Transparency Warranties for Algorithmic Decisions in Administrative Procedures. Synopsis between EU Law and the Italian Legal System

The digital transition of public administration represents a key stage in the modernization of administrative action, in accordance with both national and European legislative rules and the objectives set out in the Italian National Recovery and Resilience Plan. The introduction of digital and artificial intelligence tools into administrative procedures aims to enhance efficiency and decision-making quickness, while simultaneously requiring the preservation of the principles of legality and transparency, alongside with the constitutional principle of good administration. This paper examines the relationship between automation and the exercise of public power, focusing on the concept of "algorithmic legality" and on the indispensable role of human oversight in the decision-making process ("human in the loop"). Through the analysis of recent European (AI Act) and national (Law No. 132/2025) regulatory frameworks, as well as the case law of the Italian Council of State, the study highlights how algorithmic transparency serves as an essential safeguard of the legitimacy of digital administrative acts. It argues that ensuring the explainability of automated decisions and adherence to the principles of proportionality, reasonableness, and non-discrimination is crucial for achieving a digital public administration that upholds the rule of law in the age of technological transformation.

Keywords: *Digital transition – administrative measure and public activity – transparency and algorithmic legality – algorithmic decision – human oversight.*

Introduction

The digital transition[1], conceived as a process of progressive integration between human activity and digital tools, is a phenomenon that equally affects the modalities through which services are delivered to citizens. Attention, however, should not be focused merely on the employment of *information and communication technologies* (ICT) as such, but rather on their coordinated use with the implementation of new organizational models for public administrations[2] and the development of new competencies for public officials.

[1]See Galetta D.U. (2025), 88. The author underscores that the deployment of ICT as the ordinary means for the performance of public functions cannot be conceived as the ultimate goal of administrative modernization, but rather as a functional instrument directed toward the attainment of higher ends, embodied in the multiple dimensions of the public interest.

[2]See Zanobini G. (1958) at 233. In particular, the public administration is constituted by the organized apparatus of bodies, personnel, and resources, from the central State level down to the territorial branches, entrusted with the pursuit of institutional purposes and public interests as mandated by law.

The transformation here examined has been mandated by both national and supranational legislators[3], and the exercise of public administrative power is by no means exempt from it, at least under two distinct aspects.

The involvement of the public subjects within the so-called *Fourth Revolution*[4] requires the administrative apparatus to promote the shift from the dynamics of traditional democracy towards those of digital democracy. At the same time, it is incumbent upon it to define a system—*Government as a Platform*[5]—in which «*public administrations and democratic institutions interact, ensuring interoperability across all levels of government and among public services*»[6]. Likewise, the administration itself becomes the recipient of innovations that best serve the pursuit of the public interest and, by extension, fulfil the principle of efficiency in administrative action, given their potential to ensure greater promptness and procedural expediency.

The completion of the process of *digitalisation of the public administration*[7], a goal expressly required under Mission I of the National Recovery and Resilience Plan[8] adopted by the Italian Government in 2021, thus represents an essential purpose.

Nevertheless, public entities may legitimately pursue the general interest only insofar as their action complies with the principles established by law to safeguard the legality of administrative activity[9].

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[3]In recent years, there has been a proliferation of legislative and regulatory instruments governing technological innovation within the digital sphere and the use of algorithmic decision-making processes. Among the most significant sources at the European level are the following: 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, repealing Directive 95/46/EC (General Data Protection Regulation – GDPR); the European Union Artificial Intelligence Act (Regulation (EU) 2024/1689); the *Digital Compass 2030* (COM(2021) 18 final, 9 March 2021); and the *Digital Services Act* (COM(2020) 825 final, 15 December 2020). This non-exhaustive enumeration underscores the increasing significance of this domain within the fabric of contemporary society and, by extension, in the exercise of administrative authority directed towards the governance and safeguarding of the public interest.

[4]See in general Floridi L. (2012), Where the author considers the influence exerted by information and communication technologies on the emergence of new needs within modern society.

[5]See Lalli A. (ed.), Boschetti B. (2022), at 3 or Kubicek H., Cimander R., Scholl H. J. (2011), 23.

[6]European Commission, Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, "A Digital Compass for the Digital Decade: 2030", COM(2021) 18 final, 9 March 2021.

[7]The digitalisation process has been conceived as an attempt to remedy the deficiencies of the public organisational apparatus, which were initially addressed through the mechanism of outsourcing, although this approach ultimately failed to reduce the costs borne by public administrations. See Galetta D. U. (2025), 96.

[8]This constitutes an overall strategic framework through which the Government has outlined seven distinct Missions, each designed to contribute to the broader strategy of the country's economic and social recovery following the pandemic, in accordance with the objectives set out under the Next Generation EU programme. The strategy adopted in the Plan envisages the development of internal capacities within the administrative apparatus, ensuring the active involvement of public officials in the use of digital tools and thereby promoting continuous training aimed at realising the digitalisation process. Cf. Galetta D.U., op. cit., p. 97.

[9]Cannada-Bartoli E. (1972), 2; Falzone G. (1953). More specifically, Article 97 of the Italian Constitution addresses the principle of efficiency and impartiality in public administration, according to which those entrusted with the pursuit of the public interest must act efficiently and maintain equidistance from all parties involved, whether public or private, thereby minimizing any infringement on their interests. Complementing this provision is Article 41 of the Charter of

Public action is always typified by a legal norm justifying its exercise and must, furthermore, be formed within the framework of an administrative procedure[10]. Accordingly, no administrative measure can be deemed lawful unless it has been adopted through the exercise of a power attributed to the administration by law and in conformity with the relevant normative provisions.

The use of digital tools as an aid to conducting administrative proceedings with greater speed may therefore be deemed useful to satisfy the efficiency requirements of administrative action, provided that constitutional and legislative principles are duly respected, and that the human official remains at the centre of the system[11], through his or her proper reallocation within a "digital" administrative procedure[12].

Indeed, even if the public administration were to employ tools such as artificial intelligence systems[13] capable of autonomously determining the content of an administrative act, the logical-legal reasoning followed by the machine in developing its decision must always remain identifiable. This requirement stems from the fundamental principle that the use of automated means cannot prevent the transparency of administrative procedures, as mandated by Law No. 241 of 7 August 1990[14].

In this sense, the case law[15] has also recognised a certain openness towards the adoption of automated systems for enhancing the efficiency of administrative action, while at the same time stressing the necessity to preserve constitutionally guaranteed principles and to comply with the statutory rules governing traditional administrative functions.

