LegalTech in the Judiciary: Technological Developments and the Future of the Court System

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1. Introduction

Today's judiciary is a well-established structure with a variety of courts of varying jurisdiction, in which traditionally sit persons holding the office of a judge. A judge is independent in his actions, and the only limit to his actions is the binding law. The latter, as we know, has been expanding on a large scale in recent years. This has led to a situation in which the office of a judge and the way he acts should be viewed differently from the way it was a dozen or so years ago. Admittedly, this does not yet involve changes to the constitutional foundations for the performance of the office of a judge, which, as it can be assumed, may soon appear if only in connection with calls for the replacement of traditional judges with algorithms in deciding certain categories of cases. This axis of a change in views is currently rather related to the methodology of exercising the office of a judge. Undoubtedly, the world of new technologies is also transforming the judiciary, and the benefits associated with this world can and do serve the administration of justice. [1]

Efficient adjudication of court cases is one of today's elements of the constitutional standard of the right to a court, often referred to as the so-called "fair trial", in connection with the jurisprudence appearing not only against the background of individual Constitutions, but also, at least from the point of view of European countries, against the background of Article 6 of the European Convention on Human Rights. [2] This standard,

1 Tania Sourdin, 'Judge v. robot? Artificial Intelligence and judicial decision making'(2018) 4 UNSW Law Journal 1114.

2 cf Elsa Toska Dobjani, 'Length of proceedings as standard of due process of law in the practise of the Constitutional Court of Albania' (2016) 13 Academicus. International Scientific Journal 161. Martin Kuijer, 'The right to a fair trial and the Council of Europe's efforts to ensure effective remedies on a domestic level for excessively lengthy proceedings' (2013) 13 Human Rights Law Review 777-794.

developed over the years, has often been disturbed in some systems. These distortions, which today make up one of the basic deficiencies of the justice system - the lengthiness of court proceedings - are the motive for most of the changes in procedural regulations, whose basic task, at least from the perspective of recent years, is to speed up the examination of cases, to reduce their duration. In many countries, key indicators of the length of court proceedings have deteriorated in recent years. This must mean lowering of standards and widespread dissatisfaction, and therefore provoke a search for solutions which could improve efficiency.[3]

It should be emphasised that lawyers from all over the world are considering how to shape the performance of judges so that it can meet public expectations.[4] In the European judicial area currently in force, which is based on dialogue and mutual recognition of judicial decisions, the values that must guide the exercise of judicial functions must meet certain standards. Efficiency and speed are standards which affect the functioning of the entire justice system, if only in the context familiar from, for example, the Council of Europe and European Union regulations. These standards already recognise the problem of new technologies, the opportunities and threats which these may bring to the justice system. [5] Today's court is very different from the one that operated just a few decades ago. A prime example of this is the availability of online case law, which means that today anyone interested can easily access it. If it were not for modern technology, such a possibility would not exist; one would still have to browse through thousands of pages of library catalogues or various archives.

Technological changes can also be seen in individual court procedures. Procedural rules have undergone significant changes in recent years. Typically “analogue” court proceedings are already becoming “digital”. This was accelerated in connection with the COVID-19 pandemic, when the work of the courts was suspended for some time and a large-scale search began for solutions that could provide a panacea for the orders of social

3 cf Nicholas Mouttotos, ‘Reform of civil procedure in Cyprus: Delivering justice in a more efficient and timely way’(2020) 2 Common Law World Review 99.

4 cf Magdalena Siwek, ‘Prawa i obowiązki sędziego’(2006) 13 Studenckie Zeszyty Naukowe 37. See, also Ewa Łetowska, ‘Dekalog dobrego sędziego’(2016) 1 Krajowa Rada Sądownictwa 5-8.

5 See The Report of the European Commission: European Commision, ‘Study on the use of innovative technologies in the justice field. Final report” (Publication Office European Union 2020) "Study on the use of innovative technologies in the justice field", (Brussels, September 2020).

isolation in force during the pandemic.[6] There are many such solutions, both in the practical functioning of courts and in the conceptual phase. They may have, and often do have, an impact on the activities of courts and the parties involved. The experience of several countries shows that the bold use of non-traditional solutions can have very desirable effects.[7] Such solutions include those based on artificial intelligence. Therefore, new technologies in the administration of justice, LegalTech, is a path from which there is no turning back today. This will be the subject of the following remarks.

