THE LAW OF THE ALGORITHMIC STATE IN SERBIA

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Abstract

Serbia, like many other countries, is in the process of reforming its legislation to accommodate artificial intelligence-driven systems. The country has made some progress with investment in artificial intelligence (AI) research and development, the creation of IT infrastructure to support the future introduction of AI in the public sector, and the establishment of a strategic framework. While there is no binding national legislation solely dedicated to AI, the Strategy for Development of Artificial Intelligence in the Republic of Serbia for period 2020-2025 lays the ground for integrating AI in sectors such as health, education, and public administration. It was supplemented by the adoption of Ethical Guidelines for Development, Application and Use of Reliable and Responsible Artificial Intelligence. The forthcoming Strategy 2024-2030 aims to further these goals, while addressing concerns about data protection and the ethical application of AI and is expected to be followed soon by a dedicated piece of legislation that will regulate the use of AI in detail. Despite the efforts made to increase the use of AI in public administration, in practice it is still limited, and this paper examines a few examples of current or intended use. Even though Serbia is not part of the European Union, it strives to become a Member State, which entails aligning with the European Union *acquis communautaire* in all areas.

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Given the recent enactment by the EU of the first-ever regulation on AI – the Artificial Intelligence Act (AI Act) – it can be expected that Serbia will follow the lead and prepare a draft Law on AI that will be (for the most part) aligned with the AI Act. It can be concluded that the wider use of AI technologies by the public in administration in Serbia will have to wait for both the establishment of the infrastructural/technical architecture for its application and the legislative alignment of a number of legislative acts before it can be fully implemented.

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1. Introduction: AI and Serbian Public Administration

The rapid advancement of artificial intelligence (AI) technologies has prompted countries worldwide to reconsider their regulatory frameworks[1]. It is becoming increasingly evident that AI is rapidly evolving, sparking debates among both scholars and legal practitioners on the future development and human rights implications of its use in general and by the public administration in particular, with a special reference to accountability mechanisms[2]. In the United States, for instance, Citron has underlined the concept of 'Technological Due Process', highlighting the need for individuals to have the right to challenge and understand the automated decisions

[1] J.B. Bullock, *Artificial Intelligence, Discretion, and Bureaucracy*, 49(7) Am. Rev. Pub. Admin. 751–761 (2019).

[2] See M. Busuioc, *Accountable Artificial Intelligence: Holding Algorithms to Account*, 81(5) Pub. Admin. Rev. 825–836 (2021); D. Bogiatzis-Gibbons, *Beyond Individual Accountability: (Re-)Asserting Democratic Control of AI*, in *The 2024 ACM Conference on Fairness, Accountability, and Transparency (FAccT '24)* (2024) 74–84, https://doi.org/10.1145/3630106.%203658541.

that affect them[3]. Further considerations on the relationship between law and AI have also emerged in both legal and non-legal scholarship, emphasising how the growing autonomy of AI imposes a radical reflection on human rights protections.

Serbia, like many other nations, is in the process of reforming its legislation to accommodate AI-driven systems, with an emphasis on ethical standards, transparency, and alignment with relevant EU standards. While there is no binding national legislation solely dedicated to AI, Serbia's Strategy of Development of Artificial Intelligence in the Republic of Serbia for the period 2020-2025 lays the ground for integrating AI in public sectors such as health, education, and *public administration*[4]. It was supplemented by the adoption of Ethical Guidelines for Development, Application and Use of Reliable and Responsible Artificial Intelligence (hereinafter 'Ethical Guidelines')[5]. The forthcoming *Strategy 2024-2030*[6] aims to further these goals, while addressing concerns about data protection and the ethical application of AI and is expected to be followed soon by a dedicated piece of legislation that will regulate the use of AI in detail[7]. Currently, Serbia is ranked 57 out of 193 jurisdictions observed in the

[3] D. Citron, *Technological Due Process*, 85(6) Wash. U. L. Rev. 1249–1313 (2008).

[4] Government of Serbia, *Strategija razvoja veštačke inteligencije u Republici Srbiji za period 2020-2025. godina* [Strategy of Development of Artificial Intelligence in the Republic of Serbia for period 2020-2025] (2019), Official Gazette of RS, no. 96/2019.

[5] Government of Serbia, *Zaključak o usvajanju etičkih smernica za razvoj, primenu i upotrebu pouzdane i odgovorne veštačke inteligencije* [Conclusion on Adoption of Ethical Guidelines for Development, Application and Use of Reliable and Responsible Artificial Intelligence"], Official Gazette of RS, no. 23/2023.