Fundamental Rights of the European Union, which enshrines the same principle and, through paragraph 2, further establishes that public officials are obliged to provide an explanation for the reasons underlying their decisions. Clearly, this norm must also apply in cases where the human decision-making process is replaced, totally or partially, by automated systems. See Galetta also D.U. (2025), 15.

[10]Understood as a sequence of acts whose order and functions are predetermined by law.

[11]It must be noted that the principle of good administration, constitutionally enshrined and reinforced by the content of European norms, requires public officials to adopt the most appropriate organizational solutions in practice. In the present context, such solutions involve the implementation of digital mechanisms, with the care that officials must exercise to prevent discriminatory outcomes resulting from automated systems, while simultaneously avoiding discrimination arising from the "digital divide", being it the disequilibrium in levels of technological competence among citizens that may make the content of decisions (in)accessible. F. Galetta D.U. (2025), 105.

[12]See Moreira C., Ferguson D. (2019).

[13]Artificial intelligence (AI) is generally classified into two categories: "weak" AI and "strong" AI. The distinction lies in the fact that the former is programmed to perform a specific material task, whereas the latter is also capable of undertaking intellectual activities that would otherwise be carried out by a human being. The development of AI models itself encompasses multiple structures, including so-called machine learning, natural language processing, computer vision, and robotics. For a more detailed legal definition, see Galetta D.U. (2025), 7; Stiefel K., Coggan Jay S. (2023), *passim*. At the regulatory level, the recent European Artificial Intelligence Act provides, in Article 3, a definition of artificial intelligence systems applicable to all the various models, with the consequence that the rules set forth in the Regulation apply universally to each of them.

[14]See Art. 1, provision 1, L. n. 241/1990.

[15]Cf. Italian Council of State, Section VI, 08 April 2019, n. 2270., a ruling in which the Judges emphasized the legitimate use of digital resources as instruments to support the principle of good administration, by virtue of the more efficient exercise of administrative action that results therefrom.

For these reasons, transparency guarantees concerning the intelligibility of the adopted decision and of its formative process remain a safeguard for ensuring that the use of new digital technologies is consistent with both constitutional principles and European law requirements.

Therefore, the paper aims to analyse the discipline of the algorithmic administrative measure in abidance of the legality principle, as required by the Italian Council of State, and it is structured as follows:

Section 2 seeks to examine the transition from traditional models of public administration to those outlined in the National Recovery and Resilience Plan—models that also rely upon the deployment of artificial intelligence—through the lens of major legislative instruments such as the *EU Artificial Intelligence Act* (Regulation (EU) 2024/1689) and Italian Law No. 132 of 23 September 2025, entitled *"Provisions and Delegations to the Government on Artificial Intelligence"*.

Section 3 follows by showing the importance of the transparency principle in its double meaning, as the possibility to know the content of the public activity and to also understand the latter. In fact, that same knowability must be pursued also in developing algorithmic decisions.

Section 4 focuses on potential risks for the protection of individual rights affected by administrative action, in light of evolving case law that has underscored not only the duty to ensure traceability of the source responsible for any infringement of rights, but also the obligation to guarantee that the final administrative measure is always adopted by a human official, albeit assisted by a digital tool.

Ultimately, section 5 underlines the importance of the measure's motive part also showing the criticalities of the matter, and underling the need of a proper regulation.

Transparency and Knowability of Administrative Decisions: From Traditional Tools towards the Digital Administrative Decision

The principle of good administration, as a guiding criterion for public interest's optimal satisfaction, has manifested its significance within the Italian legal system ever since the entry into force of the Constitution in 1948[16], by the provision of its 97th article.

Post-pandemic legislation[17], however, has relied upon the public administration not merely as the instrument for pursuing general interests, but above all as a resource for developing the national recovery due to the crisis begun in 2020, in

[16]It is worth noting that, in Article 41 of the Charter of Fundamental Rights of the European Union, the good administration canon is not merely conceived as a duty incumbent upon public administrations, but also takes the form of a fundamental right of citizens that can legitimately require to be treated in its abidance.

[17]About this topic, cf. Polyakova V., Streltsova E., Iudin I. et al. (2024), 1 ff.

relation to the green transition[18] towards an environmentally sustainable model of administration and with regard to the digital transition.

The abandonment of the traditional instruments of public action is, however, a gradual process, and the advent of the "*digital administration*" represents a further step within the broader framework of the adaptation of public authorities to political, economic, and social needs[19].

Indeed, as early as the 1990s[20], the computerized administrative act first made its appearance within the Italian legislative landscape, as an act emancipated from the traditional "analog" conception until then prevailed. This development did not, however, entail the abandonment of the traditional legal categories of administrative procedure or administrative measure, but rather prompted their rethinking[21].

Thus, a pathway was traced into which, roughly thirty years later, the digital revolution would insert itself, given that the electronic act has since represented the normal mode of expression of administrative power, with the development of the decision-making process being entrusted to automated information systems[22]. What is relevant, however, is completing the transition from the computerized administrative act to the digital one. Particularly, the cases involving the adoption of an administrative decision presuppose the procedural formation of the (algorithmic) will of the administration, insofar as the exercise of public power must remain subject to control to ensure compliance with the principle of legality. Indeed, the existence of an automated mechanism capable of independently adopting a determination, as an innovative tool of exercising administrative power, cannot be considered to lie outside the legal framework delimited by the principle of legality under conditions of ordinary administrative functioning. Otherwise, an evident disproportion would arise between the position of the public administration and citizens, with the result of an unjustified public supremacy[23].

Despite the need to implement the aforementioned transition, the methods through which administrative activity develops remain anchored to normative principles. Among these, the principle most suitable for ensuring citizens' ability to

[18]Chiti E. (2022), 19-48, with reference to the impact of the European Green Deal as an instrument of ecological transition towards a model that does not adversely affect ecosystems and is aimed at achieving climate neutrality.

[19]See Galetta D.U., Corvalàn J.G. (2019), 1 ff. The authors define *"Public Administration 4.0"* as the administrative model based on information and communication technologies (ICT).

[20]Cf. Art. 3, d. lgs. 12 febbraio 1993, n. 39.

[21]Cavallo Perin R. (2022), 307.

[22]At first, it appeared that the use of the computerized administrative act was to be admitted only with reference to the *bound activity* of the public administration which is relevant to perform functions in which public authorities have no margin of discretion in adopting the final decision, since, once the conditions established by law are met, the outcome of the action is predetermined by a norm. The performance of exploratory or cognitive functions, simple communication tasks, or data-archiving activities has, in fact, long been consolidated through automated means, given that such activities do not require the interpretation of legal provisions nor the expression of an administrative will. Torchia L. (2025), 109.

