

CHAPTER 7

GERMANY

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I. Is there a national act containing a legal definition of Automated Administrative Decisions?

Digitalisation and artificial intelligence are referred to as the “fourth industrial revolution”¹. They allow public administrations to perform their tasks at any time and place through fully or partially automated procedures. Technological progress enables civil servants to concentrate on atypical cases or tasks that require human judgment and empathy, making their duties similar to those of a “process manager”².

By way of introduction, it is worth noting the variety of administrative procedures in the German legal system. The General Administrative Procedures Act (*Verwaltungsverfahrensgesetz – VwVfG*) of 1976³, which is considered the “*Grundgesetz* of public administration”⁴, is quite detailed and envisages very precise regulation of administrative activity. Nevertheless, it is generally considered incomplete, since it only regulates part of the procedure, i.e. the conditions leading to the issue of an administrative act or the stipulation of a public law agreement⁵. Other issues are regulated by specific laws for digitalisation by the 2013 e-government law (*E-Government-Gesetz – EgovG*)⁶, the digitalisation laws

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Although based on a shared conception of the work, this chapter devoted to Germany in the second part of the Volume is attributable to Cristina Fraenkel-Haeberle, while the case studies in the third part are the work of Charlotte Langer.

¹ J. Lorse, *Künstliche Intelligenz im Dienstrecht - bauen wir Windmühlen oder Mauern?*, 7-8 *Zeitschrift für Beamtenrecht* 218 (2021).

² M. Martini, §28 *Digitalisierung der Verwaltung*, in W. Kahl, M. Ludwigs (eds), *Handbuch des Verwaltungsrechts* (Teil I) 1108 (2021).

³ *Verwaltungsverfahrensgesetz (VwVfG)* of 25.5.1976, BGBl. I p. 102.

⁴ H. Schmitz, in P. Stelkens et al., *Verwaltungsverfahrensgesetz* (2018), § 1, mn. 1.

⁵ For more details, § 9 VwVfG.

⁶ *Gesetz zur Förderung der elektronischen Verwaltung (EGovernment-Gesetz – EgovG)*, BGBl. I p. 2749.

at Federal State level, and the law on online access to public services (*Onlinezugangsgesetz – OZG: Online access act*)⁷ of 2017. The German legislator opted for a basic procedural model (*Grundmodell*) in order to avoid overburdening general legislation with references to too many different areas, while allowing sector-specific legislation to derogate from it in the manner of a *lex specialis*⁸.

The legislation on the digitalisation of administrative action was much awaited by German legal scholars, who had been calling for a legal framework for the digitalisation of the administration since the 1950s⁹. In the meantime, the use of technology in public administrations has progressed slowly but steadily. In the 1960s, routine mass procedures in financial, social, and personnel management were automated for the first time and proved to be suitable pioneering fields of application¹⁰.

a. Developments leading up to automated procedures

The transition to digital procedures has been long and arduous, leading scholars to recognise different “speeds” of digitalisation¹¹. A first important step towards “semi-electronic” administration was taken with the Third Act Amending the Administrative Procedures Act of 21 August 2002 (3. *Verwaltungsverfahrenänderungsgesetz*)¹², which recognised the electronic format of administrative decisions, referred to in § 37(2) VwVfG. This case must be distinguished from that of the fully automated act, as it concerns only the use of the electronic format itself

⁷ Gesetz zur Verbesserung des Onlinezugangs zu Verwaltungsleistungen (*Onlinezugangsgesetz – OZG*), BGBl. I p. 3122, 3138, as last amended by Article 1 of the Act of 19.7.2024 (BGBl. I p. 245).

⁸ For more details see C. Fraenkel-Haeberle, *Fully Digitalized Administrative Procedures in the German Legal System*, 1 Erdal 105 (2020); T. Siegel, *E-Government und das Verwaltungsverfahrensgesetz*, 8 DVBl 552 (2020).

⁹ The most often-cited scholarship includes the monographs by K. Zeidler, *Über die Technisierung der Verwaltung: eine Einführung in die juristische Beurteilung der modernen Verwaltung* (1959); H. P. Bull, *Verwaltung durch Maschinen: Rechtsprobleme der Technisierung der Verwaltung* (1964); N. Luhmann, *Recht und Automation in der öffentlichen Verwaltung – eine verwaltungswissenschaftliche Untersuchung* (1966). See also the more recent work by M. Eifert, *Electronic Government: das Recht der elektronischen Verwaltung* (2006), the collective volume by J. von Lucke and K. Lenk, *Verwaltung, Informationstechnik und Management, Festschrift für Heinrich Reinermann zum 80. Geburtstag* (2017) as well as the monographs by A. Guckelberger, *Öffentliche Verwaltung im Zeitalter der Digitalisierung: Analysen und Strategien zur Verbesserung des E-Government aus rechtlicher Sicht* (2019) and M. Martini, *Blackbox Algorithmus: Grundfragen einer Regulierung Künstlicher Intelligenz* (2019).

¹⁰ M. Martini, cit. at 2, 1114.

¹¹ T. Siegel, cit. at 8, 554.

¹² BGBl. I 2002, p. 3322.

but implies nothing about the decision-making process¹³. As part of this reform, a new § 3a VwVfG was introduced, allowing for the optional electronic notification of administrative acts. It established a multi-channel system enabling virtual access to public administration websites for downloading electronic documents¹⁴. The provision was incorporated into the VwVfG primarily in response to the European regulation on digital signatures and was last amended on 1 January 2024¹⁵. However, in its original form, electronic transmission required possession of a digital signature (compulsory only for notaries and lawyers), which ultimately prevented the reform from taking effect¹⁶.

Different laws provide varying legal definitions of automated administrative decisions, the most common being “*Verwaltungsverfahren, die vollständig durch automatische Einrichtungen durchgeführt werden*” administrative procedures carried out entirely by automated means)¹⁷. The terms “*ausschließlich automationsgestützt*” (exclusively automated) in § 155(4) of the first sentence of the Tax Code (*Abgabenordnung – AO*) and “*vollständig durch automatische Einrichtungen*” (wholly carried out by automated means) in § 35a VwVfG are intended to be synonymous¹⁸.

b. Fully automated decisions and decision support

Fully automated administrative procedures, managed by algorithms without human intervention, were introduced at the federal level in 2017. They can be distinguished from partially automated procedures, where some internal procedural phases, such as the preliminary ones, are carried out in analog form. There is therefore a difference between partially automated measures (*mit Hilfe automatischer Einrichtungen*, i.e., “with the help of automatic devices”), which are

¹³ E. Buoso, *La pubblica amministrazione nell'era dell'intelligenza artificiale: procedimenti completamente automatizzati e decisioni amministrative robotiche*, 2 *Persona e Amministrazione* 494 (2020).

