

Research Article

THE RULE OF LAW AND TECHNOLOGY IN THE PUBLIC SECTOR

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Summary: 1. Introduction. – 2. Why the Rule of Law? – 3. Technologies in the Public Sector. – 3.1. *Automated administrative orders.* – 3.2. *Risk-assessment tool COMPAS.* – 3.3. *Robot-judges.* – 4. Why the Rule of Law Might be in Danger – 5. Conclusions.

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ABSTRACT

Background: *Technology promises the provision of public services to be more efficient, transparent, cheaper, and faster, but current issues associated with various technologies, such as, inter alia, discrimination, the ‘black-box’ problem, or cybersecurity issues raise concerns about potential legal risks. Accordingly, the question of whether democracies survive potential threats to legal norms arises. Various EU institutions express the position that we must promote technological applications but, at the same time, ensure adequate protection of human rights. However, sometimes this line is very thin – thus, it is necessary to examine how, and which technological applications should be applied in the public sector in order not to violate*

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human rights requirements. The analysis of the proper assurance of the principle of the rule of law where certain technologies are implemented in the public sector will help to answer the questions of whether the chosen legal regulation in the implementation of these functions of the state is appropriate and whether the chosen method of technology integration complies with the principle of the rule of law.

Methods: The following methods were used in the article to research potential modern technology risks to the rule of law principle. The systematic method was useful when interpreting the mutual interaction of legal norms. With the help of this method, systemic connections with other legal norms and other sources of law were assessed. With the help of the teleological method of legal interpretation, the goals and objectives of the rule of law principle were determined. The comparative method was used to study the experience of foreign countries regarding various aspects of technology in the public sector.

Results and conclusions: The paper concludes that the supremacy of the rule of law must be ensured when applying any kind of technology in the public sector. The paper also concludes that different rule of law elements might be at risk in certain areas of the public sector where technologies are incorporated, such as automated administrative orders, the risk-assessment tool COMPAS, and robot-judges.

1 INTRODUCTION

Technology is evolving so rapidly that not only can we hear the Fourth Industrial Revolution¹ being constantly discussed, but the potential new issues of the Fifth Industrial Revolution² are already being debated. Considering that each industrial revolution has brought great social change and created many opportunities, and this one is deemed to be the largest in terms of its scale, rate of spread, and potential for further development, it is of vital importance to regulate the use of technology and to anticipate the legal risks that might accompany this revolution without hindering sustainable technological development. It is worth mentioning that innovations are being particularly encouraged in the public sector. Back in 2016, the European Commission noted that digital public services reduce the administrative burden on businesses and citizens by making interactions faster, more convenient, and cheaper.³ In addition, in 2018, the Digital Strategy European Commission set the goal of moving to a digital transformation administration.⁴

However, in its 2018 communication, the Commission emphasised that, on the one hand, we have to boost the EU's technological and industrial capacity, but on the other hand, we have to ensure an appropriate ethical and legal framework based on the EU's values.⁵ In October 2020, the European Parliament adopted a resolution on a Framework of Ethical Aspects of Artificial Intelligence, Robotics and Related Technologies that recommends that the European Commission propose a legislative action to harness the opportunities and

- 1 K Schwab, *The Fourth Industrial Revolution* (Crown Publishing Group 2017).
- 2 MS Noble, et al, 'The Fifth Industrial Revolution: How Harmonious Human–Machine Collaboration is Triggering a Retail and Service [R]evolution' (2022) 98(2) *Journal of Retailing* 199-208.
- 3 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions 'Eu eGovernment Action Plan 2016-2020 Accelerating the digital transformation of government', COM/2016/0179 final.
- 4 European Commission 'Digital Strategy – A digitally transformed, user-focused and data-driven Commission', COM\2018\7118 final.
- 5 Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions 'Artificial Intelligence for Europe', COM/2018/237 final.

benefits of artificial intelligence but also to ensure the protection of ethical principles.⁶ In October 2021, the European Commission presented a proposal for the Artificial Intelligence Act, where it was stated that:

In light of the speed of technological change and possible challenges, the European Union is committed to strive for a balanced approach. It is in the Union's interest to preserve the European Union's technological leadership and to ensure that Europeans can benefit from new technologies developed and functioning according to Union values, fundamental rights and principles.⁷

While we can see that various European institutions encourage increasing integration of technology in the delivery of public services, it is not clear to what extent technological intervention in traditional ways of providing public services is considered 'European'. Therefore, it is necessary to investigate how and what kind of technologies should be applied in the public sector so that human rights requirements are not violated.

Regardless of the fact that there is no one definition of what the rule of law is, it is deemed a mechanism that helps to identify, whether human rights are properly guaranteed in different states. In the context of the spirit of the rule of law, the question arises as to whether the various integrations of technology into public sector decision-making processes pose a risk to the proper enforcement of this principle. The rule of law can be deemed as some sort of a minimal standard that has to be met before implementing technology in the public sector.

