AI and Administration of Justice: Predictive Policing and Predictive Justice

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Introduction

According to a well-established tradition of the AIDP, the third section of international congresses deals with procedural aspects, that is, how criminal law is enforced in various legal systems. Concerning the impact of artificial intelligence (AI) on the administration of justice more specifically, it is still limited in some jurisdictions but abundant in others. In general, the use of AI-based systems is growing in many parts of the world, particularly due to a strong business interest in marketing these new technologies. The industry is therefore encouraging public authorities to help test, monitor and improve these systems on a large scale, for instance through public-private partnerships. In return, it is promising impressive results, claiming that AI-based systems will improve security and reduce crime by making policing more effective (predictive policing) and will introduce neutrality and accuracy, thereby eliminating judicial subjectivity and inconsistent judicial decisions (predictive justice).

Technologies based on AI may be used at many different stages of the criminal process: to deter or prevent crime when possible, to investigate crimes and sentence offenders. AI-based systems may be used by **traditional law enforcement authorities** such as the police, investigation and judicial authorities, criminal courts, and the authorities carrying out sentences. In addition, **administrative authorities and regulators** that are authorized to impose punishment can use such systems to gain time and efficiency in elucidating complex breaches of law and to punish them when appropriate. This may concern for instance breaches of antitrust law or banking or financial market regulations, tax fraud or other large-scale fraud, non-compliance (for example with anti-bribery or anti-money laundering regulations), etc. National rapporteurs are therefore encouraged to adopt a **broad conception of criminal justice**. They are urged to analyse and assess the use of AI-based systems in any legal field in which issues of **preventing, deterring, and investigating criminal offences and similar breaches of law**, as well as of **sentencing natural or legal persons,** arise.

For the purposes of the 21st Congress of the AIDP, general rapporteurs have agreed on a **common definition of artificial intelligence** to facilitate discussion in all four sections of the Congress. It is therefore recommended that national rapporteurs refer to the definition provided by the High-Level Expert Group of the European Commission in 2019[3]:

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[3] https://www.aepd.es/sites/default/files/2019-12/ai-definition.pdf

Artificial intelligence (AI) systems are software (and possibly also hardware) systems designed by humans[4] that, given a complex goal, act in the physical or digital dimension by perceiving their environment through data acquisition, interpreting the collected structured or unstructured data, reasoning on the knowledge, or processing the information, derived from this data and deciding the best action(s) to take to achieve the given goal. AI systems can either use symbolic rules or learn a numeric model, and they can also adapt their behaviour by analysing how the environment is affected by their previous actions.

As a scientific discipline, AI includes several approaches and techniques, such as machine learning (of which deep learning and reinforcement learning are specific examples), machine reasoning (which includes planning, scheduling, knowledge representation and reasoning, search, and optimization), and robotics (which includes control, perception, sensors and actuators, as well as the integration of all other techniques into cyber-physical systems).

When talking about AI-based systems, the terms "predictive policing" and "predictive justice" refer their alleged ability to predict or forecast the future and thus enable law enforcement and judicial authorities to align their policing strategy and rulings with these predictions. In fact, however, AI techniques merely **calculate probabilities** and mostly rely on **risk assessment tools.** They do so by processing a tremendous amount of data using algorithms set according to various parameters to deliver a **mathematical result**.

In some cases, AI has not made any spectacular changes. For instance, one purpose of algorithm-based **predictive policing** is to determine the locations where and times of day (or night) when crimes are most likely to be committed. This does not fundamentally differ from the experienced police officer's intuition about the probable behaviour of offenders, except that the calculation is made much more quickly and can therefore be applied on a broader scale. It is supposed to help increase police presence at the right place and time so they can prevent crime or catch the perpetrators in *flagrante delicto*. Predictive policing also aims to identify people, including potential victims in order to protect them. In addition, AI-based systems enable the police to target groups of individuals who might be responsible for a crime that has already been committed, for example by analysing digital social networks. Lastly, these systems aim to identify suspects so the police may question and possibly arrest them. Here, the new technology not only provides investigative assistance, it alerts the police as to whom to surveil and where, before any crime is committed. This breaks with the major rule of criminal procedure according to which law enforcement authorities must base their investigation on a suspicion (and not vice-versa). The consequences in terms of investigative measures are meaningful, especially regarding civil liberties and human rights.