[6] Serbian Ministry of Science, Technological Development, and Innovation, *Draft Strategy for the Development of Artificial Intelligence* (2024), at https://nitra.gov.rs/images/vesti/2024/13-06-2024/10062024%20Strategija%20VI%202024-2030%20javna%20rasprava.pdf, accessed 22 September 2024. See also https://www.ai.gov.rs/vest/en/1020/extension-of-the-public-debate-period-on-the-draft-strategy-for-the-development-of-artificial-intelligence-in-the-republic-of-serbia-for-the-period-2024-2030.php, last accessed 22 September 2024.

[7] As communicated by the Ministry in charge of preparing the draft, the envisaged deadline for the first draft of the Law is 31 March 2025. For further information, see https://www.ai.gov.rs/vest/en/948/first-meeting-of-the-working-group-for-drafting-the-artificial-intelligence-law-of-the-republic-of-serbia-held.php, last accessed 22 September 2024.

Government AI Readiness Index 2023[8] and 55 out of 138 countries and jurisdictions observed in Global Index on Responsible AI[9].

One of the goals of the Strategy 2020-2025, which is also emphasised in the draft Strategy 2024-2030, is the encouragement of use of the AI in the public administration[10]. Therefore, although there is no mandatory legal framework for the development and use of AI, the acts in force, which consist of the Strategy 2020-2025 and the Ethical Guidelines, provide the (legal) basis for the use of AI in public administration and all the more so encourage further development of AI in that regard. Indeed, up to now, the use of AI in the country in general, and by the public administration in particular, has remained limited. Having this in mind, it is also clear why so far there have been no litigation procedures against the public administration in relation to reliance on automated algorithms and/or AI systems. However, in the past few years, the scholarly interest and debates on the AI have drastically increased in Serbia. There are now several annual conferences on AI in the country, mostly focusing on technical aspects of AI development[11]. However, other aspects of the use of the AI systems are also starting to be recognised as important, mainly in relation to legal matters. Hence, various business organisations and universities organise seminars and conferences on these topics[12]. Against this context, legal scholarship has not yet devoted proper attention to the general use of AI in the country or its (potential) use by the public administration, with the notable exception of Jovanović

[8] See https://oxfordinsights.com/ai-readiness/ai-readiness-index/, last accessed 29 September 2024.
[9] See https://www.global-index.ai/Countries, last accessed 29 September 2024.
[10] Serbian Ministry of Science, Technological Development, and Innovation, cit. at 4, section 6.4.5, measure 4.5.
[11] See https://datasciconference.com/, last accessed 22 September 2024; see also https://emerge.ifdt.bg.ac.rs/, https://www.mi.sanu.ac.rs/~ai_conf/index.html, accessed 22 September 2024.
[12] See https://aksakademija.edu.rs/lat/vest/seminar-uia-bridging-the-gap-between-law-and-technology:-the-role-of-lawyers-in-ai-digitalization-and-data-protection-novi-sad-19-i-20-septembar-2024-godine-88.html, last accessed 22 September 2024.

and Andonović[13], who have analysed whether, and to what extent, administrative decision-making could be done with the aid of the AI.

Even though Serbia is not a member of the European Union, it strives to become a Member State, which entails aligning with the European Union *acquis communautaire* in all areas. Given the recent enactment by the EU of the first-ever regulation on AI – the Artificial Intelligence Act (AI Act), adopted by the European Union in 2024[14] – it can be expected that Serbia will follow the lead and prepare a draft Law on AI that will be (for the most part) aligned with the AI Act. Therefore, the standard set of legal challenges related to the use of AI – risk management, transparency, and human oversight, reflecting the complex intersection between AI, governance, and human rights – is expected to be addressed by the binding legal acts that, in future, will transpose the contents of the AI Act in Serbia. This paper focuses on the present situation and reflects legislative and policy developments until September 2024. The next sections explore the current regulatory framework for AI in Serbia (section 2), the current (limited) use of AI within Serbian public administration (section 3), and the international legal influences shaping Serbia's AI governance (section 4).

2. The Regulatory Framework in Serbia

In the Republic of Serbia there is no binding legislation that regulates either the general use of algorithmic automation and AI or its use by the public administration. However, with the rapid development of technologies, the Government has recognised the importance of the use of digital technologies and subsequently AI in public administration, which was one of the reasons for the adoption, in 2019, of the Strategy of Development of Artificial Intelligence in the Republic of Serbia for the period 2020-2025 ('Strategy 2020-2025'). Strategy 2020-2025 was the first act to regulate and envisage the use

[13] Z. Jovanović & S.N. Andonović, *Automated Decision Making in Administrative Procedure*, 3 NBP – Nauka, bezbednost, policija 59–69 (2020).