¹⁴ Directive 1999/93/EC of the European Parliament and of the Council of 13 December 1999 on a Community framework for electronic signatures, OJ L 13/12; for more detail see S. E. Schulz, *Schriftformersatz im Wandel: Zur Neufassung des § 3a VwVfG und zu einem OZG-Änderungsgesetz*, 6 *Neue Zeitschrift für Verwaltungsrecht* 396 (2024); I. Augsberg, *Herausforderungen und Innovationen im Verwaltungsverfahrenrecht*, in Luca De Lucia and Ferdinand Wollenschläger (eds), *Sfide e innovazioni nel diritto pubblico* 88 (2019).

¹⁵ 5. VwVfÄndG, 4.12.2023, BGBl. 2023 I Nr. 344.

¹⁶ I. Augsberg, cit. at 14, 88.

¹⁷ VwVfG § 35a; § 31a SGB X; Art. 5(2) BayDiG.

¹⁸ N. Braun Binder, *Vollautomatisierte Verwaltungsverfahren, voll automatisiert erlassene Verwaltungsakte und elektronische Aktenführung*, in M. Seckelmann (ed), *Digitalisierte Verwaltung - Vernetztes E-Government* 313 (2019).

already referred to in the original version of the VwVfG (1976) in §§ 28(2) no. 4, § 37(5) and 39(2) no. 3 VwVfG, and fully automated acts, issued with no human involvement¹⁹.

While fully automated systems have barely been used in administrative practice so far (also due to the presence of a somewhat restrictive legal framework), decision-support algorithms have already found their way into many fields of application, as will be illustrated later. They do not make autonomous decisions but rather prepare the decision-making process automatically or provide forecasts or suggestions for solving problems. In principle, the German legal system does not impose strong barriers against such assistive systems²⁰. However, algorithm-based decision support carries the risk that civil servants may cease to exercise the discretion granted them by law, tending instead to uncritically accept the algorithm's recommendations²¹. In fact, most people tend to overestimate the performance of algorithms and trust them blindly. Known as “automation bias” (Art. 14 AI act)²², this has recently been the subject of a case before the European Court of Justice (ECJ), albeit not in connection

¹⁹ This included the exceptions to the requirement for a hearing under § 28(2) no. 4 VwVfG, “if the administration intends to issue administrative measures with the aid of automated means”, as well as in relation to the obligation to give reasons, referred to in § 39(2) no. 3 VwVfG “if the administration issues administrative measures with the aid of electronic equipment, and justification is not necessary in the circumstances of the case”. Above all, the wording of this rule suggests that the exception must be interpreted restrictively so as not to undermine the role of the procedure as a safeguard. Furthermore, it is now considered unnecessary due to current technological developments. U. Stelkens, in P. Stelkens et al., *Verwaltungsverfahrensgesetz* (2018), § 39, mn. 97, defines it as “totes Recht”. Especially in relation to automated measures, stating the rationale is considered useful in counteracting the opacity surrounding automated decisions (see F. von Harbou, *Abschied vom Einzelfall? Perspektiven der Digitalisierung von Verwaltungsverfahren*, 7 *JuristenZeitung* 345 (2020)). Consequently, waiver of the right to be heard (*audiatur et altera pars*), introduced already in 1976 in relation to partially automated measures, should also be revised due to the use of (entirely) digital measures and the growing opportunities offered by new technologies. The legislation of § 29 VwVfG on access to procedural documents also needs to be updated: see A. Guckelberger, *E-Government: Ein Paradigmenwechsel in Verwaltung und Verwaltungsrecht?*, 78 *Der Vereinigung der Deutschen Staatsrechtslehrer* 274 (2019); D. Roth-Isigkeit, *Die Begründung des vollständig automatisierten Verwaltungsakts*, 22 *Die Öffentliche Verwaltung* 1018 (2020).

²⁰ M. Martini, H. Ruschemeier, *KI und öffentliches Recht*, in T. Hoeren et al. (ed), *Handbuch Multimediarecht* (2023), mn. 76.

²¹ M. Martini (Fn. 2), p. 1127.

²² M. Martini, H. Ruschemeier, cit. at 20, mn. 77.

with an administrative decision²³. The ruling of the ECJ concerned the scoring assigned by Schufa Holding in Germany, a private company that provides information about individuals' creditworthiness to clients, such as banks and landlords. Schufa predicts the probability of future behaviour, such as repayment of a loan or mortgage using a statistical method based on algorithms. In this context, the Court held that the scoring must be regarded as an "automated individual decision", prohibited in principle by Art. 22 GDPR, in cases where it significantly determines a bank's decision to deny credit, because Schufa's clients rely heavily on its recommendation. This substantive approach by the ECJ was undoubtedly inspired by the commendable intention of increasing safeguards for the interested party. Nevertheless, as one commentator remarked, since an objective criterion (regardless of whether there was any human intervention in the decision-making process) is replaced by more uncertain considerations (whether or not there is significant influence from a human decision), which may be difficult to demonstrate, legal protection is weakened in the absence of clear reference parameters²⁴.

II. Is there a general legal basis (either at the constitutional level or in the Administrative Procedure Act) for the use of algorithmic automation and/or artificial intelligence (AI) by public authorities (government, agencies, local authorities, and specialised bodies)? If no such legal basis exists, are there any legislative provisions that permit public authorities to experiment with algorithmic automation or AI?

"Man outranks technology and machines", reads Article 12 of the Bremen State Constitution of 1947²⁵. According to this principle, most e-government laws in Germany are still based on the voluntary use of electronic procedures. There is neither a subjective right for citizens to an electronic procedure nor a legal obligation for public authorities to adopt (exclusively digital) electronic procedures at the Federal and state levels, but only the option of their voluntary use. The digital mode is seen as an

²³ Judgments of the Court of Justice in Case C-634/21 | SCHUFA Holding (Scoring) and in Joined Cases C-26/22 and C-64/22 | SCHUFA Holding (Discharge from remaining debts).

²⁴ For a more in-depth analysis, see C. Silvano, *La nozione di "decisione completamente automatizzata" sotto la lente della Corte di Giustizia: il caso Schufa*, 3 *Ceridap* 270 (2024); see also the judgment of the Court of Justice in Case C-203/22 | *Dun & Bradstreet Austria*.

²⁵ „Der Mensch steht höher als Technik und Maschinen“: Landesverfassung der Freien Hansestadt Bremen in the wording published on 12.8.2019, *Brem.GBl.* 2019, p. 524, 527.

additional option to existing analogue procedures (e.g. according to § 2(1) of the Federal E-Government Act²⁶, authorities must “also” provide digital access)²⁷. A purely digital procedure has only been tried in exceptional cases. This occurred, for example, during the Covid pandemic in the context of emergency financial aid and in relation to the property tax reform, both of which were met with massive public criticism²⁸. Deep-seated distrust among many Germans towards the State in handling their personal information continues to slow down efforts to digitalise administrative services.

