce administrative openness—most notably through the management of the E-Akte—and aim to counter opacity in automated decision-making. While § 35a VwVfG establishes institutional liability for automated administrative acts, this accountability continues to derive primarily from existing procedural norms rather than from explicit rules on algorithmic transparency. Moreover, mechanisms such as the Digitalisation Check may promote legislative transparency, yet their legal status and practical effectiveness remain contingent upon design and implementation. Ultimately, by mandating procedural explainability and clear attribution of responsibility throughout the life cycle of digital administrative processes, North Rhine-Westphalia seeks to safeguard legitimacy and public trust. Nevertheless, sustained oversight and, where appropriate, further statutory refinement will likely be required to address the full complexity posed by advanced algorithmic systems.

4.3.4. Procedural Fairness and Good Faith

The principles of procedural fairness, often encompassing the right to be heard, and good faith, constitute the final set of fundamental administrative law principles examined

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[545] Annex 10 to the Joint Rules of Procedure of the Ministries of North Rhine-Westphalia. Accessed October 14, 2025. https://recht.nrw.de/lmi/owa/br_text_anzeigen?v_id=12345

[546] Annex 10 to the Joint Rules of Procedure of the Ministries of North Rhine-Westphalia. Accessed October 14, 2025. https://recht.nrw.de/lmi/owa/br_text_anzeigen?v_id=12345

under the EGovG NRW framework. These principles are vital because they focus on the quality of the direct, bilateral interaction between citizens and administrative authorities. In the context of e-governance, the shift to digital procedures risks depersonalising administrative processes, thereby potentially undermining the constitutional guarantee of fair treatment. Procedural fairness requires that digital tools preserve the citizen's ability to participate and influence administrative outcomes, particularly with regard to the statutory right to be heard. Good faith imposes a duty on the administration to ensure that technology does not disadvantage citizens through technical faults or rigid adherence to formal digital requirements. The following sections analyse how the legal framework of North Rhine-Westphalia addresses these challenges: by safeguarding the right to be heard in fully digital procedures; by maintaining procedural requirements through a distinction between electronic and automated acts; and by establishing legal safeguards for secure and reliable notification.

4.3.4.1. Ensuring the Right to Be Heard in Fully Digital Procedures

The principle of procedural fairness, reinforced by the constitutional right to be heard, mandates that before an administrative act adversely affecting a citizen is issued, the affected party must be granted the opportunity to present their case. For the North Rhine-Westphalian administration, this obligation stems directly from § 28 VwVfG NRW[547], which imposes an affirmative duty on authorities to enable the effective exercise of this right.

For this right to be genuinely effective in the digital environment, electronic submission channels—authorised by § 3a VwVfG NRW—must be demonstrably reliable and functionally equivalent to analogue submission. The administration bears responsibility for any procedural deficiencies arising from technical failures that prevent timely submission of a citizen's statement, thereby rendering the electronic channel unavailable for exercising the right. Ministerial decrees concerning service portals reinforce this obligation by mandating technical quality and user-friendliness in digital input forms. Furthermore, the principles of rechtliches Gehör require that a citizen's electronic input be immediately and immutably integrated into the electronic file (E-Akte), as governed by the VV E-Akte NRW. This guarantees procedural certainty that the citizen's contribution will be considered before a final decision is issued[548].

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[547] § 28 VwVfG NRW

[548] North Rhine-Westphalia, Law and Ordinance Gazette for the State of North Rhine-Westphalia, "Law regulating electronic legal transactions with authorities in North Rhine-Westphalia (ERV Law NRW)", https://recht.nrw.de/lmi/owa/br_bes_text?anw_nr=1&gld_nr=2&ugl_nr=2006&bes_id=53709&val=53709&ver=7&sg=2&aufgehoben=N&menu=0

In Addition to the general duty to enable electronic participation, some Länder have gone further by granting citizens and businesses enforceable procedural claims to a fully electronic administrative procedure, including the electronic return channel. Bavaria, North Rhine-Westphalia (§ 4 EGovG NRW), and Saxony-Anhalt (§ 11 EGovG LSA) provide such rights, which extend beyond the scope of the EU Services Directive. This innovation is significant because the OZG does not confer subjective rights to its instruments, whereas enforceable claims indirectly sanction delayed implementation by allowing judicial enforcement. In NRW, § 4 EGovG NRW obliges authorities to use the electronic communication channel chosen by the sender, unless legal or technical obstacles prevent it, and mandates the use of open, standardised file formats. The NRW evaluation report rightly stresses that the realisation of this claim depends on progress in Schriftformersatz mechanisms, electronic signatures, eID/Servicekonto NRW, e-payment, electronic proofs, and process optimisation[549].

4.3.4.2. Maintaining Procedural Requirements: Distinction Between Electronic and Automated Administrative Acts

Despite efforts to preserve the right to be heard in the digital realm, a crucial distinction must be drawn between purely electronic administrative acts and those issued entirely by automated means. This differentiation is essential for safeguarding the integrity of fundamental principles of administrative procedural law. If exceptional provisions designed to relax requirements for automated decisions were applied universally to all electronic acts, core instruments of procedural legitimacy—such as the duty to hear the party (§ 28 VwVfG), the requirement to state reasons (§ 39 VwVfG), and the mandate for signature and name reproduction in written acts (§ 37 (3) VwVfG)—could be significantly eroded. Such an outcome would necessitate a critical re-evaluation of the legislative justification underlying these exception clauses[550].

It is therefore vital to recognise that the procedural exceptions detailed in § 28 (2) No. 4, § 37 (5), and § 39 (2) No. 3 VwVfG are generally not applicable to standard electronic administrative acts (§ 37 (4) VwVfG). Their application is typically restricted to instances

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[549] Bernhardt, Wilfried. E-Government-Gesetzgebung von Bund und Ländern im Vergleich und Best-Practices-Leitlinie. Berichte des NEGZ Nr. 21. Berlin: Nationales E-Government Kompetenzzentrum e. V., 2021, 26

[550] Britz, Gabriele. Reaktionen des Verwaltungsverfahrensrechts auf die informationstechnischen Vemetzungen der Verwaltung." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz (Reactions of Administrative Procedure Law to the Information Technology Networks of the Administration). In Administrative Procedure and the Administrative Procedure Act, pp. 214–277. Nomos Verlagsgesellschaft mbH & Co. KG, 2003, p. 230.

where an act is issued with the complete and defining assistance of automated facilities. This legal delineation ensures that primary procedural safeguards remain fully applicable to the vast majority of electronic administrative acts, thereby preserving the required level of procedural certainty and constitutional legality[551].

However, as Stelkens (2024) has cautioned, the increasing reliance on digitalisation risks transforming procedural rights into mere simulations of legality, particularly when automated facilities replace traditional safeguards. Rights such as the duty to hear (§ 28 VwVfG), access to files (§ 29 VwVfG), or the obligation to provide individualised reasoning (§ 39 VwVfG) may be reduced to schematic input forms, FAQs, or typified justifications. This 'Verwaltungssimulation' underscores the importance of maintaining the distinction between electronic acts, which remain subject to full procedural guarantees, and automated acts, where exceptional clauses apply. Otherwise, constitutional concerns arise, including equality violations, deficits in democratic legitimacy, and the obligation under Art. 83 GG to ensure the effective execution of federal law[552].

4.3.4.3. Legal Safeguards for Secure and Reliable Notification (*Zustellung*)

Procedural fairness is intrinsically linked to the reliability of notification of administrative acts. In German administrative law, a decision becomes legally effective and binding only upon proper notification, which commences appeal deadlines and establishes legal certainty. The shift to electronic notification poses a significant challenge, requiring the legal framework to guarantee that digital processes achieve the same level of security, integrity, and proof of receipt as traditional physical delivery mechanisms.

Within North Rhine-Westphalia, the legal basis for secure electronic notification is primarily governed by § 5 of the Administrative Notification Act (Verwaltungszustellungsgesetz, VwZG)[553] and supplementary provisions of state administrative procedure law. Electronic notification is valid only if the authority can provide unambiguous proof of receipt by the intended party. NRW authorities employ two principal methods to achieve this:

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[551] Britz, Gabriele. Reaktionen des Verwaltungsverfahrensrechts auf die informationstechnischen Vemetzungen der Verwaltung." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz (Reactions of Administrative Procedure Law to the Information Technology Networks of the Administration). In Administrative Procedure and the Administrative Procedure Act, pp. 214–277. Nomos Verlagsgesellschaft mbH & Co. KG, 2003, p. 230.

[552] Ulrich Stelkens, Verfassungsrechtliche Rahmenbedingungen des digitalisierten Verwaltungsverfahrens, presentation at the Online Winter Conference of the Arbeitsgemeinschaft für Verwaltungsrecht im Deutschen Anwaltverein, Landesgruppe Nordrhein-Westfalen, 2024. Einführung Verwaltungsrecht (arbeitsgemeinschaft-verwaltungsrecht-nrw.de)

[553] German Administrative Notification Act, § 5.

De-Mail: A legally regulated, secure German system providing cryptographic evidence of sending, receipt, and content integrity, thereby substituting the traditional registered mail receipt.

Secure Service Accounts: E-government platforms requiring prior registration and legally recognised identity procedures (such as the Online-Ausweisfunktion or eID), where deposit of the document in the secure account is deemed legally effective upon notification of its availability.

