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The Opportunities of Digitalisation in Public Administration with a Special Focus on the Use of Artificial Intelligence*

Możliwości cyfryzacji w administracji publicznej ze szczególnym uwzględnieniem wykorzystania sztucznej inteligencji

ABSTRACT

The study examines the issue of digitalisation of public administration. After outlining the theoretical foundations, an international framework for the creation of digital public administration is analyzed, followed by a discussion of its development in Hungary and its evaluation. In Hungary, the related legislation was initially introduced with the implementation of electronic administration, the anomalies of which were first noticeable with the introduction of electronic birth registration. In this context, the study discusses the possibilities of applying artificial intelligence (AI) in the public sector and reviews current and existing applications and good solutions, as well as possible development directions. The article describes the successes of AI applications in the financial sector and then goes on to discuss automated decision-making in more detail, as well as the planned legislative thinking on the subject.

Keywords: public administration; artificial intelligence; digitalisation; legislation; electronic administration; financial sector

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INTRODUCTION

In our era – which many rightly describe as the reality of the permanence of change – public administration (including its organisational structure, its operational mechanisms and its staffing framework) does not (and cannot) remain unchanged, cannot be independent of the trends of the world around it, and so it can be said that public administration is constantly evolving. One of the greatest challenges of our time is digitalisation in the broadest sense, which has required a reorganisation of both the public administration's approach to citizens and its infrastructure in all the world's countries.¹

It is also worth pointing out that, however inevitable the emergence of the digital explosion in the public sector may be, experience to date – especially in the CEE region – does not necessarily suggest that it is a complete success story. The reasons for this include the difficulty of taking organisational and procedural aspects into account at the same time, the slow and costly process of building infrastructure, and the general resistance to change (especially in human resources), which is also a classic barrier to innovation.²

For the sake of completeness, however, the author of this paper cannot fail to highlight the undisputed virtues of optimal digitisation of public administration, which are also relevant to this paper. There is a consensus in the relevant foreign literature that the use of proven digital tools can have a pull effect, which can legitimise the use of new technological tools in new sectors not previously affected by digitisation.³ This effect is reinforced by the fact that standardised platforms and other digital solutions from the competitive sector can be easily transferred to public administrations, within certain scope and under certain conditions. The reason for this is essentially to be found in the theoretical approach to public administration, which is that public administration and private administration are more similar than different in content and purpose, so that the successful automation (digitalisation) of certain elements of the administrative cycle does not (in

¹ For example, see I. Hoffman, K.B. Cseh, *E-administration, Cybersecurity and Municipalities – the Challenges of Cybersecurity Issues for the Municipalities in Hungary*, “Cybersecurity and Law” 2020, vol. 4(2), pp. 199–211; M. Karpiuk, *The Local Governments' Position in the Polish Cybersecurity System*, “Lex localis – Journal of Local Self-Government” 2021, vol. 19(3), pp. 609–620.

² Another unfortunate development is that in Hungary there have recently been several articles published which – in addition to presenting the results achieved – emphasise why there is no need or opportunity for further digitisation in public administration. Among others, the study by E. Fejes and I. Futó, cited later, can be mentioned in this context.

³ An excellent example of this is the range of applications tested in Hungarian tax administration practice, which have subsequently had an impact in other sectors, also related to the financial sector.

many cases) pose application problems in public sector administration.⁴ In fact, this intermediary, interactive online value creation activity is a phenomenon that is also familiar in the “traditional” offline economy, which generally operates on the technology and infrastructure of a business.⁵ On the other hand, it should also be stressed that technological tools can be used to a greater extent to achieve and reinforce the objectives declared as goals to be achieved by national and EU public administration policy (e.g. customer focus, efficiency, subsidiarity, etc.), particularly with regard to the activities of public authorities and the organisation of public services.⁶ In this context, I would like to refer to the indicators of the so-called DESI (Digital Economy and Society Index), which ranks the countries of the Central and Eastern European Area in the bottom third of the scale, in particular in terms of the efficiency of public services.⁷

The emergence and dynamism of the role of artificial intelligence (AI) in the context of the digitalisation of public administrations, especially today, cannot be overlooked. On the one hand, it is seen by many as a new era of digitalisation, and on the other hand, its mechanisms and automatism could put public administration (decision-making) on a new footing, which calls for scientific study. The following general questions, which are difficult to answer at this stage, can be formulated in the context of the applicability of AI:

1. Does the use of AI enable more efficient public administration?
2. What are the risks of using AI in the public sector?
3. What conditions are necessary for safe use?
4. What is the added value of using AI?

