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CONSULTATIVE COUNCIL OF EUROPEAN JUDGES (CCJE)

CCJE Opinion No. 26 (2023):

Moving forward:

the use of assistive technology in the judiciary

I. Introduction

1. In accordance with the mandate entrusted to it by the Committee of Ministers, the Consultative Council of European Judges (CCJE) has prepared the present Opinion entitled “Moving forward: the use of assistive technology in the judiciary”.
2. This Opinion has been prepared on the basis of previous CCJE Opinions, in particular of the CCJE Magna Carta of Judges (2010) and Opinion No. 14 (2011) on justice and information technologies (IT). It should be read in conjunction with Opinion No. 14 (2011), bearing in mind that the latter was prepared at a time when the use and nature

of technology were in an early stage of development. In addition, relevant instruments of the Council of Europe were taken into account, e.g. European Ethical Charter on the use of artificial intelligence (AI) in judicial systems and their environment (2018) of the European Commission for the Efficiency of Justice (CEPEJ), CEPEJ Guidelines on electronic court filing (e-filing) and digitalisation of courts (2021), CEPEJ Guidelines on videoconferencing in judicial proceedings (2021), Recommendation CM/Rec (2020)1 of the Committee of Ministers on the human rights impacts of algorithmic systems, Recommendation R (84) 5 of the Committee of Ministers on the principles of civil procedure designed to improve the functioning of justice (Principle 9), Parliamentary Assembly Resolution 2341 (2020) on the need for democratic governance of artificial intelligence, Parliamentary Assembly Report on justice by algorithm – the role of artificial intelligence in policing and criminal justice systems (2020).

3. Consideration has also been given to Digital Technologies for Better Justice – A Toolkit for Action (2020) of the Inter-American Development Bank, the European Union's 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, and Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).
4. Finally, the Opinion has taken into account the replies of the CCJE members to the questionnaire for the preparation of the CCJE Opinion No. 26 (2023). The replies show a broad range of development and use of technology. All member States use it to some extent. It ranges from audio recording of proceedings to electronic filing systems, electronic case management and videoconferencing, the last having particularly advanced in use as a consequence of the Covid-19 pandemic. Several member States are moving towards 100% use of electronic case files. The availability of electronic or digital versions of judgments and legislation is also a commonly used form of technology. Automated forms of proceedings, where used, are utilised in low value civil proceedings (small claims) and to facilitate judgments and other court decisions in simple procedural matters.
5. The use of artificial intelligence (AI) in the administration of justice remains at a nascent stage of development. While it is not used in a significant number of member States, such possibility is being actively explored by some. Where it is being used, such use tends to focus on administrative tasks, e.g. speech-to-text (dictation) programmes, language translation, and automatic anonymisation of judgments and orders. The replies also stressed the need to ensure that ultimate responsibility for judicial decisions remain with humans; AI should support rather than supersede judges.
6. Finally, the Opinion is based on a preliminary draft prepared by the CCJE Expert appointed by the Council of Europe, Dr. John Sorabji (Associate Professor, University College London).

II. Purpose and scope of the Opinion

7. The purpose of the Opinion is to examine the advantages and disadvantages of the use of assistive technology in the judiciary. It recognises that societal use of technology will continue to develop. Courts and judiciaries should keep pace with such developments. Additionally, it stresses the importance of developing and using technology in ways that maintain and, where possible, enhance the fundamental principles of the rule of law. It may, for instance, be used to support the work of judges and of parties to judicial processes improving accuracy in decision making. It may also promote speed and efficiency in the administration of justice. It should particularly enhance judicial independence and impartiality both of which are guaranteed internationally by the European Convention on Human Rights (ECHR)¹ as well as by the Universal Declaration of Human Rights² and other European and international instruments.³
8. To give effect to its purpose, Section III of this Opinion highlights the general use of technology, while Section IV gains an insight into its specific use, Section V deals with the potential benefits of the use of technology and Section VI deals with the challenges and dangers to judicial independence that it poses. In the light of these points, Section VII intends to provide a durable set of principles for the future use of technology in the judiciary. Terms used in the Opinion are defined in the Glossary.
9. The scope of the Opinion is limited to the use of specific forms of modern technologies, including the use of artificial intelligence (AI) to support “human” adjudication that are or may be used by judiciaries including data tools, e-filing and procedures, case tracking and management systems, and audio and videoconferencing. It does not cover web-streaming of proceedings, the use of AI decision-making as a replacement for human decisions or the use of technology by anyone other than the judiciary or the court administration.

III. General use of technology

10. States are required to secure effective and practical access to justice.⁴ Technology is a medium through which they can do so, both in the ordinary course of events and in extraordinary or emergency circumstances. It is thus one of the means through which a democratic state, committed to securing the rule of law, can enable the judicial power of the state to be exercised at all times.⁵
11. A state’s ability to secure access to justice faces numerous challenges. It faces a resource challenge. All states must balance resource allocation across a range of

¹ European Convention on Human Rights, Art. 6(1); CCJE Opinion No. 14 (2011), para 32.

² Universal Declaration of Human Rights, Art. 10.

³ EU Charter of Fundamental Rights, Art. 47; Inter-American Convention on Human Rights, Art. 8; Mount Scopus International Standards of Judicial Independence (2008, as amended 2012), principle 1.1.

⁴ European Court of Human Rights (ECtHR) *Airey v. Ireland* (1979) 2 EHRR 305; *Tolstoy-Miloslavsky v. The United Kingdom* (1995) 20 EHRR 442 at [59].