Recently, however, the digital-first principle has become increasingly popular, as evidenced by the Bavarian Digitalisation Act, which designates digital administrative procedures as the standard solution²⁹. At the same time, a subjective right to electronic communication or the handling of procedures is beginning to gain a foothold as a lever for the success of administrative digitisation³⁰. Since 2014, the Constitution of the State of Schleswig-Holstein (SchlHVerf), Article 14 paragraph 1, guarantees the further development and protection of basic digital services and citizen participation. This development has been described as a kind of “e-government obligation on the state”³¹. At the same time, however, paragraph 2 of the same article guarantees equal treatment irrespective of the chosen method of communication, which in turn can be seen as a commitment to the digital-first principle³².

In addition, due to the reluctance shown by public servants towards digitalisation, the once-only principle outlined by the Tallinn Declaration on E-Government, adopted by the EU Member States of 6 October 2017 has been unable to take hold³³. In future, this principle could significantly simplify administrative processes by providing

²⁶ E-Government-Gesetz of 25.7.2013 (BGBl. I p. 2749).

²⁷ J. Botta, *Digital First und Digital Only in der öffentlichen Verwaltung. Über die grundrechtlichen Zulässigkeitsgrenzen der digitalen Verwaltungstransformation und ein Recht auf analogen Zugang*, 17 Neue Zeitschrift für Verwaltungsrecht 1247 (2022).

²⁸ *Ibid.*, 1248.

²⁹ Gesetz über die Digitalisierung im Freistaat Bayern (BayDiG) of 22.7.2022 (GVObI 2022, p. 374), Art. 20(1); Botta (Fn. 27), p. 1248.

³⁰ A. Guckelberger, *Deutschlands E-Government-Performance im Vergleich zu Österreich und der Schweiz*, 8 Die Öffentliche Verwaltung 317 (2023).

³¹ J. Botta, cit. at 27, 1252.

³² *Ibid.*

³³ Ministerial Declaration on eGovernment - the Tallinn Declaration | Shaping Europe’s digital future (europa.eu), <https://digital-strategy.ec.europa.eu/en/news/ministerial-declaration-egovernment-tallinn-declaration>, accessed 8.1.2026.

interconnected communication of relevant information between different administrative agencies, thereby saving citizens from having to provide the same information numerous times. This could lead to an estimated reduction in administrative costs of 47-60%³⁴. Unfortunately, for the moment, the once-only principle has only been tested on a sporadic basis in Germany; for example, in the Bremen pilot project “*Einfache Leistungen für Eltern – ELFE*” (simple benefits for parents) for the issuance of birth certificates and the payment of child and parental benefits. These benefits can be applied for online as of 2022³⁵. The Federal structure of the German administrative state further complicates these efforts, as all 16 state administrations and the Federal administration can currently choose their own strategies for digital communication, which significantly hinders efforts to establish a single “once-only” platform.

a. Fully automated administrative decisions and the “three column system”

As mentioned above, the law on administrative procedure is not an all-encompassing codification. The presence of multiple procedures in the German legal system is essentially due to two factors: on one hand its federal structure, which results in different procedural regulations in the federal states; on the other, the so-called “three column system”, based on three different codes. During the drafting of the *Verwaltungsverfahrensgesetz*, the Ministries of Finance and Social Affairs insisted on maintaining their own codes due to the specificities of tax law and social welfare law. Hence, the tax code (*Abgabenordnung – AO*) and the code of procedure in social welfare matters (*Zehntes Buch des Sozialgesetzbuches – SGB X*) have remained in force and coexist with the *Verwaltungsverfahrensgesetz*, maintaining a system of special rules.

However, also with this triple codification, currently referred to as the “three-column principle”, the legislator is committed to ensuring uniform rules of administrative procedure across the three codes to facilitate interpretation by administrations and courts. Thus, when the Federal Government passed a law to modernise tax procedure (*Gesetz zur Modernisierung des Besteuerungsverfahrens*)³⁶ in 2016, stipulating that tax assessment (*Steuerfestsetzung*) had to be fully digitalised³⁷, this innovation was extended in parallel to the other two codes.

³⁴ J. Botta, *Der digitale Staat als gläserner Staat – Transparenz als Bedingung verfassungskonformer Registermodernisierung*, 10 Die Öffentliche Verwaltung 421 (2023).

³⁵ *Ibid.*, 422.

³⁶ BGBl. I p. 1679.

³⁷ The ‘ELSTER’-system (electronic tax declaration).

Tax law is particularly suitable for digitalisation due to the frequent use of routine measures, in contrast with other areas such as police law, which may have a strong effect on individual rights and freedoms and therefore requires a specific analysis of each individual situation in order to ensure “individual case-based fairness” (*Einzelfallgerechtigkeit*)³⁸. The starting point for fully automated administrative procedures lies in the tax assessment provisions (§ 155 AO). This article’s new paragraph 4 permits tax authorities to “make, correct, withdraw, revoke, cancel, or amend tax assessments and credits for tax deductions and advance payments on the basis of the information available to them and the taxpayer's indications exclusively by automated means, provided there is no reason for the individual case to be processed by officials”. Since the regulations in the three codes have traditionally developed in parallel, a new § 35a on fully automated decisions was also added to the VwVfG, as discussed in the next section. Paragraph 31a SGB X introduced a similar provision in social welfare law.

A glance at the parallel regulations in § 155(4) AO and § 31a SGB X, as well as § 35a VwVfG, nevertheless shows that they are based on a different approach. The tax code contains rather broad regulation of the powers attributed to the financial administration, but whereas the VwVfG and the SGB X envisage the general possibility of issuing fully automated administrative acts, the tax code only regulates automation of the tax assessment procedure (*Steuerfestsetzungsverfahren*) and, therefore, only a specific act³⁹.

b. Limits to the scope of application of fully automated administrative acts according to § 35a VwVfG

The wording of § 35a VwVfG on electronic decisions is extremely scant. It envisages the implementation of administrative acts (regulated by the previous § 35 VwVfG) by fully automated procedures. To make this possible, a sector-specific provision (*Rechtsvorschrift*) is required to ensure that only suitable procedures can be carried out in a fully automated manner and that they comply with the requirements of Art. 22 GDPR⁴⁰.

³⁸ H. Kube, *E-Government: Ein Paradigmenwechsel in Verwaltung und Verwaltungsrecht?*, 78 *Vereinigung der Deutschen Staatsrechtslehrer* 289 (2019).

³⁹ N. Braun-Binder, *cit.* at 18, 317.