2 WHY THE RULE OF LAW?

'Everyday issues of safety, rights, justice, and governance affect us all; everyone is a stakeholder in the rule of law.'⁸

Technology develops rapidly and embraces notions such as internationalisation and globalisation. Traditional law, for the most part, can be slow to react to technological developments and is also predominantly confined to national borders.⁹ Indeed, the scale at which technologies are developing is not limited to national borders, so, accordingly, national law is not sufficient enough to cope with the upcoming global, international issues. Meanwhile, the rule of law, although it is essentially applied in national law, is recognised internationally.

Art. 2 of the Treaty on the European Union states that: 'The Union is founded on the values of respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights'.¹⁰ Accordingly, the preamble to that document states that the member states confirm their attachment to the principles of liberty, democracy, respect for human rights

6 European Parliament resolution of 20 October 2020 with recommendations to the Commission on a framework of ethical aspects of artificial intelligence, robotics and related technologies (2020/2012(INL)), OJ C 404, 63–106.

7 Proposal for a Regulation of the European Parliament and of the Council laying down harmonised rules on artificial intelligence (Artificial Intelligence Act) and amending certain union legislative acts, COM/2021/206 final.

8 The World Justice Project Rule of Law Index 2021 (World Justice Project 2021) <<https://worldjusticeproject.org/sites/default/files/documents/WJP-INDEX-21.pdf>> accessed 26 September 2022.

9 S Greenstein 'Preserving the rule of law in the era of artificial intelligence (AI)' (2022) 30 *Artificial Intelligence and Law* 291–323.

10 Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union adopted on 13 December 2007, Official Journal C 326, 26/10/2012.

and fundamental freedoms, and the rule of law.¹¹ It is clear that the rule of law is one of the fundamental principles of the EU. This is of extreme importance because the EU was formed based on this principle – it reflects European values, aspirations, and essence. As a consequence, adherence to this principle is of vital importance for the functioning of the EU, and risks to the breach of the rule of law in one country could have a direct effect on it. Another important aspect is that Europeans strongly support the principle of the rule of law. Eurobarometer 508 on Values and identities of EU citizens shows that 82 per cent of respondents agreed on the independence of judges and equality before law, as well as on the right to a fair trial, and in addition, 79 per cent were against discrimination,¹² etc.

Of course, the rule of law is as relevant as ever these days – in the past few years, we have faced global risks, such as the COVID-19 crisis or Russia's invasion of Ukraine, which highlighted the importance of the principle. However, in the context of these sudden and manifest events, it is also important to evaluate not-so-obvious ones – the emerging issues that might have a direct effect on the principle of the rule of law – such as, for example, the use of technologies in the traditional ways of delivering public services. As the European Commission emphasises, a vibrant, forward-looking EU's transition to a greener, more digital, and more socially just society needs to continue being built on firm foundations.¹³ To conclude, the main reasons why the rule of law is deemed a good indicator to evaluate the effects of technologies in the public sector are the following:

1. It is a fundamental principle based on which the EU is founded;
2. Citizens in every member state strongly support the rule of law principle;
3. As technology is developing very quickly, the law is lagging behind – thus, the rule of law is a good threshold that shows how well human rights are ensured;
4. The mechanisms proposed by national law alone are not enough to face global issues caused by the use of technology.

3 TECHNOLOGIES IN THE PUBLIC SECTOR

Technologies that will shape the European economy and society can be divided into ones that are enabling, such as artificial intelligence, big data analytics, quantum, and high-performance computing, internet of things, NextGen internet and infrastructure, cloud computing, digital platforms, distributed ledger technology, and high-impact applied ones, such as advanced robotics, autonomous mobility, smart cities, additive manufacturing, virtual and augmented reality, digital energy innovation and sustainability, digitally enabled biotechnologies, advanced materials.¹⁴ It is likely that due to the extremely wide application possibilities of technologies, more and more functions will be delegated to them in the future.

For a long time, the legal field was untouched or barely touched by technology. However, we can see a tendency toward introducing more and more technological applications into the daily lives of lawyers. Now it is even being predicted that legal institutions and lawyers will

¹¹ Ibid.

¹² N Becuwe, O Baneth, 'Special Eurobarometer 508 on Values and Identities of EU citizens' Publications Office of the European Union, 2021.

¹³ European Commission Communication from the Commission to the European Parliament, the Council, the European Economic and Social committee and the Committee of the Region 'Rule of Law Report 2022', COM(2022) 500 final.