2. *Experience with LegalTech in the judiciary*

Focusing on the current state of the use of technological tools in the administration of justice, it should be recalled that LegalTech tools can be divided into several groups. Many indicate that, in fact, today one can speak of at least three "waves" of LegalTech.[8] It should be recalled that LegalTech 1.0 refers to the technology including software that supports the activities of lawyers as professionals. Thus, it refers to the long-known IT systems for office organisation and operation, document circulation, legal information systems, or certain services available online, such as videoconferencing, online communication with courts, or even online hearings. LegalTech 2.0 is already much more advanced technology, not only supporting the work of judges and clerks, but also replacing people, where in the justice system we can talk about, among others, automation of certain activities. Finally, LegalTech 3.0 are solutions that are aimed not so much at automation and replacing humans as at the possibility of making autonomous decisions by technological solutions, which is primarily related to the development of artificial intelligence.[9]

Looking at the above, one can in principle independently assess the implementation of the various available LegalTech tools in a given legal system. Looking at the above, e.g. from the perspective of the Polish

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6 David Freeman Engstron, 'Post-COVID courts' (2020) 68 UCLA Law Review Discourse 246 .

7 Robert Size, 'Taking advantage of advances in technology to enhance the rule of law' (2017) 91 Australian Law Journal *575*.

8 cf Dariusz Szostek, in Dariusz Szostek (ed) *Legal tech. Czyli jak bezpiecznie korzystać z narzędzi informatycznych w organizacji, w tym w kancelarii oraz dziale prawnym* (C. H. Beck 2021).

9 ibid.

judiciary, transformations connected with the first stage of LegalTech development are noticeable, but there are no wider attempts to apply further benefits of new technologies, despite subsequent IT projects aimed at improving the judiciary that have been appearing for some time now. The situation is similar in most European countries. As a rule, judges have legal information systems available, and they use an electronic system for management of hearings. In practice, there are, inter alia, so-called court information portals, solutions for persons having the status of a party to proceedings or an attorney, enabling direct online access to information resources contained in court files. There is a number of tools supporting the adjudication process which should be qualified as LegalTech 1.0 solutions.[10]

In the practice of the judiciary, however, more and more voices are being raised about the need to cross further barriers and perhaps replace, at least in some cases, traditional judges in the future by algorithms using artificial intelligence skills.[11] Such a possibility should certainly not be underestimated, especially as the first results of research and experiments (what will be presented below), at least for some, seem promising.[12]

The implementation of LegalTech tools in the judiciary takes place in stages. Today, it is not a problem to use an IT system in court, as it has become an everyday practice basically everywhere. Today, the important problem is the effective use of such systems, which could be seen in the world at least in connection with the COVID-19 pandemic. It would be impossible to list all the examples of the use of LegalTech here, but at least one example shows where the judicial world is heading. As already mentioned, LegalTech includes, inter alia, the possibility to organise part of a trial by videoconferencing. Until the COVID-19 pandemic, in different legal systems, the state of implementation of various solutions related to this was at different stages. The pandemic made the use of such tools more and more daring. This was not a question of the availability of technical solutions, but rather of the legal possibility of using these solutions for the purposes of cases proceeded by the courts. Therefore, it should be

10 Mariusz Załucki, in Dariusz Szostek (ed) *Legal tech. Czyli jak bezpiecznie korzystać z narzędzi informatycznych w organizacji, w tym w kancelarii oraz dziale prawnym* (C. H. Beck 2021).

11 cf Richard Susskind, *Online Courts and the Future of Justice* (Oxford University Press 2019).

12 cf Mariusz Załucki, 'Wykorzystanie sztucznej inteligencji do rozstrzygania spraw spadkowych' in Luigi Lai and Marek Świerczyński (eds) *Prawo sztucznej inteligencji* (C. H. Beck, 2020) 145-155.

emphasised that an important change in recent months that has occurred in the world in relation to the functioning of the judiciary is the broad possibility of holding the so-called trials at a different location by means of audio-video technology (videoconferencing). Legislative changes in individual countries have given rise to the use of such instant messengers as Zoom, Skype, Facetime, MS Teams and Google Meet for procedural activities. As a rule, hearings were conducted by means of technical devices allowing for their remote execution with simultaneous direct transmission of images and sound, with the reservation that the persons participating in them do not have to be present in the court building (including another court, which was the subject of previous regulation in some states). In principle, therefore, court hearings as a result of these changes may be held online in many countries, unless holding them in the traditional manner does not pose an excessive risk to health. Against this background, one wonders whether this improvement will remain in individual court procedures even after the pandemic period. At least some people expect this. Such a change in judicial procedures does not happen often.[13]