⁴⁰ M. Martini, D. Nink, *Wenn Maschinen entscheiden... - vollautomatisierte Verwaltungsverfahren und der Persönlichkeitsschutz*, 10 *Neue Zeitschrift für Verwaltungsrecht* 8 (2017).

Briefly, the criteria set out in § 35a VwVfG are as follows: an administrative act must be suitable for issue in a fully automated format by electronic equipment; this must be envisaged by a legal provision; the administration may not have discretionary power or a margin of appreciation (*Beurteilungsspielraum*)⁴¹. The provision has been interpreted as meaning that the legislator aimed to limit the scope of application of the rule to situations that could be managed easily by IT systems and allow full judicial review⁴². According to this interpretation, a fully automated decision not only depends on the absence of discretionary power but also presupposes a simple measure⁴³. So far, there are only a few practical examples of fully automated decisions, namely the broadcasting fee notice and motor vehicle registration⁴⁴.

According to the parliamentary commission's accompanying report regarding the legislative amendment, the inclusion of § 35a in the *Verwaltungsverfahrensgesetz* essentially serves four objectives⁴⁵. First, the "clarification objective" (*Klarstellungsfunktion*), since the new regulation expressly recognises the existence of fully automated administrative acts, and second, the "limitation and warning objective" (*Begrenzungs- und Warnfunktion*) that comes into play since, as mentioned, fully automated administrative acts are only issued in cases where there is "neither discretionary power nor a margin of appreciation". Third, the "competence allocation objective" (*Kompetenzzuweisungsfunktion*), as the

⁴¹ See more extensively J. Ziekow, *Das Verwaltungsverfahrenrecht in der Digitalisierung der Verwaltung*, 16 *Neue Zeitschrift für Verwaltungsrecht* 1169 (2018). The author investigates scholar discussion on the legal nature of automated decisions, pointing out that due to the absence of human intervention, there is no declaration of intent, which is otherwise considered inherent to an administrative act. However, this approach does not take into account that even the discipline of silent assent (so-called "*Genehmigungsfiktion*"), referred to in § 42a VwVfG, does not depend on manifestation of intent by a public administration, since the administrative act is formed over time, pursuant to a specific legislative provision (p. 1170). Another example of a fully automated administrative act, cited in scholarship, is algorithmic traffic regulation devices (for example traffic lights), framed in the German system as general administrative decrees (*Allgemeinverfügungen*), and referred to in § 35, second sentence VwVfG; see I. Augsberg, cit. at 14, 94; H. Kube, cit. at 38, 303.

⁴² E. Buoso, cit. at 13, 507.

⁴³ A. Guckelberger, cit. at 19, 265.

⁴⁴ § 6g(2) 1 *Straßenverkehrsgesetz* (StVG) in conjunction with §§ 15a ff. *Fahrzeug-Zulassungsverordnung* (FZV) of 3.2.2011, BGBl. I p. 139; since 2020, § 10a of the Interstate Treaty on Broadcasting Contributions (*Rundfunkbeitragsstaatsvertrags - RBeitrStV*) has legitimized the fully automated issuing of broadcasting contribution decisions; see additionally § 38a *Elektro- und Elektronikgerätegesetz* (ElektroG), § 3a *Bundesreisekostengesetz* (BRKG) and § 22 *Batteriegengesetz* (BattG).

⁴⁵ E. Buoso, cit. at 13, 501.

legislator alone – and not the administration – is entrusted with identifying suitable administrative procedures for automation. Lastly, the norm also serves the “protective function” (*Schutzfunktion*) of the freedom of choice of the legislator⁴⁶.

c. Interpreting the prohibition of discretion or the margin of appreciation

The meaning of the administrative acts issued in the “absence of discretion and a margin of appreciation” could be interpreted as substantially equivalent to “issuing a constrained decision” (*gebundene Entscheidung*)⁴⁷. But as highlighted in legal scholarship, more in-depth analysis reveals that this is not a matter of the legislator preferring a litotes (the use of a negative statement to emphasise a positive meaning), but rather a genuine conceptual difference⁴⁸. This means that the main criterion should not be linked to provisions allowing administrative discretion and the consequent limitation of judicial review.

Discretion and margin of appreciation are not the only aspects that require complex legal considerations which cannot be represented digitally. There are indeterminate legal concepts open to judicial review, such as the phrase “prevailing public interest” (*überwiegendes öffentliches Interesse*), which lead to a constrained decision that nonetheless exceeds the capabilities of algorithms⁴⁹. Unfortunately, this broad interpretation of § 35a VwVfG has no basis in the legislative history of this provision⁵⁰. The parallel regulations in § 155(4) AO and § 31a SGB X are more generally worded, as they permit full automation “provided there is no reason for the individual case to be handled by public officials”⁵¹. They appear more adaptable, as they can be continuously updated in line with technological progress⁵².

Internal administrative regulations that impose a self-limitation on discretion (*Verwaltungsvorschriften zur Selbstbindung der Verwaltung*) represent a borderline case of permissible automation. Additionally, in

⁴⁶ M. Ludwigs, A. Velling, *Der vollständig automatisierte Verwaltungsakt in den Grenzen des Europa- und Verfassungsrechts*, 1 *Verwaltungsarchiv* 71 (2023).

⁴⁷ E. Buoso, *Fully Automated Administrative Acts in the German Legal System*, 1 *Erdal* 113 (2020).

⁴⁸ E. Buoso, *cit.* at 13, 508.

⁴⁹ M. Martini, D. Nink, *Subsumtionsautomaten ante portas? Zu den Grenzen der Automatisierung in verwaltungsrechtlichen (Rechtsbehelfs-)verfahren*, 17 *Deutsches Verwaltungsblatt* 1128 (2018).

⁵⁰ M. Ludwigs, A. Velling, *cit.* at 46, 82.

⁵¹ *Ibid.*

⁵² M. Martini, *cit.* at 2, 1126.

cases where (abstract) discretionary powers are effectively reduced to zero (*Ermessensreduzierung auf Null*) due to lack of alternatives in practice, automated administrative decisions may be lawful⁵³.

A key criterion has thus been seen, on the one hand, in the current state of the art of computer technology. At the moment, primarily deterministic algorithms are used in public authorities' decision-making processes, allowing their translation into computer language. These algorithms ensure the traceability of decisional steps and the predictability of administrative decisions⁵⁴. Deterministic algorithms are suited to standardised decisions such as those envisaged in § 35a VwVfG.