[23]See Torchia L. (2025), 111. It is, moreover, worth underlining that the narrowing of the boundary line separating the position of public administrations from that of private individuals has been achieved primarily through the recognition of the right to access and to know the course of administrative activity, as a development that, within the Italian legal system, took place only in 1990.

participate in administrative action—and to prevent them from being merely passive adressees—remains the principle of transparency[24], as it represents the highest expression of the democratic values[25] upon which the activity of public powers, even though authoritative[26], is founded.

With the introduction of Law No. 241 of 1990 into the Italian legal system, a radical transformation occurred: until then, the recipient of administrative action could know of a procedure concerning them only when completed. Article 1 of Law No. 241/1990, as amended by Law No. 15 of 11 February 2005, gave rise to a model that allows the administrative apparatus to be defined as a "glass house" [27], by virtue of citizens' ability to know in advance the content of public activity and thus to participate in the administrative procedure from its inception.

For the purposes of adopting an administrative decision, transparency should not be understood merely as the publicity[28] of the decision-making process followed by the competent administration, but rather as the knowability and explainability of the reasoning to the addressee[29]. The ability to comprehend the decision's logic therefore constitutes the defining element for an administrative act to be deemed adopted in accordance with the standard of transparency[30]. Yet, the intelligibility of the reasoning remains a variable concept, dependent upon the manner in which the decision itself is formed.

Accordingly, the technology employed as an auxiliary tool in the adoption of an administrative decision bears its own significance in delimiting the scope of the transparency principle. Thus, with the transition from a traditional model of administration to a digital one, what must be understandable is no longer the logical reasoning followed by the human decision-maker, but rather the path followed by the algorithm.

The same transparency requirements established by the national legislator have also been shared at the supranational level, with the adoption of the *General Data Protection Regulation* (Regulation (EU) 2016/679 of the European Parliament and

[24]See, *ex multis*, Patroni Griffi F. (1992), 627 ff, *Idem* (2013), 1 ff., Carloni E. (2009), 779 ff., Arena G. (1992), 25 ff.

[25]Sandulli M.A. (2000), 1-22, where the author sets out the various forms through which the transparency of administrative activity may be manifested, recalling, for example, the obligation to provide a statement of reasons for the administrative decision that is logical and adequately reasoned, or referring to the possibility for private individuals to participate in the administrative procedure itself and, consequently, in the formation of the decision to be adopted. On the importance of the principle of transparency in administrative action, see also Chevallier J. (1988), 239.

[26]See Scoca F. G. (2002), 75-112, where, from the author's description of administrative activity, it emerges that the exercise of administrative power, expressed through the function carried out by each public entity, does not require the participation or consent of the addressee for the completion of the act adopted, even though such participation is permitted within the limits established by law.

[27]That is an impactful expression used by Member of Parliament Filippo Turati in 1908 during a discussion inside the Italian Chamber of Deputies, where he stated that any time the secret is not imposed to public administrations, they should operate as a glass house, to underline the necessity of transparency in public activity's development. Cf. Carloni E. (2009).

[28]Represented by the availability of the information and the documents held by administrations.

[29]See Carloni E. (2022), in general.

[30]See Lalli A. (ed.), Carloni E. (2022), 46.

of the Council of 27 April 2016) [31], concerning the processing of personal data, whereby a new interpretation of the principles of transparency and access was introduced[32]. The obligations enshrined in the Regulation affect administrative activity whenever it entails the processing of personal data belonging to the recipients of administrative action.

The supranational regulatory framework is further reinforced by Regulation (EU) 2024/1689 laying down harmonised rules on artificial intelligence (the "AI Act"). The adoption of this instrument marked a significant advancement in the regulation of algorithmic decision-making, as it sought to provide an organic framework for the application of artificial intelligence in various contexts—primarily industrial, but with relevant implications also for administrative activity[33].

National legislation, contained in Law No. 132 of 23 September 2025, has, by contrast, shown greater attention to the relationship between public functions and

[31]Kaminsky M.E., Malgieri G. (2020).

[32]It is worth recalling that the GDPR guarantees the data subject the right to know whether their data are being processed, as well as the corresponding obligation of the data controller to provide clear and transparent information, together with the right of access. In particular, the latter was already, in 1990, the main instrument to ensure compliance with the principle of transparency in administrative procedures. These rights, expressly stated in the GDPR, are also protected judicially, by allowing the lodging of a complaint with the national supervisory authority of the State where the data subject habitually resides or works. Furthermore, Article 42 of the Charter of Fundamental Rights links the right to access one's files or documents to the right to be heard, as a full form of citizen participation. Cf. Galetta D.U. (2025), 79. The right of access is thus significant nationally under Article 22, Law No. 241 of 7 August 1990 and subsequent amendments, and supranationally under Article 15 of the GDPR. It has also been complemented by *Guidelines 01/2022 on data subject rights – Right of access* (EDPB 01/22), specifying the steps to allow legitimate access. Although a soft law instrument, these guidelines provide important interpretative indications regarding the data controller's duties during access to administrative documents. They state that the right of access allows citizens to obtain sufficient, transparent, and readily accessible information about personal data concerning them involved in the procedure. Finally, the polyvalence of the right of access must be noted, as it allows the data subject to exercise other rights, such as rectification or deletion of data. Cf. Torchia L. (2025), 149–150; Di Filippo A. (2024), 1210; Rulli E. (2018), 543 ff. Regarding the interpretation of the article, it is interesting to analyze Opinion of Advocate General Richard de la Tour delivered on 12 September 2024, regarding *Request for a preliminary ruling from the Verwaltungsgericht Wien*. There, precisely, the Advocate General affirmed that «*Article 15 of the GDPR, entitled 'Right of access by the data subject', defines, in paragraph 1 thereof, the subject matter and scope of the right of access granted to the data subject and enshrines the right of the data subject to obtain from the controller access to his or her personal data and the information referred to in subparagraphs (a) to (h) of that paragraph*».