For reasons of scope and genre, this paper does not attempt to provide a full answer to the questions, but it does seek to outline the main opportunities and issues raised by the application of AI in the public sector.

The analysis of the presentation is based mainly on the jurisprudential method. However, several significant economic data and the approach of the policy analysis are applied, as well.⁸

⁴ For a more detailed discussion of public administration as administration, see K. Rozsnyai, *A közigazgatás meghatározása*, [in:] *Közigazgatási jog I.*, ed. M. Fazekas, Budapest 2019, pp. 31–34.

⁵ On the competition law aspects of this, see J. Firmiksz, *Rangsorolás – új szabályozási igény a platformok és az információs túlterheltség korában*, [in:] *Verseny és Szabályozás*, eds. P. Valentiny, K. Antal, I.Cs. Nagy, Zs. Berezvai, Budapest 2021.

⁶ For more on the relevant links between local government and eGovernment, see I. Hoffman, M. Karpiuk, *E-administration in Polish and Hungarian Municipalities – a Comparative Analysis of the Regulatory Issues*, “Lex localis – Journal of Local Self-Government” 2022, vol. 20(3), pp. 617–640.

⁷ European Commission, *The Digital Economy and Society Index (DESI)*, <https://digital-strategy.ec.europa.eu/en/policies/desi> (access: 7.5.2024). According to the DESI, Hungary ranks 23rd, Slovakia 24th, Poland 25th and the Czech Republic 18th, with slightly better indicators.

⁸ The topic also lends itself to a number of cybersecurity ramifications, which would, however, go beyond the scope of this paper. For a more detailed discussion of these, see M. Karpiuk, *The Legal*

TYPES OF PUBLIC ADMINISTRATION AND THE POTENTIAL OF AI: A SHORT REVIEW OF THE LITERATURE AND THE REGULATION

In the context of the core activities of public administration, the relevant doctrine of organisational law distinguishes between administrative activities of a power nature (more precisely, those based on public authority and those carried out from a position of organisational or proprietary power) and the so-called non-power activities.⁹ In this paper, I refer only to the core activities relevant to the digitalisation, including the rise of AI, which is the subject of the research (such as strategy-making, internal management, customer relations and information, and substantive public administration).

As a starting point, it should be noted that policy-making can be understood more as part of governmental activity, despite the fact that planning itself has a specific legal basis in administrative law, and that administrative activity can be understood internally (and thus not in a public authority aspect). Strategy formulation can be considered a specific administrative activity in two respects: firstly, it is a transition between normative and specific acts (although normativity is indispensable in formal terms), and secondly, it is a type of activity in which non-legal, policy-related aspects are more often present. This also means that strategy-making presupposes, on the one hand, the acquisition of information (data mining) and, in many cases, the need to automate the drafting process, but the end result always presupposes the involvement of the human factor in decision-making. In this context, it is necessary to refer to the constant “circus act” which the legislator is forced to perform in order to balance the optimisation and idealisation of regulation in any sector.¹⁰

Having said this, there are digital applications (mostly based on AI) that can (or could) support these activities (e.g. digitisation of impact assessment, use of chatbots, machine vision or speech understanding), which I do not focus on in this paper, and therefore I concentrate on the technologies that can be used in the legal relationship between customers (citizens) and public administrations, typically public authorities.

In terms of substantive administration, there are two cardinal issues that fundamentally determine the reality of the use of AI. On the one hand, a distinction must be drawn between administrative procedures initiated *ex officio* and those initiated at the request of the client, since these procedures are carried out by public admin-

Status of Digital Service Providers in the Sphere of Cybersecurity, “Studia Iuridica Lublinensia” 2023, vol. 32(2), pp. 189–201; M. Czuryk, *Cybersecurity and Protection of Critical Infrastructure*, “Studia Iuridica Lublinensia” 2023, vol. 32(5), pp. 43–52.