¹⁴ European Commission, Directorate-General for Communications Networks, Content and Technology, Shaping the digital transformation in Europe, Publications Office, 2020, 10.

change more radically in less than two decades than they have over the last two centuries.¹⁵ Machine learning systems can already predict judicial decisions as accurately as human lawyers, extract key terms from agreements, identify significant documents in litigation bundles and in due diligence exercises, and forewarn organisations of impending legal risks.¹⁶ What is interesting is that, at first, the private sector was deemed to be in the lead when talking about the application of innovations, but lately, the use of technology has been especially encouraged in the public sector.¹⁷ Of course, one of the reasons the public sector is attractive to the deployment of technology is the amount of data accumulated, which is the driving force behind technology. However, this sector is more bureaucratic and requires more caution to ensure the quality of services, as this has a direct impact on people's trust in the state in general.

Technology promises services in the public sector will be cheaper and delivered faster in a more efficient manner. It offers to reduce operational and labour costs and increase the effectiveness and quality of services. It is also believed that technology integration would contribute to greater transparency and that, eventually, it will lead to increased trust. On the other hand, technology in its current development is linked to algorithmic biases, cybersecurity issues, the 'black-box' problem, and accountability issues. Bearing in mind this dualism, how do we decide what kind of technology intrusion in the provision of public services is acceptable? In the following section, the article will discuss three different examples of technological incorporation in the public sector: automated administrative orders, the risk-assessment tool COMPAS, and robot-judges. Each of them is characterised by different technological intrusions in classical ways of delivering public services.

3.1 Automated Administrative Orders¹⁸

'Anything that can be automated will be automated.'¹⁹

Making decisions about specific individuals is an integral part of the functions of many public sector institutions, and the possibilities offered by algorithms are increasingly recognised in the process of making such decisions. Governments all around are increasingly using automated decision-making systems in their administration.²⁰ One of the topics currently widely discussed in both doctrine and jurisprudence is the use of algorithmic tools in administrative procedures not only to assist in making such decisions (leaving the final

15 R Susskind, *Tomorrow's Lawyers: An Introduction to Your Future* (Oxford University Press 2017).

16 R Susskind, D Susskind, *The Future of the Professions: How Technology Will Transform the Work of Human Experts, Updated Edition* (Oxford University Press 2022) 32-32.

17 See, for example, L Vesnic Alujevic, F Scapolo *The Future of Government 2030+: Policy implications and recommendations*, (Publications Office of the European Union 2019); European Commission 'White Paper on Artificial Intelligence – A European approach to excellence and trust', COM/2020/65 final; Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions 'A European strategy for data', COM/2020/66 final; Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions 'Shaping Europe's digital future', COM/2020/67 final.

18 For more on automated administrative orders, see J Paužaitė-Kulvinskienė, G Strikaitė-Latušinskaja, 'Automated Administrative Order in the Context of the Code of Administrative Offences' in M Doucy, M Dreyfus, N Noupadia (eds), *Changements démocratiques et électroniques dans l'action publique locale en Europe: REvolution ou E-volution? Democratic and Electronic Changes in Local Public Action in Europe: REvolution or E-volution?* (Kultura: Institut Francophone pour la Justice et la Démocratie 2022) 387-405.

19 S Zuboff, *In the age of the smart machine. The future of work and power* (Basic Books, Inc 1988).

20 R Calo, DK Citron, 'The Automated Administrative State: A Crisis of Legitimacy' (2021) 70(4) Emory Law Journal 797-846.

decision to the official) but also as a substitute for the final decision.²¹ Starting 1 January 2019, the amendments to the Code of Administrative Offences of the Republic of Lithuania, which introduced one of the first examples of automation in the public sector in Lithuania – the automation of administrative orders – came into force.²²

The institute of an administrative order in Lithuania was introduced more than a decade ago.²³ Simply put, an administrative order is (in the presence of a set of certain conditions) an offer to voluntarily pay a fine equal to half of the minimum fine imposed for an administrative offence committed by the person. The initiation of this institute was conditioned by the observed tendency that, in most cases, the severity of the imposed administrative penalty and the amount of the fine were being disputed rather than qualification, circumstances, guilt, or the fact of the violation.²⁴ After assessing the possibilities of modern technologies and good international practice, it was decided to simplify the processes of bringing administrative liability for offences of road traffic rules by taking advantage of the opportunities offered by algorithms. It was established that for certain administrative offences – an exhaustive list was introduced, stating that this applied only to administrative offences captured in pictures or video footage and the ones that are recorded by fixed or mobile recording systems, for example, speeding or parking offences – an administrative order will be automatically formed in the Register of Administrative Offences.

When it comes to automation, it should be noted that there are different degrees to be applied, the main indicator being the degree of human control in the process. For example, the scale fluctuates from no automation, where all the tasks are being carried out by a human being, to full automation, where all the tasks are fully delegated to algorithms. The following provisions indicated in the explanatory memorandum to the relevant amendment law show that it was chosen to completely eliminate the role of an officer and to apply full automation in the abovementioned cases: 1) the human factor will be eliminated when protocols for administrative offences will be created automatically; 2) it is suggested that the administrative order and other procedural documents be automatically created in the Register of Administrative Offences, meaning procedural documents would be filled in automatically using the software; 3) protocols of administrative offences or notifications of a possible administrative offence are created in the Register of Administrative Offences automatically, i.e., in such cases, administrative offences are initiated without the presence of an official.²⁵

21 B Green, 'The Flaws of Policies Requiring Human Oversight of Government Algorithms' (2022) 45 Computer Law & Security Review; A Coiante, 'The automation of the decision-making process of the public administration in the light of the recent opinion by the Italian Council of State regarding the draft of regulations concerning the modalities of digitalization in the public tender procedures' (2021) 2(1) European Review of Digital Administration & Law 239-248.