⁵ CCJE Opinion No. 14 (2011), paras 5, 15, 19, 25 and 27.

public services, of which the courts and judiciary are one. It faces a justice challenge. The delivery of justice must be done in a fair and timely manner as it is the means by which substantive law is given effect. This applies to all fields of law. It applies to unitary claims, but also where there are increasing numbers of mass claims whether they commence as unitary claims or as class or collective proceedings. It also applies to traditional forms of dispute as well as the increasing number of new forms of dispute arising from development of digital markets, e-commerce and e-crimes.

12. States also face emergent challenges to the delivery of justice and, through that, maintenance of the rule of law. Public and national emergencies, whether they are health-related such as the Covid-19 pandemic or other states of emergency pose significant challenges to the proper administration of justice. Technology, and especially data tools, whether that is e-filing and procedures, case tracking and management systems or the use of videoconferencing or other means, provides the means by which states can deliver justice in the normal course of events, i.e. the delivery of justice according to law. It is also a means through which it can meet these various challenges.
13. More broadly, technology also provides a basis upon which judiciaries could, in principle, develop a wider role than securing justice according to law. It could help judiciaries facilitate preventive justice, i.e. the prevention of disputes through the identification of their causes and the taking of pro-active steps to reduce the prospect that those causes will arise in future.⁶ By way of example, this could be achieved through the extraction of case data from publicly available judgments or anonymised data from settlements to identify general causes of disputes. That data could then be analysed and form the basis of law reform, which could help reduce the prospect that such disputes could arise in future. It could also help them to promote consensual settlement via alternative and/or online dispute resolution.⁷ Both of these mechanisms could be facilitated through the use of data tools such as case management systems by judiciaries. The promotion of either or both could, particularly, play an important role in reducing resource pressure on courts and judiciaries by reducing the number of disputes requiring case management and adjudication.⁸

IV. Specific uses of technology

14. This Section outlines several specific uses of technology: data tools, e-filing and proceedings, case tracking and case management systems, remote and hybrid hearings.

⁶ R. Susskind, *Online Courts and the Future of Justice*, (OUP, 2019) at 113-115, where it is referred to in the context of the development of online courts as 'legal health promotion'.

⁷ This includes settlement during enforcement proceedings: Recommendation Rec(2003)17 of the Committee of Ministers of the Council of Europe to member States on enforcement.

⁸ *Alassini (Environment and consumers)* [2010] 3 CMLR 17 at [64]-[65]; *Menini and Rampanelli (Approximation of laws Consumer protection: Judgment)* [2017] EUECJ C-75/16 (14 June 2017) at [61].

A) Data tools

15. There is a wide range of data tools used by judiciaries.

(i) Administration and case management

16. At a basic level, data tools include language or evidence translation, voice dictation and transcription services, digital recording of judicial notes, judgments and orders. They may also facilitate document preparation (including case briefs), the assessment of evidence, the latter through, for instance, e-disclosure technology. These can increase efficient case administration.
17. More broadly, data extraction from case documents may be analysed by data tools to help promote access to justice by providing more accessible information to the public.⁹ This can help make the legal system more efficient and accessible, particularly for those who may not have extensive legal knowledge or resources. Judiciaries can use such data to help a Council for the Judiciary and court administrators to identify and analyse the characteristics of parties to litigation. That type of analysis can help identify barriers to accessibility for parties who have specific characteristics¹⁰ or vulnerabilities. It can then be used by judiciaries as a sound evidential basis for procedural redesign and reform, consistent with the principle of non-discrimination and Article 6 of the European Convention on Human Rights (ECHR).
18. Data tools can extract and provide a basis for the analysis of case information to promote the effective triage of cases. They can help judges and court administrators identify proceedings that are potentially suitable for summary or truncated procedures, enabling them to be processed automatically and/or be disposed of via simplified court-decision mechanisms.

(ii) Settlement promotion

19. Data tools can also help judiciaries promote settlement. Analysis of case characteristics could help judiciaries provide guidance to parties on potentially suitable forms of settlement process.
20. They could also be used to promote settlement through the application of e-negotiation or e-mediation tools. Such processes are capable of being incorporated into judicial procedures or made available through court websites.¹¹ Settlement, not least via negotiation, could also be promoted through the use of AI to predict the potential outcome of proceedings. This may be capable of being incorporated into case management systems.

⁹ This could be facilitated, for instance, through the use of natural language processing (NLP).

¹⁰ Such as those referred to in Article 14 of the ECHR.

¹¹ The Civil Resolution Tribunal (British Columbia, Canada).

(iii) Decision-making

21. Data tools have the potential to play a wide-ranging role to assist judicial decision-making.
22. At the most basic level, data tools help promote speedier and more cost-effective legal research and judgment and order preparation by judiciaries. They could also help in identifying relevant evidence, as well as providing template court documents through the extraction of information from cases.
23. The use of expert systems or machine learning-based systems (supportive AI) could also assist judicial decision-making. They may be capable of providing judges with merits assessments and/or predicted outcomes of proceedings. By being able to provide judges with merits assessments, they could be a means to help judges evaluate their conclusions.
24. They may be capable of being used to assist judicial decision-making in other ways. The availability of judicial decisions and legislation is a basic form of data tool. They range in application from generic websites that simply contain case law and legislation with basic keyword and text-search functionality to more sophisticated databases that provide effective hypertext links to other case law and legislation. These are generally made available by member States or by private enterprises; the latter tend to provide the more sophisticated tools. Where judiciaries make these available, they both promote effective judicial decision-making, and also help secure the democratic accountability of the judiciary. They secure the latter where they make judgments available to the public.¹²
25. Where such documents are machine readable basic keyword functionality can be built upon. Machine learning-based systems may be capable of providing searches across and within judgments. This could provide judiciaries with access to smart forms of legal research, enhancing their ability to analyse complex legal framework, including statutes and administrative regulations, as well as European, national and comparative jurisprudence, and soft law. This may help development in judicial decision-making.
26. Smart research could provide access to novel or previously unidentified lines of argument. Knowledge of such arguments by the parties may help them to improve the quality and creativity of their submissions, thus contributing to the quality of judicial decision-making.
27. Conversely, such analysis could help judges to identify arguments that are commonly deployed by parties on specific issues and judgments that deal with them. Such assistance may then enhance confidence in, and the legitimacy of, the judiciary through promoting consistency in decision-making.