Parallel regulations identical to § 35a VwVfG can be found in the laws of Baden-Württemberg, Hamburg, Hesse, Mecklenburg-Western Pomerania, North Rhine-Westphalia, Schleswig-Holstein, and Saarland⁵⁵. The Bavarian Digital Act of 2022, which came into force much later, followed a distinct approach. Art. 5(2) does not contain any of the restrictions for fully automated administrative procedures set out in § 35a VwVfG. Instead, it stipulates that the decision-making algorithms must be "regularly checked for their appropriateness, objectivity and cost-effectiveness"⁵⁶. Furthermore, the use of AI in administration is to be safeguarded by appropriate control and legal protection measures⁵⁷. It can thus be inferred that the Bavarian regulation offers administrative authorities a broader scope for action and more flexibility, while still not losing sight of the European legal constraints of Article 22 GDPR⁵⁸. Notably, the Bavarian state regulation contains an interesting addition: fully automated decision-making procedures require the relevant authorities to offer non-digital advice, information, and hearings. It also stipulates that contact details for personal advice, information, and hearings should be easily identifiable, accessible, and constantly available⁵⁹.

⁵³ M. Martini, cit. at 2, 1126; J. Lorse, cit. at 1, 219.

⁵⁴ E. Buoso, cit. at 47, 118.

⁵⁵ H. Birner, *Wie hält es Bayern mit dem vollautomatisiert erlassenen Verwaltungsakt*, 10 Bayerischen Verwaltungsblätter, 325 (2024).

⁵⁶ Gesetz über die Digitalisierung im Freistaat Bayern (BayDiG) of 22.7.2022, BayGVBl. p. 374, which replaced the Bavarian E-Government Act (*Gesetz über die elektronische Verwaltung in Bayern* of 22.1.2015, BayGVBl. p. 458) on 31 July 2022.

⁵⁷ Art. 12(2) BayDiG.

⁵⁸ The law pursues a holistic approach with its comprehensive regulation of digital rights (Art. 8 ff. BayDiG), the right to human intervention (Art. 12 in conjunction with Art. 16 ff. BayDiG), administrative procedures (Art. 19 ff. BayDiG), and IT security (Art. 41 ff. BayDiG); see H. Birner, cit. at 55, 326.

⁵⁹ Art. 5(2) BayDiG.

d. The consequences of a breach of § 35a VwVfG

Another important point is to analyse the consequences of a breach of § 35a VwVfG. Given the difficulty of clearly distinguishing between partial and full automation, scholars are inclined to suppose that the issuance of an administrative act, lacking the regulatory basis required by § 35a VwVfG, may lead to an unlawful decision, but not to total invalidity (*Nichtigkeit*), unless one of the conditions of § 44(2) (e.g. infringement of territorial competence, conflict of interests, obligatory participation of another authority) is fulfilled⁶⁰. Since § 35a VwVfG does not contain any substantive requirements for administrative decisions, it is deemed to be a procedural provision, a breach of which can be considered an error of form. This also means that violations may be irrelevant under § 46 VwVfG⁶¹.

However, an unlawful act cannot be rectified under § 45 VwVfG, as a breach of § 35a VwVfG is not listed in the catalogue of procedural acts covered by this provision. Moreover, the issuance of an analogue administrative act would require new proceedings, resulting in a new administrative act rather than the modification of the existing automated decision⁶².

Finally, a special case arises when the issue of a fully automated administrative act requires the exercise of discretion or a margin of appreciation (which the law does not permit). In such instances, the administrative act is not only formally unlawful due to a breach of § 35a VwVfG, but it also suffers from a substantive flaw, potentially leading to being null and void under § 44 VwVfG⁶³. However, it should be noted that sector-specific legislation may deviate from this criterion, given the subsidiary role of the *Verwaltungsverfahrensgesetz*, and that this regulation is primarily intended to limit and caution the legislator⁶⁴.

III. Do public authorities rely on algorithmic automation/AI in their daily operations? If yes, to what extent? Which areas are most affected by automation (e.g., security, policing, immigration, transport,

⁶⁰ M. Martini, D. Nink, cit. at 49, 1131.

⁶¹ M. Ludwigs, A. Velling, cit. at 46, 84.

⁶² M. Martini, D. Nink, cit. at 49, 1130.

⁶³ *Ibid.*

⁶⁴ H. Schmitz, L. Prell, *Neues vom E-Government*, 18 *Neue Zeitschrift für Verwaltungsrecht* 1276 (2016); R. Kreyßing, *Verwaltungsentscheidungen durch KI*, 7 *Die Öffentliche Verwaltung* 266 (2024).

tax management, welfare, health and employment services, education, justice, or digital identity)?

There are many application scenarios for artificial intelligence in administration. They range from the acquisition and systematisation of information in view of administrative decisions, to interaction with citizens (e.g. through Government chatbots). They also include decisions concerning the allocation of university places or the prioritisation of health and other social support, such as unemployment benefits, as well as climate protection measures, which may all be optimised with the help of AI⁶⁵. The Federal Government made a list of 79 fields of application of AI that include, *inter alia*, licence plate recognition and chatbots⁶⁶.

The tax authority has positioned itself as a pioneer in the field of fully automated administrative acts, and civil procedural law through the introduction of the automated injunction pursuant to § 689(1) *Zivilprozessordnung* (ZPO; Civil Procedure Code). But even in general administrative law, there were already various options for partially or even fully automated measures: apart from the classic example of traffic lights, speed limits on German motorways processed in real time by algorithms of the Virtual Traffic Guidance Centre (*Virtuelle Verkehrsbeeinflussungsanlage*) can be classified as general administrative decrees (*Allgemeinverfügungen*)⁶⁷.

Artificial intelligence is mainly used in the field of “quasi-mass proceedings” (*unechte Massenverfahren*)⁶⁸, where an indefinite number of identical or similar administrative acts are issued in a large number of identical or similar administrative procedures⁶⁹. Examples include tax payments, pensions, fine notices, resident parking permits, child support, BAFöG (German Federal Education Assistance) benefits, and “mass rejections” in the context of hiring procedures⁷⁰.

⁶⁵ M. Martini, cit. at 2, mn. 84.

⁶⁶ *Ibid.*

⁶⁷ E. Buoso, cit. at 13, 500.

⁶⁸ H. Schmitz, cit. at 4, § 17, mn. 6: The term “genuine mass proceedings” (*echte Massenverfahren*) covers proceedings in which a large number of people are involved in an administrative decision, usually an administrative act. However, if a larger number of people are the addressees of many identical or similar administrative acts, this constitutes the so-called “quasi-mass proceedings” (*unechte Massenverfahren*); see J. Lorse, *Entscheidungsfindung durch künstliche Intelligenz – Zukunft der öffentlichen Verwaltung?*, 22 *Neue Zeitschrift für Verwaltungsrecht* 1657 (2021).

⁶⁹ T. Brockmann, *ChatGPT, die Lehre und die Verwaltung – wie verändert KI unsere Institutionen?*, 9 *Niedersächsischen Verwaltungsblätter* 287 (2023).