⁹ For a detailed discussion of this, see É. Szalai, *A közigazgatás működése, tevékenységfajtái*, [in:] *Közigazgatási jog I.*, ed. M. Fazekas, Budapest 2015, pp. 71–92.

¹⁰ For a dogmatic foundation of the phenomenon, see L. Leszczyński, *On Theoretical Aspects of the Concept of Rational Lawmaker: Between Optimization and Idealization of the Legislation*, “Studia Iuridica Lublinensia” 2022, vol. 31(5), pp. 171–174.

administrations according to different logics, both in terms of detection (see initiation of the procedure) and clarification of the facts (see preparation of the decision), and can therefore be supported by different digital methods. At this point, it can be concluded that in Hungary – basically in the area of financial administration – there are technologies that work for both types of procedures, but these are sector-specific solutions, for which there is no horizontal success story, and all these solutions can be criticised for some “teething problems”.

The Hungarian State Treasury uses the TÉBA application,¹¹ which is an OPA-based IT framework for the automation of certain normative family support procedures that can be applied for. The main objective of the Modernisation of the Processing of Family Support Benefits (TÉBA) project was to simplify certain financial governance processes and increase the efficiency of the administrative activities involved. The development of a new, integrated IT system has created a single framework to support and electronically manage the recording of the underlying data for family support, financing, public education and social assistance, and the application, accounting and control of subsidies. The newly developed system will allow for a unified management of the subsidies paid by the Hungarian State Treasury and linked to citizens. However, a shortcoming of the programme is that the explanatory (justification) function of the application is currently underused. This is due to the procedural institution of the possibility of the so-called simplified decision-making in procedures without the involvement of an opposing party, which allows the authority to omit the reasoning part of the application.¹² As the authority is not obliged to give reasons for these decisions (because of their favourable nature for the client), the development of the explanatory function is not a priority.

The National Tax and Customs Administration uses several AI-based programs, among which Eskort¹³ is an expert system supporting VAT audits from the office, which was introduced by the tax authority in 1999. While the development has the merit of having a meaningful explanatory function, it has the disadvantage of being able to draw only one-step conclusions.¹⁴ However, the introduction of another application, NAV RADAR (Flexible Tax Audit Decision Support and Data Mining System), which, unlike the previous one, is relevant for *ex officio* tax audits, should also be mentioned. Its operation is based on the identification, on the basis of the investigation results of previously investigated cases, of the characteristics of cases

¹¹ KIFÜ, *TÉBA – családtámogatási ellátások folyósításának korszerűsítése*, <https://kifu.gov.hu/projekt/teba-csaladtamogatasi-ellatasok-folyositasanak-korszerusitese> (access: 7.5.2024).

¹² Cf. Article 73 (2) of the Act CL of 2017 on the Rules of Taxation and Article 81 (2) (a) of the Act CL of 2016 on the Code of General Administrative Procedure.

¹³ I. Futó, K. Csekei Tóth, *E-kormányzat az APEH informatikája szemszögéből*, <https://itf.njszt.hu/324rtr4/uploads/2019/06/APEHf.doc.pdf> (access: 7.5.2024), p. 3.

¹⁴ Cf. E. Fejes, I. Futó, *Mesterséges intelligencia a közigazgatásban – az érdemi ügyintézés támogatása*, “Pénzügyi Szemle” 2021, vol. 66(1), p. 44.

which in the past were likely to have led to high tax deficits, and on this basis it draws conclusions for the future. It is worth highlighting the large volume of data, in particular the wide range of data that is entered into the system and which is linked in RADAR in a tax-centred way, and the fact that the application also uses logistic regression – machine learning – for evaluation. The development was clearly aimed at increasing the efficiency of tax audits, and to this end risk analysis and efficient taxpayer selection will be carried out thanks to the application.¹⁵