These NRW provisions must be understood within the broader federal and state framework regulating secure electronic communication. The obligation to provide De-Mail access is not unique to North Rhine-Westphalia. Federal and most state e-government laws require authorities to open a De-Mail channel pursuant to the De-Mail Act, although the scope of this obligation varies. For example, Brandenburg imposes no direct duty, while Rheinland-Pfalz, Saxony-Anhalt, and Lower Saxony permit alternative electronic channels. In NRW (§ 3(2)) and Thuringia (§ 5(3)), the duty to accept De-Mail does not apply to specialised procedures or where an electronic court and administrative mailbox is operated. Berlin, by contrast, mandates De-Mail whenever statutory provisions require it, whereas Mecklenburg-Vorpommern formulates only a 'should' obligation. Despite these legal requirements, the actual uptake of De-Mail has remained limited, with Saxony reporting very low usage. This reflects broader criticism of De-Mail as lacking technological openness and European compatibility. Expert evaluations of the Federal EGovG have therefore recommended replacing the statutory fixation on De-Mail with neutral security standards for communication channels, leaving detailed technical specifications to BSI guidelines. Such an approach would better align legal safeguards with evolving technological realities[554].

4.3.4.4. The Duty of Good Faith in Digital Interaction and Error Correction

The principle of good faith, a general tenet of German law, is not merely an ethical recommendation but a fundamental legal doctrine[555]. Within administrative law, the principle can be interpreted as offering a basis for arguing that the administration should take reasonable measures to ensure that the use of technology does not disadvantage citizens or

[554] Bernhardt, Wilfried. E-Government-Gesetzgebung von Bund und Ländern im Vergleich und Best-Practices-Leitlinie. Berichte des NEGZ Nr. 21. Berlin: Nationales E-Government Kompetenzzentrum e. V., 2021, 20.

[555] Wittern, Andreas, and Maximilian Baßlsperger. Verwaltungs-und Verwaltungsprozessrecht: Grundriss für Ausbildung und Praxis. (Administrative and Administrative Procedure Law: Outline for Education and Practice) Kohlhammer Verlag, 2016.58.

expose them to constraints resulting from technical rigidity[556]. In the context of digital interaction within the North Rhine‑Westphalian administration, this duty requires the state to mitigate the adverse consequences of genuine errors made by citizens when navigating complex electronic procedures, thereby ensuring that substantive justice prevails over overly formalistic digital requirements.

In a similar vein, the duty of good faith may be understood as being operationalised through the doctrines of error correction and procedural rectification, which may be regarded as important safeguards for maintaining fairness in digital proceedings.

In conclusion, the principles of procedural fairness and good faith are indispensable for ensuring the legitimacy and quality of administrative action in the digital framework of North Rhine‑Westphalia. These safeguards demonstrate a clear commitment to preserving the dialogical nature of administrative processes and ensure that the pursuit of digital efficiency remains subordinate to fundamental procedural rights and the overarching mandate of the rule of law[557].

4.3.5. Administrative Efficiency and Legal Coherence (GDPR Interplay)

The final set of principles governing the North Rhine‑Westphalia E‑Government Act (EGovG NRW) highlights the critical tension between the pursuit of administrative efficiency and the imperative of legal coherence. While a central objective of e‑governance is to expedite procedures and reduce public sector costs, this goal is constitutionally constrained by the mandate of data protection, primarily enshrined in the General Data Protection Regulation (GDPR) and complemented by the Data Protection Act of North Rhine‑Westphalia (DSG NRW). The challenge for the state's legal framework is to ensure that efficiency gains do not compromise legality and data integrity. This section critically assesses the equilibrium achieved between these competing demands, focusing on the evaluation of efficiency gains versus compliance costs and the necessity of coherence with data protection law.

4.3.5.1. Evaluation of Efficiency Gains vs. Compliance Costs

A central rationale for the enactment of digital legislation in North Rhine‑Westphalia, as articulated in the E‑Government Act (EGovG NRW), lies in the pursuit of enhanced

[556] Vogel, Hans-Josef. "Rechtsetzung und Rechtsumsetzung besser machen." "Improving legislation and its implementation." In Politik und Verwaltung. Verstehen und Verändern, pp. 171-204. Nomos Verlagsgesellschaft mbH & Co. KG, 2025. 188-193.

[557] Alliance 90/The Greens parliamentary group, Law to facilitate access to official information in North Rhine-Westphalia, North Rhine-Westphalia State Parliament, Printed Paper 17/8722 (25 February 2020)

administrative efficiency. The envisaged transition to digital procedures—most notably electronic file management (E-Akte) and the automation of services—is expected to generate measurable improvements in procedural speed, reductions in operational costs, and an overall increase in the quality of services delivered to citizens and businesses. Yet, this orientation towards efficiency does not unfold in a normative vacuum. Rather, it is conditioned by the binding requirements of compliance, particularly in the domains of data protection and information security, which derive from the constitutional principle of the Rule of Law.

The legislative process itself reflects this tension. While efficiency gains are consistently emphasised, the amendments to the Act underscore the necessity of accelerating digitisation in order to realise the projected alleviation of administrative and financial burdens. As noted in the explanatory memorandum to the amendment bill, "the acceleration of digital transformation is indispensable to ensure that the anticipated benefits in terms of efficiency and cost reduction can be effectively achieved". This formulation illustrates the dual imperative: on the one hand, the promise of efficiency as a driver of reform, and on the other, the constitutional obligation to embed such reforms within a framework that safeguards legality, transparency, and accountability[558].

Compliance costs primarily arise from implementing the technical and organisational measures required by the GDPR[559] and the DSG NRW[560]. The duty to manage these costs effectively is formalised through specific procedural requirements. First, Data Protection Impact Assessment (DPIA), Article 35 GDPR mandates a DPIA before implementing high-risk digital projects[561]. This mechanism compels authorities to quantify and document risks to fundamental rights, with mitigation measures defining the minimum acceptable compliance cost. Second, privacy by Design and Privacy by Default. This requires that compliance costs be addressed proactively during the design phase of IT systems mandated by the EGovG NRW.

From a legal standpoint, the proportionality of the EGovG NRW is indirectly tested by this economic balance. If efficiency gains are negligible while compliance costs remain high, the overall benefit of the measure becomes questionable. Crucially, the state's duty is to

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[558] Landtag Nordrhein-Westfalen. Gesetzentwurf: Gesetz zur Änderung des E-Government-Gesetzes Nordrhein-Westfalen und zur Änderung weiterer Vorschriften. Drucksache 17/8795, 17. Wahlperiode. Düsseldorf: Landtag Nordrhein-Westfalen, 4 March 2020.

[559] European Parliament and Council, Regulation (EU) 2016/679 (General Data Protection Regulation), Art. 25, 35.

[560] Cybersicherheit NRW, "Datenschutzanforderungen in Unternehmen und öffentlichen Einrichtungen," accessed December 3, 2025, https://www.cybersicherheit.nrw/datenschutzanforderungen-unternehmen-und-oeffentlichen-einrichtungen-0

[561] Data protection by design and by default, and data protection impact assessments (DPIA). Data Protection Consultant NRW. https://www.ldi.nrw.de/liste-von-verarbeitungsvorgaengen-nach-art-35-abs-4-ds-gvo-fuer-den-oeffentlichen-bereich

ensure that efficiency is achieved through compliance, not at its expense. Digital initiatives must therefore be structured to achieve "cost-effective legality," integrating privacy-enhancing technologies at the design stage to minimise recurring costs of audits and scrutiny, thereby safeguarding the constitutional integrity of digital transformation.

4.3.5.2. Coherence with Data Protection Law (GDPR and DSG NRW)

The operational success and legal legitimacy of the EGovG NRW depend on its strict coherence with data protection law. Since the processing of personal data is inherent in almost all digital administrative actions—ranging from electronic file management to service portals and automated decisions—the legal foundation must align with the constitutional right to informational self-determination[562], enforced by the GDPR and supplemented by the DSG NRW[563].

The EGovG NRW authorises digitalisation but must adhere to the GDPR's requirements. Key areas of mandatory coherence include:

a. Legality: Legal Basis for Processing (Article 6 GDPR)[564]:

Legal basis for processing (Article 6 GDPR): Any digital service or data exchange mandated by the EGovG NRW must rest on a clear legal basis, typically Article 6(1)(e) GDPR (public task) combined with statutory authorisation in state law. Directives from the Ministry for Digitalisation (MHKBD) ensure that new services explicitly cite this foundation.

b. Principle of Data Minimisation (Article 5 GDPR)[565]:

Provisions relating to data collection and exchange are governed by the requirement that data be adequate, relevant, and limited to necessity. This is enforced through retention schedules and Privacy by Design, mandating that systems such as the E-Akte minimise access and usage by default.

c. Data Protection Impact Assessments (DPIAs - Article 35 GDPR)[566]:

For large-scale systems such as service portals or AI applications, the mandatory DPIA—regulated by the DSG NRW—ensures risks to fundamental rights are identified and mitigated prior to implementation, preventing ex post legal challenges.

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[562] Bundesministerium des Innern (BMI), "Datenschutz," accessed December 3, 2025, https://www.bmi.bund.de/DE/themen/verfassung/datenschutz/datenschutz-node.html
[563] Datenschutzgesetz Nordrhein-Westfalen (DSG NRW)," accessed December 3, 2025, https://www.recht.nrw.de/lmi/owa/br_text_anzeigen?v_id=3520071121100436275
[564] GDPR, Artikel 6.
[565] GDPR, Artikel 5.
[566] GDPR, Artikel 35.

Thus, the legal validity of any action under the EGovG NRW depends on demonstrable compliance with GDPR safeguards, operationalised through the DSG NRW.

4.4. Challenges and Gaps in Implementation

While the E-Government Act of North Rhine-Westphalia (EGovG NRW) formally reflects core principles of administrative law, its effectiveness ultimately depends on implementation. This section, therefore, examines points of friction where statutory ideals confront practical realities, focusing on three areas: the digital divide and accessibility, tensions in data protection and privacy, and institutional hurdles within public administration.