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[4] Humans design AI systems directly, but they may also use AI techniques to optimise their design.

The term **predictive justice** covers different practices. Historically speaking, risk assessment tools were used first – at least in the United States – to assess the risk of recidivism of offenders. Updated to incorporate AI-based technology, these tools help judges decide on release, probation, parole, and supervision. Their primary purpose is to predict human behaviour, just as risk assessment tools do for predictive policing. However, they also suggest how cases should be decided, which shows that AI-based systems are able to provide assistance with the application of law.

More generally, a new generation of AI-based systems has been developed to calculate the probability of particular outcomes. These systems are already widely used in various legal disciplines, such as insurance law and several other branches of civil law. **Legal Tech** (technology at the service of law) is progressively making inroads into the area of criminal justice. Theoretically speaking, AI-based systems can be used to guide judicial decision making (whether to prosecute, order an alternative measure, or dismiss a case), or to calculate the amount of a deposit or fine or the length of pre-trial custody, for example. These systems thus tend to assist judicial authorities and judges in exercising the power to prosecute, judge or sentence a person – and may partly replace them in the future. This is a very disconcerting perspective for at least two reasons. First, from an epistemological point of view, it implies that the outcome of a case is not the result of the centuries' long tradition of legal reasoning but of a mathematical calculation. Second, there is a risk that judges will hide behind the algorithm and surreptitiously delegate the power to decide on other people's lives to software.

Furthermore, as some national rapporteurs might be able to illustrate on the basis of their country's experience, start-ups may either provide legal advice to lawyers' offices as subcontractors or directly offer AI-calculated outcomes to parties to criminal proceedings. Using rapid, AI-based calculations may become more and more popular, especially for settlement negotiations (and possibly, one day, plea bargaining). Again, the potential consequences are manifold. Not only does Legal Tech challenge well-established legal professions, it could also be the source of disparity between litigants: while the rich will be able to afford lawyers, the poor may have to be satisfied with software-produced "legal" advice or dispute resolution.

Artificial intelligence also affects a further component of criminal justice: the overarching **law of evidence**. It is not surprising that AI-based systems contribute to the collection of evidence. Forensic and law firms use them for complex criminal business law cases in the context of so-called internal investigations in order to sift through an enormous quantity of documents and e-mails to extract evidence of the crime and thus help the defendant, usually a legal person, to cooperate with the prosecution services by self-reporting charges against itself. AI may also assist social workers or judicial authorities with, for instance, the collection of relevant information for character reports about the suspect. In addition, AI-based systems produce evidence themselves, through techniques like facial and voice recognition. The question whether "AI evidence" is reliable and trustworthy in a criminal trial is obviously decisive. Moreover, which categories of evidence will such information fall into under national law: testimony – from a machine – or technical expert evidence? Will it be necessary to create new categories or concepts

for implementing ad-hoc rules on the admissibility of evidence? It is moreover unclear whether information provided by AI-based systems used by non-investigative authorities may serve as evidence in criminal proceedings. An appropriate example is the drowsiness detection and distraction warning system embedded in an automated vehicle, which monitors human behaviour (e.g. evaluates the driver's ability to retake control of the vehicle where necessary) to enhance safety. Under what conditions – guaranteeing due process – may judicial authorities use the information given by the software robot as a charge against a particular driver? Finally, if we indulge in a bit of science fiction, judges in the future might rely on AI-based systems for an assessment of the evidence based on a calculation of the probability that the defendant is guilty. This would seriously challenge the presumption of innocence. If, for example, an AI-based system processing evidence concludes that there is a 97% probability that a suspect committed the crime, will the criminal court still follow the *in dubio pro reo* principle and acquit, and will an acquittal under such circumstances be perceived as just?