22 Code of Administrative Offences of the Republic of Lithuania, Official register of legal acts TAR, No XII-1869, 2015.

23 On 1 January 2011, the relevant amendments were made to the Code of Administrative Violations of the Republic of Lithuania that was in force at that time; see Law amending articles 302, 226, 232, 232¹, 239, 239³, 241, 241¹, 246¹, 246², 246⁷, 249, 259, 260, 261, 262, 282, 313 and the twenty-third section of the Code of Administrative Offences of the Republic of Lithuania, supplementing the code with articles 257¹, 260¹, 260², 260³, 257¹, 260¹, 260², twenty-third¹ and twenty-third², Official gazette Valstybės žinios, 2010, no 142-7257, <<https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.386939>> accessed 7 October 2022.

24 Explanatory memorandum to Law amending articles 30², 226, 232, 232¹, 239, 239³, 241, 241¹, 246¹, 246², 246⁷, 249, 259, 260, 261, 262, 282, 313 and the twenty-third section of the Code of Administrative Offences of the Republic of Lithuania, supplementing the code with articles 257¹, 260¹, 260², 260³, 257¹, 260¹, 260², twenty-third¹ and twenty-third², Official gazette Valstybės žinios, 2010, no. XIP-1839, <<https://e-seimas.lrs.lt/portal/legalAct/lt/TAK/TAIS.367360?jfwid=-1ddupcv4di>> accessed 7 October 2022.

25 Explanatory memorandum to the draft law amending Articles 33, 38, 417, 424, 569, 573, 575, 589, 590, 595, 602, 610, 611, 612, 669, 682 and 686 of the Code of Administrative Offences of the Republic of Lithuania, 10 October 2018, no. XIIIIP-2672, <<https://e-seimas.lrs.lt/portal/legalAct/lt/TAK/95ca5ce0cc7411e8a82fcc67610e51066?jfwid=3eixg5pyz>> accessed 7 October 2022.

3.2 Risk-Assessment Tool COMPAS

Another field of the public sector where algorithms are used is to help judges of criminal courts. In the United States of America, it is becoming commonplace that 'pretrial risk assessment algorithms' are being consulted when setting bail, determining the duration of prison sentences, and contributing to decisions concerning guilt and innocence. Such systems form a behavioural profile of the accused by mathematically calculating the relation of different factors.²⁶ For example, in some jurisdictions in the United States, judges use an automated decision-making software COMPAS ('Correctional Offender Management Profiling for Alternative Sanctions') that uses historical data to decide which convicted defendants are most likely to re-offend. The software, developed by Northpointe Inc., a private company, takes into account 137 responses to a questionnaire, either answered by the defendant or based on information from criminal records. The questions are quite diverse, ranging from the ones that seem to be directly related to the likelihood to re-offend (for example, about prior felony offence arrests, parole breaches) to ones less connected to it (such as, for example, who the offender was raised by or how often he or she was bored).²⁷ The algorithm then rates how likely a person is to commit a repeat offence on a scale from 1 (low risk) to 10 (high risk), and the judge may decide to detain the person.

However, a few concerns in connection to the use of this system have already arisen. First of all, as already mentioned, the COMPAS software was designed by a private company; thus, the algorithm operation processes are protected under intellectual property rights (in *State of Wisconsin v. Loomis*, it was indicated that the developer does not disclose how the risk scores are determined or how the factors are weighed in COMPAS, because it is a trade secret).²⁸ Accordingly, neither litigants nor courts can review how the algorithms function to further explore their accuracy and fairness. Secondly, concerns have been raised that the COMPAS software is subject to racial discrimination. It has been observed that the system was less likely to generate a positive score for African American litigants than for white litigants. The COMPAS software was found to misclassify African American defendants as 'high risk', considering them twice as likely to re-offend as their white counterparts. Correspondingly, the wrong assumptions were made vice versa – white defendants were rated as lower risk but re-offended at twice the rate.²⁹ To conclude, the discriminatory effects of the algorithm used in the COMPAS were revealed. As correctly pointed out by the European Commission for the Efficiency of Justice, these tools can reproduce unjustified and already existing inequalities in the criminal justice system concerned; instead of correcting certain problematic policies, technology may end up legitimising them.³⁰ Thirdly, even though judges can reject the COMPAS conclusion, it is not clear whether and, if so, how much they tend to rely on the recommendation of the software and how much they tend to deviate from it.