4.4.1. The Digital Divide and Accessibility:

The reliance on digital services mandated by the EGovG NRW creates constitutional tension by widening the digital divide (digitale Spaltung). This divide risks infringing the principle of equal access (Gleichheit des Zugangs), as certain groups—such as older citizens, those with limited socio-economic resources, or residents in areas with poor infrastructure—face systemic barriers. For them, administrative services risk shifting from a guaranteed entitlement to a conditional privilege dependent on digital literacy and technological access.

4.4.1.1. Legal Remedies and Their Practical Efficacy in NRW

To safeguard inclusivity, the legal framework provides two remedies:

a. Form Equivalence (§ 3a VwVfG NRW[567]): The permissive wording ("may be transmitted electronically") preserves analogue channels, ensuring that the constitutional right to service is not contingent on digital capacity.

b. Barrier-Free IT (BITV NRW[568], BGG NRW[569]): These provisions enforce accessibility standards (WCAG 2.1), translating equality into auditable technical duties monitored by supervisory authorities.

4.4.1.2. The Socio-Economic Bias in E-Participation

Municipal e-participation tools reveal further inequality. Studies show that such instruments disproportionately engage well-educated, politically active groups, thereby

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[567] VwVfG NRW, § 3a.

[568] Barrierefreie-Informationstechnik-Verordnung Nordrhein-Westfalen (BITV NRW), RECHT.NRW.DE, https://recht.nrw.de/lmi/owa/br_text_anzeigen?v_id=10000000000000000502..

[569] Behindertengleichstellungsgesetz Nordrhein-Westfalen (BGG NRW), RECHT.NRW.DE, https://recht.nrw.de/lmi/owa/br_text_anzeigen?v_id=54201405091006364 14

undermining equality of representation. The challenge thus extends beyond access to ensuring balanced participation in administrative processes[570].

4.4.2. Data Protection and Privacy Concerns:

Research on proactive administrative services in Germany highlights that digital transformation, while normatively aligned with data protection law, often generates recurring frictions with the GDPR and state-level data protection acts (DSG). These tensions challenge the sustainability of e-government, particularly regarding the principles of data minimisation and the security of sensitive information[571].

4.4.2.1. Data Minimisation (Datensparsamkeit)

Proactive and interoperable service models reduce duplication but risk purpose-creep and the creation of centralised pools of sensitive data. As Kuhn et al. (2020) note, the reliance on cross-agency data sources raises questions of legality and proportionality. Effective compliance requires strict segmentation and oversight—often through Data Protection Impact Assessments to ensure that efficiency does not override necessity[572].

4.4.2.2. Security of Sensitive Information

The processing of sensitive data in digital channels demands the highest technical and organisational safeguards. Yet, as identified in empirical studies, implementation is complicated by uneven municipal infrastructures, reliance on external providers, and persistent risks of human error[573]. These factors illustrate that while legal texts provide a coherent foundation, operational realities continue to constrain the effective protection of fundamental rights.

4.4.2.3. Institutional Comparison: The State Data Protection Commissioner of North Rhine-Westphalia and the Chief Information Officer of North Rhine-Westphalia (LDI NRW and CIO NRW)

The coexistence of the Landesbeauftragte für Datenschutz und Informationsfreiheit NRW (LDI NRW) and the Chief Information Officer of NRW (CIO NRW) necessitates a

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[570] Lars Holtkamp, "E-Democracy in deutschen Kommunen: Eine kritische Bestandsaufnahme," E-Democracy in German Municipalities: A Critical Assessment," *e-merkur* 4, no. 1/2 (2002): 49–58.
[571] Kuhn, Peter, Dian Balta, and Helmut Krcmar. "Was sind Herausforderungen proaktiver Verwaltungsleistungen in Deutschland?." In Wirtschaftsinformatik (Zentrale Tracks), pp. 554-559. 2020.
[572] Kuhn, Peter, Dian Balta, and Helmut Krcmar. "Was sind Herausforderungen proaktiver Verwaltungsleistungen in Deutschland?." In Wirtschaftsinformatik (Zentrale Tracks), pp. 554-559. 2020.
[573] Kuhn, Peter, Dian Balta, and Helmut Krcmar. "Was sind Herausforderungen proaktiver Verwaltungsleistungen in Deutschland?." In Wirtschaftsinformatik (Zentrale Tracks), pp. 554-559. 2020.

closer examination of their respective mandates and institutional roles. A comparative analysis reveals both points of intersection and divergence, situating each office within the broader framework of digital administration in North Rhine-Westphalia.

The LDI NRW, established under the Datenschutzgesetz NRW (DSG NRW §§25–30) and the Informationsfreiheitsgesetz NRW (IFG NRW), functions as an independent supervisory authority. Its mandate encompasses oversight of data-protection compliance across public and private sectors, as well as supervision of freedom-of-information rights. The LDI possesses investigative powers, may issue remedial orders, and handles complaints, thereby exercising binding authority in the enforcement of fundamental rights[574].

By contrast, the CIO NRW is designated under §22 E-Government-Gesetz NRW (EGovG NRW) as a coordinating office within the executive. Its role is programmatic: steering IT development, promoting interoperability, and overseeing IT security. While the CIO sets standards and coordinates projects, its powers remain largely advisory and non-binding, reflecting a model of administrative coordination rather than regulatory oversight[575].

Accordingly, their perspectives differ fundamentally. The LDI's orientation is one of protective oversight, grounded in fundamental rights and legality. Its lens is conformity with the GDPR, transparency, and access, backed by supervisory powers. The CIO's orientation is programmatic coordination, grounded in administrative efficiency and modernisation. Its lens is delivery—standards, interoperability, security, and rollout—though with limited binding authority[576].

These institutional logics may collide in several areas. For instance, cross-agency data integration, essential for seamless services, risks expanding processing purposes and thereby challenges GDPR principles of purpose limitation and minimisation. At the same time, certain domains reveal complementarity rather than conflict. Cybersecurity, for example,

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[574] Law on Data Protection and Freedom of Information in North Rhine-Westphalia (DSG NRW), Chapter 5, Sections 25–30 (establishing and empowering the State Commissioner for Data Protection and Freedom of Information NRW).

[575] E-Government-Gesetz NRW (EGovG NRW), §22. (Beauftragte der Landesregierung für Informationstechnik / CIO), defining coordination tasks and scope.

[576] E-Government-Gesetz NRW (EGovG NRW), §22. (Beauftragte der Landesregierung für Informationstechnik / CIO), defining coordination tasks and scope.

constitutes a foundational component of data-protection compliance, reinforcing rather than undermining the LDI's mandate[577].

The functional disparity between these two roles—binding regulatory control (LDI) versus advisory coordination (CIO)—means that the CIO's efficiency-driven mandate is legally constrained by the LDI's protective oversight. Consequently, the legal validity of any major digital project spearheaded by the CIO, such as the mandatory implementation of the E-Akte or the establishment of cross-agency service portals, depends critically on demonstrable compliance with GDPR safeguards, which the LDI is empowered to enforce. This inherent tension establishes the LDI as a procedural gatekeeper within the digital transformation process, compelling the CIO to integrate fundamental rights considerations into the core of IT strategy. In effect, data-protection compliance becomes not merely a parallel requirement but a mandatory precondition for administrative modernisation.

4.4.3. Institutional and Administrative Hurdles:

These administrative hurdles often prove more tenacious than purely legal inconsistencies. Evidence from other jurisdictions, such as the evaluation of the Berlin E-Government Act, suggests that the operational friction points observed in NRW—including difficulties in securing high-performance central IT provision, deficits in strategic digital competencies, and the slow pace of cultural adoption—are part of a systemic challenge within German state administration, transcending individual state legislation. The pace of digital transformation therefore lags behind legislative aspirations, constrained by inadequate material and human resources and by persistent coordination difficulties. Consequently, analysis must move beyond technical obstacles to address underlying governance and cultural deficits[578].

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[577] EuroCC National Competence Centres. Best Practices for Cybersecurity, GDPR and Data Interoperability. Version 1.0. By Vladimir Dimitrov, Vicky Konstantinopoulou, and Maria Nisheva. Approved by USTUTT/HLRS Project Management Team. Funded by the European High-Performance Computing Joint Undertaking (Grant Agreement No. 951732), 2020.. Available at: https://hpc-portal.eu/sites/default/files/2025-01/BestPractices_DataManagement_v1.0.pdf.

[578] Senate Department for the Interior and Sport (SenInnDS), Evaluation of the Berlin E-Government Act: Legal Report and Empirical Study with Recommendations for the Further Development of Digital Administration Law (Berlin: SenInnDS, 21 May 2021),1-7

4.4.3.1. Insufficient Investment and the Burden of Legacy Infrastructure

Underinvestment in IT and reliance on outdated systems restrict interoperability and uniform service quality. Smaller municipalities, lacking resources and personnel, face disproportionate burdens, undermining equal access to administrative services[579].

This situation generates a significant disparity in digital readiness. Comprehensive digitalisation projects demanded by the state framework place disproportionate financial and operational strain (Kraftakt) on smaller municipalities. These local authorities often lack the budgetary reserves and specialised personnel required to manage the transition while maintaining traditional service delivery. The uneven distribution of resources and investment capacity among administrative levels thus constitutes a structural impediment to achieving uniform quality in digital public services across the state.

4.4.3.2. Deficiencies in Digital and Legal Competencies (The Skills Gap)

Deficits in digital and legal competencies slow decision-making and create uncertainty in applying principles of legality to new technologies. Operational gaps (e.g., use of the E-Akte) and strategic deficits (e.g., AI governance) highlight the need for specialised training to secure lawful and effective digital administration[580].

Beyond financial constraints, deficits in specialised digital and legal competencies represent an equally significant barrier. Digital transformation requires more than digitising paper forms; it demands a wholesale re-engineering of administrative processes. This, in turn, necessitates a sophisticated blend of technical and administrative-legal expertise that is currently lacking in many public sector workforces.