The above means that court procedures have recently undergone a significant transformation and the way courts operate today is indeed different from how it was just a few years ago. The need to incorporate the technological world into the legal world is undeniable. It is to be expected that this interpenetration of these worlds will continue. An effective and efficient justice system is a key factor influencing the functioning of the state, particularly in the area of security and economic development. Widely understood computerisation, as LegalTech tools can be understood, is certainly a way to improve the functioning of the justice system. However, computerisation understood as a support is not everything. More and more often, the possibility of replacing a human being, at least at certain stages of case recognition before a court, is being considered.

3. AI in the judiciary

The impulse for further discussion in this area may be the results of a test which were published in 2016, to which 584 cases pending before the European Court of Human Rights were subjected. The algorithm, after analysing the documents, predicted 79 % of the decisions of this court concerning claims under Article 3 (prohibition of torture, inhuman and de-

13 Załucki (n 10).

grading treatment), Article 6 (right to a fair trial) and Article 8 (right to respect for private and family life) of the European Convention on Human Rights. [14] The results of this test have resonated widely in the world literature and have given impetus to undertake further research, which is also promising.[15] Undoubtedly, the level of complexity of the matter to be resolved and the complexity of the issues raised allows an optimistic outlook on the future from the perspective of the possibility to create an algorithm for resolving less complicated cases, which are most often the subject of adjudication before a common court.

A similar test, the results of which were published in 2017, was conducted in the United States of America. Here, in turn, artificial intelligence analysed more than 28,000 cases pending before the US Supreme Court on the basis of the created algorithm. [16] The algorithm was able to predict 70.2 % of cases decided between 1816 and 2015.[17] At the same time, the spectrum of cases was much broader than in the case of the test concerning the application of the standards of the European Convention on Human Rights in specific cases. This is certainly one of the next impulses, a motivation to try to further search for alternative methods of judging disputes. Therefore, it is not surprising that also this experiment was widely echoed in the scientific space.[18]

The above tests were primarily based on a natural language processing method, where an artificial intelligence predictive model operating on text data was used. Large amounts of data were analysed to accurately predict the actual outcome. The results of the tests are interesting in that a large proportion of the errors related to similar legal standards, where only the nuances of the jurisprudence decided on a different outcome in reality. It should therefore be noted that a system dealing with the automation

14 cf Nikolos Aletras, Dimitrios Tsarapatsanis, Daniel Preotiuc-Pietro and Vasileios Lampos, 'Predicting judicial
decisions of the European Court of Human Rights: a natural language processing perspective' (2016) 2 PeerJ Computer Science 93 .

15 Masha Medvedeva, 'Using machine learning to predict decisions of the European Court of Human Rights' (2020) 28 Artificial Intelligence and Law 237-266.

16 cf Daniel Martin Katz, Michel J. Bommarito II and Josh Blackman, 'A General Approach for Predicting the Behavior of the Supreme Court of the United States' (2017) 3 PLOS ONE.

17 ibid.

18 cf., eg.: Haoxi Zhong, Zhipeng Guo, Cunchao Tu, Chaojun Xiao, Zhiyuan Liu and Maosong Sun, 'Legal Judgment Prediction via Topological Learning' (Proceedings of the 2018 Conference on Empirical Methods in Natural Language Processing, Brussels 2018) 3540-3549.

of the analysis, understanding, translation and generation of natural language by a computer in the context of the processing of specific real-life judgments could be an interesting starting point for further research.[19] Certainly, in turn, such experiments open up the discussion of whether the traditional judge can be replaced by a computer. For many this seems tempting, although for obvious reasons this is not yet (and may never be) the standard that individual legislators are aiming for. Nevertheless, in the scientific discussion, it is becoming more and more courageous to formulate theories according to which, at least in certain categories of cases, it seems possible.[20]