¹² CCJE Opinion No. 18 (2015), paras 27-28 and 32. Private enterprise may and does also provide access to such information.

B) E-filing and proceedings

28. E-filing and proceedings are a basic prerequisite for the effective use of technology in judiciaries. They underpin judicial support systems. Such processes are used widely, whether as part of mixed systems (physical and e-files and procedures) or as part of e-only systems. They also include the use of digital, e-signatures or e-time stamps on documents and processes carried out electronically.
29. This technology can be used at all stages of proceedings. Proceedings can be initiated online through e-filing. Service can be effected electronically either through e-mail, a web-based application (App) or other forms of technology. Case tracking and management systems are facilitated through e-procedures and digital case management files. Enforcement could also be effected through e-procedures, whether carried out by or on behalf of a court or by a third party, such as an enforcement officer.¹³ Use of this technology has several benefits.
30. Their use can also promote administrative and procedural standardisation across first-instance and appellate courts and tribunals. Standardisation can lead to the more cost-effective and efficient deployment of administrative staff supporting judiciaries.
31. Their use can also lead to the reappraisal of processes. Unnecessary and inefficient ones can be eliminated, again reducing administrative costs and time. Paper documents will, for instance, no longer need to be filed, retrieved or transported. E-files are available at any time or location. This can promote more efficient judicial case management. It can also, potentially, promote more flexible working patterns amongst the judiciary.
32. Use of such technology can also result in more cost-effective and efficient access to case documents by parties and their lawyers. It can thus help judiciaries promote greater access to justice. By providing the means to access processes from an office, from home or otherwise, greater procedural equality can, particularly, be secured.

C) Case tracking and case management systems

33. The use of case tracking and case management systems, as part of judicial support systems, serves a range of functions.

(i) Administration

34. Administrative and judicial management information can be extracted from these systems. This may help facilitate the assessment, by judiciaries, of the use of court and judicial resources. It can provide effective data for the establishment and application of Key Performance Indicators for justice systems, e.g. in terms of efficiency, cost-effectiveness and accessibility.¹⁴

¹³ Enforcement officers include, for instance, bailiffs and huissiers de justice.

¹⁴ Key performance indicators (KPIs) are a means by which performance can be assessed. They are based on quantifiable data. Where the judiciary are concerned KPIs could, for instance, relate to the length of time taken to deliver a judgment following the conclusion of proceedings. See also

35. Such measures can promote more informed resource allocation, budget and workflow planning (including effective allocation of work to judges and court administrators) and future resource planning.¹⁵ This may be particularly beneficial where these systems are interoperable across the justice system. It may also facilitate a holistic approach to, and assessment of, resource management across all aspects of the justice system.
36. Where information from case tracking and management systems is made available to the public, e.g. through online public registers, listing schedules and hearing information, judiciaries may also enhance their public accountability.

(ii) Effective timetabling and hearing scheduling

37. At a basic level these systems can more easily facilitate procedural timetabling by judiciaries. Simply, this can be achieved through providing more ready access to information concerning the status and progress of individual proceedings.
38. At a higher level such systems can optimise timetabling and hearing scheduling. Supportive AI could be used to determine the optimum utilisation of court and judicial time to deal with each set of proceedings for which they have responsibility. This could include providing model procedural timetables or directions for each case.

(iii) Case distribution

39. Scheduling systems may also provide the possibility of automated case distribution to judges through the application of criteria agreed by judiciaries and which are subject to judicial oversight and decision-making. This can also help facilitate optimal use of court buildings and court rooms.

(iv) Compliance monitoring

40. Once an optimum procedural timetable has been set, case management systems can promote effective and cost-efficient compliance monitoring.¹⁶ They can provide automated reminders to judges and parties of upcoming procedural deadlines. Such prompts can facilitate effective management. They are also able to prompt compliance. They can also alert judges to documents being filed. In addition to promoting economy and efficiency such measures can promote the timely delivery of justice by judiciaries, which itself can promote both effective adjudication and enforcement.
41. Automation, particularly where compliance prompts are concerned, and the provision of standardised information to judges, can promote greater consistency in case

the Guidelines of the European Commission for the Efficiency of Justice (CEPEJ) on measuring the quality of justice (2016).

¹⁵ Digital Technologies for Better Justice – A Toolkit for Action (2020) of the Inter-American Development Bank at 22-23.

¹⁶ It should be noted that efficiency and economy are not ends in themselves. They are a means to promote access to justice.

management. This can consequently promote the legitimacy of, and public confidence in, the judiciary.