Studies conducted in NRW indicate that a substantial number of municipalities acknowledge insufficient competencies to effectively steer digital change. This skills gap manifests in two distinct areas:

a. Operational Competencies: Basic proficiency in using new digital tools, such as the E-Akte, is often inconsistent, leading to inefficient workflow adoption.

b. Strategic and Leadership Competencies: More critically, there is a shortage of expertise in formulating comprehensive digital strategies, understanding the administrative-legal

[579] Klenk, Tanja, Samuel Greef, and Carla Lucks. "Digitalisierung der Daseinsvorsorge als kommunale Herausforderung: Wie unterschiedliche administrative Kapazitäten, digitaler Verwaltungszugang und Ungleichheit zusammenhängen." Zeitschrift für Politikwissenschaft (2025): 1-26.

[580] Klenk, Tanja, Samuel Greef, and Carla Lucks. "Digitalisierung der Daseinsvorsorge als kommunale Herausforderung: Wie unterschiedliche administrative Kapazitäten, digitaler Verwaltungszugang und Ungleichheit zusammenhängen." Zeitschrift für Politikwissenschaft (2025): 1-26.

implications of emerging technologies (e.g., AI), and applying principles of administrative legality (Verwaltungsakzessorietät) to automated decision-making.

This lack of specialised training slows decision-making and generates legal uncertainty regarding the compliance and robustness of new digital procedures, particularly in sensitive areas of administrative discretion.

4.4.3.3. The Friction of Network Administration and Public-Private Partnerships

The statutory push toward "network administration" complicates resource management by introducing inter-organisational friction where responsibilities are shared across administrative boundaries. A salient example is found in the state's "Geo-E-Government" initiatives, such as those undertaken by the Surveying and Mapping Administration in NRW. Here, the legal requirement to build a robust Spatial Data Infrastructure (GDI) necessitates continuous, high-cost investment in data provision and standardisation by public authorities[581].

While aligned with the political goal of "Private before State", this model introduces significant institutional hurdles. It demands rigorous and continuous legal oversight to ensure private partners adhere to data security standards and to prevent purpose-creep of sovereign data[582].

4.4.3.4. Inter-Administrative Coordination and the Communal Burden

Germany's multi-level federal system complicates implementation by introducing inherent coordination difficulties. The statutory aim of creating interconnected portals and uniform digital services mandates standardisation across federal, state (Länder), and municipal levels. Yet practical experience reveals significant fragmentation.

The operational challenge lies in securing consensus and uniform implementation across highly autonomous local administrations. Imposing central solutions or rigid technical standards often encounter resistance, given varied local political priorities and heterogeneous IT landscapes. This resistance can be framed through the lens of micropolitics, a concept

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[581] Stephan Heitmann and Jens Riecken, "E-Government in einer Netzwerkverwaltung am Beispiel des Landesvermessungsamtes NRW," E-Government in a Network Administration Using the Example of the State Surveying Office of North Rhine-Westphalia," *Zeitschrift für Vermessungswesen (zfv)* 132, no. 3 (2007): 123-27.

[582] Stephan Heitmann and Jens Riecken, "E-Government in einer Netzwerkverwaltung am Beispiel des Landesvermessungsamtes NRW," E-Government in a Network Administration Using the Example of the State Surveying Office of North Rhine-Westphalia," *Zeitschrift für Vermessungswesen (zfv)* 132, no. 3 (2007): 123-27.

traditionally applied to intra-organisational dynamics but equally relevant to inter-organisational contexts lacking clear hierarchical control[583].

Crucially, while legislative and strategic frameworks are set at state and federal levels, the operational burden of delivering mandated services falls primarily on local authorities. This unequal distribution of responsibility, coupled with resource deficits, makes coordination a continuous friction point. It threatens to produce a fragmented public service landscape where the quality and accessibility of digital services vary widely within NRW, thereby undermining the principle of equal public access to administrative services[584].

In summation, challenges stemming from insufficient investment and legacy IT infrastructure are compounded by a critical skills gap, particularly in strategic digital and legal competencies. When these internal constraints are combined with the complexities of multi-level coordination—where implementation burdens fall heavily on resource-limited municipalities—it becomes evident that the administrative framework itself presents a formidable obstacle to statutory compliance. This conclusion is reinforced by federal-level analyses, which designated the implementation of the federal Online Access Act (OZG) by the end of 2022 as a "complete failure", achieving only 18% of the targeted 575 services[585]. This systemic failure, attributed largely to neglect of back-office digitalisation and the absence of a legal instrument compelling municipalities to adopt "One-for-All" (EfA) solutions, confirms that the challenges observed in NRW are not unique but symptomatic of deeper structural and conceptual deficits within German federal administration. Addressing these institutional hurdles therefore requires more than policy adjustment; it demands fundamental structural reform to ensure that the ambition articulated in the EGovG NRW can be translated into a functional and equitable digital administrative reality. This underscores the continuous need for legislative and executive strategies that explicitly link resource allocation and specialised training to the attainment of digital legal standards.

4.4.3.5. The Structural Friction of Local Autonomy and Duplication

While competition among larger cities—such as the Virtuelles Rathaus in Hagen or the doMap in Dortmund—has generated innovative "best practice" solutions, the

[583] Klaus-Heiner Röhl, The status of the Online Access Act at the target date of early 2023 (Cologne: German Economic Institute, 30 March 2023), 4, 12.
[584] Klaus-Heiner Röhl, The status of the Online Access Act at the target date of early 2023 (Cologne: German Economic Institute, 30 March 2023), 4, 12.
[585] Klaus-Heiner Röhl, The status of the Online Access Act at the target date of early 2023 (Cologne: German Economic Institute, 30 March 2023), 4, 12.

decentralised dynamism has proven detrimental to the overall economy and efficiency of the administrative system across the state[586].

The need to compensate for this fragmentation has forced a reactive shift towards compensatory cooperation, exemplified by ambitious public-private partnerships such as the d-NRW project. Yet the primary institutional hurdle remains the persistent difficulty of organising effective knowledge transfer and ensuring the standardised roll-out of successful lighthouse projects to the numerous smaller and medium-sized municipalities[587].

4.4.3.6. The Challenge to the Territorial Principle in the Digital Age

The adoption of sophisticated e-government solutions poses a fundamental conceptual challenge to the traditional macro-structure of German public administration, particularly its reliance on the territorial principle. Historically, this principle ensured equivalence between affected citizens, territory, and political representation, with efficient performance predicated on achieving a minimum "operating size" for each local authority[588].

However, the advent of advanced information and communication technology (ICT) facilitates the emergence of informatised public service networks (IPSN). These networks enable the de-localisation of service provision, effectively decoupling efficiency from the physical size or resident population of the administrative unit. By separating front-office functions (citizen-facing services) from back-office processes (data management and administrative processing), the traditional need for territorial enlargement to secure efficiency is substantially mitigated[589].

Consequently, the debate shifts from enforcing physical consolidation to establishing functional integration and shared service centres. Administrative tasks lacking an explicit local reference can be consolidated and shared across multiple jurisdictions, thereby achieving efficiency without territorial reform. This conceptual shift necessitates a re-evaluation of the legal basis for communal self-government and its organisational

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[586] Herbert Kubicek and Martin Wind, *E-Government in Kommunen: Studie für die Enquetekommission „Zukunft der Städte in NRW" des Landtags Nordrhein Westfalen* (Bremen: University of Bremen, November 2003). E-Government in Municipalities: Study for the Enquete Commission "Future of Cities in NRW" of the State Parliament of North Rhine-Westphalia.

[587] Herbert Kubicek and Martin Wind, *E-Government in Kommunen: Studie für die Enquetekommission „Zukunft der Städte in NRW" des Landtags Nordrhein Westfalen* (Bremen: University of Bremen, November 2003). E-Government in Municipalities: Study for the Enquete Commission "Future of Cities in NRW" of the State Parliament of North Rhine-Westphalia.

[588] Tino Schuppan, "Gebietsreform im E-Government-Zeitalter," Territorial Reform in the E-Government Age *Verwaltung und Management* 14, no. 2 (2008): 66–78.

[589] Tino Schuppan, "Gebietsreform im E-Government-Zeitalter," Territorial Reform in the E-Government Age *Verwaltung und Management* 14, no. 2 (2008): 66–78.

autonomy, as administrative performance increasingly depends on cross-jurisdictional process management rather than territorial size[590].

4.4.3.7. Limited Steering Competence of the CIO

A further institutional hurdle lies in the limited steering competence of the state CIO (IT-Beauftragte). While § 22 EGovG NRW designates a CIO responsible for coordinating IT development, implementing IT-Planungsrat decisions, and overseeing IT security, the provision does not confer binding decision-making powers. This coordination-oriented model contrasts with stronger CIO mandates in Berlin or Saxony, where CIOs participate directly in legislative procedures or hold budgetary authority. The restricted competence in NRW undermines the ability to enforce uniform standards across heterogeneous administrative landscapes, leaving municipalities considerable autonomy to deviate from central IT strategies[591]. As a result, the CIO's role remains largely advisory, limiting its effectiveness in overcoming the systemic hurdles of digital transformation.

4.4.3.8. Implementation of IT-Planning Council Decisions and Interoperability

Another institutional hurdle concerns the implementation of binding standardisation decisions adopted by the IT-Planning Council. While these intra-federal acts are binding only between Bund and Länder, their external effect requires transposition into state law through Durchleitungsnormen. The EGovG NRW provides such a mechanism, thereby extending interoperability obligations to municipalities and self-governing bodies. However, not all Länder have enacted such norms, instead relying on their CIOs to ensure implementation. This uneven approach undermines the uniformity of standards and perpetuates fragmentation. Moreover, the IT-Planning Council's limited activity has fallen short of expectations, leaving Länder to set their own standards, which must later be aligned with Council decisions[592]. The result is a patchwork of obligations that complicates the pursuit of seamless interoperability across administrative tiers.