Tests such as the ones indicated above show that artificial intelligence can be an interesting tool to assist in the administration of justice, and may one day be able to replace "real" judges. In fact, this idea is not entirely new, as already in the 1970s concepts related to this appeared.[21] Recently there has been a growing buzz about a project originating in Estonia, where the first steps are being taken by a mechanism that assists judges by collecting certain data necessary to decide a given case and analysing it so as to decide the case in the most just manner.[22] This mechanism is intended, among other things, as a response to the courts' inability to cope with the growing number of cases, so one of the motivations for working on this solution is the desire to improve the efficiency and effectiveness of case resolution. Its first task is to resolve the so-called minor cases, where the value of the subject of a dispute does not exceed the amount of 7000 EUR.[23] Traditional judges are not involved in these settlements. The system is based on the parties providing documents supporting their positions, which are analysed by an algorithm which then issues the decision. Only an appeal against this decision is heard in the traditional way. It is

19 Oleg Metsker, Egor Trofimov, Sofia Grechishcheva, 'Natural Language Processing of Russian Court Decisions for Digital Indicators Mapping for Oversight Process Control Efficiency: Disobeying a Police Officer Case' (Electronic Governance and Open Society: Challenges in Eurasia, 5th International Conference, EGOSE 2018, St. Petersburg 2018).

20 See Sourdin, (n 924)1114; Mariusz Załucki, 'Computers in gowns and wigs. Some remarks about a new era of judiciary' in Laura Miraut Martin and Mariusz Załucki (eds) *AI and human Rights*, (in print 2021).

21 cf Anthony D'Amato, 'Can/Should Computers Replace Judges?'(1997) 11 Georgia Law Review 1277–1301.

22 Eric Miller, 'Can AI Be a Fair Judge in Court? Estonia Thins So' (WIRED 3 March 2019) <http://www.wired.com/> accessed 7 April 2021.

23 Franciska Z. Gyuranecz, Bernadett Krausz and Dorottya Papp, 'The AI is Now in Session. The Impact of Digitalization on Courts' (2019) 8.

therefore certainly another step towards taking seriously solutions of this kind based on artificial intelligence, where the involvement of a human judge is minor (minimised).[24] The Estonian solution is part of the Estonian strategy of digitizing public actions, and the first effects of using it also seem promising.

Another example of the use of artificial intelligence in the judiciary is the US-based system, the Correctional Offender Management Profiling for Alternative Sanctions (COMPAS), which assesses the risk of recidivism on the basis of 137 types of data.[25] The COMPAS software uses an algorithm to make this assessment. The system predicts, among other things, pre-trial risk, which is a measure of a person's potential to fail to appear and commit new offences while in custody. For this purpose, the system assesses, inter alia, current charges, pending charges, history of previous imprisonment, previous pre-trial failures, housing stability, employment status, social ties, or substance abuse, which, according to science, are the most significant indicators affecting the outcome of such risk. The system also performs risk assessments to predict new crimes after release from prison. It uses, among other things, a person's criminal history, associates, drug involvement and signs of juvenile delinquency as data. The system also makes it possible to predict the commission of violent crimes after release. To do this, the system uses data such as criminal history, history of non-compliance with the law in other ways, occupational problems, educational problems, age of the person on admission and age of the person on first arrest, among others. So far, the system has met with a rather enthusiastic reception, although it has of course also been subject to criticism. For example, the position of the Wisconsin Supreme Court emphasises that the COMPAS evaluation may be taken into account in sentencing, but that the limitations of the system must also be taken into account.[26] This opinion is interesting also in the context that the court concluded that the trial court's use of an algorithmic risk assessment in sentencing did not violate the defendant's due process rights, even though

24 Tanel Kerikmäe and Evelin Pärn-Lee, 'Legal dilemmas of Estonian artificial intelligence strategy: in between of e-society and global race'(2020) AI & Society <https://doi.org/10.1007/s00146-020-01009-8> accessed 7 April 2021 .

25 Tim Brennan, William Dieterich and Beate Ehret, 'Evaluating the predictive validity of the Compas risk and needs assessment system' (2009) 1 Criminal Justice and Behavior 21.