(v) Management of mass claims

42. Case management systems can also promote the identification, grouping and management of test cases and/or mass claims.
43. In the case of a large number of individual claims that raise the same or similar legal or factual issues, case management systems can help reduce resource pressure on courts and judges by identifying and grouping them as a mass claim, which consequently may be transferred, through the framework of procedure, to a single management court and managed as a class, group or representative action.
44. Automated case management of such claims can, consequently, promote their efficient, cost-effective and proportionate management and determination. It can also promote effective mass settlement schemes. Ready identification and grouping of such cases promote consistency of case law, since it reduces the risk that the same or similar factual or legal issues would be determined differently by different judges.
45. Efficient management may also be promoted through the identification of a single claim from amongst a large number of similar claims, which could then move forward to judgment as a test or lead case. This can be facilitated through data tools extracting information from cases filed to identify the most suitable cases to go forward to trial and judgment on such a basis.

(vi) Identification and assessment of issues and evidence

46. Data tools such as those used in predictive technologies¹⁷ (e-disclosure or e-discovery) within a judicial support system, may be used to identify key pieces of evidence that have been uploaded to the case management system by parties. This can better enable judges to identify and consider factual issues more efficiently.
47. Such technology is particularly important where e-evidence is concerned. This is especially so in criminal proceedings, such as white-collar crime and where analysis of mobile phone data is concerned relating to crimes against the person. Without the use of such technology, the examination and assessment of such evidence is becoming ever more resource and time intensive. Automated case management could then assist judicial fact-finding in such cases. It can thus improve adjudicative accuracy, as well as reducing the cost and time taken to judgment.

(vii) Open justice and accountability

48. Making case tracking information available to the public and media enables effective scrutiny of the nature and types of disputes that are brought before the courts as well as of judgments and orders. It enables scrutiny of case progress. These systems are

¹⁷ Such as predictive coding, which is used by parties in some member States to carry out e-disclosure.

thus also a means by which judiciaries can promote transparent procedural accountability¹⁸.

49. Automated case management systems can also ensure that any necessary derogations from open justice are put in place effectively. They thus can help judiciaries secure compliance with any obligations that arise in this respect from Articles 6 and 8 of the ECHR.

D) Hybrid hearings

50. Audio and videoconferencing are well-established means to conduct hearings irrespective of the subject matter. They make it possible to hold hybrid or remote hearings.
51. The Covid-19 pandemic has, however, significantly expanded the use of this technology. States are either developing and using their own or using commercially available technology to hold such hearings. Their use has several potential benefits.
52. They can reduce the cost and time taken to deal with proceedings. They can facilitate more efficient hearing scheduling, while eliminating travel and waiting times in court buildings. This can promote procedural proportionality. A physical hearing may generate disproportionate financial and temporal costs in short, paper-based, interim, or case management hearings. The same can be said for hearings that only involve legal argument. Their use may thus promote access to justice.
53. Hybrid hearings can also promote effective participation both by judges and parties. Specifically, where judges are concerned they may help promote part-time and flexible working patterns. They may thereby increase job satisfaction and career opportunities amongst the judiciary.
54. Where judges and parties are concerned, they may facilitate attendance at hearings where their personal characteristics, health or other circumstances might otherwise render attendance at a physical hearing problematic. A vulnerable party, particularly in criminal or family proceedings, may, for instance, be able to take part effectively through attending remotely from their home or from another part of the court building. The same holds, more generally, for individuals with disabilities. Hybrid hearings can in this way promote procedural equality as well as access to justice generally.

V. Challenges arising from the use of technology

55. Article 6 of the ECHR provides, amongst other things, for an independent judiciary.¹⁹ It requires the judiciary to be independent of the executive²⁰ and the legislative powers. It must also be independent of parties to litigation²¹. The judiciary must also

¹⁸ CCJE Opinion No. 18 (2015), paras 27-30.

¹⁹ CCJE Opinion No. 3 (2002), para 9; CCJE Magna Carta of Judges (Fundamental Principles) (CCJE (2010)3), paras 2-3.

²⁰ *Sovtransavto Holding v. Ukraine* [2002] ECtHR 626 at [80].

²¹ *Ringeisen v. Austria* [1971] ECtHR 2 at [95].

be impartial.²² In both cases, the judiciary must not only be independent and impartial but also must be seen to be so.²³ Judicial independence, in both its institutional and individual aspects,²⁴ does not exist for the benefit of the judiciary, nor does impartiality.

(A) Substantive challenges

(i) The judicial independence challenge

56. Implementation of technological reform is, in several member states, the responsibility of the executive. The CCJE has previously recognised that judiciaries ought properly to have a role and responsibility in this respect to secure judicial independence.²⁵ The potential for technological design to shape access to justice, either consciously or unconsciously, cannot be underestimated. Data tools in the development of key performance indicators could be used to undermine judicial case management through the imposition of efficiency-based targets that are inimical to autonomy in judicial decision-making. Moreover, they could be used to improperly criticise members of the judiciary who failed to meet such targets, undermining both individual and institutional judicial independence. Moreover, the development of technology-based system defaults, prompts or AI may reduce judicial autonomy in decision-making. In extreme cases, they may do so in ways that are contrary to the rule of law.
57. Effective data security and protection measures require effective, independent oversight of technology used by the judiciary, as they do generally in society.²⁶ Such oversight could pose a significant risk to judicial independence were it to be carried out by the executive or a regulatory body, such as a national Data Protection Supervisor, rather than by a body within the judiciary.
58. Turning to AI, it poses several challenges to judicial independence. Algorithmic design may undermine judicial independence where the judiciary do not have informed and effective input and oversight over it. This may particularly be the case where design and implementation are outsourced by member States to private companies, not least as the control of the AI tends to be concentrated in the hands of a small number of companies. This is a discrete, and acute, instance of design risk. It may also, where case management systems use AI to schedule hearings, do

²² *Kyprianou v. Cyprus* [2005] ECtHR 873 at [118]; *Piersack v. Belgium* [1982] ECtHR 6 at [30].