The final important aspect to discuss when analysing the COMPAS software is *State v. Loomis*, where the decision to sentence a defendant to six years' imprisonment and five years of extended supervision for a crime was partly made by the software. What is interesting is that the Supreme Court of Wisconsin concluded that COMPAS is merely one tool available to a court at the time of sentencing, and a court is free to rely on portions of the assessment

26 Greenstein (n 10) 291-323.

27 See <<https://mineracaoedados.files.wordpress.com/2017/01/sample-risk-assessment-compas-core.pdf>> accessed 2 October 2022.

28 *State of Wisconsin v Loomis* (2016) 881 N.W.2d 749 (Ann Walsh Bradley J) ('Loomis'). Cert denied, 137 S Ct 2290 (2017).

29 J Dressel, H Farid, 'The accuracy, fairness, and limits of predicting recidivism' (2018) 4(1) *Science Advances*.

30 See The European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and their environment, adopted by the CEPEJ during its 31st Plenary meeting, Strasbourg, 3-4 December 2018.

while rejecting other portions. If used properly with an awareness of the limitations and cautions, it does not violate a defendant's right to due process, according to the court.³¹ However, a question arises as to whether the use of the COMPAS or similar software to assist courts, even considering that the judges retain the discretion to make the final decision, is in line with the principle of the rule of law.

3.3 Robot-Judges

The pandemic has accelerated the shift into an online environment, as well as the implementation of certain technologies in courts worldwide. In more than 160 countries, hearings have now been conducted remotely, largely by video.³² It can be said that it is unlikely that post-pandemic court systems will remain the same as they were before; however, remote court hearings are just a beginning and far from a revolution in court services. States will have to decide to what extent will the technological intrusion in court systems be justified because, in a world where we are used to getting all the services and goods with the click of a few buttons, our administration of justice is becoming cumbersome.

In general, technology can affect the work of courts in two broad ways. On the one hand, there is automation and improving various processes – using systems to improve, refine, streamline, optimise, and turbo-charge traditional ways of working. On the other hand, there is a transformation – using technology to allow us to perform tasks and deliver services that would not have been possible, or even conceivable, in the past – doing new things rather than old things in new ways.³³ In the European Commission study on the use of innovative technologies in the justice field, good practices among member states currently in place are those that concern areas such as, *inter alia*, anonymisation of documents (e.g., court decisions); speech-to-text and transcription; introduction of chatbots for strengthening the access to justice and public services; and Robot Process Automation for increasing efficiency and minimising errors in repetitive tasks.³⁴ In addition, the European Council notices that artificial intelligence systems in the justice sector may in the future be capable of performing increasingly complex tasks, such as analysing, structuring and preparing information on the subject matter of cases, automatically transcribing records of oral hearings, offering machine translation, supporting the analysis and evaluation of legal documents and court/tribunal judgments, estimating the chances of success of a lawsuit, automatically anonymising case law, and providing information via legal chatbots.³⁵

Another area of technology use in courts that is receiving more and more attention in jurisprudence is whether to delegate fundamental rule-making powers to artificial intelligence systems.³⁶ The discussion of robot-judges was particularly fostered after the

31 *State of Wisconsin v Loomis* (2016) 881 N.W.2d 749 (Ann Walsh Bradley J) ('Loomis'). Cert denied, 137 S Ct 2290 (2017).

32 Susskind, Susskind (n 17).

33 R Susskind, *Online Courts and the Future of Justice* (Oxford University Press 2019) 33-36.

34 European Commission, Directorate-General for Justice and Consumers, 'Study on the use of innovative technologies in the justice field: final report', Publications Office, 2020.

35 Council Conclusions 'Access to justice – seizing the opportunities of digitalisation' 2020/C 342 I/01, OJ C 342I, 2020, 1-7.

36 See, for example, M Richard, A Solow-Niederman, 'Developing Artificially Intelligent Justice' (2019) *Stanford Technology Law Review*, 242-289; ADD Reiling, 'Courts and Artificial Intelligence' (2020) 11(2) *International Journal for Court Administration* 8; RW Campbell, 'Artificial Intelligence in the Courtroom: The Delivery of Justice in the Age of Machine Learning' (2020) *Colorado Technology Law Journal* 323-350; C Coglianesse, D Lehr, 'Regulating by Robot: Administrative Decision Making in the Machine-Learning Era' (2017) 105 *Georgetown Law Journal*, U of Penn, Inst for Law & Econ Research Paper No. 17-8; J Deng, 'Should the Common Law System Be Intelligentized?: A Case Study of China's Same Type Case Reference System' (2018) *Georgetown Law Technology Review* 223.