Layout of the questionnaire:

I. Predictive policing
II. Predictive justice
III. Evidence law

The **objectives of the national reports** based on this questionnaire are the following:

- Provide an insight into whether, how and for what purposes AI-based systems are used in national criminal justice systems (national practice with respect to AI-based-systems)
- Describe legal rules, case law and soft law related to the use of AI-based systems by law enforcement authorities (normative framework for using AI-based systems)
- Discuss the aptitude of currently applicable national rules to meet the challenges AI-based systems pose to the general principles of constitutional law and rules of criminal procedure (fairness, due process, presumption of innocence, rights of defence, right to non-discrimination, right to privacy, admissibility of evidence, etc.)
- Describe the current schools of thought among national legal commentators concerning the impact of AI in criminal justice systems

As national reports may be published in the RIDP *(Revue internationale de droit pénal – International Review of Penal Law),* national rapporteurs should not merely answer one question after another. They should instead provide the AIDP with a **self-standing report** where answers to the questionnaire are presented in a **fluent, articulate text**. National reports should be approximately 30 pages long.

When questions or parts of the questionnaire are not relevant for your country, please indicate it briefly in the report and ignore the question(s). If, on the contrary, the questionnaire does not address issues that are of interest for your report, please contact

the general rapporteur (juliette.lelieur@unistra.fr) before introducing them. If it is easier for you to handle the questions in a different order, feel free to do so. However, please **keep the general layout of the questionnaire** (I. II. III. / A. B. / 1.2.3.) when organizing your report.

Thank you for your participation!

I. PREDICTIVE POLICING

1. National practices

General questions

1.1. Is there a definition of "predictive policing" in your country? If so, please provide it and indicate its date and origin.

1.2. Are AI-based systems used for predictive policing in your country? If so, please indicate the names of these systems, the first year they were used, and the company or companies (national or foreign) that produce them.

1.3. If AI-based systems are not used for predictive policing in your country but there are plans to use them in the future, please answer the following questions in the light of those plans. If the police in your country have refrained from procuring AI-based systems on the basis of negative findings made abroad, please indicate this. Was there a political decision – at the national or local level – not to rely on AI-based systems for policing activities? What were the arguments for this decision?

1.4. Please briefly describe how the AI-based systems used in your country work from a technological perspective. [5]

1.5. What kind of data are used by these AI-based systems? [6]

1.6. In what areas are these AI-based systems used (urban areas, suburbs, problem neighbourhoods; specific business or financial markets, local or regional markets, multinational companies; territories where minority population is living or where important national interests are at stake, etc.)?

1.7. What kind of criminal activities do the AI-based systems focus on? [7]

1.8. What type of organizations rely directly on AI-based systems? [8]

1.9. What kind of concrete results do AI-based systems produce? [9]

1.10. How are these results used to improve policing? Have the results provided by AI-based systems led to any changes in policing methods?

1.11. What are the political or socio-economic incentives – at the national or local level – for using AI-based systems? [10]

1.12. What are the concrete objectives pursued by using AI-based systems.[11] Is there a difference between the stated objectives (see question 1.11.) and the objectives actually pursued?

1.13. How are AI-based systems for predictive policing perceived by the public in your country? How are they presented in the media? What is the opinion of police officers, law professors, writers, philosophers, intellectuals?

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[5] Machine learning, deep learning, machine reasoning, etc.

[6] Crime data, police files, open sources, data collected for investigations, protected personal data, etc.

[7] Street crime, property crime, violent crime, terrorism, fraud, economic and financial crime, cybercrime, political crime, etc.

[8] Police, private companies working for the police, private security companies, regulators, etc.

[9] Determining location and time where crime is likely to happen, profiling people who are likely to commit a particular type of crime, profiling groups or networks where crime may be committed, etc.

[10] Policy based on safety and security promises, need to reduce policing costs, need to support innovative high-tech industry, etc.

[11] To save time, improve effectivity, reduce costs, etc.

Assessment of reliability, impartiality and effectiveness

1.14.   Has the reliability of the AI-based systems used for predictive policing in your country been evaluated? [12] If so, was the assessment done by the authority using the system or by third parties? [13] What were the findings and were they findings taken into consideration by the organizations using the AI-based systems?

1.15.   Has the impartiality of the AI-based systems used in your country been evaluated? [14] If so, was the assessment done by the authority using the system or by third parties? [15] What were the findings and were they findings taken into consideration by the organizations using the AI-based systems?

1.16.   Has the effectiveness of using AI-based systems for policing/reducing crime been evaluated in your country? If so, was the assessment done by the authority using the system or by third parties? [16] What were the findings and did lead to approbation or criticism in your country? [17]

1.17.   Have any public authorities that have experimented with using AI-based systems for predictive policing in your country decided not to use them in the future? If so, why?