²³ *Sramek v. Austria* [1984] ECtHR 12 at [42]; *Kyprianou v. Cyprus* [2005] ECtHR 873 at [121]. And see, in respect of the EU, *Associação Sindical dos Juizes Portugueses* [2018] EUECJ C-64/16 at [44].

²⁴ Council of Europe, Recommendation (2010) 12 on judges, independence, efficiency and responsibilities, Chapters 2 and 3, where these distinctions are referred to as external and internal independence, respectively.

²⁵ CCJE Opinion No. 14 (2011), paras 32 and 36.

²⁶ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data and repealing Directive 95/46/EC (General Data Protection Regulation).

so in ways that embed bias into listing hearings that undermine judicial control over this function²⁷.

59. The use of AI to assist case management or assist judicial decision-making may lack transparency as to what and how information is used by such technology. Reduced transparency may inhibit explanatory and appellate accountability of the judiciary.²⁸ This may call into question judicial independence, and the legitimacy of the judiciary, both individually and institutionally.
60. Judicial decision making is a highly skilled activity. It requires significant training and experience. Use of data tools as a replacement for judicial legal research and of supportive AI to help judges reach decisions may undermine an individual judge's ability to research and take decisions. Use of predictive coding may, for instance, undermine a judge's ability to determine what is and what is not relevant evidence and may adversely affect their ability to assess the strength of evidence. While such tools are intended to assist judicial decision-making, they may over time reduce judicial skill and experience.
61. One possible consequence of judges no longer being able to identify and assess the strength of evidence is that they could become dependent upon technological assistance. Were their skills and experience in evidence-taking and identification, and similar areas, to be denuded by reliance on technology such as predicative coding, individual independence, and judicial autonomy, may be reduced. What is intended to be supportive may thus become the *de facto* decision. This may particularly be problematic where such assistance provides individual judges with an assessment of decisional norms based on general trends amongst the judiciary; a problem that would then become self-reinforcing as more judges follow the trend identified by data tools. More broadly, this poses a threat to institutional independence as it would, in effect, place the decision-making process in the hands of those who design the data tools.

(ii) The fair trial challenge

62. Technology poses several challenges to the judiciary's ability to secure the parties' right to a fair trial guaranteed by Article 6 of the ECHR.
63. Use of data tools, particularly where they involve supportive AI, may adversely affect the judiciary's ability to secure a fair trial for parties. Data tools, such as Chatbots, may for instance produce false results, e.g. they may create fictitious case law that may result in judicial error. AI use may also undermine the judiciary's control over the allocation of cases.
64. Care does, however, need to be taken where hybrid hearings are concerned. Access to justice gains may not be as readily realisable where trials or final hearings are concerned, particularly where they involve the taking and assessment of witness evidence. In the latter situation, it may, depending on the circumstances, be

²⁷ Bias could result in cases not being allocated randomly but according to the parties' characteristics.

²⁸ CCJE Opinion No. 18 (2015), paras 27-29.

necessary to hold a physical hearing to take and test evidence and secure a fair trial as that is the properly effective means by which that can be carried out.

65. Hybrid hearings also pose the risk that parties and witnesses may be coached by individuals off-camera, which may corrupt the trial process. Additionally, they also pose the risk that hearings do not secure equality of arms. Differential participation may benefit or disadvantage one type of participant over another, particularly where witness evidence is being assessed, depending on whether they are physically present in court or participating via audio or videoconferencing. In criminal proceedings, where a defendant is taking part via videoconferencing and their lawyer is not present with them in person, questions may arise whether they are able to obtain legal advice on a fully confidential basis during a hearing.²⁹
66. Audio and videoconferencing also pose a risk to the judiciary's ability to fulfil its duty to secure open justice. Technology may inhibit this if accessibility is not built-in effectively.³⁰ Conversely, too ready public and media access to hearings held via videoconferencing may create pressure on judges. The nature and quality of constant scrutiny where all hearings are made available online may inhibit judicial decision-making, not least by compromising an essential zone of privacy and reflection that judges need to carry out their responsibilities effectively.
67. A significant move away from physical to hybrid or remote hearings may also undermine the constitutional status of the judicial process, particularly its symbolic nature.³¹ Taking part in proceedings from home, in a car, or in a public space may tend to undermine society's understanding of the civic importance of proceedings. The status and legitimacy of the judiciary at an institutional level as a part of the state may thus be harmed. In respect of individual proceedings, this may lead to participants not taking proceedings as seriously as they ought. This may have an adverse impact on the nature and quality of evidence, particularly witness evidence on oath, which may also compromise the judiciary's ability to secure fair trials.

(B) Other challenges

(i) Design challenge

68. Technology could be incorporated into courts and judiciaries in several ways. It could replicate pre-digital processes. The inherent risk is that a status quo bias would embed into future systems any design flaws extant in current practices and procedures. Were automation to be adopted, care needs to be taken to test whether what is presently done ought properly to be replicated technologically. Additionally, some forms of technology, particularly those provided for case tracking and case management decisions, may also require judicial input to ensure appropriate design. Care needs to be taken to ensure such input is provided.

²⁹ *Sakhnovskiy v. Russia* [2010] ECtHR 1673; *Sakhnovskiy v. Russia* ([2018] ECtHR 966; *Marcello Viola v. Italy* (No. 45106/04) (5 October 2006) at [67]-[77]; *Gorbunov v. Russia* [2016] ECtHR 231.