4.4.3.9. Summary

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[590] Tino Schuppan, "Gebietsreform im E-Government-Zeitalter," Territorial Reform in the E-Government Age *Verwaltung und Management* 14, no. 2 (2008): 66–78.

[591] Bernhardt, Wilfried. E-Government-Gesetzgebung von Bund und Ländern im Vergleich und Best-Practices-Leitlinie. Berichte des NEGZ Nr. 21. Berlin: Nationales E-Government Kompetenzzentrum e. V., 2021, 52.

[592] Bernhardt, Wilfried. E-Government-Gesetzgebung von Bund und Ländern im Vergleich und Best-Practices-Leitlinie. Berichte des NEGZ Nr. 21. Berlin: Nationales E-Government Kompetenzzentrum e. V., 2021, 57.

Institutional hurdles—ranging from resource deficits and skills gaps to coordination difficulties—demonstrate that statutory compliance depends not only on legal design but on structural reform. Without stronger investment, training, and governance mechanisms, the EGovG NRW risks falling short of its administrative law principles of equality, legality, and efficiency.

4.5. Institutional Implementation, Auditing, and Administrative Accountability

The translation of legal mandates within the EGovG NRW into a functioning digital reality requires close examination of both the implementation process and the mechanisms of administrative accountability. The Supplementary Report on the State of Digitalisation in the North Rhine-Westphalian State Administration, issued by the Ministry of Economic Affairs, Innovation, Digitalisation and Energy (MWIDE) in August 2021, provides critical insight into the political and institutional dynamics shaping this transformation (MWIDE 2021). Presented in response to a critical audit by the State Audit Office (Landesrechnungshof, LRH), the report underscores the non-linear, discovery-based nature of complex administrative reform[593].

4.5.1. Accountability and the Challenges of Digital Program Management

At the core of the institutional challenge lies the audit of the "Digital Administration North Rhine-Westphalia Program" (DVN). The LRH's criticism, dating back to mid-2020, identified three central deficits: a cumbersome organisational structure, limited steering capabilities of the Chief Information Officer (CIO), and deficiencies in program management, particularly in financial controlling. This critique provides a concrete case study for assessing accountability in digital governance. It demonstrates that political and administrative commitment alone is insufficient; effective institutional architecture and governance mechanisms are indispensable to ensuring legitimate and efficient implementation[594].

4.5.2. Balancing Political Strategy with Legal Mandates

The MWIDE's response, while acknowledging initial setbacks during the prior government's tenure, asserted that a "trend reversal" had been achieved, positioning NRW as

[593] Ministry of Economic Affairs, Innovation, Digitization and Energy of the State of North Rhine-Westphalia (MWIDE), Report on the Implementation Status of Digitization in the State Administration of North Rhine-Westphalia (Düsseldorf: MWIDE, 31 August 2021): 2.
[594] Ministry of Economic Affairs, Innovation, Digitization and Energy of the State of North Rhine-Westphalia (MWIDE), Report on the Implementation Status of Digitization in the State Administration of North Rhine-Westphalia (Düsseldorf: MWIDE, 31 August 2021): 2.

a leader in comparative federal digitalisation. The report sought to contextualise the LRH's critique within the broader framework of the 2018 E-Government Strategy and the 2020 EGovG Novella, which accelerated the full digitalisation deadline from 2031 to 2025[595].

This exchange highlights a fundamental tension: the political dynamism required to accelerate reform versus the constitutional requirements of fiscal prudence and administrative efficiency, monitored by independent audit bodies such as the LRH. The report further emphasised the expansion of the CIO's capacity and the reduction of planned outsourcing expenditure, signalling a strategic shift towards centralised control and harmonisation. These measures inherently reinforce legality by strengthening internal administrative competence and reducing reliance on external service providers[596].

4.5.3. Implications for Legal Governance

The legislative and administrative history presented in the MWIDE report reinforces the finding that e-government implementation is best understood as a process of discovery rather than a linear plan. This insight necessitates a legal framework that is adaptive and principle-based. The ongoing struggle to meet targets and the need for continuous strategic re-evaluation—as reflected in the report's four central strategic claims—validate the argument that general principles of administrative law must serve as the normative anchor for digital projects. These principles guide decision-making where rigid rules fail to capture the complexity of technological and institutional change[597].

4.5.4. Auditing the Federal-Regional Interdependency: The OZG Implementation Failure

The challenges identified in NRW's internal program management (DVN) are magnified by deficiencies in cooperative federal governance. The independent critique by the Federal Court of Auditors concerning the implementation of the Onlinezugangsgesetz (OZG) confirms that NRW's friction points are part of a broader systemic failure. The audit revealed that the overarching legal mandate to digitise services by the end of 2022 was significantly

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[595] Ministry of Economic Affairs, Innovation, Digitization and Energy of the State of North Rhine-Westphalia (MWIDE), Report on the Implementation Status of Digitization in the State Administration of North Rhine-Westphalia (Düsseldorf: MWIDE, 31 August 2021): 2.
[596] Ministry of Economic Affairs, Innovation, Digitization and Energy of the State of North Rhine-Westphalia (MWIDE), Report on the Implementation Status of Digitization in the State Administration of North Rhine-Westphalia (Düsseldorf: MWIDE, 31 August 2021): 2.
[597] Ministry of Economic Affairs, Innovation, Digitization and Energy of the State of North Rhine-Westphalia (MWIDE), Report on the Implementation Status of Digitization in the State Administration of North Rhine-Westphalia (Düsseldorf: MWIDE, 31 August 2021): 2.

missed, with only 19% of services online, thereby validating concerns about the feasibility of ambitious legal deadlines[598].

Crucially, the audit exposed fundamental shortcomings in central coordination. It noted that the Federal Ministry of the Interior (BMI) failed to provide timely planning certainty and unified standards, consuming a disproportionate share of the legal timeframe merely for clarification (Bundesrechnungshof 2023, 0.3). This absence of decisive federal steering undermined efficiency at the national level and contributed to an uncontrolled proliferation of redundant, non-reusable IT solutions across the federation[599]. For NRW, this meant that financial and personnel burdens on local authorities were amplified, as they could not rely on centrally promised reusable technical components.

4.6. Conclusion: Key Findings from the Case Study

This case study, focusing on the E-Government Act of North Rhine-Westphalia (EGovG NRW), set out to assess the extent to which a regional administrative law framework can balance foundational legal principles with the demands of technological innovation, within the broader context of ensuring administrative-legal resilience. The detailed analysis conducted throughout this chapter suggests that while the Act provides a necessary and ambitious legal impetus for digitisation, its success in maintaining equilibrium remains partial and contested in practice.

4.6.1. The Balance Between Principle and Innovation

The core question addressed by this chapter—whether the EGovG NRW successfully balances legal principles with innovation—can be answered with a qualified finding: the Act achieves legal coherence but faces significant friction in implementation.

4.6.1.1. Legal Coherence Achieved:

The Act is generally successful in structurally anchoring digital administration within the principle of legality. By mandating the use of the electronic file (E-Akte), facilitating secure digital communication channels (such as De-Mail), and establishing clear requirements for information provision, the EGovG NRW provides a legitimate legal foundation for transformation. It does not inherently contradict established administrative law doctrines.

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[598] Coordination, report according to Section 88 Paragraph 2 of the Federal Budget Code to the Budget Committee of the German Bundestag, Ref. VII 5 - 001755 (29 March 2023).
[599] Coordination, report according to Section 88 Paragraph 2 of the Federal Budget Code to the Budget Committee of the German Bundestag, Ref. VII 5 - 001755 (29 March 2023).

In the context of e-government, legal equivalence is typically achieved through the Qualified Electronic Signature (QES). The QES fulfils the traditional functions of the handwritten signature—ensuring non-repudiation, securing authenticity of identity, and confirming document integrity. Crucially, this equivalence is generally limited to natural persons. The challenge of validating official acts issued en masse by administrative bodies has been addressed in comparative legal systems through the introduction of the electronic seal, which validates organisational origin and integrity. This innovation is essential to ensuring Rechtssicherheit in contexts involving large-scale administrative decisions. The conceptual framework underscores that coherence in digital administrative law depends on providing functionally equivalent technical substitutes that rigorously meet the multi-layered purposes of traditional analogue forms[600].

4.6.1.2. Implementation Friction in Practice:

Practical application reveals tensions where the pursuit of efficiency risks marginalising established principles, resulting in fragmented administrative justice across the state. As demonstrated in (4.4.2), the push for data interoperability strains the principle of data minimisation, requiring continuous oversight through Data Protection Impact Assessments (DPIAs). Similarly, institutional hurdles (4.4.3)—including deficits in municipal infrastructure and specialised competencies—impede uniform and legally rigorous application. The law is structurally sound, but administrative capacity to execute it remains fragmented.

4.6.2. Key Analytical Findings

The in-depth examination of the EGovG NRW yielded several critical findings regarding the interaction between administrative law and e-governance:

4.6.2.1. The Shift in Legislative Focus:

The Act confirms a crucial shift from merely regulating analogue processes to actively shaping the digital structure of public authority. This legislative approach requires administrative law to move beyond remedial control towards proactive design of governance systems.

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[600] Claudia Seitz, Ralf Michael Straub, and Robert Weyeneth (eds.), Legal Protection in Theory and Practice: Festschrift for Stephan Breitenmoser (Helbing Lichtenhahn, 2023), 183-192.

4.6.2.2. The Administrative Burden on Local Government:

The study strongly suggests that the primary implementation risk lies at the communal level. The Act places significant functional demands on local authorities without guaranteeing commensurate financial and human resources, raising questions about the fairness and sustainability of this decentralised model. Recent administrative research confirms this challenge, highlighting that the OZG—and by extension, regional mandates such as the EGovG NRW—failed to adequately address the specific needs and resource constraints of smaller municipalities[601].