[14] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act).

and development of AI in Serbia. As a general act, it covered topics from the introduction of AI in the educational system up to the use of AI in business environments and included a section on the development of AI for use in public administration. In addition, the Strategy for Public Administration Reform in the Republic of Serbia for the Period 2021-2030 adopted in 2020 underlines that "efficient provision of quality services will also depend on the capacity of the organs of public administration to effectively use large data sets, AI and block chain technology to quickly identify spaces for optimising existing and developing new services"[15]. It also states that "the potential of using AI in service delivery is enormous − from better resource allocation, replacement of expert support in solving simpler challenges to summarising large sets of different types of data that are collected in public administration but still insufficiently analysed"[16].

The (unexpectedly) rapid development of AI prompted the Government to initiate the preparation of a new Strategy of Development of Artificial Intelligence in the Republic of Serbia even before the current one expires, and covering the period 2024-2030[17]. The public discussion on the draft of the Strategy 2024-2030 was held in July 2024 and it is expected that the new Strategy will be adopted shortly. However, at the date in which this paper was written, the text of the draft Strategy was available to the public, but the text of the final proposal of the Strategy 2024-2030 was not publicly available. Since no substantial changes are expected to be made in the text, the paper will make reference to the draft document. The current draft of the Strategy 2024-2030 provides an overview of the progress that has been accomplished and adjusts the goals envisaged by Strategy 2020-2025 in line with the changes that occurred in the meantime. The most progress is seen in the educational sector and in setting up the environment for the development of AI, which lays the ground for the use of AI in practice in accordance with established ethical principles[18].

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[15] Government of Serbia, *Strategija reforme javne uprave u Republici Srbiji za period od 2021. do 2030. Godine* [Strategy for Public Administration Reform in the Republic of Serbia for the Period 2021-2030] (2020), 18.

[16] Government of Serbia, cit. at 15, 149.

[17] Serbian Ministry of Science, Technological Development, and Innovation, cit. at 6.

[18] Serbian Ministry of Science, Technological Development, and Innovation, cit. at 6.

As there are no mandatory regulations concerning the use of AI in the public administration, there are no prescribed mandatory requirements specific to AI that need to be fulfilled. However, the general rules of administrative law[19] would apply to systems and processes based on AI as they do to other procedures. The Strategy 2020-2025 acknowledges that the use of AI is accompanied by significant concerns, and thus sets a special goal concerning ethical and safe application of the AI[20]. One of the main concerns pertains to data protection, due to the large amount of data processed for these purposes. Further, the application of AI systems can pose risks of discrimination for several reasons, such as the criteria used, the use of data perpetuating historical discrimination, misbalanced data, the failure to include relevant sources, etc. Hence, it is important to take all measures necessary to ensure that the prescribed data protection requirements are fulfilled, along with other mandatory requirements applicable to the specific case to prevent discrimination and non-compliance with the regulations in force.

Strategy 2020-2025 envisages the following areas – health, agriculture and forestry, transportation and smart cities – as areas of public interest which should be given primary support for implementation of AI systems[21]. Apart from that, special emphasis is placed on adjusting and improving the education system from primary to university level, in order to prepare future generations for working with AI-based systems and other interested people to adjust their skills and certifications to new circumstances[22]. The Strategy 2020-2025 strives to encourage the development and use of AI systems both in general and with regard to the public administration, as this is the area in which the Government has greater influence and can directly decide on the technologies to be used. Funds and incentives for the development of AI systems are available to everyone, i.e., the Government does not reserve the right to exclusively develop AI

[19] More on general principles and sector-specific rules on Serbian administrative law, see M. Milenković, *Serbia*, in G. della Cananea & J.-B. Auby (eds), *General Principles and Sector-Specific Rules in European Administrative Laws* (2024) 58–63.

[20] Government of Serbia, cit. at 4, section 6.5.

[21] Government of Serbia, cit. at 4, section 6.3.2.3.

[22] Government of Serbia, cit. at 4, section 6.1.1, measure 1.1; section 6.1.2, measure 1.2; sections 6.1.3, measure 1.3; section 6.1.4, measure 1.4.; section 6.1.5. measure 1.5.

systems for public administration. Therefore, public authorities can implement systems developed by public, private, or hybrid entities, as long as they are in accordance with the regulations in force, and in particular with the Ethical Guidelines.