³⁰ *Micallef v. Malta* [2009] ECtHR 1571.

³¹ CCJE Opinion No. 14 (2011), para 6.

69. Additionally, the use of technology could expand the judiciary's role. This could be done by enabling court systems to incorporate preventive and consensual justice into court processes. The risk here is that the constitutional role of judiciaries may be undermined. The judiciary's constitutional role could be conflated with that of a dispute resolution service, of a consumer service.
70. Technology is also not design-neutral. It carries the inherent risk of discriminatory design, implementation, and use. Design may discriminate against parties on grounds of race, ethnicity, sex, or gender. It may also adversely effect, for instance, the neuro-diverse or individuals with a visual or hearing impairment. This can arise either through discriminatory design or through the use of data in judicial support systems that is itself discriminatory or both. It may also impede access to justice for those who are technologically disadvantaged, where they cannot either use or access technology effectively.
71. The primary challenge is thus to ensure that technological design is consistent with the principle of non-discrimination and Articles 6 and 8 of the ECHR, while maintaining the judiciary's constitutional status.

(ii) The implementation challenge

72. Effective design must be complemented by effective implementation, which requires the active engagement, involvement and subsequent training of judges.
73. If the use of technology is to fully realise economic and efficiency benefits, e-filing and proceedings, case tracking and management systems ought to be interoperable across the whole of the justice system. Lack of interoperability can embed inefficiency into such systems. At worst, it can lead to implementation being abandoned.
74. Implementation can also suffer from overreach. Rather than seeking to implement technological change at a measured pace, steps may be taken to implement wholesale reform to an overambitious timescale. The greater the degree and nature of reform at any one time, the greater the risk that it will fail and, consequently, will either be abandoned or, at best, implemented in part and sub-optimally.

(iii) The funding challenge

75. The CCJE has previously emphasised the fundamental importance of adequate funding to enable the judiciary to carry out its function as a part of the state.³² Increased use of technology should not be seen as a means to reduce state expenditure on the courts and judiciary. Implementing technological change carries with it a range of associated costs that need to be considered carefully and budgeted for effectively.
76. Ongoing secure funding is also required when technology is in a steady state. Technology must be kept up to date. Judges and administrators require regular training. This carries an ongoing cost. Additionally, administrators and IT specialists

³² CCJE Opinion No. 2 (2001).

employed by courts to enable the judiciary to operate, maintain and update technology may particularly require enhanced salaries given their enhanced and IT skills. That will need to be budgeted for, absent which it may not be possible for judiciaries to utilise technology effectively.

(iv) The data protection, security and accessibility challenge

77. Increased use of technology entails large scale data processing, which may interfere with the rights protected under Article 8 of the ECHR, including that of the protection of personal data.³³ In terms of technological design, implementation and use, these rights should be protected. Such measures should also protect against security risks. This is particularly the case where sensitive case data in criminal and family proceedings are concerned. Accidental disclosure or the malign acts of bad actors may compromise data security, and particularly confidentiality of justice data.
78. System failure is a further risk that arises from increased use of technology; particularly of e-filing and procedures and case tracking and management systems. Systems failure could render case data inaccessible. Without adequate and effective technological and/or paper-based back-up systems, there is a real risk to effective and practical access to justice.

(v) The well-being challenge

79. Increased use of technology may pose a threat to the short- and long-term health and well-being of judges and other court users.
80. Widespread use of technology may result in, for instance, fatigue, eye strain, headaches, not least through excess use of technology such as e-filing and procedures and videoconferencing. It may also result in increased stress, anxiety, melancholy, reduced attention-span and cognitive performance.³⁴ Any such adverse effects may equally adversely affect a judge's ability to secure a fair trial for parties. It may also increase the risk of adjudicative error.

VI. Legal and ethical framework for use of technology

81. To better secure judicial independence and impartiality, the CCJE considers that a clear legal and ethical framework for the development and use of technology by judiciaries is necessary. Such a framework will better enable the judiciary, as one of the powers of state, to uphold the rule of law as it increasingly adopts, and adapts to, the use of technology.³⁵

³³ Council of Europe Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data.

³⁴ UNODC, Exploring Linkages between Judicial Well-Being and Judicial Integrity (2022) at [12]; A. Bullock, A. Colvin, & M. Jackson, *Zoom fatigue in the age of COVID-19*, Journal of Social Work in the Global Community, (2022) 7(1), 1–9.

³⁵ CCJE Opinion No. 18 (2015), paras 20-22.