[33]Recital 12 of the AI Act provides a precise definition of the characteristics of artificial intelligence systems, identifying as essential their capacity for inference in producing an outcome. On the discipline of the AI Act, see Sapienza S. (2024), 106, where the value of this legislative act is emphasized for having established a risk-based framework for the use of artificial intelligence. In particular, Article 3(1)(2) defines risk as "the combination of the probability of harm occurring and the severity of that harm." Moreover, significant risk is described as that characterized by "the combination of severity, intensity, likelihood of occurrence, and duration of its effects, as well as its capacity to affect an individual, a plurality of persons, or a particular group of persons." The AI Act also provides four categories of activities according to risk intensity: prohibited, high-risk, limited-risk, and minimal-risk activities. On the subject, see, among many others, also Trimarchi Banfi F. (2025), 655; Barbieri L., Dani L. (2025); Artuso S. (2025); Rumi T. (2025), in general.

the use of digital instruments[34]. Indeed, although Article 1 of the law explicitly establishes that national legislation draws its foundations from the AI Act, it is possible to discern a specific focus on the activity of public administrations, particularly with regard to the delimitation of the scope of criminal liability of public bodies in the use of artificial intelligence tools, as introduced through the amendment of Legislative Decree No. 231/2001[35].

The critical issue, therefore, coincides with the identification of the appropriate means by which to ensure the dual dimension of transparency in the pursuit of the public interest[36]. Not by chance, the inherent opacity of such mechanisms has led to the emergence of the so-called "black box problem"[37], due to the intrinsic difficulty of gathering the functioning of the algorithm[38].

Transparency in (and for) the Algorithmic Administrative Procedure

It is worth noting that, conceptually, the administrative procedure shares certain similarities with what an algorithm represents. In both cases, indeed, we are dealing with sequences of ordered operations aimed at achieving a predetermined result. In the case of digital administrative activity, it can even be argued that the administrative procedure is realized in—and replaced by—the software used for the execution of the activity, since through it the administration's will is expressed at its culmination[39].

Consequently, what the legal nature of the software is, in relation to the exercise of digital administrative activity, may be interesting to discover. Various theories have been developed on the matter: one position considers the rules embedded in

[34]See Art. 1, Law No. 132/2025: «*This law establishes principles concerning the research, experimentation, development, adoption, and application of artificial intelligence systems and models. It promotes the correct, transparent, and responsible use of artificial intelligence in an anthropocentric perspective, aimed at seizing its opportunities. It ensures oversight of economic and social risks and of the impact of artificial intelligence on fundamental rights. The provisions of this law shall be interpreted and applied in accordance with Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024*». From the statutory text, it already emerges that the use of artificial intelligence is intended only insofar as it does not conflict with the fundamental rights of citizens, which becomes even more significant where digital tools constitute an expression of administrative power. Cf. Masnada M. (2025).

[35]Art. 24, paragraphs 3 and 5(c), Law No. 132/2025, delegates to the Italian Government the «specification of the criteria for attributing criminal liability of natural persons and administrative liability of entities for offenses related to artificial intelligence systems, taking into account the actual level of control exercised by the agent over the aforementioned systems».

[36]On one hand, transparency can be understood, from a static perspective, as the possibility of scrutinizing the exercise of administrative power to assess its compliance with legal principles, or, from a dynamic perspective, as the purpose (always instrumental to the protection of the public interest) to be ensured in the performance of the institutional activity carried out by the entity. See Corrado A. (2020), 123 et seq, or Ramotti C. (2025), 216 ff.

[37]See Sonia Arduini S. (2021), 453 ff; Pasquale F. (2015), 975 ff.; Palmer Olsen H., Livingston Slosser J., Treols Hildebrandt T. (2020), 1 ff., Stiefel K., Coggan Jay S. (2023), *passim*.

[38]More precisely, it should be emphasized that the difficulties in understanding the machine's mode of operation concern both cases in which a straightforward algorithm is used, as well as instances of artificial intelligence, and, above all, the use of machine learning tools.

[39]Cf. Mazza Labocetta A. (2023), 118.

the software as acts of mere internal organization regarding the exercise of the "digital administrative function", whereas another point of view permits to consider them on the same level as a self-limitation of the exercise of the function[40].

Another relevant point, in the analysis of digital tools for the more efficient exercise of public action, concerns the fact that the impact of the digital tool varies depending on the type of procedure or act that the public administration conducts and adopts. This can easily be assessed by considering the difference between the administration's bound activity and discretionary activity, the latter undoubtedly presenting greater challenges in the analysed context.

In the first case, occurs a situation that better accommodates the model of algorithmic administrative function, since there is no room for choice for the acting administration. Indeed, there is a full correspondence between the model underlying the functioning of the algorithm and the space of discernment left to the administration in cases of bound activity: on the one hand, the programmer sets rules for the algorithm based on an *if/then* mechanism so that it behaves in the predetermined way when encountering a specific input; similarly, in cases of bound power, the legislator establishes the outcome of the administrative action upon the occurrence of the conditions fixed by the same law conferring the power. Given this alignment of dynamics, the use of automated models for the adoption of a bound act seems fitting.

The situation is markedly different, however, in the case of the public administration's discretionary activity, which entails determining the *an*, *quid*, *quomodo*, and *quando* of the act[41].

As is intuitively clear, in the latter scenario, the use of an algorithm introduces more pervasive risks regarding the legitimate achievement of the final purpose, given the impossibility of constantly guaranteeing the predictability of the outcome[42]. This is particularly evident with machine learning models, which are known for their ability to autonomously reach increasingly accurate and complex decisions through the processing of data initially provided by the programmer, in addition to the inferences acquired from the machine's experience[43].

Despite a cautious openness in jurisprudence[44] toward the possibility of using machine learning models even for discretionary administrative activity, a generalized and uncalibrated use appears inadequate, since discretion is an expression of human reasonableness[45] and cannot be substituted by any automation.

[40]See Cavallo Perin R. (2022), 309. In the second mentioned case, therefore, the software underlying the machine's operational mechanism is, from a legal standpoint, equated to an administrative act of general effect.

[41]Which mean whether to adopt the measure, its subject matter, the modalities of adoption, and the timing. See Piras A. (1964), 67-91.

[42]See Torchia L. (2022), 112.

[43]Even a brief description of how machine learning works should make clear the difficulty of grasping the logical path followed by the algorithm, even if initially regulated by the programmer, due to its capacity for autonomous adaptation and improvement. Therefore, this element allows machine learning tools to be considered as a *quid pluris* compared to a simple "if/then" algorithm or even to artificial intelligence alone

[44]Council of State, Section VI, 04 February 2020, n. 881.

[45]Mazza Labocetta A. (2023), 122.

Otherwise, there may be an evident exponential increase in the risk of causing prejudice to the recipient of the action[46].

If the operations performed by the algorithm cannot be easily traced by a human controller after the decision is made, the last safeguard available to assess the legitimacy of the act is precisely the principle of transparency[47] as a preventive safeguard, alongside the principle of algorithmic legality[48].

However, the principle of transparency manifests itself in different ways.