The other fundamental issue in relation to public authority action is the discretionary power of the public administration. In this respect, it is useful to differentiate between cases that should be decided in favour of normative regulation and those that require discretion. The former refers to the issuance of the so-called legally binding acts, where the public authority can only take one type of legal decision, given the facts and the rules, and this way of applying the law can be easily modelled and thus supported by AI.¹⁶ This is not questionable in the sense that the logical operation can be easily modelled: a one-way conclusion can be reasonably drawn and the facts and the associated decision, which alone can be considered legal, can be easily recorded in the database. It should be noted that discretion may also be exercised in this case, but this does not mean a margin of discretion within the decision, but rather a discretionary power of proof in the context of the clarification of the facts, where the authority is free to assess the means of proof offered.¹⁷

Discretion essentially refers to the attitude of applying the law, where – due to the more informal nature of the legal regime – the authority is left to its discretion to decide which of several lawful decisions to apply (e.g. determining the exact amount of the fine between the minimum and maximum values, choosing the enforcement method, etc.). Generally speaking, the discretionary power can be seen as a rule-of-law solution for the more informal exercise of the public authority's law-making powers, since in this case the legislator not only grants the administrative body powers but also defines the framework of possible lawful decisions. The problem with this is that in some cases there is a fine line between discretionary and discretionary powers, as it is equally difficult to automate the public authority's decision in the case of general legal concepts and discretionary decisions in the case of AI.¹⁸

¹⁵ The financial sector is a similar priority in Poland, where a number of innovative initiatives have been introduced. For more on this, see J. Kostrubiec, *Preventing the Abuse of the FinTech Sector for Money Laundering and Fiscal Fraud in Terms of Polish Law: Legal Measures and Postulates of Normative Changes*, [in:] *Digital Transformation of the Financial Industry: Approaches and Applications*, eds. S. Benković, A. Labus, M. Milosavljević, Cham 2023, pp. 198–200.

¹⁶ An example of this is the TĚBA application mentioned above.

¹⁷ For more information on the evidentiary standard, see K. Rozsnyai, *A közigazgatási aktusok jogi kötöttsége*, [in:] *Közigazgatási jog III.*, ed. M. Fazekas, Budapest 2021, pp. 120–121.

¹⁸ *Ibidem*, p. 122.

By its very nature, modelling this requires both a combination of machine learning and expert systems, and explicitly big data processing and data mining.

Related to this problem is the “production” of substantive decisions using AI, which is in its infancy in Hungarian law. The reasons for this may include the lack of a horizontal perspective and the inadequacy of the infrastructure in its present state, but some in the literature argue that the obligation of the public administration to give reasons for its decisions prevents automation.¹⁹ In addition to the fact that this approach is suitable for reassuring the legislator, I take issue with this idea for two reasons: firstly, as I indicated in connection with the NAV Eskort, it is IT-solvable to develop an explanatory function, and secondly, the forms used intensively in the public administration can easily be used to digitise the justification, so there is no reason to turn away from planning further developments on this account.

ANALYSIS: A “SMALL HUNGARIAN HISTORY OF THE DEVELOPMENT” OF DIGITISATION IN PUBLIC ADMINISTRATION

In the previous sections, I have reviewed the AI-based and other technological innovations that can be applied to the basic types of public administration activities, the adaptation of which can increase the efficiency of public administration task performance, while at the same time strengthening the user-friendly attitude.

Also, I have pointed out that digitisation appears as an inevitable development path for public administration policy makers, and that it is a broader category than the application of AI, as the digitisation of public administration (operations) has a longer history and richer achievements. In the following, I briefly review and evaluate developments in this field.

Professor G. Kilényi once wrote in one of his studies that the history of public administration can be identified with the history of failed reforms, which, although obviously an exaggeration, can be seen as an important reality. So the question arises: Why has public administration consistently resisted the reform process and why has there been no breakthrough so far in the context of digitalisation?

The first reason is the historical specificity that after the regime change, large state institutes and state-owned companies with significant internationally significant R&D activities in the field of science and technology have practically disappeared or have been privatised.²⁰ Researchers were employed and generally engaged in selling products of foreign companies, so the development of expert systems, a component of AI, virtually stopped. At the same time, it seems appropriate to

¹⁹ Cf. E. Fejes, I. Futó, *op. cit.*, p. 44.