26 State v. Loomis, 881 N.W. 2d 749, (Wisconsin 2016).

the methodology used to prepare the assessment was not disclosed to either the court or the defendant.[27]

Allegations of this kind are increasingly common in relation to similar solutions. It is stressed that the functioning of such a mechanism should be clear and access to the algorithm should be open. It is argued that since such algorithms are usually secret, they cannot be examined by the public and the parties involved, which may constitute a violation of the right to a fair trial.[28] It is also stressed, inter alia, that algorithms may be susceptible to various kinds of bias. In the case of COMPAS, a study showed, among other things, that the system did not treat persons of different race equally. The study showed that African-Americans were much less likely to repeat the same offence, while the COMPAS system showed such a result for Caucasians.[29] Without prejudging the effectiveness of the system, it should be noted that it raises certain controversies, which should undoubtedly be taken into account in the future, when designing analogous solutions.

Speaking of analogous solutions, it is worth mentioning the one operating in France, concerning the software for setting the amounts of severance payments for dismissals without just cause.[30] One of the reasons for seeking an algorithm-based solution was to limit excessive variability in case law. Indeed, the practice of the French courts to date in this regard has been far from uniform. The introduction of an algorithm based on various data has also proved to be a promising solution in this respect and a tool based on artificial intelligence is helpful for the adjudicator in a given case.[31] Interesting solutions also exist e.g. in China, where three internet courts operate (Hangzhou, Beijing, Guangzhou), in which the settlement of cases is based, among others, also on algorithms based

27 Katherine Freeman, 'Algorithmic injustice: How the Wisconsin Supreme Court failed to protect due process rights in State v. Loomis' (2016) 5 North Carolina Journal of Law & Technology 75.

28 ibid 106.

29 cf Julian Angwin, Jeff Larson, Surya Mattu and Lauren Kirchner, 'Machine bias' (Pro Publica, 23 May 2016) <https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing> accessed 11 March 2021.

30 Roseline Letterton, 'L'accés numérique au droit' (2018) 3 Annales des Mines 68-72.

31 Pierre Cahuc, Franck Malherbet and Julien Prat, 'The detrimental effect of job protection on employment: Evidence from France' (2019) Iza Institute of Labor Economics 1.

on artificial intelligence,[32] or where the "Shanghai Intelligent Assistive case-handling system for criminal cases - System 206" operates, which is useful for solving criminal cases.[33] Relevant tests are also being conducted in Brazil (Inova PJe).[34]

There are already many similar examples of using tools based on artificial intelligence. It is impossible to present them all in one place. However, looking at those mentioned as well as some of the solutions not presented here, one may be tempted to conclude that a place is slowly being created for the use of artificial intelligence in resolving certain categories of court cases. Support for the judiciary in terms of new technologies is no longer just about solutions that help a judge, the use of which cannot be overestimated, but also about the use of artificial intelligence alone, which can decide certain categories of cases instead of a judge. Particularly in the context of the COVID-19 pandemic, there has been a large-scale and intensive search for tools that could allow courts to function normally, eliminating at least some of the ills of their operation. Artificial intelligence is certainly a solution. However, it is still a solution that requires further research. So what can artificial intelligence do for the functioning of the courts?

4. *The potential of AI in the context of the functioning of the judiciary of the future*

There is no doubt that artificial intelligence can be helpful to the judiciary. This help may concern many aspects of its functioning. There are even some who believe that artificial intelligence would make judgments in individual cases fairer.[35] It could certainly also become more efficient, especially in those types of cases where human involvement takes up all of a person's professional capacity. An example of such a case is the recently heard criminal case in Poland concerning the so-called Amber-Gold affair. The justification for the first instance verdict in this case is 9345 pages long, and its preparation took over nine months.[36] Leaving aside the actual

32 Alison (Lu) Xu, 'Chinese Judicial Justice on the Cloud: A Future Call or a Pandora's Box? An Analysis of the 'Intelligent Court System' of China'(2017) 1 Information & Communications Technology Law 59-71.

33 cf Yadong Cui, *Artificial Intelligence and Judicial Modernization* (Springer 2020) 43.

34 Paulo C. Neves Jr., 'Judiciário 5.0' (Blucher 2020) 76.

35 Daniel Kahnemann, *Thinking fast and slow* (Farrar, Straus and Giroux 2011) 43.

36 cf Natalia Grzybowska, 'Jest uzasadnienie wyroku ws. Amber Gold. Liczy 9345 stron I zajmie około 47 tomów akt sprawy' (gdansk.naszemiasto.pl, 29 July 2020)

possibility of a human being preparing more than 30 pages of text per day, it seems that in this scope the applied support could be provided by artificial intelligence. At the same time it should be stressed that it is precisely the legitimacy and transparency of decision making by mechanisms based on artificial intelligence that is a solid argument against such solutions.[37] While many would accept the support of the adjudication process by artificial intelligence, the lack of knowledge of how the algorithm arrives at specific conclusions and the parallel impossibility to trace subsequent steps in the argumentation (which is a characteristic of most algorithms used so far) seems to be important for assuming, if only against the background of the functioning standards related to the so-called fair trial, that the rights of a party could be violated in this way. It is, however, certainly a functionality of the system that can be improved in the future, which in the case of cases such as the one discussed above, would significantly affect the efficiency of the justice system.