Estonian Ministry of Justice asked to design a robot-judge to resolve small disputes up to €7,000.³⁷ The idea is that parties to a dispute would be able to upload related documents to a specialised court platform, where artificial intelligence would make a judgment that could later be appealed to a human judge. Another example fuelling the discussion on robot-judges, is China's Same Type Case Reference System (STCRS) program.³⁸ The STCRS program aims to reduce the backlog of judges as well as to improve the quality of the decision-making process. Artificial intelligence programs act as legal researchers, analysts, and decision-makers. It is claimed that they do this by conducting legal research more efficiently than human researchers, providing statistical analysis of prior analogous cases, generating judgments, and writing decisions. What is important is that a human judge is still in the loop and retains the possibility to reject any part of the STCRS process and manually complete such tasks.³⁹ To sum up, as of now, the STCRS program is an assistant to a judge in China and does not (yet) attempt to take his or her place. The final decision rests with the judge.

In light of these examples, it is worth mentioning that the current European approach embedded in various soft law sources of different EU institutions is that the use of technology to make final judgments in courts, at least at this stage of technological development, is not encouraged.⁴⁰ However, here lies another potential legal problem, requiring an analysis of the symbiosis of law and psychological sciences – to what extent is the judge independent in situations where artificial intelligence tools suggest a certain way of solving a case, and how much does he or she tend to deviate from such a suggestion? Although this discourse is not the subject of this article, legal scholars are invited and highly encouraged to explore it, as the conclusions obtained can be extremely valuable in determining the trust level of technology integrated into the courts.

Even though robot-judges are still at the level of debate, as we have no practical examples, there are scholars asking whether we as a society will ever be willing to delegate fundamental rule-making powers and assign assertion of the legitimacy of the state to such non-human entities,⁴¹ and others discussing the STCRS program in China believe that even if the STCRS programs look like pre-artificial-intelligence judicial assistants, they may hide a gradual substitution of machines for judges. The program's existence and potential capacity to complete advanced, abstract thinking and analysis can go even further – ultimately, these programs can help replace judges in simple, non-controversial cases.⁴² Talking more generally, some scholars claim that looking further ahead, a legal system without courts as we know them, wherein contractual disputes, tort claims, and criminal allegations are all posed and 'adjudicated' entirely by machine without the involvement of any human lawyers whatsoever, is possible.⁴³ For example, Richard Susskind suggests the idea of a certain rule being implemented, saying that if a machine predicts a court finding in favour of the claimant with a probability greater than, for example, 95 per cent, that finding should be deemed an

37 E Niiler, 'Can AI Be a Fair Judge in Court? Estonia Thinks So' (*WIRED*, 24 March 2019) <<https://www.wired.com/story/can-ai-be-fair-judge-court-estonia-thinks-so/>> accessed 1 September 2022.

38 T Kadam, 'China's AI-Enabled 'Smart Courts' To Recommend Laws & Draft Legal Docs; Judges To Take Consult AI Before Verdict' (*The EurAsian Times*, 16 July 2022) <<https://eurasianimes.com/chinas-ai-enabled-smart-court-to-recommend-laws-judges/>> accessed 5 September 2022.

39 Deng (n 37) 223.

40 See, for example, Council Conclusions 'Access to justice – seizing the opportunities of digitalisation' 2020/C 342 I/01, OJ C 342I, 2020, 1-7; European Parliament resolution of 20 October 2020 with recommendations to the Commission on a framework of ethical aspects of artificial intelligence, robotics and related technologies (2020/2012(INL)), OJ C 404, 63-106.

41 RW Campbell, 'Artificial Intelligence in the Courtroom: The Delivery of Justice in the Age of Machine Learning' (2020) *Colorado Technology Law Journal* 323-350.

42 Deng (n 37) 33.

43 Richard, Solow-Niederman (n 37) 242-289.

official resolution made by the court, is thinkable.⁴⁴ In addition, commenting on Brazil's backlog of 100 million cases, he suggests that usually, it is better to have these cases disposed of by opaque predictive systems that would faithfully issue decisions consistent with judges of the past instead of waiting for a decision by a human judge that will never become.⁴⁵ As discussions over the robot-judges and their independence grow, an analysis of whether it will not put the rule of law in danger is required.

4 WHY THE RULE OF LAW MIGHT BE IN DANGER

Despite the fact that the rule of law can be deemed one of the most important principles globally in general, the definition of it varies throughout different legal systems and contexts. In fact, it is getting harder and harder to define it, as the phrase is being used in many different ways. The phrase has become chameleon-like, taking on whatever shade of meaning best fits the author's purpose. But without a clear definition, the rule of law is in danger of coming to mean virtually everything so that it may, in fact, come to mean nothing at all.⁴⁶ Nevertheless, the essence of this principle is best revealed by analysing the main elements it encompasses. According to the World Justice Project, the rule of law encompasses the following four universal principles:

1. The government and its officials and agents are accountable under the law;
2. The laws are clear, publicised, stable, and fair and protect fundamental rights, including the security of persons and property;
3. The process by which laws are enacted, administered, and enforced is accessible, efficient, and fair;
4. Justice is delivered in a timely manner by competent, ethical, and independent representatives and neutrals who are accessible, have adequate resources, and reflect the makeup of the communities they serve.⁴⁷

It should be noted that the Organisation for Economic Co-operation and Development, for example, distinguishes the same four elements when describing the notion of the rule of law.⁴⁸ Subsequently, within the framework of this article, the rule of law will be deemed a principle encompassing the four abovementioned universal principles, the totality of which reveal its essence. In the following passages of the article, it will be analysed whether the universal elements of the rule of law principle mentioned above are at risk when applying technologies in certain areas of the public sector: automated administrative orders, the risk assessment tool COMPAS, and robot-judges.