²⁰ MTA SZTAKI (Computer and Automation Research Institute of the Hungarian Academy of Sciences) is a refreshing exception to this trend.

point out two historical facts for the sake of authenticity. On the one hand, it should be stressed that the priority of public administration development after 1990 was to meet the requirements of the rule of law and democracy, rather than to put it on a digital footing; on the other hand, in those sectors where IT development did take place (more so in the mid- to late 1990s), it was isolated, sector-specific and general platforms were still to be developed.

It should also be stressed that the lack of credible “champions” was (and in some respects still is) one of the reasons for the digital explosion. E. Fejes and I. Futó refer to the phenomenon whereby the first initiative to implement a knowledge-based application usually comes from a vendor. “If the bidder is a large multinational company, it has a number of references in the field. The real question, however, is who needs to be convinced of the usefulness of the future application. The potential vendor needs to find an in-house ‘champion’ who understands – perhaps already knows – the essential operational elements of the proposed solution, who is a sufficiently credible person and who is willing to stand behind the project, even ‘campaign’ for it”.²¹ Although the quotation suggests that this approach is more suited to the logic of the competitive sector, it has not, by definition, achieved breakthroughs in the public sector (and, given the procurement nature of public procurement, can be a breeding ground for corruption), and so there has long been understandable resistance to technological innovation and its management within public administrations and their staff. In the context of attempts at digitisation in public administration, I will look at the (instructive) institutionalisation of two legal instruments: electronic administration and the introduction of an electronic civil registry system.

The electronic civil status system was institutionalised by the Act I of 2010 on Civil Status Procedure, which, according to the original plans, was to enter into force at the beginning of January 2011. The sequel is known to all: the legislator “postponed” the entry into force first by one, then by two, and finally by three and a half calendar years, so that the legislation finally became applicable from 1 July 2014. For the purposes of this work, I will not go into the initial difficulties encountered in the early days, but the circumstances that led to the delayed entry into force are certainly worth mentioning. There were two main reasons for the delay in entry into force. The first was the institutionalisation of registered partnerships, where there was no consensus between the concept of the law’s proposer and that of the government in power at the time of its entry into force, and this (political) conflict also hindered the final text of the law.²² Simplifying what happened, there were first of all constitutional

²¹ Cf. E. Fejes, I. Futó, *op. cit.*, p. 44.

²² The story began earlier. The first time the legal institution was dealt with was in the decision of the Constitutional Court 154/2008 (17.12.2008), but its satisfactory legal settlement was an obstacle to the finalisation of the Civil Status Act.

concerns about the introduction of registered partnerships, which were technical on the surface and political below the surface. The professional argument was based on the expediency and constitutionality of institutionalising registered partnerships as a quasi-alternative to marriage (the first constitutional court decisions also addressed this question), but in fact it was the liberal/conservative approach to conservative family law legislation that decided the fate of the issue for a few years. This is related to our topic from the point of view that the new law introduced (in addition to the birth, marriage and death registers) the so-called fourth civil register, a fact that did not help it to come into force at the initial date.

The other reason for the “delay” is the lack of infrastructure: the electronic civil status system (and the security document registry as part of it) was simply not built (forming a reliable system) by the deadline indicated, so the legislation was not ready to enter into force due to the lack of material conditions.²³

The introduction of electronic administration (?) was not any smoother, but here the gap between the legislative “shall” and the “sein” that is actually realised was even more pronounced. The first ambitious legislative attempt was Act CXL of 2004 on the General Rules of Administrative Procedure and Services (hereinafter: Ket.), which made provision for electronic administration in a separate title. Apart from the fact that the law (also) contained a lot of technical rules in this chapter, which led its critics to regard it as a “manual for administrators”, it soon became apparent that the chapter introduced simply cannot work. To avoid giving a legal-historical aspect to this work, I shall illustrate the above by illustrating some of the original, difficult-to-enforce provisions of the Act:

1. “Unless otherwise provided by law, government decree or local government decree, the authority shall also conduct administrative matters by electronic means” (§ 160 (1) Ket.).
2. “Where the public authority provides the possibility to use electronic administrative administration or services not only through the central system, it shall also provide information on its own information platform about the services available on the central system and the possibility to use them” (§ 160 (11) Ket.).
3. “The authority may communicate by electronic mail only with the customer who has provided the authority with his electronic mail address for this purpose, for the validity of which the customer is responsible” (§ 162 (5) Ket.).