As underlined by the Strategy, the development of AI systems goes hand in hand with the development of the skills of employees and the other staff members who use these systems. Strategy 2020-2025 does not envisage the training of the employees and staff members in the public administration as a separate goal, but includes such training in the goal regarding the improvement of education opportunities in relation to AI. This is thought to be achieved by having public employees and staff members take part in special courses, trainings, workshops, etc[23]. Draft Strategy 2024-2030 specifically envisages organising training and workshops for public administration employees as a part of the incentives to promote the further introduction of AI-based systems in public administration. The main topics of the workshops and training should be learning about the advantages of AI technologies and their application in practice. The long-term goal, as envisaged, is to have future generations of employees who will already have the skills for working with AI systems as a result of the educational system that includes learning about AI at all educational levels[24].

Strategy 2020-2025 further envisages the collection, storage and reuse of data both from both the public and private sectors. However, given the sensitivity of any activity regarding the collection of data and their reuse, it also envisages the necessity to complete extensive preparatory actions. In this regard, it should be noted that in 2017, Serbia launched the Open Data Portal, an initiative commenced by nine institutions that disclosed their own data and forty-five sets of data, now involving 111 organisations and 2198 sets of data[25]. The possibility of reusing data was first introduced in the Law on Electronic Administration of 2018, which enabled anybody to reuse the

[23] Government of Serbia, cit. at 4, section 6.1.4, measure 1.4.
[24] Government of Serbia, cit. at 4, section 4.4.3.
[25] See https://www.ite.gov.rs/tekst/en/30/open-data-portal.php, last accessed 22 September 2024.

data in commercial or non-commercial purposes[26]. Further, the same Law envisaged the obligation of public administration bodies to publish their data in a manner that enables easy search and reuse[27]. The data derived from the public sector, such as those concerning companies' business, healthcare and transportation data, are defined as priority data for disclosure and reuse. Firstly, it is necessary to precisely determine the exact collections of data that should be targeted as a priority and then perform a feasibility study concerning the possibility of opening them in the short or middle term. Once the analysis is performed and the relevant collections are identified, it should be confirmed whether a legal and technical framework for collection and reuse of such data exists. If not, it is necessary to first create an appropriate legal framework, organisational method and technical mechanism for such data processing. Further, ownership of the relevant data should be assessed and, if necessary, the regulatory framework should be updated and adjusted in relation to contractual and property regulations, as well as intellectual property regulations. Bearing in mind that some initiatives for opening the data of institutions already exist, it is extremely important to ensure that the data relevant for the development of AI are also placed within the scope of such initiatives[28]. With regard to data from the private sector, disclosure is even more complicated, due to the diversity of data and the lack of an obligation to open and make the data available. Similarly, like the data from the public sector, it is first necessary to assess which data would be valuable for the purposes of developing AI, and then to perform a feasibility study to show the possibility of disclosing them in the short to mid term. Strategy 2020-2025 also envisages also the voluntary donation of free data. It also envisages the possible introduction of a compulsory system for opening and making data available through a public procurement process[29].

In conjunction with the preparation of (overdue) legislation for the use of AI, the Government has undertaken a number of steps to

[26] See Article 25 of the Law on Electronic Administration (*Zakon o elektronskoj upravi*), Official Gazette of RS, no. 27/2018.
[27] See Article 27 of the Law on Electronic Administration.
[28] Government of Serbia, cit. at 4, section 6.4.3. measure 4.3.
[29] Government of Serbia, cit. at 4, section 6.4.3. measure 4.3.

prepare an (adequate) infrastructure for storing and archiving data. With regard to data storage, it was decided to have one large, centralised database rather than multiple smaller ones. Thus, in 2019 the work to build the State Data Centre commenced, and it opened in 2020. The Centre meets the Tier 3+ standard, and its services are provided in accordance with the ISO 27001 security standard, as well as ISO 9001 quality standards and ISO 20000 service quality standards. It stores the data of citizens and institutions, and provides the Government cloud service, that is, the necessary infrastructural resources to government bodies. Resources in the State Data Centre are offered to government bodies according to the IaaS (Infrastructure as a Service) model, i.e., virtual server resources are issued according to the user's request. By using this model, users are freed from investmenting in their own equipment and storage space as all of this is provided by the State Data Centre[30]. Given that the key factor for developing AI systems is access to a large amount of relevant data, the work done on regulating the disclosure of data and building modern and reliable infrastructure for storage of data was the necessary precondition for further development of the AI systems. Besides the data made available by government bodies and institutions, it is also recognised that it is crucial to encourage business entities to disclose their data. Thus, the draft Strategy 2024-2030 envisages similar measures as Strategy 2020-2025, i.e. to incentivise making partnerships with the private sector that will include disclosure[31]. As underlined by the draft Strategy, efforts and work on developing a centralised data base (the State Data Centre) will continue, with the ultimate goal of having all data in one place, in an easily accessible format[32].