2.   **Normative framework**

Law and soft law

2.1. Are there national legal rules concerning AI-based systems for predictive policing in your country? If so, please briefly describe this legislation and its main objectives (keep the details about the content for questions 2.8 to 2.15). If not, please indicate whether your country is considering adopting such legislation and what are the arguments.

2.2. Do government memos, ministerial recommendations or other normative instruments produced by the executive authorities of your country deal with AI-based systems for predictive policing? If so, please describe them briefly and explain their main objectives.

2.3. Are there soft law sources, private sector regulations [18] concerning predictive policing in your country? If so, please briefly describe them and explain their main objectives.

2.4. Does your national criminal justice system refer to international or regional normative instruments concerning the use of AI-based systems for predictive

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[12] Errors, false positives/negatives, etc.

[13] The company that produced the AI-based system, the industry, public or private research institutions, or independent experts, etc.

[14] Bias, inclusion, etc.

[15] See note 11.

[16] See note 11.

[17] E.g. the AI-based system leads to a more effective use of police human resources or makes it possible to deter crime that wouldn't be deterred otherwise; predictive policing through AI-based systems is useless or even counterproductive.

[18] Ethics charters, codes of conducts, best practices guides, etc.

policing? If so, please mention these instruments and describe their impact on policing in your country.

Case law

2.5. Have the judicial authorities[19] or regulators of your country issued decisions in cases in which AI-based systems were used for predictive policing? In what context, and what decisions did they issue? How did legal commentators respond?

2.6. Have the criminal courts of your country decided cases in which AI-based systems were used for predictive policing? How did they rule in those cases and how did legal commentators assess those rulings?

2.7. Have the civil, administrative or constitutional courts – or other independent authorities – issued decisions in cases in which AI-based systems were used for predictive policing? How did they decide and how did legal commentators assess those decisions?

Substantive guarantees

2.8. Are the guarantees discussed in questions 1.14 to 1.16 (reliability, impartiality, effectiveness) addressed by law in your country? If so, please describe the normative instruments providing for these guarantees.[20] May victims be compensated? Feel free to elaborate on elements that are significant.

2.9. Is there an obligation for AI-based systems to be certified or labelled before they can be used for predictive policing? What are the substantive conditions for obtaining certification or a label? Which (independent) authority is authorized to issue the certificate or label? What are the procedures and who verifies compliance?

2.10. Are the authorities using AI-based systems for predictive policing in your country obliged to continuously monitor and adjust them?

2.11. How is transparency about the technological functioning of AI-based systems guaranteed?[21] Are companies that produce AI-based systems allowed to refer to unclear mechanisms ("black box") or claim the technology is a trade secret and refuse to provide explanation of how their product works?

2.12. Are the companies producing AI-based systems accountable for the results they provide?[22] If so, how are they held accountable?

2.13. How do the organizations that use AI-based systems for predictive policing in your country guarantee transparency about their practices?

2.14. Are these organizations accountable for the actions they undertake based on indications provided by AI? How is accountability concretely guaranteed? If, for instance, a person is arrested on the basis of an incorrect AI-based system calculation,[23] what happens?

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[19] E.g. prosecution services, tribunal deciding on investigation measures.
[20] Hard law, soft law, case law.
[21] Peer review, auditing systems, etc.
[22] For instance, because of an incorrect calculation a person is identified as a criminal although she/he is not.
[23] She/he did not commit the crime.

2.15.   What other substantive obligations are imposed on the police authorities that use AI-based systems? Are there any particular recommendations they are encouraged to follow? Feel free to discuss any rule that is relevant for the accuracy and interest of your report.

3. General principles of law

3.1. Is there a discussion in your country about protecting the *right to equality* – or the right to non-discrimination – with respect to AI-based systems used for predictive policing, especially due to the observation that processing methods may reproduce or aggravate human discrimination? What positions do legal commentators take?

3.2. Is there a discussion in your country about protecting the *right to privacy* with regard to AI-based systems used for predictive policing? Do the normative instruments provide satisfactory protection in this regard? Are there ways to challenge unlawful access to and use of personal data? May victims be compensated? What positions do legal commentators take?

3.3. Is there a discussion in your country about protecting the *right to liberty and security* of persons against AI-based systems used for predictive policing? If so, please elaborate on normative instruments, case law and any other significant measures. What positions do legal commentators take?