²³ It is worth noting that, in addition to the delay, this has further preserved an unconstitutional situation in which the subject matter was still regulated by decree-law and by decree of the Minister of the Interior until 2014, despite the fact that it was an exclusive legislative subject matter, which the Constitutional Court had already drawn the attention of the legislator to in 1990 in the decision of the Constitutional Court 32/1990 (22.12.1990).

4. “In the event of a temporary failure of the information technology system under the control of the public authority in the course of the ongoing electronic communication between the public authority and the customer, the public authority shall inform the customer of the fact of the failure by electronic mail, indicating the start and end time of the failure, within twenty-four hours after the failure has been rectified” (§ 163 (1) (a) Ket.).

In comparison, the first fine-tuning took place with the entry into force of the amendment to the Code of Laws (i.e. Act CXI of 2008). At that time, the legislator recognised that the previously declared state of digitisation of administration was more of an objective than a reality, so the procedural code only spoke of electronic information and electronic communication, and the technical provisions were transferred to Act LX of 2009 on Electronic Public Services.

The final refinement was the amendment that only included in the principles the right of the customer to choose freely the means of communication with the public authority and only the mandatory electronic channel for communication between public authorities. This is essentially the model of today’s legislation, according to which the provisions at the level of principles are laid down in Act CL of 2016 on the Code of General Administrative Procedure, while the technical and other detailed rules are laid down in Act CCXXII of 2015 on the General Rules for Electronic Administration and Trust Services.

DISCUSSION: CHALLENGES AND RESPONSES IN THE RELATIONSHIP BETWEEN PUBLIC ADMINISTRATIONS AND AI

IT solutions (also) used in AI-based public administrations have shown varying degrees of effectiveness in different developed countries. Looking at examples from abroad, it can be seen that both machine learning and the use of expert systems are not alien to the international arena, with Anglo-Saxon countries in particular leading the way.²⁴

While public administrations cannot remain unaffected by the digital innovations of the world around them, it is also clear that the challenges of recent years (e.g. pandemics, war, restrictions on fundamental rights, etc.) are forcing public administrations to take a proactive approach to these operational solutions. An example of this in the Hungarian documentary administration is the effort to reinforce the so-called customer call kiosks in the district offices with AI, which, without achieving a practical breakthrough, will create the theoretical possibility

²⁴ Machine learning is the basis of the OPSI and BIT technologies, among others, which have been in existence since 2017, while examples of successful use of expert systems can be found in the UK (ESI), Australia (IVAG), New Zealand (CSLC) and the US (e-HASP2).

of online initiation and issuance of documents of a decision nature (e.g. identity card, proof of address, driving licence, passport, etc.) without the involvement of human beings. The development is based on the recognition that AI can automate routine administrative tasks, allowing public administrators to focus on complex, strategic activities. Document management certainly falls into this category, as a large number of cases require the routine issuance of documents under prescriptive regulation, an area where improvements can simplify processes, reduce bureaucratic burdens and improve administrative efficiency.

The other aspiration that pervades domestic procedural codification is the use of digital tools (including AI) as (one of) the means to shorten the time needed to complete a case. To illustrate this, one can cite the case of automatic decision-making, institutionalised by the former Administrative Procedure Act and further developed by the current Act CL of 2016. The basic idea is that a decision is taken or communicated within 24 hours of the initiation of the procedure, provided that the facts are clear and the necessary information is available to the authority.²⁵ As the scope of this study does not allow a comprehensive evaluation of the legal instrument, I would simply like to add that, under the current rules, the human factor must be present in order to approve the actual decision, which means that there is no real automatism in line with EU doctrine at the moment.²⁶ Accordingly, the legal instrument cannot be considered as a pure application of AI, although the nature of the legislative activity (i.e. the issuing of a legally binding act) would create the framework for its application.²⁷

Finally, I would like to point out that, in addition to the classic public authority activities, there is also the possibility of using AI in the context of public service organisation (once the guarantee framework is in place). Examples of possible sectors include the organisation of public transport (which could be based on the operating mechanisms of Uber's existing platform) and the linking of so-called basic registers with administrative planning (e.g. birth registers could be used to draw automated conclusions from the number of children born in a municipality in order to plan the number of places in nurseries and kindergartens).