For instance, it is closely linked to the administration's obligation to inform the interested party of the beginning of the administrative procedure. This obligation is contained in Law No. 241/1990 and also applies to automated procedures, where it assumes essential importance, as it allows to know the instructions given to the machine to conduct the activity[49]. More specifically, the General Data Protection Regulation (GDPR)[50] imposes the specific obligation to indicate in the communication of the initiation of the procedure any use of automation tools for decision-making[51], together with a description of the partially or fully automated nature of the act to be adopted.

[46]An example of an evidently unfair automated decision was brought before the administrative judge. In particular, jurisprudence considered the case involving the assignment of thousands of teachers to different school levels nationwide in 2017. The competent Ministry commissioned a private company to develop an algorithm capable of processing relevant data to assign scores in the public selection procedure for each teacher. However, the algorithm malfunctioned, giving higher rankings to teachers who, based on their scores, should have been placed lower. On that occasion, the teachers' ability to exercise the right of access to documents proved essential to understand the reasoning behind the incorrect scoring. Initially, the Ministry denied access, arguing that no administrative acts were produced, but only a source code also covered by private intellectual property rules. The teachers appealed to the administrative court, which first had to establish its jurisdiction, affirmed on the basis that the administration makes a macro-organizational choice when adopting automated tools for its activities. Jurisprudence then recognized the right of access initially denied by the Ministry, as an expression of the principle of transparency, because the algorithm automatically manages the administrative procedure and shapes it, and all supporting data and the measure are contained in the algorithm, making it equivalent to an administrative digital act, to which Law no. 241/1990 extends the right of access. It was also affirmed that the choice to use digital means in place of traditional administrative methods cannot undermine citizens' guarantees, and the logical process followed must always be intelligible. See Council of State, Section VI, 13 December 2019, n. 8472.

[47]Galetta D.U. (2025), Cavallo Perin R., Galetta D.U. (eds.) 85 ff.

[48]Torchia L. (2025), 117; Civitarese Matteucci S. (2019), 8, here, the author emphasizes that the principle of algorithmic legality differs from its traditional version. The reason for this distinction lies in the fact that it no longer concerns only the guarantee of complying with legal norms to avoid undue restriction of the legal sphere of the recipient of the administration's unilateral authoritative act; rather, it requires that such a guarantee be provided in any context of administrative action, even when it is relevant from a private law perspective.

[49]Diaco D. (2024), 249.

[50]It should also be noted that, through Article 15 of the aforementioned Regulation (EU) 2016/679, as noted above (cf. *supra* note 26), transparency is no longer considered solely as an obligation on the part of the entity conducting the administrative procedure, but also as a right exercisable by anyone wishing to know about the possible existence of an algorithmic procedure concerning them. See Lalli (ed.), Carloni E. (2022), 55, Civitarese Matteucci S. (2019), 5 ff.

[51]See Torchia L. (2025), 127. The author also considers the national framework established by the Digital Administration Code (Legislative Decree no. 82 of 7 March 2005), which provides additional rules for the content of the notification of the initiation of the digital procedure, such

The critical aspect is that, although these procedural requirements are imposed to guarantee the application of the principle of transparency, they do not necessarily achieve the same effectiveness in an automated procedure as in traditional conditions. Consider that, whereas in the classic administrative procedure, exercising the right of access to documents was generally sufficient for the citizen to understand the administration's reasoning, this is not sufficient in the algorithmic procedure. Access would allow only to see the source code that led to the adoption of the act, but is it possible to affirm that recognizing the software also ensures intelligibility of the legal reasoning? The answer is clearly negative[52].

The only admissible solution, therefore, is to ensure algorithmic transparency in advance, and not only after the adoption of the act, as otherwise the right to participate in the procedure and the adversarial process within it would be compromised[53]. Given that the current normative elements are still insufficient to guarantee these aspects, judicial interpretation has proven essential[54] in affirming that, to give real effect to the principle of transparency, public administrations must first prefer the adoption of open-source algorithmic tools, rather than those protected by intellectual property, in order to facilitate their intelligibility[55].

Transparency as a warrantee of legality and legitimacy for algorithmic decisions in light of the Council of State case law.

Once established that the principle of transparency represents the cornerstone of the system underpinning the digital administrative procedure, also considering the interpretation provided by the courts[56], it becomes necessary to examine the ways in which the administrative function may be deemed legitimately exercised.

First, it is essential to consider the technical rule governing algorithms, artificial intelligence, or machine learning mechanisms, given that such rule also carries legal significance. What renders this technical rule legally relevant is precisely the possibility of knowing and understanding the formula that, through the explanation

as the indication of the existence of a digital file containing the procedural documents and related information, the indication of the administration's digital address, or the indication of an online access point to the digital file.

[52]American scholarship distinguishes between "*fishbowl transparency"* and "*reasoned transparency*", noting that the first model aims to show what the administration is doing within the procedure, while the second seeks to make understandable the reasons driving the automated administrative activity. See Coglianese C., Lehr D. (2019), 20 ff.

[53]Indeed, to remedy a situation in which an unlawful algorithmic decision has already been adopted, the only solution remains recourse to the judicial function.

[54]See Hous. Fed'n of Teachers, Local 2415 v. Hous. Indep. Sch. Dist., 251 F. Supp. 3d 1168 (S.D. Tex. 2017).

[55]See Diaco D. (2024), 223-253.

[56]Cf. The already cited judgment of the Council of State, Section VI, No. 8472/2019. This centrality is, in any case, also emphasized by statutory provisions, such as Article 42 of the European Charter of Fundamental Rights, which provides that, in cases where an administrative act restricts the subjective legal sphere of the addressee, the administration is bound by the duty of prior adversarial proceedings with the interested party, in addition to the obligation to explain the reasons for adopting such an act. See also Sassi S. (2019), 109, Orsoni G., D'Orlando E. (2019), 593 ff.

of its functioning[57], rises to the status of a legal rule (typically, a norm) and, as such, is capable of producing juridical effects for the addressee.

More precisely, the software employed in digital administrative proceedings has been classified by case law[58] within the pre-existing category of the so-called informatic administrative act[59]. However, for such assimilation to be valid, the algorithmic technical rule has firstly to be translated into a legal one, making it intelligible both to citizens and to the judge who may be called to review its lawfulness[60].

Nonetheless, as mentioned, the courts have not opposed the use of algorithms within administrative procedures. Specifically, the legitimacy of such mechanisms depends on compliance with the general rules of the legal order, since the technical rule programming the algorithm's operation remains a general rule of administrative law and, as such, it needs to conform to the principles of transparency, reasonableness, and proportionality when applied within an administrative procedure[61].