In order to mitigate these specific concerns, Strategy 2020-2025 envisaged adopting ethical guidelines that should be drafted in accordance with the Ethics Guidelines for Trustworthy Artificial

[30] See further Serbian Ministry of Science, Technological Development, and Innovation, cit. at 6, section 3.3.4 and https://www.ite.gov.rs/tekst/en/24/government-data-center.php, accessed 22 September 2024.
[31] Serbian Ministry of Science, Technological Development, and Innovation, cit. at 6, section 4.5.2.
[32] Serbian Ministry of Science, Technological Development, and Innovation, cit. at 6, section 4.5.1.

Intelligence issued by the European Commission[33]. The Ethical Guidelines by the European Commission prescribe following principles as a basis for ethical use of the AI systems, not excluding any other appropriate principle: explainability and verifiability, dignity, and the prohibition of damages and righteousness. Based on the stated principles, the Ethical Guidelines issued by the European Commission envisage conditions determined through the following categories: action (mediation, control, participation) and supervision, technical reliability and safety, privacy, personal data protection and data management, transparency, diversity, non-discrimination and equality, social and environmental well-being, and liability. At the international level, the United Nations, through the United Nations System Chief Executives Board for Coordination, also endorsed the Principles for the Ethical Use of Artificial Intelligence in the United Nations to achieve ethical AI use[34]. In particular, the United Nations promotes the principle of 'do no harm' by extending it to all phases of the life cycle of AI systems, from design to implementation. According to the United Nations, the use of AI must comply with the principle of transparency by requiring that decisions made by AI are understandable and verifiable by human beings. In addition, AI systems must always be accompanied by human supervision that must continue in all automated decision-making processes to ensure that AI access to people's fundamental rights must always occur under human supervision and intervention. Finally, particular emphasis is also placed on the principles of transparency and non-discrimination[35].

In 2023, the Government of Serbia adopted the Conclusion on Adoption of Ethical Guidelines for Development, Application and Use of Reliable and Responsible Artificial Intelligence (hereinafter: Ethical

[33] European Commission, "Ethics Guidelines for Trustworthy AI prepared by the High-Level Expert Group on Artificial Intelligence within the European Commission" (2019), at https://www.europarl.europa.eu/cmsdata/196377/AI%20HLEG_Ethics%20Guidelines%20for%20Trustworthy%20AI.pdf, accessed 22 September 2024.

[34] United Nations System Chief Executives Board for Coordination, "Principles for the Ethical Use of Artificial Intelligence in the United Nations System" (20 September 2022), at https://unsceb.org/principles-ethical-use-artificial-intelligence-united-nations-system, accessed 22 September 2024.

[35] Ibid.

Guidelines)[36]. While these Ethical Guidelines are mainly addressed to public administration, i.e. government bodies and other holders of public authorisations, they are also recommendable for any other legal or natural person that develops and uses AI to adhere to them. The Ethical Guidelines provide the principles that should be followed when AI is used and prescribe a set of questions that should be adjusted for a specific sector, based on which it can be monitored whether certain principles are at risk of a breach. The conditions determined through the stated categories consist of parameters that are divided into technical and non-technical methods. On the one hand, the technical methods aim to guide the development and use of AI systems in order to ensure their reliability and the minimisation of potential damages. These methods are provided in the form of recommendations. On the other hand, the non-technical methods refer to organisational and other non-technical elements in the process of the development and use of AI systems. The non-technical method is provided in the form of a questionnaire, the purpose of which is to assess whether the specific AI system complies with the prescribed ethical standards. The questionnaire contains minimum standards and may be adjusted for a specific sector or even project. Monitoring performance through the questionnaire serves a dual purpose. On one hand, the questionnaire should provide a clear guideline for any specific project whenever a legal/ethical issue arises within the system and should suggest which appropriate measures can be taken. On the other hand, collecting information from various questionnaires and analysing the available data can be a very valuable asset for future projects, as such data can show whether there are some common issues and ultimately help find their cause, which could be mitigated in the future. However, collecting enough data for a proper analysis would require populating the questionnaire with a great number of data from a great number of projects.

While the questionnaire can serve as a sort of checklist for compliance regarding specific AI matters, it should be borne in mind that there may be other, legally mandatory requirements that need to be fulfilled. First and foremost, all processes must comply with the data protection regulations in force, as a mandatory piece of legislation

[36] Government of Serbia, cit. at 5.

that regulates personal data, which, in most cases, are extensively used in AI projects. It should be ensured that a proper legal basis for processing personal data is in place prior to processing. Depending on the specific case, it may also be necessary to perform an impact assessment; if the latter shows that the intended processing activities would pose a high risk to data protection, it may be necessary to request an opinion from the Commissioner for Information of Public Importance and Personal Data Protection before starting. Further, the intellectual property aspect should also be taken into account, as issues relating to copyright and patents could arise. Therefore, the AI systems must be developed in accordance with the general legislative framework, as far as possible, while the Ethical Guidelines must also be followed, as they are one of the few legal acts to focus on AI systems, regardless of the fact that they are not a mandatory regulation.

