**Report: 3rd webinar on Artificial Intelligence in the justice field: Predictive Justice,
18 November 2021**

The third webinar was dedicated to the topic of predictive justice and thus dealt with various applications of AI tools for legal analytics, justice-related quality assessments, and support in decision-making. Furthermore, some of the risks and opportunities related to the use of AI applications for predictive justice purposes were discussed. The webinar featured an introductory part with speakers from the European Commission and three panel discussions with external speakers from Member States, Academia, and the private sector.

The introductory part was opened by **Mr Richard Sonnenschein**, Acting Director of DG JUST (Directorate B, Criminal Justice), who welcomed the participants and emphasised the importance of the topic at hand. He stressed the high priority of AI related issues for the European Commission and recalled that this webinar is part of a series of webinars, organised following the Communication on Digitalisation of Justice of 2 December 2020 with the aim of bringing together people to exchange views on justice related AI topics. Furthermore, he referred to several initiatives such as the White Paper on AI from February 2020, or the 2030 Digital Compass Communication. He highlighted the corresponding funding, mentioning the Digital Europe Programme and the Recovery and Resilience Facility, which both support Member States in their digital transition. Furthermore, Mr Sonnenschein gave an overall introduction into the topic of AI in the field of predictive justice, mentioning some of the potential benefits and risks of the use of AI in the judicial field.

A policy officer at DG JUST, then pursued to present the AI Act as proposed by the European Commission in April 2021 and the use of AI systems in the context of justice. With regard to the AI Act, he explained the main objectives, such as protecting safety and fundamental rights and fostering the uptake of AI without creating new rights but rather by enforcing the existing acquis. He then highlighted several details of the regulation proposal, like the definitions, the high-risk assessment of AI systems relating to the justice field, the requirements for high-risk AI, the obligations of operators, data, governance, transparency and information to users.

**Panel 1** featured three speakers that discussed AI in legal analytics and justice-related quality assessments.

**The** **VP Global Product Development of Wolters Kluwer Legal & Regulatory Division** responsible for accelerating and managing digital innovation and product development, presented a current R&D project of the firm using AI in legal analytics. The project aims at building a platform with which legal grounds, outcomes and proxy claims should be made easily identifiable in order to facilitate access to legal professionals. The VP described the focus of this project as providing legal professionals with relevant data extracted from important legal documents with the help of a semantic model. As a main learning, the VP stressed the importance of a gradual – not a disruptive – approach to using this kind of technology to gain trust as well as finding the balance in being transparent and simply trusting the work of the machine.

**A representative** **from the Intelligence department of the Swedish Customs presented the Swedish PROFILE project**, its content and objectives. The project, which is still ongoing until the end of 2021, aims at developing modern data analytics and leverage big data and open sources for customs risk management like trying to find anomalies, errors, or fraudulent declarations and shipments. The speaker highlighted the types of data, methods and techniques that have been used within the scope of the project, including different techniques like random forest classifier to make a more dynamic analysis, the exchange of models with Norwegian data that have been used on Swedish data and vice versa, natural language processing or data visualisation.

**The Co-founder of Case Law Analytics**, spoke on the possibilities and limitations of mathematical modelling of the judicial decision-making process in different areas of civil and commercial law to visualise all possible outcomes of a case based on more than just statistical data. The speaker highlighted that this way, the user can obtain information not only on potential outcomes, but also on what data is taken into account and how important that data is for the given case. The speaker furthermore stressed that modelling can be implemented in any area of law for which a sufficiently large body of case law is available, and for which there is substantial uncertainty about the outcome.

**Panel 2** featured three speakers that discussed AI in the decision-making process.

**A representative** **from the Italian Ministry of Justice** spoke on the use of artificial intelligence systems in the decision-making process in Italy, focusing on the question of how they are used. The presentation focused on the results of a study on the use of innovative technologies in the justice field. The representative emphasised the widespread digitalisation of justice in Italy, reporting on several projects, which are currently in the implementation or study phase – more than two third of these aiming at prediction. The representative described the purpose of predictive justice systems as providing decision support, increasing predictability of the decision, guiding the parties’ choices and reducing litigation. As main challenges, she pointed out legal limitations, administrative-bureaucratic problems, costs, IT infrastructure and cultural differences. At the end of the presentation, the speaker emphasised that no project aims at replacing the person judge with a robot judge, which ultimately can only support the judge,