This also follows from the fact that such a rule is always conceived by humans rather than by the machine, which merely executes it, even if autonomously.

This observation extends the application of the transparency principle to include the right to know who developed the algorithm, the technical process followed in its creation, and the decision-making mechanism designed to reveal the priorities set by developers in assessing data relevant to the decision, and not merely the path followed by the machine in reaching a particular outcome[62].

Only in this way can the technical rule be regarded as explained, and, therefore, legally relevant. In any event, the algorithmic administrative rule must not allow any discretion in adopting a digital decision; instead, it needs to be programmed to provide a predetermined solution for every possible case submitted to the system[63], even the most unlikely ones, so as to prevent unreasonable or disproportionate results[64].

Consequently, the public administration has to engage in continuous supervision and updating of the algorithm to ensure a proper balancing of the interests at stake. Given the significance of the issue, the Council of State promptly

[57]The understanding of a rule, even if expressed in a language different from the legal one, must always be ensured for the citizen. In this regard, see Council of State, Section VI, 8 April 2019, No. 2270.

[58]T.A.R. Lazio, Roma, Section III-*bis*, 30 June 2021, n. 7769.

[59]The informatic administrative act is represented by every act adopted with the support of informatic technology, meanwhile the digital act asks for a further requirement to be deemed as such, since it is necessary the usage of an algorithm. See Masucci A. (1997), 221 – 228.

[60]Council of State, Section VI, 13 December 2019, n. 8472; Council of State, Section VI, 18 May 2020, n. 3148.

[61]See, once again, Council of State, Section VI, 08 April 2019, n. 2270.

[62]See Lalli A. (ed.), Carloni E. (2022), 55. Moreover, the Council of State (Council of State, Section VI, 13 December 2019, No. 8742, cited) reiterated the need to regulate automated procedures through a "strengthened" transparency principle, which is manifested in the modes described above. See also Benetazzo C. (2020), 24-35.

[63]This aspect is what prevents an algorithm-based administrative rule from being fully equated with the general legal rule, which has a general and abstract range of application needed to be suitable for each and every possible hypothesis touched by the provision.

[64]Cf. Torchia L. (2025), 151.

elaborated the minimum principles under which an algorithmic administrative act may be considered lawful.

As noted, the judiciary has expressed a favourable view toward the use of automated tools in the exercise of administrative functions, as they facilitate compliance with the principle enshrined in Article 97 of the Constitution. However, efficiency and cost-effectiveness cannot be pursued at the expense of other protected interests. For this reason, the Council of State[65] has clarified that such acts must always be subject to judicial oversight by the administrative courts; therefore, it is not sufficient merely to guarantee the knowability of all aspects relating to the parties involved, the algorithm's programming, and the resulting decision. Where these safeguards are ensured, however, the algorithmic tool can significantly enhance administrative action.

In this regard, courts have emphasized that, in carrying out the binding activity of public administration, algorithms can help prevent negligence or misconduct by public officials[66]. This considering the fact that processing large volumes of data not requiring evaluation beyond automatic classification can be performed more efficiently by the algorithm, even without human intervention. Though, eliminating any space for algorithmic discretion is crucial: programmers, as mentioned, must anticipate all possible solutions associated with the exercise of administrative power through the automated tool, preventing the system from making unpredictable choices. Administrative discretion, by contrast, still finds space but it is exercised at the stage of choosing which software to adopt, before the activity is delegated to the algorithm.

Accordingly, the Council of State has identified the essential profiles of legality applicable to the algorithmic rule[67].

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[65]See the mentioned judgement of Council of State, No. 2270/2019: *«An automated administrative decision, adopted through the use of an algorithm, requires that: (a) the algorithm be "knowable", according to a strengthened interpretation of the principle of transparency, which also entails the full knowability of a rule expressed in a language different from the legal one; (b) the algorithmic rule be not only knowable in itself but also fully accessible to, and subject to, the complete scrutiny of the administrative judge»,* on appeal, moreover, from the first-instance judgment of the Regional Administrative Court of Lazio, Rome, No. 12026 of 2016; translation provided by the present writer.

[66]Belisario E., Cassano G., Belisario E., Ricciulli F. (2023), 157 ff.

[67]Simoncini A. (2019), 1149 ff, this refers to a genuine "rule of technology," whereby an automated decision adopted in practice must necessarily correspond to the "abstract algorithmic provision." See also Belisario E., Cassano G., Belisario E., Ricciulli F. (2023), 158. The issue of "algorithmic legality" does not concern exclusively the machine's compliance with legal requirements in the development of the digital administrative procedure, or the observance of principles outlined by the judiciary, but also the question of whether an electronic administrative act may be adopted only in the presence of a norm that expressly permits such an operation. This clearly relates to the repeatedly expressed need to ensure the application of the law even in the use of digital tools, preventing, indeed, their use as a means to circumvent legal obligations.
In the Italian legal system, there is statutory authorization for the use of digital tools, within Law No. 241 of 7 August 1990, Article 3-*bis*, which highlights the connection between technology and efficiency objectives, alongside Article 12 of the "Codice dell'Amministrazione Digitale". The existence of provisions promoting the digitalization of administrative activity supports the possibility of generalized recourse to algorithmic decision-making, provided it is employed within the limits repeatedly emphasized. In matters of algorithmic legality see Simoncini A. (2019), 1149 ff.; Torchia L. (2025), 114; Civitarese Matteuci S. (2019), 5 ff.; Bateman W. (2020),

A judge called upon to annul an unlawful administrative act must therefore verify the compliance with the principle of "algorithmic legality," as developed in case law.

Among these standards, in addition to the aforementioned duty of constant supervision and updating of the software, stands the "*human in the loop*" [68] principle, of mathematical doctrine origin, which requires that algorithmic decision-making is not entirely detached from human intervention, and that a person is involved as a supervisor in verifying the outcome.

The inclusion of human oversight within the decision-making process is also what, at a pathological stage, enables judicial review to occur. Specifically, this principle means that, whenever an algorithmic decision affects the subjective sphere of the addressee, the individual has the right to ensure that the production of legal effects does not depend uniquely on an automated process but also on human evaluation[69].

520–530; Bent, J. R. (2020), 803–853; Martìn Dalgado I. (2022), 9-30; Panagopoulou F. (2024), 2 ff.