3.4. Is there a discussion in your country about respecting the *principle of proportionality* in using AI-based systems for predictive policing? Have measures been taken to safeguard proportionality? What positions do legal commentators take?

3.5. Is there a discussion in your country about *procedural legality*, that is to say the requirement that enforcement authorities base their investigation on a suspicion (and not vice-versa) respective to predictive policing with the use of AI-based systems?

3.6. Is there a discussion in your country about *principles of constitutional law* with regard to using AI-based systems for predictive policing? Feel free to discuss any principle that is relevant for your report.

II.   PREDICTIVE JUSTICE

1. National practices

General questions

1.1. Is there a definition of "predictive justice" in your country? If so, please mention it and indicate its date and origin.

1.2. Are AI-based systems used for predictive justice in your country? If so, please indicate the names of these systems, the first year they were used and the companies producing them (national or foreign companies).

1.3. If AI-based systems for predictive justice are not used in your country but there are plans to use them in the future, please answer the following questions in the light of those plans. If any of your country's criminal justice authorities have refrained from procuring AI-based systems for predictive justice, for instance on the basis of negative findings made abroad, please mention it. Was there a political decision – at national or local level – not to rely on AI-based systems in the criminal justice system? What were the arguments for this decision?

1.4. Since when and for what purposes are AI-based systems used in your country? Please explain whether these systems are principally or exclusively risk assessment tools [24] or whether they produce judicial decisions. [25] If they do both (risk assessment and suggested legal outcomes for the case), please indicate this.

1.5. Please briefly describe how the AI-based systems used in your country work from a technological perspective. [26]

1.6. What kind of data are used by these AI-based systems? [27]

1.7. Who relies directly on the AI-based systems for predictive justice? [28]

1.8. If public authorities use AI-based systems for predictive justice in your country, which decisions do they in fact take on the basis of AI-based systems calculations? [29]

1.9. Are any of your country's judicial authorities obliged to use AI-based systems at any stage of the criminal process? If so, which ones and why? Does the digital industry's lobbying play a role on mandatory use of AI-based systems?

1.10. What are the political or socio-economic incentives for using AI-based systems? [30]

1.11. What are the objectives of those who use AI-based systems for predictive justice? [31] Is there a difference between the stated objectives (see question 1.10.) and the objectives actually pursued?

1.12. If private companies or individuals use AI-based systems to calculate judicial decisions, in what types of decisions do the systems' predictions differ from the criminal justice system's decisions? [32]

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[24] Calculation of the probability that a natural or legal person will exhibit a particular "behaviour": re-offending/recidivism, dangerousness, non-compliance, etc.

[25] Calculation of probabilities, based on a legal situation, to predict a judicial decision: decision-producing software, chatbots, robot lawyers, etc.

[26] Machine learning, deep learning, machine reasoning, etc.

[27] Crime data, data collected for investigations, protected personal data, legal data, government and/or soft law data, case law data at a national level or from local tribunals, open sources, etc.

[28] Prosecution services, judges, social workers, prison system, regulators, lawyers, forensic experts, private operators advising companies in view of settlement or other negotiations; start-ups hired by lawyers to provide advice or that suggest alternatives to criminal prosecution, etc.

[29] Sentencing, release, probation, parole, supervision; non-prosecution decision, decision on compliance obligations, etc.

[30] Policy of harsher/softer criminal justice response to individuals; government's inability to meet the costs of the criminal justice system or desire to reduce these costs; desire to support innovative high-tech industry, etc.

[31] To increase the neutrality/objectivity of judicial decisions, provide for better judicial consistency, individualize decisions to fit each litigant; save time and human resources.

[32] Decisions on prosecution, on the amount of penalties, on victims' compensation, etc.

1.13.   Do these predictions affect the decisions issued within the public criminal justice system or will the case be resolved outside of that system?

1.14.   Are offers for alternative dispute resolution based on AI calculations popular in your country? For litigation involving small or large amounts?

1.15.   How are AI-based systems for predictive justice perceived by the public in your country? How are they presented in the media? What do legal practitioners, legal commentators, writers, philosophers, and intellectuals say about them?