82. Member States should develop such a framework consistently with the requirements of the ECHR. Specifically, technology use must be consistent with judicial independence and impartiality. It must also be consistent with the right to a fair trial, as it applies to court proceedings, under Article 6 of the ECHR. It must also be consistent with the right to privacy, and data protection,³⁶ provided by Article 8 of the ECHR, and the right to freedom of expression for the public, including the media, provided by Article 10 of the ECHR. Due to the particular risk that the use of technology may be biased or partial in its application or effects, technology use must take particular account of the need to guarantee these rights consistently with the principle of non-discrimination.
83. The CCJE recognises that the European Court of Human Rights (ECtHR) has developed, and will continue to develop, its case law in the light of technological developments. By way of example, physical absence from a hearing at one time was understood to amount to a breach of Article 6 of the ECHR. Under certain conditions, and with the development of effective video-conferencing facilities there is now an acceptance that participation at trial via such facilities is equivalent to physical presence and thus not in conflict with Article 6.³⁷ Similarly, video-conferencing facilities with secure break-out rooms may provide the requisite level of privacy and confidentiality in criminal proceedings for a defendant to obtain legal advice consistently with the requirements of Article 6, where previously technology would not have been able to do so.³⁸
84. Within the general framework provided by the ECHR and national protection for fundamental rights, the use of technology by judiciaries should be supported by an appropriate legislative basis.³⁹ This is particularly important where technology is used in judicial support systems that provide assistance to judicial decision-making. It is equally important where the protection of personal data is concerned.
85. To provide effective data protection and security, and regulation without compromising judicial independence, member states ought to establish, where they do not already exist, national data protection supervisory bodies for the judiciary when acting in a judicial capacity. Such bodies should be created within the judiciary. Legislative provision could also be made allocating responsibility for the security and integrity of technology and data used by the judiciary.
86. Legislation ought also to make provision for the increasing transition to the use of technology by judiciaries. It should particularly make provision for the maintenance of alternative non-technology-based means to access the judiciary and legal proceedings, for those who are unable to access or use technology effectively.
87. It is particularly important for provision to be made for the continuance of non-technology-based hearings. While audio and/or videoconferencing may be appropriate for some hearings, it will not necessarily be appropriate for long hearings,

³⁶ See, for instance, *Avilkina v. Russia* [2013] ECtHR 515 at [45]-[46].

³⁷ *Marcello Viola v. Italy* (No. 45106/04) (5 October 2006) at [67]-[77].

³⁸ *Sakhnovskiy v. Russia* [2010] ECtHR 1673; *Sakhnovskiy v. Russia* ([2018] ECtHR 966; *Gorbunov v. Russia* [2016] ECtHR 231.

³⁹ Guidelines on videoconferencing in judicial proceedings (2021) of the CEPEJ at 8.

or those which involve the taking and assessment of witness evidence, amongst others.

88. Procedural rules should make provision for when the judiciary, who ought ordinarily to be present in the court room/building during hearings and only exceptionally participate in remote hearings from elsewhere, may exercise discretion to determine that hearings should be held via technology or via traditional means. They should also make provision for when it is necessary for participants in proceedings, including members of the judiciary, to attend a court in person when hearings are otherwise held via audio- or video-technology.
89. Within the general legislative framework procedural rules should make provision for judicial determination of the use of technology for specific purposes. Member states should make available differential rules for different forms of procedure. Any discretion provided in procedural rules, and for that matter in legislation, as to the use of technology in particular proceedings should be exercised judicially rather than administratively.

VII. General principles relating to technology in judicial systems

90. The use of technology must, above all, respect the nature of the judicial process. First, many judicial decisions are discretionary decisions, based on the particular facts of an individual case. Secondly, judges play an essential role in the development of the law. They do not merely apply fixed and immutable rules. Judges must be able to correct or add to the law if it falls short or threatens to derail the law's application in specific cases. Technology must not step into the realm of justice. Technology must not discourage or impede the critical thinking of judges as this can lead to stagnation of legal development and an erosion of the system of legal protection. Technological tools must therefore respect the process of judicial decision-making and the autonomy of judges.
91. The CCJE considers that the following principles should guide the future design, implementation and use of technology to support judges. They are intended to be consistent with the European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and their Environment (2018) and the Guidelines on Electronic Court Filing (e-filing) and Digitalisation of Courts (2021) of the CEPEJ.
92. The CCJE supports the use of technology that assists judges. It does so where such technology fully respects the following principles. The central aim of these principles is therefore to better secure effective and practical access to justice consistent with judicial independence and the rule of law. They are intended to maintain and enhance judicial legitimacy and confidence in the judiciary. The principles are as follows:
 - (i) **The rule of law:** technology should only be used to support and enhance the rule of law. It must therefore be designed, implemented and used within and based upon a clear, generally applicable and publicly accessible legal and

ethical framework that is consistent with fundamental rights guaranteed by the European Convention on Human Rights (ECHR).

- (ii) **Judicial independence and impartiality:** technology should support the judiciary in carrying out its constitutional role fairly and efficiently. Its design and operation should be subject to such safeguards, including legislation and/or rules of court, as necessary to secure both institutional and individual judicial independence and impartiality at all stages of legal proceedings. Such safeguards should be tailored to the needs of the proceedings whatever their nature. Technology should, specifically, not be used to predict an individual judge's decision-making.
- (iii) **Judicial autonomy:** technology may only be used to support and assist courts and the judiciary in the proper management and determination of proceedings. Decision-making must, explicitly and implicitly, only be carried out by judges. It cannot be delegated to or carried out by or through technology. Judicial autonomy must be respected by the use of technology.
- (iv) **Judicial oversight:** to maintain its consistency with judicial independence, impartiality and autonomy, judges whether through Councils of the Judiciary or otherwise, ought to be involved in the purchase, design and control of technology. They ought also to concur in its introduction and implementation. This is particularly important where the responsibility for court administration rests with Ministries of Justice or is a matter of partnership between the judiciary and the Ministry of Justice. Provision should also be made for judges to be kept up to date with technological innovation to facilitate their effective involvement and, where necessary, concurrence in the use of new and evolving technology.
- (v) **Accessibility and quality:** technology should enhance and improve effective and practical access to justice for all members of society. It ought to promote access to both adjudicative justice, consistently with article 6 of the European Convention on Human Rights, as well as consensual settlement. Promoting accessibility necessarily requires technology to be of a high quality. Where access to technology is impractical, an appropriate equivalent alternative must be made available.
- (vi) **Interoperability and continuous improvement:** to fully realise and promote efficiency and effectiveness in access to justice, technology should be interoperable across all parts of the justice system. It should be designed and operated so that it can be subject to continuous improvement. Mechanisms should therefore be implemented to provide for effective user-feedback on its use.
- (vii) **Piloting:** the effect of technology development cannot always be fully assessed in advance of implementation. To guard against unforeseen consequences and to also allow for a proper evaluation of technological innovation, the use of new technology should be subject to piloting before it is fully implemented.