**A member from the Department of Legal Theory at Jagiellonian University in Kraków** focused his presentation on five points deemed crucial for the field of predictive justice. First, the speaker characterised subsymbolic machine learning models as the dominant approach in use today. Second, the speaker talked about how machine-learning models may yield false result, but how their performance is quite good in terms of accuracy, precision, recall and F-measure. Third, the representative stressed that subsymbolic models are not really well understandable and transparent for humans. Fourth, machine-learning models are data driven and represent the structure of the data, which could be problematic in terms of erroneous data, biases and discrimination. Fifth, the speaker pointed out the risk of rationalising an outcome based on machine-learning after it has been produced, giving more importance to the prediction of an outcome than on the actual legal reasoning and justification behind it.

**The founder and CEO of Eticas Research & Consulting** gave a presentation on Eticas’ expertise opening the black box of AI, their tools on how to assess whether predictive tools work, and the findings of their work in the context of the judicial system. In this regard, the speaker stressed that *Eticas* addresses all sorts of biases in an algorithm, trying to “un-bias” them. The founder and CEO furthermore stressed that in terms of predictive justice one cannot predict the future, algorithms just make an estimated guess based on historical data. Moreover, the speaker talked about two use cases in Spain, which *Eticas* has been auditing. First, an algorithm used to assign a risk to women who report being victims of domestic violence and which determines the level of police and judicial protection they receive and second, a system used to predict recidivism among inmates. At the end of the presentation, the founder and CEO emphasised that there is no future for predictive tools in the justice systems unless we come up with an ecosystem of regulation and transparency that allows all parties involved to trust those systems.

**Panel 3** featured five speakers that discussed the challenges and opportunities of AI in predictive justice.

**Representatives** **from the Research and Documentation Centre of the Ministry of Justice and Security of the Netherlands** spoke on the interpretability of predictive AI models. Regarding the responsible use of AI, they highlighted that the element of uncertainty must always be taken into account, with two possible strategies that can be deployed. Strategy 1 consists of searching for evidence that weakens the hypothesis (self-denying prophecy), which would reduce false positives with the risk of a true hypothesis being marked as false. Strategy 2 consists of searching for evidence that strengthens the hypothesis (self-fulfilling prophecy), which reduces false negatives but increases the risk of a false hypothesis being marked as true. On what strategy to use, the speakers suggested a cost-benefit analysis of what the impact of false positives or negatives in relation to the extra costs would be.

**A** **senior researcher at the Research Institute on Judicial Systems of the National Research Council of Italy**, spoke on AI based forecast in judicial proceedings. The speaker raised several questions like how to ensure equality of arms with AI-based solutions, how to make the system accountable, and whether predictive justice clashes with judicial independence and impartiality. The representative suggested that predictive justice can help with caseload pressure, but higher pressure would make it harder to go against the prediction, which would pose a challenge for judicial independence. Concluding, the speaker highlighted the challenge to find a context in which the AI based forecast can be properly used without violating the basic principles of justice.

**The Director of the Privacy and Civil Liberties Engineering Team at Palantir Technologies** spoke on the limits of predictive justice. The speaker pointed out that it is important to recognise limitations of predictive justice, mentioning that computational processing is not human understanding, that there might still be biases within algorithms, and that algorithmic opacity and conceptual irreducibility are still a problem. In the presentation, the speaker gave the following seven guiding principles of responsible AI. First, not to solve problems that should not be solved. Second, to collect and select data responsibly. Third, to methodically assess and address sample bias. Fourth, to carefully monitor outcomes, and understand equity assessment trade-offs. Fifth, to ensure auditability, explainability and interpretability. Sixth, to keep humans in the loop as much as possible. Seventh, to promote multi-stakeholder engagement.

**A Legal and Policy Officer at FairTrials** spoke on issues with predictive justice and how criminal justice data was used to create, train and operate AI and automated decision-making systems that reflected systemic, institutional and societal biases, which would result in disproportionately negative effects for minority groups. The speaker criticised several systems in place using AI in pre-trial detention and prosecution contexts as well as in the contexts of sentencing and probation. As the key issues in this regard the speaker named discriminatory practices, the right to a fair trial, the presumption of innocence, technological barriers that prevent effective and meaningful scrutiny, transparency and accountability, as well as an underlying automation bias.