This failure manifests structurally as a breakdown in inter-communal cooperation (IKZ). Many small authorities perceive collaborative structures as cumbersome, costly, and poorly suited to their requirements. Consequently, a comprehensive and economically rational digitisation strategy at the local level is blocked by fundamental issues of coordination[602]. This highlights that the successful execution of administrative law principles, such as efficiency and good administration, depends on recalibrating the balance between constitutionally protected communal self-government and the standardisation and centralisation required for digital governance.

Furthermore, the research confirms a critical political deficit: low political interest in the complex, less visible aspects of internal administrative digitisation, leading to insufficient budgetary allocation. This finding reinforces the conclusion that legal compulsion alone cannot substitute for political support and the provision of technical competencies and financial resources, exposing the fragility of legislative mandates in technological transformation[603].

4.6.2.3. The Necessity of Competency and Standards:

The effective maintenance of legal principles—such as transparency and data protection—in a digital environment relies less on statutory text and more on the

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[601] Eileen Bong; Busch, Alex; Dous, Alina; Hanf, Jenny Marleen; Kopatz, Ricco; Kosewald, Joel; Kreß, Alexandra; Langhof, Sören; Siebert, Alwina; Warmuth, Seraphine; Weiß, Jens. Implementation of the Online Access Act in Small Municipalities - Experiences and Problems, Working Paper 15 (Halberstadt: Harz University of Applied Sciences, 2025), 33. https://nbn-resolving.org/urn:nbn:de:0168-ssoar-102253-9

[602] Eileen Bong; Busch, Alex; Dous, Alina; Hanf, Jenny Marleen; Kopatz, Ricco; Kosewald, Joel; Kreß, Alexandra; Langhof, Sören; Siebert, Alwina; Warmuth, Seraphine; Weiß, Jens. Implementation of the Online Access Act in Small Municipalities - Experiences and Problems, Working Paper 15 (Halberstadt: Harz University of Applied Sciences, 2025), 33. https://nbn-resolving.org/urn:nbn:de:0168-ssoar-102253-9

[603] Eileen Bong; Busch, Alex; Dous, Alina; Hanf, Jenny Marleen; Kopatz, Ricco; Kosewald, Joel; Kreß, Alexandra; Langhof, Sören; Siebert, Alwina; Warmuth, Seraphine; Weiß, Jens. Implementation of the Online Access Act in Small Municipalities - Experiences and Problems, Working Paper 15 (Halberstadt: Harz University of Applied Sciences, 2025), 33. https://nbn-resolving.org/urn:nbn:de:0168-ssoar-102253-9

establishment of uniform technical standards and the legal competence of administrative personnel.

4.6.2.4. Empirical Validation: The Gap Between Mandate and Reality

The initial government evaluation of the EGovG NRW (MWIDE 2019) empirically confirms the friction points identified. While the report acknowledges the successful establishment of legal baselines—such as the mandatory use of secure electronic communication channels (§ 4 EGovG NRW)—it reveals profound structural weaknesses. Specifically, the mandated introduction of the E-Akte (§ 9 EGovG NRW) was deemed "ambitious" and subject to delays due to insufficient personnel and financial resources[604].

The evaluation also highlights a deficiency in user acceptance, noting that many digitally available services are used only sporadically. This underscores the need to improve the usability of key components such as Servicekonto.NRW. The finding demonstrates that legal effectiveness in e-governance is contingent upon resolving systemic deficiencies in infrastructure and user-centric design[605].

4.6.3. Setting the Stage for Final Conclusions

The findings from this case study now serve as the empirical and analytical foundation for the final part of this dissertation. The friction points identified—particularly the tension between efficiency and data protection, and the gap between legal mandate and administrative capacity—demonstrate that administrative law requires robust, anticipatory principles to govern technological change effectively.

The concluding chapters will therefore move from specific case analysis to broader theory-building. Drawing on the experience of the EGovG NRW, they will propose a framework for anticipatory administrative law. The recommendations will extend beyond the regional context of North Rhine-Westphalia, offering guidance for broader policy development.

A particularly illustrative example of the need for anticipatory reform concerns the scope of access to information. While § 29 VwVfG satisfactorily regulates access to files for parties within ongoing administrative procedures, public access to information extends

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[604] Ministry of Economic Affairs, Innovation, Digitization and Energy of the State of North Rhine-Westphalia, Report on Experiences with the E-Government Act NRW (EGovG NRW), State Parliament of North Rhine-Westphalia, Printed Paper 17/2860 (20 December 2019)

[605] Ministry of Economic Affairs, Innovation, Digitization and Energy of the State of North Rhine-Westphalia, Report on Experiences with the E-Government Act NRW (EGovG NRW), State Parliament of North Rhine-Westphalia, Printed Paper 17/2860 (20 December 2019)

beyond this traditional framework and implicates the broader constitutional right to information. Proposals to expand § 29 VwVfG to establish a right of inspection and information outside formal proceedings and for non-parties have been contemplated. Yet such reform is widely considered systemically inappropriate, given that the VwVfG provisions are designed to apply only within the procedural context, whereas the right of access to information is intended to operate precisely outside such proceedings[606].

Moreover, any expansion of § 29 VwVfG, while desirable for legal uniformity with federal law, would require significant coordination and time investment by the Länder—a prospect that has often met resistance. Consequently, the decision was made in favour of adopting specific Freedom of Information Acts (IFG), the application of which is typically limited to the federal administration but may serve as a model for the Länder. Unlike administrative procedural law, absolute legislative uniformity between federal and state freedom of information laws is not a compelling requirement[607].

A further complexity arises from the inherent tension between information access and data protection. Every request for official information necessitates an examination of whether it contains sensitive third-party data, creating a constant legal conflict. While some discussions have proposed integrating data protection and information access into a comprehensive Informationsgesetzbuch, such integration is generally advised against in the short term, as it risks unduly complicating the legislative process[608].

Nonetheless, the long-term goal of an overarching, harmonising federal information code remains a valid conceptual consideration, pointing towards the need for anticipatory legal design that can reconcile competing constitutional values in the digital age[609].

The findings of Chapter Four, though grounded in the specific experience of North Rhine-Westphalia, point to structural and doctrinal challenges that extend well beyond the regional context. They indicate that the digital transformation of public administration cannot

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[606] Vgl. Kloepfor, Gutachten D fiir den 62. Deutschen Juristenlag, 1998, S. D 90. as cited in Schmitz, Heribert. "Fortentwicklung des Verwaltungsverfahrensgesetzes: Konkrete Gesetzgebungspläne und weitere Perspektiven." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 136-155. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 143.

[607] Vgl. Kloepfor, Gutachten D fiir den 62. Deutschen Juristenlag, 1998, S. D 90. as cited in Schmitz, Heribert. "Fortentwicklung des Verwaltungsverfahrensgesetzes: Konkrete Gesetzgebungspläne und weitere Perspektiven." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 136-155. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 143.

[608] Vgl. Kloepfor, Gutachten D fiir den 62. Deutschen Juristenlag, 1998, S. D 90. as cited in Schmitz, Heribert. "Fortentwicklung des Verwaltungsverfahrensgesetzes: Konkrete Gesetzgebungspläne und weitere Perspektiven." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 136-155. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 143.

[609] Schmitz, Heribert. "Fortentwicklung des Verwaltungsverfahrensgesetzes: Konkrete Gesetzgebungspläne und weitere Perspektiven." In Verwaltungsverfahren und Verwaltungsverfahrensgesetz, pp. 136-155. Nomos Verlagsgesellschaft mbH & Co. KG, 2003. 143.

be sustained through legislative compulsion alone, but instead requires the development of anticipatory legal principles, the strengthening of institutional capacity, and the cultivation of sustained political commitment. These conclusions provide the analytical bridge to the final chapter, which moves beyond case-specific observations to construct a broader framework of recommendations and conclusions. By synthesising doctrinal analysis, empirical evidence, and comparative perspectives, Chapter Five seeks to demonstrate how administrative law can evolve into a proactive architecture—one that not only guides technological change but also ensures that constitutional values such as legality, proportionality, and equality remain firmly embedded within the digital governance landscape.

Chapter 5: Conclusions

5.1. Introduction

The preceding chapters traced the doctrinal foundations of German administrative law, examined the federal and regional regulatory frameworks governing e-government, and analysed the normative implications of automated administrative procedures. They also explored the case study of the E-Government Act of North Rhine-Westphalia (EGovG NRW), which illustrates both the internal legal coherence of digitalisation efforts and the persistent frictions that arise when these efforts encounter administrative practice.

The analysis of Germany's federal administrative system demonstrated that digital transformation unfolds within a constitutionally complex environment shaped by federalism, subsidiarity, and a deeply rooted commitment to the Rechtsstaat. Legislative instruments such as the E-Government Act (EGovG) and the Online Access Act (OZG) have provided important momentum for digitalisation. Yet, as the study showed, their implementation has been constrained by administrative fragmentation, overlapping competences, and uneven infrastructural development. These structural limitations suggest that digitalisation cannot be conceptualised merely as a technical modernisation project; rather, it must be understood within the constitutional distribution of powers and the normative principles that govern administrative action.

The examination of automated administrative procedures under § 35a VwVfG highlighted the doctrinal challenges posed by algorithmic decision-making. While automation offers the potential for greater efficiency, it simultaneously raises concerns regarding fairness, proportionality, and the constitutional requirement that individuals be treated as "subjects of rights" rather than passive objects of state processing. The safeguards embedded in § 35a—particularly the exclusion of discretionary decisions from automation and the guarantee of human intervention—illustrate the resilience of administrative law in the face of technological change. At the same time, they reveal the need to embed legal principles directly into the design and operation of digital systems to ensure that automation remains compatible with constitutional standards.