²⁵ It should be noted that the sectoral legislation was originally modelled on *ex officio* procedures for certain traffic offences, but was later extended to procedures on request and to other sectors (e.g. certain family allowances, the issue of an inauthentic title deed, etc.).

²⁶ For more on this issue, see S. Wachter, B. Mittelstadt, C. Russell, *Counterfactual Explanations without Opening the Black Box: Automated Decisions and the GDPR*, "Harvard Journal of Law & Technology" 2018, vol. 31(2), pp. 461–464.

²⁷ For a more detailed discussion, see I. Hoffman, A. Bencsik, *New Ways of Providing Public Services: Platforms of Service Provision and the Role of Artificial Intelligence in the Light of the Development of the Hungarian Public Administration*, [in:] *Digital Transformation of the Financial Industry...*, p. 181.

CONCLUSIONS

In conclusion, I will limit myself to saying that the benefits of digitalisation of public administration (in this context, the use of AI) in terms of increasing efficiency or reducing administrative costs are beyond dispute, but it should also be emphasised that the decentralisation of tasks and competences has not resulted in the decentralisation of the administrative location to the citizens. On the contrary, the digitalisation of public administration has reinforced the principle of centralisation, so that the cautious rise of AI in Hungary can be identified for the time being with the process of centralisation.

REFERENCES

Literature

- Czuryk M., *Cybersecurity and Protection of Critical Infrastructure*, "Studia Iuridica Lublinensia" 2023, vol. 32(5), DOI: <http://doi.org/10.17951/sil.2023.32.5.43-52>.
- Fejes E., Futó I., *Mesterséges intelligencia a közigazgatásban – az érdemi ügyintézés támogatása*, "Pénzügyi Szemle" 2021, vol. 66(1), DOI: http://doi.org/10.35551/PSZ_2021_k_1_2.
- Firnics J., *Rangsorolás – új szabályozási igény a platformok és az információs túlterheltség korában*, [in:] *Verseny és Szabályozás*, eds. P. Valentiny, K. Antal, I.Cs. Nagy, Zs. Berezvai, Budapest 2021.
- Hoffman I., Bencsik A., *New Ways of Providing Public Services: Platforms of Service Provision and the Role of Artificial Intelligence in the Light of the Development of the Hungarian Public Administration*, [in:] *Digital Transformation of the Financial Industry: Approaches and Applications*, eds. S. Benković, A. Labus, M. Milosavljević, Cham 2023, DOI: <https://doi.org/10.1007/978-3-031-23269-5>.
- Hoffman I., Cseh K.B., *E-administration, Cybersecurity and Municipalities – the Challenges of Cybersecurity Issues for the Municipalities in Hungary*, "Cybersecurity and Law" 2020, vol. 4(2), DOI: <https://doi.org/10.35467/cal/133999>.
- Hoffman I., Karpiuk M., *E-administration in Polish and Hungarian Municipalities – a Comparative Analysis of the Regulatory Issues*, "Lex localis – Journal of Local Self-Government" 2022, vol. 20(3), DOI: [https://doi.org/10.4335/20.3.617-640\(2022\)](https://doi.org/10.4335/20.3.617-640(2022)).
- Karpiuk M., *The Legal Status of Digital Service Providers in the Sphere of Cybersecurity*, "Studia Iuridica Lublinensia" 2023, vol. 32(2), DOI: <https://doi.org/10.17951/sil.2023.32.2.189-201>.
- Karpiuk M., *The Local Governments' Position in the Polish Cybersecurity System*, "Lex localis – Journal of Local Self-Government" 2021, vol. 19(3), DOI: [https://doi.org/10.4335/19.3.609-620\(2021\)](https://doi.org/10.4335/19.3.609-620(2021)).
- Kostrubiec J., *Preventing the Abuse of the FinTech Sector for Money Laundering and Fiscal Fraud in Terms of Polish Law: Legal Measures and Postulates of Normative Changes*, [in:] *Digital Transformation of the Financial Industry: Approaches and Applications*, eds. S. Benković, A. Labus, M. Milosavljević, Cham 2023, DOI: https://doi.org/10.1007/978-3-031-23269-5_11.
- Leszczyński L., *On Theoretical Aspects of the Concept of Rational Lawmaker: Between Optimization and Idealization of the Legislation*, "Studia Iuridica Lublinensia" 2022, vol. 31(5), DOI: <http://dx.doi.org/10.17951/sil.2022.31.5.169-185>.