It is undoubtedly possible for artificial intelligence to influence the administration of justice by organising and structuring information, providing advice or bringing about uniformity in the adjudication process. It is the task of any adjudicatory process to recognise certain model views in the documents being analysed, e.g. in reasons for court decisions or doctrinal positions. There is no doubt that a mechanism based on artificial intelligence will be much quicker to determine whether there is a line of case law that should be considered for the resolution of a given case. All judgments, as well as scientific articles or glosses, contain a lot of different information. Automated analysis of this information can considerably speed up specific litigation decisions. Automated analysis of various data can also have other applications. This can be seen, for example, in the eDiscovery system from the United States of America, which is used for the preparation of evidence proceedings, which may include litigation. In the so-called electronic discovery we deal with gathering, processing and presenting electronic evidence, i.e. means of proof, which are based on information stored electronically. The ways in which potential evidence is handled in eDiscovery are governed by rules depending on statutory requirements or by guidelines agreed by the parties and then accepted by the judge. The fact that a specific algorithm is used significantly reduces

<https://gdansk.naszemiasto.pl/jest-uzasadnienie-wyroku-ws-amber-gold-liczy-9345-stron-i/ar/c1-7827784> accessed 7April 2021.

37 cf Paul Marrow, Mansi Karol and Steven Kuyan, 'Artificial Intelligence and Arbitration: The Computer as an Arbitrator. Are We There Yet?'(2020) 4 Dispute Resolution Journal.

the length of the evidentiary process.[38] The use of eDiscovery involves the application of an algorithm in the pre-trial phase of a trial in which each party investigates the facts of the case by, among other things, obtaining evidence from the opposing party. In the local legal system, this is a widely used mechanism that can essentially predict the outcome of a case. It is undoubtedly a much faster mechanism than physically reviewing all the data manually.[39]

On the other hand, the so-called advisory use of artificial intelligence seems to be needed insofar as, in principle, everyone, not only the judge dealing with a given case, could, upon presentation of certain facts, receive information on the expected outcome. An example is the Civil Resolution Tribunal in Canada, where victims of road traffic accidents can receive free information about their claims. The tool uses a question and answer function to provide the public with tailored legal information, written in plain language, and self-help tools. The aim of this solution is to seek to resolve disputes without the need to file a lawsuit.[40]

A similar solution is being tested in the Netherlands, where a court in collaboration with research units is investigating the possibilities of artificial intelligence in the context of traffic offence cases in which a citizen appeals (contesting the validity of the penalties imposed for the offence). The aim of this work is to develop an artificial intelligence mechanism that would resolve such cases autonomously.[41]

Predictive tools, which allow solid guesses as to the outcome of a future court case, may be of great importance in the perspective of the development of artificial intelligence tools used in the judiciary. For this reason, further tests of software analysing specific databases of judgments and drawing appropriate conclusions from them should be expected in the near future. According to many, the justice system of the future will

38 Jack G. Conrad, 'E-Discovery revisited: The need for artificial intelligence beyond information retrieval'(2010) 4 Artificial Intelligence and Law 321-345.

39 cf James N. Dertouzos, Nicholas M. Pace and Robert H. Anderson, 'The Legal and Economic Implications of Electronic Discovery' 2008 Institute for Civil Justice 7.

40 Shannon Salter, 'Online dispute resolution and justice system integration: British Columbia's Civil Resolution Tribunal' (2017) 34 Windsor Yearbook of Access to Justice 112.

41 cf Manuella van der Put, 'Kan artificiële intelligentie de rechtspraak betoveren' (2019) 2 Rechtstreeks 50.

be one where justice can be predicted by artificial intelligence.[42] This is already recognised by many stakeholders, including such major institutions as the European Union and the Council of Europe.