⁷⁰ J. Eichenhofer, *Der vollautomatisierte Verwaltungsakt zwischen Effizienz und Rechtsschutzgebot*, 3 *Die Öffentliche Verwaltung* 93 (2023); J. Lorse, cit. at 1, 220; M. Martini, D. Nink, cit. at 49, 1128; M. Martini, D. Nink, cit. at 40, 1.

In e-recruiting, the use of AI mainly concerns pre-selections. Studies show that 70% of all job applicants are first evaluated by algorithms before a human sees their documents⁷¹. The formulation of job advertisements can also be checked by AI. Moreover, job advertisement texts can easily be checked by text comparison analysis due to their recurring formulations and special terminology⁷². Examinations represent a similar field for the application of AI; they can be fully automated through multiple-choice questions to be answered online⁷³.

The use of intelligent technologies is particularly widespread in the areas of health and public safety. The spectrum ranges from the diagnosis of infectious diseases to civil protection situation-monitoring and data mining to prevent terrorist attacks. Since 2017, the Federal Office for Migration and Refugees has been using language samples of refugees to determine their origin⁷⁴. Some Federal states use predictive policing tools to identify crime hotspots. Police authorities have also long been using intelligent systems to collect and evaluate data from social media and to network what they find ('social media monitoring'). In Hessen, a law was issued to permit data mining by the police using Palantir Technologies Inc. platforms⁷⁵. The City of Hamburg and the state of North Rhine-Westphalia followed Hessen's example. Both states have introduced special standards for automated data comparison in their police laws⁷⁶.

Many tasks of municipalities, especially mass proceedings, can be performed digitally. According to the "smart city" concept, power generation and consumption can be coordinated better and made more effective, and intelligent traffic monitoring systems can avoid traffic jams. Sensors for weather data, street lights based on usage time and parking guidance systems are also widely used⁷⁷.

Another sector in which automation is progressively taking hold, not only in Germany, is routine administrative tasks (*schlichtes Verwaltungshandeln*). This includes requests for information and advice, as laid down by § 25 VwVfG, as well as warnings and prohibitions (which are treated as mere information in the German legal system),

⁷¹ J. Lorse, cit. at 1, 221.

⁷² T., Brockmann, cit. at 69, 292.

⁷³ J. Lorse, cit. at 1, 221.

⁷⁴ M. Martini, H. Ruschemeier, cit. at 20, mn. 10.

⁷⁵ *Ibid.*, mn. 11.

⁷⁶ *Ibid.*, mn. 12.

⁷⁷ J. Lorse, cit. at 1, 222.

especially in environmental matters⁷⁸. Section 25 VwVfG presents administrations as “citizens' helpers” and does not prescribe any particular form. Fully automated declarations and individualised assistance systems are therefore permitted⁷⁹. In this area, the use of intelligent software, such as chatbots, i.e. digital assistants that answer standard user questions or provide help in filling out forms, is spreading within the administration⁸⁰. During the pandemic, a “C-19” chatbot provided updated information on Covid counts. In the field of climate change, smart systems deliver information on biodiversity, energy demand, and renewable energy performance⁸¹. ChatbotInA, developed for the Schleswig-Holstein Integration Office by Govii UG, provides a government bot capable of answering questions about the specific areas of responsibility of public administrations, and it learns through artificial intelligence⁸².

As there are no precise rules, scholars have identified some categories of acts that are certainly excluded from automated decisions: 1) acts requiring balancing of interests (e.g. planning acts) and consultancy; 2) acts in which the participation of third parties or receiving advisory opinions from other administrations is compulsory⁸³.

IV. What legal requirements - e.g. in terms of privacy, cybersecurity, quality of the datasets, impact assessments, transparency obligations, access to codes, the right to explanations, compulsory human involvement, and the right to obtain a review or remedy - apply to the use of algorithmic automation or AI by public authorities? Are there sector-specific regulations on Automated Administrative Decisions (e.g., public procurement, taxation etc.)?

According to the architecture of German administrative procedure, focused on strong investigative powers of public administrations and the inquisitorial principle, § 24(1) VwVfG, the provision concerning the aforementioned principle, was amended in 2017 when automated decisions were introduced. A new sentence was added, according to which, if an administration makes use of automated

⁷⁸ T. Siegel, *Elektronisches Verwaltungshandeln - Zu den Auswirkungen der Digitalisierung auf das Verwaltungsrecht*, 9 Jura 920 (2020).

⁷⁹ J. Eichenhofer, cit. at 70, 97.

⁸⁰ T. Siegel, cit. at 78, 930.

⁸¹ M. Martini, H. Ruschemair, cit. at 20, mn. 16 ff.

⁸² T. Brockmann, cit. at 69, 292.

⁸³ E. Buoso, cit. at 47, 120.

acts, it must consider any indications provided by the parties that cannot be detected in digital format. In fact, the highly participatory German procedural system is threatened by automated decisions⁸⁴. A specific obligation to consider all information given by the parties was therefore introduced⁸⁵. On one hand, it is a warning by the legislator to public administrations to ensure that the implementation of automated systems does not hinder the participation of the parties in the procedure⁸⁶. On the other, since the purpose of the provision is to improve efficiency, only facts that may actually have a bearing on the decision-making process should be considered. A similar rule was introduced in the Social Welfare Code of SGB X (§ 31a).

The same reasoning was originally followed with regard to tax procedures, where § 88(5) AO was added to compensate for limitations to the inquisitorial principle arising from the fully automated treatment of procedures. It states that the tax administration can employ a computerised risk management system (*Risikomanagementsystem*) to identify anomalous cases (according to confidential criteria), which have to be checked manually, albeit without compromising the principle of the economy of public administrations⁸⁷.

So, to protect the inquisitorial principle, exceptions to fully automated decisions were introduced in three cases: 1) situations that require human intervention, such as when the risk management system detects a problem; 2) intervention of the tax office staff arising from a random check; 3) a taxpayer request in a special section of the tax declaration⁸⁸. Unlike tax procedures, the other two codes do not specify how the non-digital examination of elements relevant to the decision should be requested. This inconsistency can be justified by considering that outside tax assessment, it is difficult to match the wide range of possible procedures with excessively strict procedural rules⁸⁹.

⁸⁴ This is demonstrated by the fact that § 24(2) VwVfG obligates the administration to consider all relevant circumstances in individual cases, including “those favourable to the parties”.

⁸⁵ *Setzt die Behörde automatische Einrichtungen zum Erlass von Verwaltungsakten ein, muss sie für den Einzelfall bedeutsame tatsächliche Angaben des Beteiligten berücksichtigen, die im automatischen Verfahren nicht ermittelt würden.*

⁸⁶ I. Ziekow, cit. at 41, 1172.