- Rozsnyai K., *A közigazgatás meghatározása*, [in:] *Közigazgatási jog I.*, ed. M. Fazekas, Budapest 2019.
- Rozsnyai K., *A közigazgatási aktusok jogi kötöttsége*, [in:] *Közigazgatási jog III.*, ed. M. Fazekas, Budapest 2021.
- Szalai É., *A közigazgatás működése, tevékenységfajtái*, [in:] *Közigazgatási jog I.*, ed. M. Fazekas, Budapest 2015.
- Wachter S., Mittelstadt B., Russell C., *Counterfactual Explanations without Opening the Black Box: Automated Decisions and the GDPR*, "Harvard Journal of Law & Technology" 2018, vol. 31(2), DOI: <https://doi.org/10.2139/ssrn.3063289>.

Online sources

- European Commission, *The Digital Economy and Society Index (DESI)*, <https://digital-strategy.ec.europa.eu/en/policies/desi> (access: 7.5.2024).
- Futó I., Csekei Tóth K., *E-kormányzat az APEH informatikája szemszögéből*, <https://itf.njszt.hu/324-tr4/uploads/2019/06/APEHlf.doc.pdf> (access: 7.5.2024).
- KIFÜ, *TÉBA – családtámogatási ellátások folyósításának korszerűsítése*, <https://kifu.gov.hu/projekt/teba-csaladtamogatasi-ellatasok-folyositasanak-korszerusitse> (access: 7.5.2024).

Legal acts

- Act CXL of 2004 on the General Rules of Administrative Procedure and Services.
- Act LX of 2009 on Electronic Public Services.
- Act I of 2010 on Civil Status Procedure.
- Act CCXXII of 2015 on the Code of General Rules for Electronic Administration and Trust Services.
- Act CL of 2016 on the General Administrative Procedure.
- Act CL of 2017 on the Rules of Taxation.

ABSTRAKT

W opracowaniu badania poddano zagadnienie cyfryzacji administracji publicznej. Po nakreśleniu podstaw teoretycznych przeprowadzono analizę międzynarodowych ram tworzenia cyfrowej administracji publicznej, a następnie omówiono jej rozwój na Węgrzech i dokonano oceny. Na Węgrzech przedmiotowe ustawodawstwo zostało po raz pierwszy wprowadzone wraz z wdrożeniem administracji elektronicznej, której anomalie najwcześniej uwidoczniły się przy implementacji elektronicznej rejestracji urodzeń. W tym kontekście autor omówił możliwości zastosowania sztucznej inteligencji w sektorze publicznym oraz dokonał przeglądu aktualnych zastosowań i dobrych rozwiązań, a także potencjalnych kierunków rozwoju. W artykule opisane zostały sukcesy w zastosowaniu sztucznej inteligencji w sektorze finansowym, a następnie dokonano bardziej szczegółowego omówienia automatycznego podejmowania decyzji oraz przeprowadzono rozważania dotyczące objęcia tego zagadnienia regulacją prawną.

Słowa kluczowe: administracja publiczna; sztuczna inteligencja; cyfryzacja; ustawodawstwo; administracja elektroniczna; sektor finansowy