It may also be an important step to entrust artificial intelligence with the adjudication of certain cases, as is the case, for example, in Estonia. To this end, science indicates, among other things, that it is necessary to select cases that would be suitable for adjudication by artificial intelligence and conduct further tests. As can be expected, this will be a melody of the not too distant future.

Here, as an example, one can point to the extensive use of technological tools in Poland, in arbitration courts. For example, one of them, operating at the Polish Notaries' Association in Warsaw, conducts completely electronic proceedings and its IT system is largely automated, verging on AI mechanisms.[43] In the future, it is planned to carry out analysis of case documentation and their assignment to specific legal norms by artificial intelligence, which is to be advisory and prepare draft awards with justifications.[44] The system is also to support the arbitrator during the proceedings by providing him with information on the course and outcome of other similar cases. It will also present excerpts from the justifications of other judgments that best explain a particular problem or legal issue.[45] The announcements are therefore promising. The trend towards total electronicisation, or at least an increase in its significance, can also be seen in other places. Here, for example, one can point to the Chinese justice system and the transformation of court procedures, which resulted in the adoption of the Rules on the Provision of Online Case Service for Parties to Cross-border Litigation on 3 February 2021(关于为跨境诉讼当事人提供网上立案服务的若干规定). These require Chinese courts to provide services that include guidance on initiating online cases, responding to enquiries, providing testimony via video, and initiating cases for parties

42 Veronika Myltseva, 'The legal nature and principles of the predictive justice' (2019) 3 Recht der Osteuropäischen Staaten 59; Antoine Garapon, 'Les enjeux de la justice prédictive'(2017) 1-2 La Semaine juridique.

43 cf Patrycja Rojek-Socha, 'Rusza elektroniczny sąd polubowny, skorzysta z profile zaufanego' (Prawo.pl, 24 April 2019) <https://www.prawo.pl/prawnicy-sady/elektroniczny-sad-polubowny-ultima-ratio-rusza-przy,402433.html> accessed 11 March2021.

44 cf Ultima Ratio 'Sztuczna inteligencja w Ultima Ratio. Czy roboty zastąpią arbitrów?' (ultimaratio.pl) <https://ultimaratio.pl/sztuczna-inteligencja-w-ultima-ratio-czy-roboty-zastapia-arbitrow> accessed 12 March 2021.

45 ibid.

in cross-border litigation. his is certainly the path that other countries will follow.[46]

5. *Dilemmas related to AI and the judiciary of the future*

In the above it should be noted that the use of artificial intelligence in the administration of justice raises many objections and a number of doubts. Seeing the potential related to the development of artificial intelligence, it is raised, among others, the possibility of a threat to the further development of law, predicting, for example, the twilight of legal discourse of judicature. In this context it is stressed that artificial intelligence will resolve the same cases in the same way, which will deprive jurisprudence of its new legal wisdom. The necessity of the human factor in adjudication is also raised, stressing among other things the need for de-automated and empathic handling of cases.[47] Finally, a number of ethical issues are raised concerning the functioning of artificial intelligence in the judiciary, not to mention the typical constitutional problems of the administration of justice by an independent and autonomous court.

These and other problems appear in institutional studies related to the future of justice through the use of artificial intelligence. Such future is seen, among others, by the European Union, which in the document "Study on the use of innovative technologies in the justice field" published on 14 September 2020, considers the use of artificial intelligence and blockchain/DLT technologies in the field of justice as a priority.[48] The document identifies 130 projects in this field (using innovative technologies in the justice field) in EU countries and proposes the creation of an EU legal and policy framework for future action. It is recalled that in the doctrinal discussion of this field, researchers and organisations debate various legal and ethical aspects. These aspects include ensuring guarantees for funda-

46 cf Meng Yu, 'Filing Lawsuits While Living Abroad: China's New Policy' (China Justice Observer, 7 March 2021) <https://www.chinajusticeobserver.com/a/filing-lawsuits-while-living-abroad-china-s-new-policy> accessed 12 March 2021.

47 cf Mark Halsey and Melissa de Van-Palumbo, 'Courts as empathic spaces: reflections on the Melbourne neighbourhood justice centre' (2018) 2 Grifith Law Review 182.