⁸⁷ N. Braun Binder, cit. at 18, 315; *Id.*, *Vollautomatisierte Verwaltungsverfahren im allgemeinen Verwaltungsverfahrenrecht?*, 14 Neue Zeitschrift für Verwaltungsrecht 960 (2016).

⁸⁸ § 155(4) combined with § 150(7) AO.

⁸⁹ F. von Harbou, cit. at 19, 343.

Another aspect connected to “end-to-end-digitisation” is the communication and publication of administrative acts, which must be possible in electronic form on virtual portals⁹⁰. This option was initially envisaged in § 6 (4) of the Bavarian e-government law (BayEGovG) in force since 30 December 2015⁹¹. At Federal level, it led to the addition of § 41(2a) VwVfG, which establishes that, with the consent of the interested party, an administrative act can be made accessible to its addressee or his/her representative for download on the digital platform⁹². The administration must ensure that download of the duly authenticated administrative act is possible and that the act can be saved by the party on an electronic support. Here, unlike in the case of postal transmission, the addressee must actively participate. Electronic communication is voluntary (due to the so-called “digital divide”, i.e. the fact that not all citizens have access to electronic devices) and requires the party's consent, which can be revoked at any time⁹³. The authority in charge ensures that the electronic measure is deemed to be communicated the day after the download is made and that if the download is not made within ten days, the communication is deemed not to have taken place, without prejudice to the administration's faculty to repeat the communication in this or another form. Similar legislation was introduced regarding social welfare by § 37(2a) SGB X and in tax law by § 122a(4) AO. However, publication on the website is independent of whether the procedure is fully (or partially) automated⁹⁴.

V. Who builds the algorithmic technologies used by public authorities? Are these developed by public entities, private companies, or a hybrid body?

In order to advance the digital transformation of public administrations under divided competences, as already mentioned, the Federal Government and the states have begun new cooperation strategies. The implementation of the digitalisation strategy is largely managed by the IT Planning Council, the Federal Ministry of the Interior,

⁹⁰ M. Martini, D. Nink, cit. at 40, 3.

⁹¹ *Gesetz über die elektronische Verwaltung in Bayern* (Bayerisches E-Government-Gesetz – BayEGovG) of 22.12.2015 (GVBl. p. 458).

⁹² N. Braun Binder, *Elektronische Bekanntgabe von Verwaltungsakten über Behördenportale*, 6 *Neue Zeitschrift für Verwaltungsrecht* 342 (2016).

⁹³ M. Martini, cit. at 2, mn. 39.

⁹⁴ N. Braun Binder, *Vollständig automatisierter Erlass von Verwaltungsakten und Bekanntgabe über Behördenportale*, 21 *Die Öffentliche Verwaltung* 891 (2016).

and the Federal IT Cooperation (*Föderale IT-Kooperation* – FITKO), founded in October 2020, which, as a joint institution of the Federation and the states, represents the organisational substructure of the strategy⁹⁵.

In line with the principle of subsidiarity, digital administrative services are first developed by one or more states and then made available (upon payment of a fee) to the other federated states and municipalities for joint or subsequent use.⁹⁶ The focus is on the “one for all” principle (*Einer für Alle-Prinzip*), according to which, instead of separately developed online services in the same field of use, a nationwide coordination strategy is pursued. This cooperation fosters a division of labour: a solution developed in one federal state can also be employed elsewhere⁹⁷ and – like open source – the knowledge acquired is made available for subsequent use⁹⁸.

For this purpose, a “digital marketplace” or “State app store” is being created⁹⁹. In this framework, digital services can be delivered, *inter alia*, by the FIT-Store of the above-mentioned FITKO, or the “govdigital” cooperative, a platform of public IT providers and other public organisations for the exchange and development of online services¹⁰⁰.

In North-Rhine-Westphalia, on the initiative of the *Westfälische Hochschule* and the Fraunhofer Institute, the URBAN.KI programme investigates and develops artificial intelligence applications for municipalities and supports them in their effort to become smart cities¹⁰¹. Private companies are also involved in the development of algorithmic technologies for public authorities. In Baden-Württemberg Aleph Alpha, a start-up in Heidelberg, has developed a special AI-based assistance program called “F13” (an additional function on the computer keyboard)

⁹⁵ M. Seckelmann, C. Berger, *Die Nutzerkommune und das Bürgerkonto – partizipative Gestaltungsoptionen nach dem Onlinezugangsgesetz*, in N. Braun Binder et al. (eds), *Jahrbuch für direkte Demokratie 2019* (2020).

⁹⁶ J. Botta, *Federalism, legal fragmentation and register modernisation: challenges for the digital transformation of public administration in Germany*, 1 CERIDAP 109 (2022).

⁹⁷ M. Richter, *Geleitwort*, in M. Seckelmann, M. Brunzel (eds), *Handbuch Onlinezugangsgesetz – Potentiale – Synergien – Herausforderungen* (2021).

⁹⁸ M. Seckelmann, C. Berger, cit. at 95, 54.

⁹⁹ J. Botta, cit at 96, 114.

¹⁰⁰ *Ibid.*

¹⁰¹ Die deutsche KI-Initiative für Kommunen (urban-ki.de), <https://urban-ki.de/> (last accessed 19.9.2025).

to support public servants in their document research activities and in drafting written documents¹⁰².

VI. Is there a centralised infrastructure for digital data management, or are there several infrastructures? If the latter is true, is interoperability guaranteed, and to what extent? Are there any rules or procedures governing the exchange of information between different administrative bodies?

In accordance with the principle of “self-responsible performance of tasks” (*eigenverantwortliche Aufgabenwahrnehmung*)¹⁰³, the Federal Government and the states are responsible for the digital transition of their respective administrative agencies and must fulfil this duty with their own organisational, human and financial resources. According to the German Constitution (*Grundgesetz*: Basic Law), digital cooperation in the multi-level system must not lead to impermissibly mixed administration, i.e. interference by the Federal Government in the organisational sovereignty of the states guaranteed by the Constitution. Nevertheless, the Federation and the states are allowed to cooperate if there is a valid reason to do so, such as digital interoperability. The rule is laid down in section VIIIa of the Basic Law, dedicated to shared tasks and administrative cooperation between the various levels of government.

This digital exception to the “principle of task separation” (*föderales Trennungsprinzip*) required a constitutional amendment giving the Federal Government the necessary legislative competence. This was done by the Second Federalism Reform on 1 August 2009. The introduction of Article 91c, paragraphs 1-4, of the Basic Law gives the Federation and the states the option (but not the obligation) to work together in the field of information technology in the “planning, construction, and operation” of information technology systems (paragraph 1) and to adopt agreements on common standards and security requirements (paragraph 2)¹⁰⁴.