With the AI Act, the European Union has introduced a regulatory framework on Artificial Intelligence. Serbia is currently undertaking accession negotiations to join the European Union, that require a complete alignment with the EU *acquis*[37], which will be also applicable to all EU regulatory developments, including the AI *acquis*. Therefore, it is expected that future legislation on AI will aim to ensure the closest possible alignment with EU standards.

3. Use of AI by the Public Administration

The use of AI in public administration requires proper grounds for the use of digital technologies in general. In order to work more efficiently on the development of public administration services using digital technologies, in 2017 the Government set up the Office for information technologies and electronic administration ('Office for IT'). The purpose of setting up this special organisation was to have a body focusing on development and implementation of standards and measures in the introduction of information and communication

[37] M. Milenković, *EU Enlargement, Conditionality Policy and Prospects for the Integration of the Western Balkans*, in L. Montanari (ed.), *L'allargamento dell'Unione europea e le transizioni costituzionali nei Balcani occidentali* (2022) 61–75; M. Milenković, *The Western Balkans and European Union enlargement – exploring possibilities of differentiated integration*, in D. Fromage (ed.), *(Re-)defining Membership: Differentiation in and outside the European Union* (2024) 273–290.

technologies in state administration and Government services, the establishment and management of information systems in which state administration bodies and holders of public authority maintain data in registers of importance for the provision of electronic administration services and registers of importance for scientific research, connecting data from registers under the jurisdiction of other state authorities and similar activities[38]. After the Law on Electronic Administration[39] was adopted in 2018, the legal basis for introduction of electronic public administration services was set, and such services could be introduced in practice. This led to the development of an improved portal for the provision of electronic public administration services – eAdministration Portal[40] (in Serbian: "*portal eUprava*") that was made available to the general public in 2020, coinciding with the COVID crisis and increased use of digital tools in all spheres of life. The eAdministration Portal offers various public administration services, from scheduling appointments with different authorities, ordering certain documents, and tax calculations in the self-taxation system, to obtaining certain confirmations and certificates issued by the public authorities in electronic form. Further, the availability of specific services depends on the type of registration and sign-in method adopted by the user.

The eAdministration Portal also strives to be a one-stop shop for its users, connecting the state authorities and the registers and records they keep, enabling users to efficiently communicate and cooperate with the public administration. One of the indicators of the development of the eAdministration Portal is the increase in the sets of data that have been included in the Open Data Portal (already described in section 2) as a result of connecting the data held by the state authorities. Thereby, the basis for use of AI is being prepared, in the sense of ensuring that the appropriate amount of data is available for the AI systems to be developed in accordance with ethical standards.

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[38] See more at https://www.ite.gov.rs/tekst/149/kancelarija-za-it-i-eupravu.php, accessed 12 October 2024.

[39] Law on Electronic Administration (*Zakon o elektronskoj upravi*), Official Gazette of RS, no. 27/2018.

[40] See more at https://euprava.gov.rs/eusluge?service=lifeSituation&lifeAreaId=57, last accessed 22 September 2024.

Despite the efforts made to increase the use of AI in the public administration, in practice its use is still limited. The notable examples of use of the AI in public administration is the feature "Read to me" (in Serbian: "*Čitaj mi*") available on the website of the government, i.e. the eAdministration Portal that uses automated speech recognition technology. This feature was designed to help those with disabilities to have easier access to information on how they can complete an administrative procedure they require. The main example of the current limited use of AI by the public administration is the introduction in 2020 by the City of Belgrade of the so-called Hawk Eye[41] (in Serbian: "*Oko sokolovo*") system for traffic and parking control. The process is performed by specially designed vehicles. The vehicles are equipped with cameras that record the licence plates of cars parked on both sides of the road, based on which the system determines whether there are any irregularities and if so, the appropriate ticket is issued to the car owner. The system uses the data stored by the state-owned enterprise Parking Service to verify whether the parking fee has been paid. The data is then sent to the municipal police, that formally issues the ticket, although the process is entirely automated. In other words, once the system processes the collected data, in case it determines that there is an offence (i.e., a failure to pay a parking fee), the ticket is automatically issued. Moreover, the Hawk Eye system also records data on vehicles that are parked on sidewalks, green areas and other prohibited surfaces, or in a manner that impedes the usual traffic flow. The records produced by Hawk Eye, and the data from the Parking Service, are also sent to the city police, where human police officers review the case at hand; if they confirm that a vehicle was illegally parked, then a ticket is issued. From a practical point of view, it is unclear to what extent the records and data are actually reviewed by the police themselves; it may be argued that this process has somehow become automated as well. Citizens are entitled to lodge a complaint with police. In theory, they may review the case again and withdraw the ticket. Given that information on submitted complaints is not publicly disclosed, there are no records on whether this is actually done in practice. The great benefit of this system is that it is completely objective since it records all cars; the risk of corruption is