The case study of the EGovG NRW further demonstrated that regional legislation can establish a coherent legal framework for digital administration, yet its practical effectiveness remains uneven. The Act anchors digitalisation within the principle of legality by mandating instruments such as the E-Akte and secure communication channels. Nevertheless, implementation has varied significantly across municipalities, where disparities in resources,

administrative competencies, and political commitment have hindered uniform application. The resulting tension between efficiency and data protection, as well as the gap between legislative ambition and administrative capacity, emerged as central points of friction.

Taken together, these findings indicate that digital transformation in public administration is neither a radical rupture nor a purely technical adjustment. Instead, it constitutes an incremental and often contested process that requires administrative law to recalibrate its normative orientation. The challenge lies in balancing legality, proportionality, and equality with the demands of efficiency, innovation, and standardisation. This chapter, therefore, reflects on the broader implications of the study, arguing that administrative law must evolve from a predominantly reactive framework of oversight into a more anticipatory architecture capable of guiding technological change while preserving constitutional integrity.

Bibliography
Books

Alder, John. *General Principles of Constitutional and Administrative Law.* Oxford: Oxford University Press, 2002.

Becker, Jörg, Lars Algermissen, and Bjoern Niehaves. *Organizational Engineering in Public Administrations.* Berlin: Springer, 2004.

Detterbeck, Steffen. *Allgemeines Verwaltungsrecht.* 18th ed. Munich: C.H. Beck, 2020.

Künnecke, Marina. *Tradition and Change in Administrative Law: An Anglo‑German Comparison.* Berlin: Springer, 2007.

Mendes, Joana. *Participation in EU Rule‑Making: A Rights‑Based Approach.* Oxford: Oxford University Press, 2011.

Mayer, Otto. *Deutsches Verwaltungsrecht.* Vol. 1. Nachdruck 1961 [1923].

Schaefer, Jan Philipp. *Die Umgestaltung des Verwaltungsrechts.* Tübingen: Mohr Siebeck, 2016.

Stott, David. *Principles of Administrative Law.* London: Routledge‑Cavendish, 1997.

Weber, Max. *Economy and Society: An Outline of Interpretive Sociology.* Tübingen: Mohr Siebeck, 1922.

Wirtz, Bernd W., and Pascal R. M. Kubin. *Governance Reforms in Germany.* Cham: Springer Nature, 2024.

Journal Articles & Book Chapters

Arjola-Sarja, Terhi. “The Ombudsman as an Advocate for Good Administration.” *Parliamentary Ombudsman of Finland. 90 Years* (2010).

Arzoz, Xabier. “Administrative Procedures.” *Max Planck Encyclopedia of Comparative Constitutional Law* (2017).

Bartholomae, Florian W., Chang Woon Nam, and Peter Steinhoff. “Does Federalism Affect E‑Government in Germany?” CESifo Working Paper No. 10260 (2023).

Behnke, Nathalie, and Sabine Kropp. “Administrative Federalism.” In *Public Administration in Germany*, edited by Sabine Kuhlmann et al.

Bernatt, Maciej. “Administrative Sanctions: Between Efficiency and Procedural Fairness.” *Review of European Administrative Law* 9, no. 1 (2016).

Bogdanovskaya, Irina. “E‑Government: Legal Aspects.” *Legal Issues of the Digital Age* 3 (2022).

Bovens, Mark, and Stavros Zouridis. “From Street-Level to System-Level Bureaucracies: How ICT Is Transforming Administrative Discretion.” *Public Administration Review* 62, no. 2 (2002).

Brown, David. “Electronic Government and Public Administration.” *International Review of Administrative Sciences* 71, no. 2 (2005).

Cassisi, Sabino. “New Paths for Administrative Law: A Manifesto.” *International Journal of Constitutional Law* 10, no. 3 (2012).

Coglianese, Cary. “Administrative Law in the Automated State.” *Daedalus* 150, no. 3 (2021).

Detterbeck, Steffen. “General Administrative Law.” In *Allgemeines Verwaltungsrecht*, 18th ed.

Eddowes, Lee Anthony. “Good Practice in E-Government: Management over Methods?” In *International Conference on E-Government* (2005).

Engewald, Bettina. “Administrative Silence in Germany.” In *The Sound of Silence in European Administrative Law*, edited by Dragos, Kovač, and Tolsma (2020).

Fleischer, Julia. “Federal Administration.” In *Public Administration in Germany* (2021).

Fraenkel-Haeberle, Cristina. “Fully Digitalized Administrative Procedures in the German Legal System.” *European Review of Digital Administration & Law (Erdal)* 1, no. 1–2 (2020).

Grönlund, Åke, and Thomas Horan. “Introducing E-Gov: History, Definitions, and Issues.” *Communications of the Association for Information Systems* 15, no. 1 (2005).

Heuberger, Moritz, and Christian Schwab. “Challenges of Digital Service Provision for Local Governments.” In *The Future of Local Self-Government* (2021).

Hoffmann-Riem, Wolfgang. “Verwaltungsverfahren und Verwaltungsverfahrensgesetz – Einleitende Problemskizze.” In *Verwaltungsverfahren und Verwaltungsverfahrensgesetz* (2003).

Hofmann, Hans. “Europeanisation and German Public Administration.” In *Public Administration in Germany* (2021).

Hu, Guangwei, Wenwen Pan, Mingxin Lu, and Jie Wang. “The Widely Shared Definition of E-Government.” *The Electronic Library* 27, no. 6 (2009).

Kahl, Wolfgang. “Das Verwaltungsverfahrensgesetz zwischen Kodifikationsidee und Sonderrechtsentwicklungen.” In *Verwaltungsverfahren und Verwaltungsverfahrensgesetz* (2003).

Klumpp, Dieter. “From Websites to E-Government in Germany.” In *Electronic Government* (2002).

Kuhlmann, Sabine, Isabella Proeller, Dieter Schimanke, and Jan Ziekow. “German Public Administration: Background and Key Issues.” In *Public Administration in Germany* (2021).

Lifante-Vidal, I. “Is Legal Certainty a Formal Value?” *Jurisprudence* 11, no. 3 (2020).

Mehde, Veith. “Control and Accountability: Administrative Courts and Courts of Audit.” In *Public Administration in Germany* (2021).

Mergel, Ines. “Digital Transformation of the German State.” In *Public Administration in Germany* (2021).

Mitskevich, Ludmilla. “Administrative Acts of Germany.” *Journal of Siberian Federal University: Humanities & Social Sciences* 4, no. 2 (2011).

Nica, Elvira. “Sustainable Development and Citizen-Centric E-Government Services.” *Economics, Management, and Financial Markets* 10, no. 3 (2015).

Nolte, Georg. “General Principles of German and European Administrative Law.” *Modern Law Review* 57, no. 2 (1994).

Petoft, Arian. “The Concept and Instances of General Principles of Administrative Law.” *Cuestiones Constitucionales* 42 (2020).

Pünder, Hermann. “German Administrative Procedure in a Comparative Perspective.” *International Journal of Constitutional Law* 11, no. 4 (2013).

Röhl, K. F. “Verfahrensgerechtigkeit.” *Zeitschrift für Rechtssoziologie* 14, no. 1 (1993).

Schmitz, Thomas. “The Administrative Procedure in German Administrative Law.” In *Administrative Decision and Administrative Procedure under German, French and Vietnamese Law* (2013).

Schneider, Hans-Peter. “The Federal Republic of Germany.” In *Distribution of Powers and Responsibilities* (2006).

Schrapper, Ludger. “The Administration of the Länder.” In *Public Administration in Germany* (2021).

Siegel, Thorsten. “Digitalisierung des Verwaltungsverfahrens.” *Juristische Ausbildung* (2020).

Sommermann, Karl-Peter. “Constitutional State and Public Administration.” In *Public Administration in Germany* (2021).

Stelkens, Ulrich. “Legal Certainty and Protection of Legitimate Expectations.” Lecture Notes, University of Speyer (2016).

Summers, Robert. “Evaluating and Improving Legal Process – A Plea for Process Values.” *Cornell Law Review* 60, no. 1 (1974).

Voßkuhle, Andreas. “Allgemeines Verwaltungs- und Verwaltungsprozeßrecht.” In *Rechtswissenschaft und Rechtsliteratur im 20. Jahrhundert* (2021).

Wegrich, Kai. “Is the Turtle Still Plodding Along? Public Management Reform in Germany.” *Public Management Review* 23, no. 8 (2021).

Widlak, Arjan, Marlies van Eck, and Rik Peeters. “Towards Principles of Good Digital Administration.” In *The Algorithmic Society* (2020).

Winter, Gerd. “Theoretical Foundations of Public Participation in Administrative Decision‑Making.” In *Environmental Democracy and Law* (2014).

Yildiz, Mete. “E‑Government Research: Reviewing the Literature, Limitations, and Ways Forward.” *Government Information Quarterly* 24, no. 3 (2007).

Yutaka Arai‑Takahashi. “Proportionality – A German Approach.” In *The Principle of Proportionality in European Law*, edited by Evelyn Ellis (1999).

Ziekow, Jan. “Das Verwaltungsverfahrensrecht in der Digitalisierung der Verwaltung.” *Neue Zeitschrift für Verwaltungsrecht* (2018).

Ziekow, Jan. “Administrative Procedures and Processes.” In *Public Administration in Germany* (2021).

Legal Sources

Basic Law (Grundgesetz)
Basic Law for the Federal Republic of Germany.

https://www.gesetze-im-internet.de/englisch_gg/englisch_gg.html.

Germany. *Grundgesetz* [Basic Law], Art. 20(3).
Germany. *Grundgesetz* [Basic Law], Art. 3.
Germany. *Grundgesetz* [Basic Law], Art. 83.