¹⁰² Künstliche Intelligenz in der Verwaltung: Staatsministerium Baden-Württemberg (baden-wuerttemberg.de), <https://stm.baden-wuerttemberg.de/de/service/presse/meldung/pid/kuenstliche-intelligenz-in-der-verwaltung>, (last accessed 19.12.2025).

¹⁰³ S. Art. 30, 70, 83, 92 ff. and 109 ff. GG; vgl. BVerfG, judgement of 20.12.2007, BVerfGE 119, 331.

¹⁰⁴ H. Mangoldt *et al.* (eds) *Grundgesetzkommentar* (2018).

In particular, Article 91c(4) BL allows the “*Hochzonung*” (centralisation) of responsibilities at the federal level through the transfer of exclusive legislative competence to the Federation with regard to information technology networks of the Federation and the states¹⁰⁵. However, this competence is subject to the consent of the Federal Council (the chamber representing the individual states).

The next step was the constitutional law of 13 July 2017 amending the Basic Law. It was passed as part of the reform of financial federalism¹⁰⁶. It added a new paragraph 5 to Article 91c of the Basic Law: “*Overall information technology access to the administrative services of the Federation and the states is regulated by federal law with the consent of the Federal Council.*” The Federation is thus given new exclusive legislative authority (but also the task) of regulating digital access to the administrative services of the Federation and the states. In this way, the Federation is to promote the establishment of a website through which all major administrative services of the federal, state, and local administrations can be accessed¹⁰⁷. The Federal Council, as the chamber representing the federal states, was again granted a right of veto in this regard, which laid the foundation for the Federal Government's major e-government project, whereby administrations are required to publish the range of available digitalised services on their homepages.

The details of the cooperation were regulated in an IT state treaty (*IT-Staatsvertrag*) negotiated by the Financial Federalism Reform Commission between the Federation and the states¹⁰⁸. The IT state treaty established the IT Planning Council (*IT-Planungsrat*) as the coordinating body of the Federation and the states in the field of digital technologies¹⁰⁹. Composed of experts from the Federal Government and the states in the field of information technology, it acts as an interface between the political and administrative spheres¹¹⁰. The IT state treaty gives the IT Planning Council four areas of responsibility: coordinating

¹⁰⁵ *Ibid.*, mn. 11.

¹⁰⁶ BGBl. I p. 2347.

¹⁰⁷ T. Siegel, cit. at 78, 921. On digital progress as state responsibility, see M. Martini, *Transformation der Verwaltung durch Digitalisierung*, 11 *Die Öffentliche Verwaltung* 443 (2017).

¹⁰⁸ Vertrag über die Errichtung des IT-Planungsrates und über die Grundlagen der Zusammenarbeit beim Einsatz der Informationstechnologie in den Verwaltungen von Bund und Ländern, BMI - Homepage - IT-Staatsvertrag (bund.de), <https://www.bmi.bund.de/SharedDocs/downloads/DE/veroeffentlichungen/themen/it-digitalpolitik/it-planungsrat-staatsvertrag.html> (last accessed 19.12.2025).

¹⁰⁹ H. Mangoldt v. et al, cit. at 104, mn. 17.

¹¹⁰ § 1 para. 2 IT-StV; A. Guckelberger, cit. at 19, 259.

cooperation between the Federation and the states in the field of information technology; making decisions on IT interoperability and IT security standards; managing e-government projects, and taking on tasks for the inter-federal connection network¹¹¹.

As proposed by the *IT-Planungsrat* on 14 October 2016, the Joint Conference of Prime Ministers of the Federation and the states decided to set up an “integrated website” (*Portalverbund*), a sort of digital one-stop-shop to access public services on a national basis. This enabled the promulgation of the Online Access Act (*Onlinezugangsgesetz - OZG*)¹¹² on 14 August 2017 to allow access to public services free of temporal or spatial constraints¹¹³. According to the multichannel principle, § 1a OZG stipulates that the Federation and the states must offer their respective services “also” in electronic form through a single digital portal and connect their respective websites (§ 1a para. 1 and 3 OZG)¹¹⁴.

VII. Conclusions

The use of AI poses a lasting challenge to every State and its legal order. On one hand, Germany should not lose touch with digital developments, on the other, it must be careful not to compromise the normative pillars of the State. Artificial intelligence first of all challenges the principle of democracy. In a representative democracy, and not only according to German state theory, the political order has to secure an uninterrupted chain of legitimacy (*ungebrochene Legitimationskette*) from the people to the exercise of executive power in order to guarantee that every form of State power is linked back to the democratically expressed will of the people¹¹⁵. A fully automated administrative act is undoubtedly a way of exercising State power¹¹⁶. In spite of neural networks, the connection between the people as the source of legitimacy of power and State decisions therefore has to be maintained. This entails a close connection between binding decisions, control activities, and instruction and supervisory rights¹¹⁷.

¹¹¹ § 1 para. 1 No. 1-4 IT-StV.

¹¹² See at 7.

¹¹³ Compare Art. 9 of the *Gesetz zur Neuregelung des bundesstaatlichen Finanzausgleichs ab dem Jahr 2020 und zur Änderung haushaltsrechtlicher Vorschriften* of 14.8.2017 (BGBl. I p. 2787).

¹¹⁴ T. Siegel, *Auf dem Weg zum Portalverbund – Das neue Onlinezugangsgesetz (OZG)*, 5 Die Öffentliche Verwaltung 185 (2018).

¹¹⁵ M. Martini, cit. at 2, mn. 86.

¹¹⁶ M. Ludwigs, A. Velling, cit. at 46, 97.

¹¹⁷ M. Martini, D. Nink, cit. at 49, 1134.

The opaque structures of adaptive systems also conflict with the rule of law principle, which requires every form of exercise of State power to be designed in a predictable manner in line with legal requirements. Adaptive software applications cannot be allowed to even partially undermine the position of the legislature as the centre of gravity for the exercise of State power¹¹⁸. So, the lawmakers in Berlin and Brussels are required to regulate intelligent systems in such a way that they can develop their potential without abdicating the right to reasonable, non-discriminatory decisions complying with legal requirements¹¹⁹.

Besides the constitutional limits linked to the dynamics of AI, the development of fully automated administrative decisions in Germany is also making slow progress for other reasons. The current legislative and administrative situation shows that the high expectations regarding the use of AI systems have so far been fulfilled to only a very limited extent. The “Intelligent State” is currently failing, not primarily for lack of technical possibilities, but above all due to difficult practical implementation¹²⁰. The German experience shows that the public sector has a lot of catching up to do when it comes to digital services. Before thinking about advanced applications of artificial intelligence, it is therefore necessary to meet the basic requirements of digitalisation

¹¹⁸ Martini, cit. at 2, mn. 88.

¹¹⁹ M. Martini, H. Ruschemeier, cit. at 20, mn. 114.

¹²⁰ *Ibid.*, mn. 112.