Assessment of reliability, impartiality, equality, adaptability

1.16.   Has the reliability of the AI-based systems used in your country for predictive justice been evaluated? [33] If so, was the assessment done by the authority using the system or by third parties? [34]

1.17.   Has the impartiality of the AI-based systems used in your country for predictive justice been evaluated? [35] If so, was the assessment done by the authority using the system or by third parties? [36]

1.18.   What are the findings of the studies or surveys mentioned in questions 1.17 and 1.18? Could errors, bias etc. be identified? If so, what were they? Were the findings taken into consideration by the authorities using AI-based systems?

1.19.   Have AI-based systems used for predictive justice been found to provide more neutrality in the criminal justice system than humans do?

1.20.   Have AI-based systems been found to provide more consistency in criminal justice decisions than humans do? It is possible to state that they enhance equality between litigants?

1.21.   Have AI-based systems been found to provoke a general change in responses to crime or other violations of the law? If so, are these responses harsher or softer?

1.22.   Have AI-based systems been found to adapt to new situations? Do they recognize new facts and take them into account to produce decisions that depart from previous case law?

1.23.   Have any public authorities or private entities that have experimented with AI-based systems for predictive justice purposes in your country decided not to use them in the future? If so, why?

2. **Normative framework**

Law and soft law

2.1. Are there national legal rules governing the use of AI-based systems for predictive justice in your country? If so, please briefly describe this legislation

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[33] Errors, false positives/negatives, etc.

[34] The company that produced the AI-based system, the industry, public or private research institutions, or independent experts.

[35] Bias, inclusion, etc.

[36] See note 32.

and its main objectives (keep the details for questions 2.7 to 2.18). If not, please indicate whether your country is considering adopting such legislation and what the arguments.

2.2. Do government memos, ministerial recommendations or other normative instruments produced by the executive authorities of your country deal with AI-based systems for predictive justice? If so, please briefly describe them and explain their main objectives.

2.3. Are there soft law sources[37] concerning predictive justice in your country? If so, please briefly describe them and explain their main objectives.

2.4. Does your national criminal justice system refer to international or regional normative instruments concerning AI-based systems for predictive justice? If so, please cite these instruments and describe their impact on predictive justice in your country.

Case law

2.5. Have the criminal tribunals or courts of your country been confronted with AI-based systems used for predictive justice? In what context and how did they rule? What did legal commentators say about these rulings?

2.6. Have the civil, administrative or constitutional courts – or other independent authorities – been confronted with AI-based systems used for predictive justice? How did they rule and how did legal commentators assess their rulings?

Substantive guarantees

2.7. Are the guarantees discussed in questions 1.16 to 1.23 (reliability, impartiality, equality, and adaptability) addressed by law in your country? If so, please describe the normative instruments providing for these guarantees[38]. Feel free to elaborate on elements that are significant in your country.

2.1. Is prior authorization required to market an AI-based system for predictive justice? If so, does the law of your country[39] impose technological requirements on producers? Are producers obliged to include criminal justice professionals while designing the software? Do they have to regularly monitor and update the software?

2.8. Must AI-based systems for predictive justice be certified or labelled? What are the substantive conditions posed for issuing a certificate or label? Which (independent) authority is authorized to issue a certificate or label? What is the procedure and who verifies compliance?

2.9. Are the professionals of your national criminal justice system who rely on AI-based systems trained to review the data used for producing judicial decisions and to review these decisions themselves at any time? If possible, please indicate the probability that the judge, judicial authority, regulator, etc. will follow the AI-based system's suggestion as to how to apply the law.

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[37] Ethics charters, codes of conducts, best practices guides.
[38] Hard law, soft law, case law.
[39] See note 36.

2.10.   How is transparency about the technological functioning of AI-based systems guaranteed? [40] Are companies allowed to refer to unclear mechanisms ("black box") or claim the technology is a trade secret and refuse to be transparent about how their product works?

2.11.   How is transparency about using AI-based systems for predictive justice guaranteed in your country? Must individuals be informed case by case about the use of AI-based systems by the judicial authorities, regulators, etc. deciding on their legal situation? Who has to provide them with this information? Do the other parties to the proceedings have to be informed, too, or is the information public?

2.12.   Must the parties also be informed of the substantive results provided by AI calculation? Must they be informed of the percent of probability attained and the possible errors arising from the calculation?