Germany. *Grundgesetz* [Basic Law], Art. 91c.

Administrative Procedure Act (VwVfG)
Germany. *Verwaltungsverfahrensgesetz (VwVfG)* [Administrative Procedure Act], §§ 24, 28, 29, 39.
Federal Republic of Germany. *Administrative Procedure Act (VwVfG)*, § 48(2).
Verwaltungsverfahrensgesetz (VwVfG), Bundesgesetzblatt I 1976, 1253, as amended.
German Administrative Procedure Act (VwVfG), § 39, “Statement of Reasons for Administrative Acts.”

https://www.gesetze-im-internet.de/vwvfg/.

E‑Government Legislation (Federal & State)
E‑Government Act (EGovG) – Act to Promote Electronic Government, 2013, amended 2021.

https://www.gesetze-im-internet.de/egovg/.

North Rhine‑Westphalia. *E‑Government Act (EGovG NRW)*, 2020.

https://recht.nrw.de/lmi/owa/br_text_anzeigen?v_id=73520171220150354215.

Act of Germany (EGovG).

https://www.gesetze-im-internet.de/englisch_egovg/ (gesetze-im-internet.de in Bing).

Online Access Act (OZG)
Germany. *Onlinezugangsgesetz (OZG)* – Online Access Act, 2017.

https://www.gesetze-im-internet.de/ozg/.

Online Access Act (OZG), Federal Law Gazette I 2017.

Data Protection Legislation
Regulation (EU) 2016/679 (General Data Protection Regulation – GDPR), Art. 22.
Bundesdatenschutzgesetz (BDSG) – Federal Data Protection Act, 2018.

https://www.gesetze-im-internet.de/bdsg_2018/.

Freedom of Information Laws
North Rhine‑Westphalia. *Informationsfreiheitsgesetz Nordrhein‑Westfalen* (IFG NRW), 2001.

Germany. *Informationsfreiheitsgesetz* (IFG), 2005.

Other German Federal Legislation
Act on the Federal Office for Information Security (BSI Act – BSIG), 2009, last amended 2021.
Germany. *Gesetz zur digitalen Signatur* (Signaturgesetz), 1997.
Gesetz über die Umweltverträglichkeitsprüfung (UVPG) [Federal Environmental Impact Assessment Act], 2017.

https://www.gesetze-im-internet.de/uvpg/.

The General Equal Treatment Act (Allgemeines Gleichbehandlungsgesetz – AGG).

European Union Legal Sources
European Parliament and Council. Regulation (EU) No 910/2014 on Electronic Identification and Trust Services (eIDAS).

https://eur-lex.europa.eu/eli/reg/2014/910/oj/eng (eur-lex.europa.eu in Bing).

European Commission. *Consolidated Version of the Treaty on European Union.* OJ C 326, 2012.

European Union. *Tallinn Declaration on eGovernment*, 2017.

IT Governance & Federal Cooperation
IT‑Planungsrat. *IT‑Staatsvertrag – State Treaty on Information Technology*, 2009.

https://www.it-planungsrat.de/.

Föderale IT‑Kooperation (FITKO). *Federal IT Cooperation*.

https://www.fitko.de/.

Reports & Official Documents
Bundesrechnungshof (Federal Court of Auditors).

Report Pursuant to Section 99 of the Federal Budget Code (BHO): Implementation of the Online Access Act. Bonn: Bundesrechnungshof, 2023. https://www.bundesrechnungshof.de.

Bundesministerium des Innern (Federal Ministry of the Interior).

BundOnline 2005: Implementation Plan for the Federal Government's E-Government Initiative. Berlin: BMI, 2000.

Bundesministerium des Innern (Federal Ministry of the Interior).

E-Government 2.0: Innovations for Germany's Public Administration. Berlin: BMI, 2006.

Council of Australian Law Deans.

Statement on the Nature of Legal Research. 2005. Accessed June 10, 2025. https://cald.asn.au.

Digitale Verwaltung.

OZG-Leistungen. Accessed June 28, 2025. https://www.digitale-verwaltung.de.

European Commission.

The Digital Economy and Society Index (DESI). Last modified August 7, 2024. https://digital-strategy.ec.europa.eu (digital-strategy.ec.europa.eu in Bing).

European Commission.

Communication: The European eGovernment Action Plan 2011–2015. COM(2010) 743 final, 2010.

European Commission.

i2010 – Information Society and the Media: Working Towards Growth and Jobs. EUR-Lex.

European Commission.

EU eGovernment Action Plan 2016–2020: Accelerating the Digital Transformation of Government. COM(2016) 288 final.

European Commission and Council.

eEurope: An Information Society for All – Action Plan. 2005.

European Union.

Tallinn Declaration on eGovernment. Signed October 6, 2017.

Federal Commissioner for Data Protection and Freedom of Information (BfDI).

Home Page. Accessed September 1, 2025. https://www.bfdi.bund.de.

Federal Ministry of the Interior (BMI).

E-Government. Accessed August 30, 2024. https://www.bmi.bund.de.

FITKO – Federal IT Cooperation.

Federal IT Cooperation. Accessed September 1, 2025. https://www.fitko.de.

Föderale IT-Kooperation (FITKO).

FITKO – Federal IT Cooperation. https://www.fitko.de.

IT-Planungsrat (IT Planning Council).

Official Website of the IT Planning Council. Accessed September 1, 2025. https://www.it-planungsrat.de.

IT-Planungsrat.

IT-Staatsvertrag – State Treaty on Information Technology. 2009. https://www.it-planungsrat.de.

Nationales E-Government Kompetenzzentrum (NEGZ).

Bernhardt, Wilfried. *E-Government-Gesetzgebung von Bund und Ländern im Vergleich und Best-Practices-Leitlinie.* Berichte des NEGZ Nr. 21. Berlin: NEGZ, 2021.

OECD (Organisation for Economic Co-operation and Development).

Procedural Fairness: Transparency Issues in Civil and Administrative Proceedings – Germany. Working Party No. 3, 2010.

OECD.

Recommendation of the Council on Digital Government Strategies. OECD/LEGAL/0406, adopted July 15, 2014.

Scientific Services of the German Bundestag.

Criteria of the Wesentlichkeitstheorie of the Federal Constitutional Court. WD 3-152/19, June 14, 2019.

United Nations Department of Economic and Social Affairs.

United Nations E-Government Survey 2020: Digital Government in the Decade of Action for Sustainable Development. New York: United Nations, 2020.

United Nations Department of Economic and Social Affairs.

United Nations E-Government Survey 2022: The Future of Digital Government. New York: United Nations, 2022.

van Kampen, Jakob.

From Plan to Reality: Applications of the European eGovernment Action Plan 2016–2020. Master's thesis, Technische Hochschule Köln, 2018.

Web & Institutional Sources

Federal Ministry of the Interior (BMI).

"E-Government." Accessed August 30, 2024. https://www.bmi.bund.de.

Federal Commissioner for Data Protection and Freedom of Information (BfDI).

"Home." Accessed September 1, 2025. https://www.bfdi.bund.de.

FITKO – Federal IT Cooperation.

"Federal IT Cooperation." Accessed September 1, 2025. https://www.fitko.de.

IT-Planungsrat (IT Planning Council).

"Official Website of the IT Planning Council." Accessed September 1, 2025. https://www.it-planungsrat.de.

Digitale Verwaltung.

"OZG-Leistungen." Accessed June 28, 2025. https://www.digitale-verwaltung.de.

European Commission.

"The Digital Economy and Society Index (DESI)." Last modified August 7, 2024. https://digital-strategy.ec.europa.eu/en/policies/desi.

European Union.

"Tallinn Declaration on eGovernment." 2017. https://ec.europa.eu.

European Commission.

"i2010 – Information Society and the Media." EUR-Lex. https://eur-lex.europa.eu.

European Commission.

"EU eGovernment Action Plan 2016–2020." COM(2016) 288 final. https://eur-lex.europa.eu.

European Commission.

"Communication: The European eGovernment Action Plan 2011–2015." COM(2010) 743 final. https://eur-lex.europa.eu.

Council of Australian Law Deans.

"Statement on the Nature of Legal Research." Accessed June 10, 2025. https://cald.asn.au.

Federal Court of Auditors (Bundesrechnungshof).

“Implementation of the Online Access Act.” 2023. https://www.bundesrechnungshof.de.

Nationales E-Government Kompetenzzentrum (NEGZ).

“Berichte des NEGZ.” https://www.negz.org.

Federal Ministry of the Interior (BMI).

“BundOnline 2005.” https://www.bmi.bund.de.

Federal Ministry of the Interior (BMI).

“E-Government 2.0.” https://www.bmi.bund.de.

European Commission and Council.

“eEurope: An Information Society for All – Action Plan.” https://ec.europa.eu.

United Nations Department of Economic and Social Affairs.

“UN E-Government Survey 2022.” https://publicadministration.un.org (publicadministration.un.org in Bing).

United Nations Department of Economic and Social Affairs.

“UN E-Government Survey 2020.” https://publicadministration.un.org (publicadministration.un.org in Bing).

Onlinezugangsgesetz (OZG).

https://www.gesetze-im-internet.de/ozg/.

E-Government Act (EGovG).

https://www.gesetze-im-internet.de/egovg/.

E-Government Act NRW (EGovG NRW).

https://recht.nrw.de.

Bundesdatenschutzgesetz (BDSG).

https://www.gesetze-im-internet.de/bdsg_2018/.

Verwaltungsverfahrensgesetz (VwVfG).

https://www.gesetze-im-internet.de/vwvfg/.

UVPG – Environmental Impact Assessment Act.

https://www.gesetze-im-internet.de/uvpg/.

eIDAS Regulation (EU) 910/2014.

https://eur-lex.europa.eu.

BSI Act (BSIG).

https://www.gesetze-im-internet.de/bsig_2009/