[41] See more at https://okosokolovo.com/, last accessed 22 September 2024.

thereby mitigated. Further, Hawk Eye is more efficient than human parking controllers, as it can cover more space and perform a larger number of controls in the same time. Yet, the issue that arises in practice is that the Hawk Eye cannot distinguish the numerous situations that happen in everyday traffic and that make exceptions for issuing parking tickets, such as whether the car only stopped for persons to disembark the vehicle or it is improperly parked. As with all AI systems, these concerns regarding its application need to be properly addressed.

Further, this example of application of AI proves that before using the AI-based system in practice, it is of the outmost importance to establish a proper legal basis, in order to mitigate as many legal risks as possible. Apart from being virtually the only documented example of the use of AI in administrative decision-making, the legal basis for this system – specifically the Decision on Municipal Police[42] and the Decision on Municipal Order[43] – is questionable and subject to legal challenges. The issue has been raised whether these decisions, as legal acts adopted at city (municipal) level, comply with the relevant laws in force. The Law on Municipal Activities of 2011[44] defines the activities considered municipal and are supervised by communal militia. Further, the Law on Safety of Traffic on Roads of 2009[45] regulates the rules on traffic and establishes that, as a rule, the supervision of traffic violations is to be carried out by the Ministry of Internal Affairs, i.e. Traffic Police Administration. Therefore, as parking matters and irregularities in that regard fall under the

[42] Decision on Municipal Police (*Odluka o komunalnoj miliciji*), Official Gazette of the City of Belgrade, no. 101/2019 and 83/2022.

[43] Decision on Municipal Order (*Odluka o komunalnom redu*), Official Gazette of the City of Belgrade, no. 10/2011, 60/2012, 51/2014, 92/2014, 2/2015, 11/2015, 61/2015, 75/2016, 19/2017, 50/2018, 92/2018, 118/2018, 26/2019, 52/2019, 60/2019, 17/2020, 89/2020, 106/2020, 138/2020, 152/2020, 40/2021, 94/2021, 101/2021, 111/2021, 120/2021, 19/2022, 96/2022, 109/2022, 41/2023, 65/2023 and 12/2024.

[44] Law on Communal Activities (*Zakon o komunalnim delatnostima*), Official Gazette of RS, no. 88/2011, 104/2016 and 95/2018.

[45] Law on Road Traffic Safety (*Zakon o bezbednosti saobraćaja na putevima*), Official Gazette of RS, no. 41/2009, 53/2010, 101/2011, 32/2013 – decision of constitutional court, 55/2014, 96/2015 – other law, 9/2016 – Decision of the Constitutional Court, 24/2018, 41/2018, 41/2018 – other law, 87/2018, 23/2019, 128/2020 – other law and 76/2023.

jurisdiction of the rules of the Law on Safety of Traffic on Roads, one would assume that supervision of such matters would be performed by the traffic police. Given that neither the Law on Municipal Activities nor the Law on Road Traffic Safety provides an exception regarding parking matters, i.e. neither establishes the jurisdiction of the municipal police for overseeing parking violations, it is questionable how legal acts at city level have conferred such jurisdiction on the municipal police. In accordance with the Constitution[46], all laws must comply with it, and all legal acts issued on town or municipal level must be compatible with the Constitution and all laws in force, in order to ensure a coherent legal system. Therefore, only laws can establish an exception to a rule prescribed by another law. Due to the uncertainty that was introduced by the Decision on Municipal Order and the Decision on Municipal Police, a request for a procedure for assessing the constitutionality and legality of the respective provisions was submitted to the Constitutional Court; the case is still pending.

There is an additional example of the intended use of AI by the public administration, as the Tax Administration is currently implementing, together with the Faculty of Natural Sciences of the University of Novi Sad, the research project "Detecting the risk of evading personal income tax based on appropriate methods using artificial intelligence"[47]. Although no details regarding this project and the expected start date for the use of AI solutions are publicly available, the intended use of the project clearly concerns the assessment of the evasion of personal income tax, with possible far-reaching consequences on tax-payers' human rights. In the Serbian tax system, appeals against tax decisions, as a rule, do not stay the execution of the decision, entailing often huge financial burdens on the party against whom the tax decision was made. It is yet to be seen what kind– and what level – of automation will be implemented in these cases, but this matter requires the outmost caution when implementing the new technologies and urgently calls for a legislative framework to be put in place.