2.13.   Do the authorities that use AI-based systems for predictive justice in your country have to inform individuals whose cases are handled with AI assistance about the data that were used by the algorithmic calculation? Do they have to do so under oath?

2.14.   Do they have to provide those individuals with information on the scientific process of the AI calculation – under oath?

2.15.   Are the companies producing AI-based systems for predictive justice accountable for the results they provide? If so, how is accountability guaranteed?

2.16.   Are the public institutions that use AI-based systems for predictive justice accountable for the actions they undertake based on indications provided by AI? Concretely, how is accountability guaranteed? If, for instance, conditional release is given to a person on the basis of an incorrect AI-based system calculation[41], what happens?

2.17.   Are the professionals of your country's criminal justice system who rely on AI-based systems trained to review the data used to produce judicial decisions and to review those decisions themselves at any time?

2.18.   What other substantive obligations are imposed on those who use AI-based systems for predictive justice purposes in your country? Are they encouraged to follow any particular recommendations? Feel free to discuss any rule that is relevant for the accuracy and interest of your report.

3. General principles of law

3.1. Is there a discussion in your country about protecting the *right to equality* – or right to non-discrimination – with regard to AI-based systems used for predictive justice, especially due to the observation that processing methods may reproduce or aggravate human discrimination?

3.2. Is there a discussion on whether the *judge's independence* is affected when a judge or a court is assisted by AI-based systems? Are there special means or methods to guarantee the judge's independence while using AI? [42]

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[40] Peer review, auditing systems, etc.
[41] She/he does re-offend.
[42] Collegiality, ethics committee, supervision, etc.

3.3. Is there a discussion on the need to recognize the *right of access to a human judge*, at least for some types of cases?

3.4. Is there a discussion about protecting the *presumption of innocence* when an AI-based system is used to establish the probability that a person is dangerous or is likely to reoffend?

3.5. Is there a discussion about guaranteeing the *right to a fair trial* with regard to AI-based systems used for predictive justice, including equality of arms and an adversarial process? How can the use of an AI-based system for predictive justice be challenged by law? Can only the parties to a case appeal, or can third parties affected by the use of the AI-based system also appeal? [43]

3.6. Is there a discussion about guaranteeing the *right to defence* by people whose legal situation is handled with assistance from AI-based systems? Does your country provide for appropriate means to defend oneself against an algorithmic calculation? If so, please elaborate on that question and highlight legal commentators' thoughts.

3.7. Is there a discussion on whether the *right to appeal* is properly guaranteed when AI-based systems are used on first instance as well as at appeal level, in particular when the same AI-based system is relied on?

3.8. Are there specific ways to challenge an AI calculation, including the scientific validity of the algorithm and the selection of data? Are there specific conditions for obtaining judicial review of an AI-based decision?

3.9. Is there a discussion about *principles of constitutional law* with regard to using AI-based systems for predictive justice? Feel free to discuss any principle that is relevant for your report.

3.10. Is there an epistemological discussion about replacing legal reasoning with mathematical calculation for criminal justice purposes? If so, is this discussion linked to a general principle of law? What are the arguments of legal commentators and intellectuals, and of legal practitioners?

3.11. Is there a discussion about the possibility that criminal justice – or parts of it – will be privatized through the development of Legal Tech in your country?

3.12. Is there a discussion about equality of litigants before the criminal justice system, and especially on whether expensive human-made decisions will be reserved to those who can afford them, while inexpensive, software-made decisions will be available for everyone?

III.   EVIDENCE LAW

1. Evidence gathering through AI-based systems

1.1. Are there AI-based systems used in your country to process and sort through large quantities of documents and communications, such as e-mails from a firm's numerous employees, to gather evidence of a crime or other violation of the law? [44]

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[43] Privacy/family rights violations or reputational harm to individuals/companies.
[44] E.g. TAR/CAL Relativity.

1.2. If so, who uses them? [45] Is there a particular type of procedure where the use of such AI-based systems is especially prevalent? [46]

1.3. Are there AI-based systems used to extract data from mobile devices and decode and analyse that data to gather evidence? [47] If so, who uses them and in what circumstances?

1.4. Are there other kinds of AI-based systems used to help investigators gather evidence of a crime or other unlawful conduct? If so, who uses them and in what circumstances?