48 The Report of the European Commission: European Commision, 'Study on the use of innovative technologies in the justice field. Final report" (Publication Office European Union 2020) "Study on the use of innovative technologies in the justice field", (Brussels, September 2020).

mental rights and freedoms, such as respect for private life, protection of personal data, fair trial, good administration or non-discrimination.[49] It also recalled that several important papers have been prepared analysing the impact of AI on these rights and debating whether the existing legal framework is sufficiently adapted and adequate to deal with potential problems, and whether it is flexible enough to cope with the complexity and pace of technological developments.

As suggested by some of the doctrine's contributions, the document also notes that AI technology for dispute resolution is currently underutilised and its use remains at a rudimentary level. This can be understood to mean that we are still in an area that will develop and has great potential. So if the EU, a strongly institutionalised structure, is thinking about the future of justice in terms of the use of AI, it is highly likely that such a future in a more institutionalised form will occur.

This is certainly also recognised by the Council of Europe, which in its 2018 document, "European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and Their Environment" pointed to five fundamental principles for shaping the practice of justice with artificial intelligence.[50] These are:

1) respect for fundamental rights,
2) equal treatment and non-discrimination,
3) quality and security of data,
4) transparency, impartiality and fairness,
5) operation of AI systems under user control.

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49 cf Eduard F. Villaronga, Peter Kieseberg and Tiffany Li, 'Humans forget, machines remember: Artificial intelligence and the Right to Be Forgotten' (2018) 34, 2 Computer Law & Security Review 304–313; Paul Nemitz, 'Constitutional democracy and technology in the age of artificial intelligence' (2018) 2133 Royal Society Publishing; Aleš Završnik, 'Algorithmic justice: Algorithms and big data in criminal justice settings' (2019) 11 European Journal of Criminology . 1–20; (n 220) 83–92; Patrick Perrot, 'What about AI in criminal intelligence? From predictive policing to AI perspectives' (2017) 16 European Police Science and Research Bulletin 16; Karamjit S. Gill, 'Data to Decision and Judgment Making – a Question of Wisdom' (2018) 30 IFAC Papers On Line 733-738; MichaelL. Butterworth, 'The ICO and artificial intelligence: The role of fairness in the GDPR framework' (2018) 2 Computer Law Security Review 257-268.

50 European Ethical Charter on the use of artificial intelligence in judicial systems and their environment, Council of Europe, Commission for the Efficiency of Justice (CEPEJ), <https://rm.coe.int/ethical-charter-en-for-publication-4-december-2018/16808f699c> accessed 22 april 2021).

The Charter is intended for public and private stakeholders responsible for the design and implementation of AI-based tools and services that involve the processing of judicial decisions and data (machine learning or other methods derived from data science). It also concerns public policy makers responsible for legislative or regulatory frameworks. It should therefore be seen as an important guideline for future solutions that have the potential to revolutionise the justice system.

The above means, therefore, that the area of artificial intelligence and its possible applications in the administration of justice is an area where the last word has not yet been said. What is more, it is an area that still requires a great deal of investment and research. There is no doubt, however, that artificial intelligence is of great importance in the administration of justice and that the future possibilities are endless. With this in mind, while respecting the standard of a fair trial, as well as extremely important ethical issues, it is necessary to continue the search for possible applications of solutions based on artificial intelligence in the judiciary.

6. Conclusions

Transformation of the judiciary is a natural process, sometimes occurring too slowly. Today, in the world of new technologies, there is a need to adapt the judiciary to new realities and social expectations. Traditional adjudication of cases reveals more and more problems and becomes ineffective. Hence, changes are needed, especially those that boldly enter the world of new technologies. Some of the biggest obstacles to a modern court system, including online or automated courts, are thought to be political will. Carrying out such a transformation would require the support of judges and professionals, a source of funding and a well thought-out methodology for the transformation. Although today some solutions seem too futuristic, at the end of the day it is important to point out that in the practice of the judiciary there is a serious problem with wide access and efficiency. Technology can improve outcomes and give the public the tools to resolve public disputes in ways that were not possible before. While such a transformation may not solve many of the problems associated with the administration of justice, it can offer significant improvements in areas

where this is expected. Therefore, further opportunities for technology development in the judiciary cannot be ignored.[51]

51 cf Tania Sourdin and Richard Cornes, 'Do Judges Need to Be Human? The Implications of Technology for Responsive Judging' in Tania Sourdin and Archie Zariski (eds) *The Responsive Judge*., (Springer, 2018) 87.