- (viii) **Non-discriminatory design and operation:** technology that supports and assists the judiciary should be actively designed and operated so that it is non-discriminatory. It must be consistent with user-centred design and operation. Consideration of the needs of all users, whether judges, lawyers, members of the public, must be taken into account in order to ensure that the design and operation of technology by the judiciary is fair. Design teams must therefore be interdisciplinary.
- (ix) **Transparency and intelligibility:** technological design must be transparent and intelligible to users. This is particularly the case where AI is used and where technology is used to assist case management and judicial decision-making.
- (x) **Accountability:** the nature and use of technology should be subject to appropriate accountability mechanisms. Its design and implementation should be capable of being subject to scrutiny by the state, including legislative scrutiny and authorisation, and civic society. Its use in individual proceedings should be subject to scrutiny by parties to proceedings, consistent with principles of due notice, adversariality and judicial accountability.
- (xi) **Integrity, security and data protection:** technology should be subject to effective organisational and technical measures, consistent with applicable standards required by any applicable data protection law, to maintain the integrity and security of data used by judiciaries so as to maintain confidence in, and the legitimacy of, the judiciary. Such measures should make provision for differential access controls to such data for judges, court administration, parties, legal representatives and the public.
- (xii) **Openness and privacy:** measures to maintain integrity, security and data protection should not compromise the judiciary's ability to secure the publicity principle, including any valid derogation from or limitation upon it to protect privacy or other right or interest, consistent with article 6 of the European Convention on Human Rights.
- (xiii) **Funding:** technology, its introduction, maintenance, use by court administration and judges, and updating should be adequately funded throughout its lifespan. Financing should support its effective design and implementation. It should also be adequate to support its effective maintenance by the court administration and continuous improvement. Mechanisms must therefore be in place to provide for the effective capture of operational data to facilitate the assessment of the operation and effect on the judiciary and court users of technology by judiciaries and those responsible for court administration.
- (xiv) **Training and operability:** to ensure that technology can be used as efficiently and effectively as possible, the judiciary and court administration should be properly informed about and trained in the nature and effective use of technology used by the judiciary.

Glossary

The following terms are used in the Opinion:

- a. **Artificial intelligence (AI):** the replication of human cognition and decision-making by a machine. Within this Opinion, the main form of AI referred to is that of machine learning. That is a process that uses statistical, mathematical models (algorithms) which enable computers to detect mathematical patterns within large sets of data (information) without explicit instruction. Pattern detection is what is meant by 'learning'. This analysis then forms the basis of, for instance, data classification, data sorting or decision-making.
- b. **Audio-conferencing:** a system that uses technology, whether telephonic or digital via the Internet, to facilitate a meeting, such as a court hearing, via audio.
- c. **Case management systems:** electronic systems that support the administration of justice. They include automated mechanisms that: permit documents and evidence to be uploaded and provided to parties and the judge via e-filing, facilitate timetabling proceedings through scheduling tools, promote procedural compliance, including compliance monitoring; promote efficient allocation and management of court resources, including judicial workload.
- d. **Case tracking systems:** an electronic system that permits its user to obtain information concerning proceedings. Such information includes: the court identification number for each case, the names of parties to proceedings, details of legal representatives for the parties to proceedings; details of documents filed in the proceedings and of any orders or judgments made, and details of hearings listed and case progress.
- e. **Data tools:** electronic means to process and manage information and provide access legislation and judicial decisions (case law). They may be provided by the state or by the private sector.
- f. **E-Disclosure or e-discovery:** the disclosure of electronic documents (e-documents) in court proceedings.
- g. **E-filing and procedures:** an online tool, which permits parties and the lawyers to upload to the court and exchange digital versions of case documents and evidence.
- h. **Expert systems:** a form of AI. An online tool made up of two parts: a knowledge base, which is made up of rules and known facts; and an inference engine. The inference engine applies the rules to the known facts, through the application of deductive reasoning, to arrive at new facts. It is intended to replicate human expert decision-making.
- i. **Hybrid hearing:** a hearing where one or more of the participants (judge, parties, witnesses) take part while they are present in a physical court building. The other participants take part via either or both audio and videoconferencing.

- j. **Judicial support system:** an extension of the case management system, which provides judges with various means to promote the effective and practical management of proceedings, e.g. through assisting with the completion of documents, judgments or orders or through promoting judicial awareness of upcoming procedural time limits. This also includes, for instance, document automation through the use of decision trees.
- k. **Machine readable:** the structuring of information, such as that in a document or, particularly a judgment, which is capable of being processed by a computer programme. The means by which documents can be processed by way of machine learning.
- l. **Predictive coding:** a form of predictive technology, which facilitates the review of documents and e-documents as part of a disclosure or e-disclosure process in court proceedings. The technology is trained to recognise disclosable documents through the use of supervised and reinforcement machine learning.
- m. **Remote hearing:** a hearing that is held via audio or videoconferencing where none of the participants are present in a physical court building during the hearing.
- n. **Supportive (or assistive) AI:** the use of AI to support case management and judicial decision-making.
- o. **Videoconferencing:** a system that uses technology that provides for the simultaneous transmission of audio and of visual images of individuals for the purposes of synchronous communication.