The main idea of the first of the four universal principles of the rule of law consists of its accountability. The principle says that all persons, including the government and private actors, are accountable under the law. However, if systems start making decisions that traditionally were delegated exclusively to officials, are we not risking that there will be an 'accountability deficit'? This risk can be perceived in the first example of the use of technologies in the public sector – automated administrative orders. Who will be responsible if, for

44 Susskind (n 34) 287.

45 Ibid 290.

46 R Stein, 'Rule of Law: What Does It Mean' (2009) *Minnesota Journal of International Law* 250.

47 The World Justice Project Rule of Law Index 2021 (World Justice Project 2021) <<https://worldjusticeproject.org/sites/default/files/documents/WJP-INDEX-21.pdf>> accessed 26 September 2022.

48 See, for example, *OECD Government at a Glance 2021* (OECD Publishing 2021); *OECD Government at a Glance 2019* (OECD Publishing 2019).

example, the algorithm generates a discriminative administrative order? We should also bear in mind that the issuance of administrative orders, at least in Lithuania, has for years been a discretion only police officers had. Civil servants have a special place in the Lithuanian legal system when they perform duties in the civil service and carry out public administrative activities. Accordingly, a person seeking to become a statutory civil servant is subject to certain qualification requirements, *inter alia*, the requirement of an impeccable reputation. Consequently, it is questionable whether the functions of civil servants can be delegated to systems in general. Bearing in mind the current level of technological development, the use of algorithms could only assist the officer, but the final decision (and, therefore, the responsibility) should be at the officer's discretion.

What is more, the Constitutional Court of the Republic of Lithuania repeatedly emphasised that the civil service system must function in such a way that not only responsibility is established for violations committed in the civil service but also that persons who have committed violations in the civil service are actually brought to justice.⁴⁹ In general, civil servants are liable for official misconduct that arise from a failure to perform the duties of a civil servant or from an improper performance due to the fault of the civil servant. Thus, it is not clear, what kind of accountability this entails and who bears it in the event that the principles and/or duties of civil servants are violated by an algorithm? For example, when an automated administrative order with offensive content is sent, can we hold the algorithm responsible? Probably not, since algorithms have neither intentions nor morals. Let us say a police officer breaches the law – he or she could be fined, receive a warning, or even be fired, whereas when we talk about automated administrative orders, there is no such thing as personal responsibility. The algorithm has the rights of a police officer but no obligations. Unfortunately, as we know, algorithms and other technologies discriminate, and technical failures or cases of a cyber security breach are also not ruled out. In the context of such legally significant risks, the following questions arise: is the interpretation of the Constitutional Court that a person should be held personally responsible for violations committed in public service properly ensured? Won't the further development of technology in the public sector, in the long run, eliminate responsibility for violations committed when performing duties of public administration? Coming back to the universal principle of the rule of law and the requirement to be able to hold public officials legally responsible, the question of how we perceive algorithms that perform the functions (that were exclusively reserved for the discretion of the official) requires further discussion. To conclude, there is a risk that the fundamental principle of accountability might be in danger.

The second universal principle of the rule of law is about fundamental rights and just law. According to the World Justice Project, eight elements should be borne in mind: equal treatment and the absence of discrimination; effective guarantees to the right to life and security of person; due process of law and rights of the accused; effective guarantee of freedom of opinion and expression; effective guarantee of freedom of belief and religion; freedom from arbitrary interference with privacy; effectively guaranteed assembly and association and fundamental labour rights.⁵⁰ This set of rights was chosen according to their relation to the flourishing of the rule of law and good governance, and non-discrimination is definitely one of the most important of them. However, technology-based decision-making tools may not be reliable in ensuring adequate protection of this right. When analysing the software COMPAS case, it was emphasised that racial disparities were discovered in the software's determinations. Let us not forget other important aspects, such as the 'black-box'

49 Ruling of 18 13 August 2007, no 33/04 and ruling of April 2019, no 11/2017-5/2018 of the Constitutional Court of the Republic of Lithuania.