1.5. Is there a normative framework governing the AI-based systems referred to in questions 1.1, 1.3 and 1.4 and their use over the course of the criminal process? If so, please briefly describe the existing (or planned) regulation(s) and indicate whether any limitations or conditions have been placed on using these systems.

1.6. In particular, explain whether the defendant is provided with information regarding the particular AI-based system used, and whether he/she can easily and efficiently challenge the way in which such evidence was collected. [48]

1.7. Have any courts been confronted with the use of AI-based systems to gather evidence? If so, please elaborate on the rulings given by those courts.

1.8. Is there any legal commentary on using AI-based systems to gather evidence? If so, please give an insight into this literature. In particular, if no legal framework exists in your country, please indicate whether scholars are in favour of regulation in this area.

2. Evidence produced by AI-based systems

2.1. Are any AI-based systems that perform facial recognition and/or voice recognition used in your country to produce evidence for the purpose of criminal justice? If so, by whom and under what circumstances?

2.2. Do AI-based systems produce other kinds of evidence for the purpose of criminal justice? If so, what kinds of evidence do these systems produce and who uses it?

2.3. Is there a normative framework governing evidence-producing AI-based systems and their use over the course of the criminal process? If so, please elaborate on any existing or planned regulations and especially on any limitations or conditions placed on AI-produced evidence, and answer questions 2.4 to 2.9. In case no legal framework exists, please indicate whether scholars are in favour of a regulation and why.

2.4. How are the reliability and neutrality of AI-based systems producing evidence for the purposes of criminal justice guaranteed by law?

2.5. How does your legal system guarantee that defendants can effectively challenge AI-produced evidence? [49]

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[45] Criminal justice authorities, forensic firms, law firms, etc.
[46] Settlement negotiations, deals, etc.
[47] E.g., UFED Ultimate-Cellebrite.
[48] Equality of arms, rights of defence.
[49] Equality of arms, rights of defence.

2.6. Does AI-produced evidence fall into a specific category of evidence in your legal system? [50] What are the consequences in terms of criminal procedure law?

2.7. May information provided by AI-based systems used by non-investigative authorities serve as evidence in criminal proceedings? [51]

2.8. Is there a normative standard for the admissibility of AI-produced evidence? If so, is this standard different from the common standard for admissibility of evidence in your country?

2.9. Are there specific exclusionary rules concerning AI-produced evidence? If so, please present these rules and explain whether they differ from the common rules on admissibility in your national legal system.

2.10. Is your country a party to a treaty or other type of regional or international agreement on the admissibility of digital evidence? If so, please specify which agreements and elaborate on the consequences for the admissibility of AI-produced evidence in your country.

2.11. Have the courts of your country been confronted with AI-produced evidence? If so, please cite the existing case law and elaborate on the ruling given by the courts.

2.12. Is there significant academic debate in your country regarding the use of AI-based systems for producing evidence and the admissibility of AI-produced evidence in criminal proceedings? If so, please give an insight into the relevant literature.

3. Evidence assessed through AI-based systems

3.1. Are AI-based systems used in your country to help judges, courts or regulators assess criminal evidence?

3.2. If so, does the AI-based system evaluate the probative value of single pieces of evidence or does it assess the overall conclusive force of the evidence as a whole? Please briefly describe how the AI-based system works from a technological point of view.

3.3. Is it conceivable in your country that in a criminal trial, a person's guilt would be assessed with help of an AI-based system? Is there significant academic debate on this issue, including with regard to the presumption of innocence?

3.4. Are there rules (or drafts of normative instruments) on using AI-based systems for assessing pieces of evidence or for assessing the culpability of a person during a criminal trial? If so, please elaborate on these rules.

3.5. Have any courts been confronted with judicial decisions or criminal judgements for which the evidence was assessed with the help of AI-based systems? If so, please cite the existing case law and elaborate on the rulings given by the courts.

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[50] Findings/statement, testimony, expert evidence, etc.
[51] See for example the drowsiness detection and distraction warning system embedded in an automated vehicle referred to in the introduction to this questionnaire.

List of topics for special reports (Section III)

1. The role of AI-based systems in negotiated proceedings

2. Certification of AI-based systems used in criminal litigation

3. Fundamental procedural rights v. AI-based systems in criminal justice: is there a need for a right to a human justice?

4. Cross-border admissibility of AI-evidence