[68]On this point, there are numerous judicial decisions, supported by extensive doctrinal and scientific research, all sharing the common thread that human involvement must not be excluded at any stage of the logical-algorithmic process leading to the adoption of an act that produces legal effects. This ensures that the recipient is guaranteed the possibility of obtaining a decision that is not purely automated. Essentially, a human must be able to supervise, confirm, or override the content of the algorithmic act, meaning that the intended outcome of the act can occur only to the extent that the machine has interacted with a human. This principle is also reflected in Article 22 of the GDPR, except in the cases explicitly listed in paragraph 2, which concern decisions that: *« a) it is necessary for the conclusion or performance of a contract between the data subject and the data controller; b) it is authorized by Union or Member State law to which the data controller is subject, which also specifies appropriate measures to safeguard the rights, freedoms, and legitimate interests of the data subject; c) it is based on the explicit consent of the data subject*». However, the data subject always retains the possibility to express their opinion and challenge the decision, and the data controller remains obliged to implement appropriate safeguards for the rights, freedoms, and legitimate interests of the data subject in the cases referred to in points *a*) and *c*). Cf., *ex multis*, T.A.R. Calabria Catanzaro, Section I, 29 July 2025, n. 1300; Court of Appeal of Rome, Labor Section, Judgement, 03 March 2023, n. 834; Council of State, Section VI, 04 February 2020, n. 881; Council of State, Section VI, 13 December 2020, n. 8474; from a doctrinal point of view, instead, see Kinchin, N. (2024), 23–45; Tschider, C. A. (2024), 324–429; Zheng, E. L., Jin, W., Hamarneh, G., & Lee, S. S.-J. (2024), 84–86; Belisario E., Cassano G., Belisario E., Ricciulli F. (2023), 162; Torchia L. (2025), 129; Sapienza S. (2024), 40. It is worth recalling the already cited Opinion of Advocate General Richard de la Tour delivered on 12 September 2024, by which it was confirmed the setting about art. 22 GDPR, affirming that: «[…] *the prohibition thus laid down does not apply in the cases listed in Article 22(2) of that regulation, to which I shall return below. In its judgment of 7 December 2023, SCHUFA Holding and Others (Scoring), the Court held that Article 22(1) of the GDPR must be interpreted as meaning that the automated establishment, by a credit information agency, of a probability value based on personal data relating to a person and concerning his or her ability to meet payment commitments in the future constitutes 'automated individual decision-making' within the meaning of that provision, where a third party, to which that probability value is transmitted, draws strongly on that probability value to establish, implement or terminate a contractual relationship with that person*».

[69]The algorithm used in the conduct of the administrative procedure must undergo continuous assessment, both before its adoption and throughout its use. This ensures that the interests at stake can be balanced in advance, with the type of reasoned judgment characteristic of human evaluation—whether preventive or subsequent—which the machine itself cannot perform.

Consequently, following the adoption of an algorithmic act, human intervention has to confirm or remove its content; if even that is not sufficient, then the subject of the illegitimate measure can appeal the judicial remedies.

Although, theoretically, the legal provision embodying this principle appears clear, its practical implementation raises several challenges.

Indeed, EU legislation remains incomplete regarding the use of artificial intelligence in decision-making processes, particularly in two respects relating to the distinction among different automation models.

The first concerns the fact that the requirement of human oversight may not apply to decision-making models that are not fully automated, thereby excluding categories of automation that already incorporate human input during the decision-development stage[70].

The second critical aspect relates to the processing of data referring not to individuals but to groups of people or the wider community, where personal data are anonymized and processed collectively, leading to the inapplicability of GDPR provisions that protect only individual data[71].

Finally, the principle of non-discrimination in algorithmic decision-making is the last to consider for completing the algorithmic legality fundamental requirements. This translates into a duty to avoid so-called automation biases[72], preventing outcomes that might be discriminatory toward the addressee of administrative action. The difficulty arises from the fact that the accuracy of algorithmic decisions depends on the quality of the data filled into the software[73],

[70]Sapienza S. (2024), 41.

[71]Attention should also be paid to the Judgment of the Court (Fourth Chamber) of 4 September 2025, which highlighted further critical issues in the EU regulatory framework. In that decision, with reference to the judge's role in cases of unlawful personal data processing, it was emphasized that the GDPR does not directly confer on the data subject the right to obtain an injunction aimed at preventing the recurrence of unlawful data processing by the data controller. Nevertheless, nothing prevents national legislation from providing such a preventive remedy, confirming the importance of judicial oversight in this area

[72]These represent a cognitive factor that conditions the interaction between humans and machines to such an extent that it can cause harm to the data subject through the incorrect processing of personal data, based on mathematical procedures tainted by discriminatory effects against individuals, depending on ethnicity, sex, political opinion, or other factors of similar relevance. See Goddard K, Roudsari A, Wyatt JC (2012); Italian Higher Council of the Judiciary, recommendation 08 October 2025; Guidelines 4/2019 on Article 25. Data Protection by Design and by Default. Version 2.0, of the European Data Protection Board (EDPB).

[73]A new category of defect in administrative acts could be the 'malfunction' of the algorithm from which an unlawful decision arises. This category seems to encompass all technical circumstances that may negatively affect the accuracy of algorithmic decisions, including through the distortion of reality as perceived by the machine, resulting in the production of an incongruous outcome. Examples may include programming errors, such as mismatches between input and output, or technological deviations, as a consequence of the aforementioned biases or invalid data within the algorithm (see Simeoli D., 2022). However, such a defect also raises questions regarding the applicable liability regime. It is necessary to determine whether there was liability, through intent or negligence, on the part of the administration in the erroneous selection of the software used for exercising administrative power, with potential application of Article 2050 of the Italian Civil Code, concerning liability for hazardous activities (in this case, inherently posing a risk to the recipient), or whether liability might rather lie with the developers

coupled with the machine's inherent inability to assess data within their broader context. The objective data processed by the algorithm may thus apply to an individual a rule that is statistically fair and legitimate but, in light of the person's specific circumstances, proves discriminatory in the concrete case[74].

Hence, it becomes even more evident that the intervention of the administrative judge has always to be possible to assess the lawfulness of the algorithmic determination. If the automated measure complies with all the principles outlined above, it will also satisfy the requirements of so-called algorithmic legality.

Concluding Remarks and Criticalities

In conclusion, the exercise of administrative power lends itself to the use of digital technologies, as long as all the legal requirements governing traditional administrative activity are respected.

However, as emphasized, the use of tools that render the decision-making process opaque— even in the name of greater procedural efficiency—cannot justify any compromise on legitimacy. Consequently, the traditional categories of vices acts must be reconsidered in light of algorithmic decision-making[75]. From this, two main considerations arise: the first concerns the need to adapt the regulation of algorithmic activity to an ever-changing context[76]; the second relates to the

who failed to properly train the machine, for the purposes of claiming compensation for the injured party. See Belisario E., Ricciulli F. (2023), 171.