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[46] Constitution (*Ustav Republike Srbije*), Official Gazette of RS, no. 98/2006 and 115/2021.

[47] See https://www.ai.gov.rs/tekst/en/101/application-of-ai-in-the-public-sector.php, last accessed 22 September 2024.

Although the examples just described present only the first steps, developing such projects and putting the designed systems into use marked a significant move. This is recognised in draft Strategy 2024-2030, which emphasises the importance of supporting the actual use of the AI systems and technologies, as well as support in the project development and testing phase. In other words, Strategy 2020-2025 set the foundation for funding AI projects and encouraged the development of technologies, while draft Strategy 2024-2030 goes a step further, acknowledging success in the project development phase and now advocating for accessibility and investing in the applicability of the developed systems. There are a number of considerations both in the legal scholarship and practice that the future legislative framework in Serbia must address. In particular, one of the main questions posed is whether AI systems function on a neutral basis, given that a wealth of literature has noted that decisions made by AI are hardly ever objective[48]. Indeed, according to Floridi, the advent of AI requires a reassessment of the so-called 'infosphere', i.e., the information space in which we act and interact since an AI's autonomous decision-making power risks compromising individual freedoms and autonomies[49]. Similar concerns were also raised by Huq[50], who, addressing the issue of predictive justice, highlights the dangers of relying on algorithmic models to make complex legal decisions, and underlines the problematic relationship between AI and the Rule of Law in the light of the principle of transparency and accessibility. This is because it is becoming increasingly difficult to 'look inside an algorithm', both for reasons concerning companies' copyright and the degree of development of AI, which has reached such complexity that it resembles a neural network capable of autonomously producing its own 'thought'. As outlined above, Serbian legal scholarship is yet to address the challenges of introduction of AI technologies in public administration. In one of the

[48] L. Floridi et alii, *AI4People – An Ethical Framework for a Good AI Society: Opportunities, Risks, Principles, and Recommendations Minds and Machines*, 28(4) Minds and Machine 689–707 (2018).

[49] L. Floridi, *The Fourth Revolution: How the Infosphere is Reshaping Human Reality* (2016).

[50] A. Huq, *Artificial Intelligence and the Rule of Law*, in M. Sevel (ed.), *Routledge Handbook on the Rule of Law* (2025, forthcoming).

rare studies of its use from the point of view of the legislative framework in force – such as the Law on general administrative procedure and the Law on e-government – Jovanović and Andonović conclude that there are some cases where automated decision-making might be possible (predominantly when aiding humans), but they also pointed out that "[c]urrently, the legal framework of the general administrative procedure in the Republic of Serbia does not allow the use of computer programs and information systems to make administrative decisions. Only an official is authorised to analyse the facts of a specific case and make a decision"[51]. Bearing all this in mind, it can be concluded that wider use of AI technologies by the public authorities in Serbia will have to wait for both the establishment of the infrastructural/technical architecture for its implementation and the alignment of several legislative texts before it can be fully implemented.

4. Concluding Remarks

Serbia's efforts to integrate artificial intelligence into public administration reflect a broader global trend towards using AI to improve efficiency and governance. However, as in other jurisdictions, these efforts also raise well-known challenges and potential conflicts with human rights considerations. The country has made some progress with the investment in AI research and development, the creation of IT infrastructure to support the future introduction of AI in the public sector, and the establishment of a strategic framework – namely Strategy 2020-2025 and the Ethical Guidelines for the use of AI – while already preparing the new strategic framework to keep pace with technological advancements. However, most legal challenges remain unanswered, particularly with regard to ensuring that AI is implemented in an accountable and transparent manner. The lack of binding national AI-specific legislation highlights the importance of aligning the Serbian legal and international legal frameworks, such as the EU AI Act and the United Nations guidelines, to safeguard human rights and ensure accountability. In addition, the judiciary in Serbia is yet to face the challenges of the use of AI, especially when it comes to

[51] Z. Jovanović & S.N. Andonović, cit. at 13, 67.

administrative decision-making and the future emergence of the algorithmic state. As Serbia moves towards greater adoption of AI, particularly in sectors such as healthcare, education, and public administration, a focus on building robust ethical and regulatory frameworks will be crucial. It is expected that, by mid-2025, a new strategic and legislative framework should be in place and that more examples of the use of AI in public administration will emerge, making it a topical issue to follow for both legal practitioners and scholars.