50 The World Justice Project Rule of Law Index 2021 (World Justice Project 2021) <<https://worldjusticeproject.org/sites/default/files/documents/WJP-INDEX-21.pdf>> accessed 26 September 2022.

problem – meaning that regular people, judges, and even the creators of the software are not able to explain and understand how it works, as the system teaches itself and mutates independently. What is more, such software often enjoys the protection of intellectual property law. Another important aspect not yet examined is reliance on decisions made by such software when a human being is still in the loop and retains the discretion to make the final decision. The same problem could indeed be relevant when we talk about automated administrative orders – they can also have a discriminatory effect that we might not be aware of. And in that case, the results are not even being reviewed by a human being. To conclude, we must be able to check whether the technology is discriminating; otherwise, we put this element of the rule of law at risk of being breached.

The openness of government is the third universal principle of the rule of law. It regulates whether enough information is shared by the government (also the quality of it), whether people have effective tools to hold the government accountable if needed, etc. In the framework of this article, important aspects of this principle are the right to information and the ability to complain regarding the provision of public services. When a decision is made by a system, how can citizens be in possession of relevant information to challenge such a decision? What about the requirement that the law should provide access to justice and, secondly, that court processes should be fair? To challenge a decision made by a public decision-maker, it is essential to understand how and why a certain decision was made. When we talk about robot judges, it is still not clear how they will make decisions and how we will be able to challenge them. Also, the previously-discussed problems of a ‘black-box’ and a trade secret are still not resolved. From the perspective of a person wanting to challenge a decision made by a robot-judge, it is simply not fair. This is important to consider with an example like the risk assessment tool COMPAS and can even be relevant when talking about automated administrative orders.

The final universal principle concerns accessible and impartial justice. Can we consider the robot-judge – created based on existing technological developments and with the existing potential problems, as analysed in this article – as being in accordance with these principles? What about the requirement for a judge to be independent? Relying on a suggestion or especially delegating the decision-making function to software that the judges are unable to understand and test poses a risk to a judge’s independence. After all, judges would not accept or tolerate relying on expert evidence if the expert were not required to provide qualifications or demonstrable expertise, an explanation of reasoning or methodology, and assurance of the reliability of their evidence.⁵¹ Also, the impartiality of a judge requires fairness and equal treatment of all persons: without being biased or prejudiced. Lack of transparency (as already mentioned, often resulting from protection under trade secrets) is not in line with a judge being impartial in cases, especially when software – used either to counsel a judge or to take over the decision-making function – is using data that reflect bias and might have discriminatory effects. Of course, over the years, many cases in which the judges were biased have been disclosed, and it would not be fair to tolerate one standard for judges but demand the systems to be completely unbiased. However, the scale when we have single biased judges and when we enable an entire system to act on behalf of the state in the public sector that potentially might be discriminatory differs dramatically. To conclude, the potential for as yet unresolved risks, such as algorithmic discrimination, the ‘black-box’ problem, and a lack of openness in terms of operation principles pose a risk to the universal principle of the rule of law that requires justice to be delivered by representatives of certain qualities.

⁵¹ M Zalnieriute, F Bell, ‘Technology and the Judicial Role’ in G Appleby, A Lynch (eds), *The Judge, the Judiciary and the Court: Individual, Collegial and Institutional Judicial Dynamics in Australia* (Cambridge University Press, 2021).

To conclude, before enabling any kind of use of technology in the public sector, all four boxes of the rule of law components (universal principles) have to be ticked, and the supremacy of the rule of law must be ensured. Only then can we have a system we can trust – the system we have been building for some time now.

4 CONCLUSIONS

The rule of law is one of the fundamental principles of the EU, the notions of which are very highly supported in all member states. Even though it is limited to the borders of states, it is recognised internationally, and adherence to it in a Member State has a direct impact on the EU itself. In addition, it contains all the necessary principles that allow us to consider the state as one in which law reigns. The totality of all the aspects mentioned above makes the rule of law a proper measure to evaluate the effects of the use of technology in the public sector.

When the exclusive right of a police officer to give administrative orders is being delegated to the algorithm without a subsequent opportunity to review it, the universal principle of the rule of law that the government and its officials and agents are accountable under the law is at risk of being breached: according to current regulations, algorithms have no accountability for violations committed in the performance of civil service functions.

The software COMPAS was proved to be discriminatory. Other aspects specific to this case, such as the 'black-box' problem, the legal protection under the intellectual property law, and the tendency to rely on a decision made by an assistive tool, showed that this type of software might put the principle of the rule of law in jeopardy in terms of the notion that fundamental human rights must be properly protected.

When talking about applying certain technology in the public sector, the inability to understand how certain technologies work due either to a lack of knowledge or a lack of relevant information being disclosed is not in line with the third universal principle of the rule of law. A person trying to challenge such a decision is put in an unfavourable position, and the right to a fair trial is not properly ensured.

The final universal principle of the rule of law that justice is delivered by representatives with certain qualities, especially the notion that they should be independent and impartial, might be in danger when software makes a suggestion or a decision, as it is impossible to test it or understand how it came to the conclusion it did, what kind of data was used, and what impact it had on a judge's final decision

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