[74]See Torchia L. (2025), 143.

[75]Violation of law, lack of competence, and abuse of power remain the reference categories, albeit they must be interpreted so as to encompass the peculiarities of each case. Consider violation of law as the failure to comply with a norm that may exist at both national and supranational levels; the relevant aspect, then, is the development of an algorithm capable of simultaneously observing multiple layers of regulation. Lack of competence, in turn, would arise in any case in which the law itself excludes the development of an automated procedure, or where such a procedure is handled by an entity lacking the competence specifically related to the subject matter of the action. Finally, with regard to abuse of power, additional symptomatic forms of the defect, distinct from traditional ones, have been hypothesized. It is worth mentioning: the so-called uncontrolled delegation, i.e., the generalized conferral of the power to decide on certain matters to the algorithm, without simultaneously providing for adequate human oversight; algorithmic manipulation, understood as the distortion of the outcome through improper use or tampering of the software; lack of transparency, which can likewise be seen as a symptomatic form of algorithmic abuse of power, since in its absence it is impossible to review the content of the decision; and lastly, the 'disproportionate response,' understood as the adoption of a decision that is devoid of reasonableness and appropriateness to the specific case. See Belisario E., Ricciulli F. (2023), 171.

[76]The relevant issue is to identify the most appropriate moment to intervene in the regulation of the matter. This critical aspect was already highlighted in the literature as early as the 1980s (cf. Collingridge D. (1980), passim), where it was emphasized that if regulation intervenes too early relative to technological development, there is a risk of failing to provide a framework encompassing all relevant aspects, which would rapidly become obsolete, or of stifling technological progress from the outset. The approach advocated at the time was the so-called 'wait-and-see' approach, whereby the regulator, faced with the existence of a multiplicity of models on the market, should not determine which of them deserve protection, but rather regulate each of their facets. It is evident that such an approach is no longer feasible in a market in which

importance of upholding the duty to provide the explanation for administrative acts, including algorithmic ones, as required by Article 3 of Law No. 241/1990 and by supranational sources[77].

Just as the statement of reasons plays a crucial role in identifying possible defects in acts adopted through the traditional exercise of administrative functions, so too, in algorithmic decision-making, it represents the cornerstone of citizens' guarantees, since it is through letting the reasons accessible that explainability and explanation take concrete form.

The explicative part of the decision thus constitutes the instrument through which all the principles set out above—those safeguarding transparency and algorithmic legality[78]—enter the automated determination within the administrative procedure, together with the element of human oversight. Only by articulating the underlying reasoning within the statement of reasons can the presence of human judgment in the algorithmic process be ensured, allowing for judicial review or reconsideration by the competent authority.

In the absence of reasoning, or where it is inadequate[79], *ex post* judicial check would be deprived of substance, since even if judges were placed in a position to reconstruct the operations performed by the digital systems, this might not suffice to trace the relationship between the inputs provided and the outputs produced[80]. Indeed, in the use of machine-learning systems, the opacity of inferences is inevitable, given the impossibility of verifying *ex post* which data were processed by the system in order to reach the disputed result.

In such cases, the issue of understanding the logical-legal reasoning is coupled with the problem of ensuring adversarial participation within the procedure, even when the decision is accompanied by reasoning.

The requirements of adversarial participation[81] could be satisfied through the issuance of a preliminary automated decision, with the interested party subsequently allowed to submit observations to a human case handler. In this way, the human official could depart from the potentially detrimental content of the preliminary automated outcome, thereby applying the human-in-the-loop principle, and the final decision would be adopted only after the adversarial phase with the individual concerned.

Nevertheless, under Italian law exist forms of simplified administrative procedure that are legally justified by the binding nature of the administrative

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the number of models emerging is so diverse that a single ex-post regulation applicable to all of them is not possible. Cf. Pittelli D. (2025), 43; Torchia L. (2025), 12.

[77]Cf. Art. 296, par. 2, TFUE or the aforementioned Article 41 of the Charter of Fundamental Rights of the European Union. The case law on the subject is extensive, but at the European level, it is worth recalling the judgment of 20 March 1957, *Case 2/6, Die in der "Geitling" Ruhrkohlen-Verkaufsgesellschaft mbH zusammengeschlossenenen Bergwerksgesellschaften v. High Authority*.

[78]The duty to provide adequate reasoning in an administrative act is not only established in Article 3 of Law no. 241/1990 but also serves to justify the decision made by the machine, as it makes the underlying reasoning understandable.

[79]Judgement Court of Justice of the European Union, March 20th, 1959, Case 18/57, I. Nolde v. High Authority.

[80]See Dignum V. (2019), 59 ff.

[81]See Torchia L. (2025), 132.

outcome[82]. Hence, the use of algorithmic decision-making becomes more acceptable as the degree of administrative discretion decreases and the public action is more tightly constrained.

In any event, the reasonableness and proportionality of the digital administrative act remain subject to judicial scrutiny. The administrative judge retains full cognizance over the method used to design the software, the way data are entered, the reliability of the data, and the adequacy of their management. If, therefore, case law over time has demonstrated a certain sensitivity toward this issue—allowing a first form of regulation of digital public administration to emerge through law in action—the legislative path has proven slower and more complex.

The current challenge for the legislator, already anticipated by judicial interpretation, lies in crafting a regulatory framework capable of fostering the use of technological tools that improve the functioning of the administrative system, which remains composed of both human capital[83] and digital resources. The envisaged regulatory intervention is indispensable for the full achievement of the digital transformation process, but it must evolve in step with the rapid progress of information technologies, so as to achieve an algorithmic procedure in which administrative power is exercised with the same degree of transparency as in traditional forms of public action. Indeed, digitalization should be understood as a means to strengthen the democratic paradigm embodied in the *e-Government* model[84], and not as an end in itself that justifies fleeing the democratic nature of the legal order.

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[82]Among all, it can be considered the institution of *tacit consent*, as a typical case of the exercise of administrative power in the absence of the express adoption of an act with positive or negative content for the addressee within the time limits established by law. See, *ex multis*, Lignani P.G. (1999), 978 ff.

[83]Becker Gary S. (1975). Where the economist uses this expression, it refers to the set of skills and abilities of each individual, which determine their value in the labor market, also in relation to the potential positive contribution they can make to societal development

[84]See Sheridan W., Riley T.B. (2010), 1.

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