**PROBabLE Futures Work Package Research Questions**

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| WP1 | What probabilistic AI tools are being deployed, piloted or trialled in the main stages of the law enforcement process? |
| How are each of the above AI tools categorised in relation to the following? a) input-output behaviour b) training data and testing c) technical method and internal parameter settings d) role in the law enforcement decision and legal framework e) comprehension of measures such as precision and uncertainty f) model chaining and connection with other systems? |
| WP2a | Using a shortlist of past probabilistic technologies, what legal, regulatory/governance, technical and interpretability issues can be identified from these past case-studies? |
| What regulatory/governance and technical methodologies could have mitigated the identified issues for each case-study? |
| WP2b | What can storytelling as a research method reveal about lived experiences of stakeholders and contested truths in relation to law enforcement AI? |
| WP3 | What future and emerging technologies are likely to impact and influence law enforcement? |
| How are each of the above future AI tools categorised in relation to the following? a) input-output behaviour b) training data and testing c) technical method and internal parameter settings d) role in the law enforcement decision and legal framework e) comprehension of measures such as precision and uncertainty f) model chaining and connection with other systems? |
| What testing protocols, model techniques and guidelines are required to ensure that future AI tools in law enforcement are responsible? |
| WP4a | What does an effective model for participatory oversight of AI in law enforcement look like? |
| What lessons can be learned from the establishment and operation of the experimental oversight body? |
| Which methods of scrutiny (such as assurance cases, model cards) are effective in oversight? |
| WP4b | What issues relating to the use of probabilistic AI do the main stakeholders in the jury trial exercise wish to explore? (prosecution and defence counsel, police, judiciary, Home Office, MoJ, experimental advisory body) |
| Which methods of visualisation, design and communication concerning uncertainties are the most effective for supporting users and decision-makers? |
| What standards, guidance, protocols and governance will be needed to ensure reliability and relevance of AI-enabled evidence in the future? |
| WP5 | What similarities and differences can be identified between law enforcement bases, legal frameworks and contexts across jurisdictions and how do these influence the understandings and development of responsible AI? |
| WP6 | What should be included in a framework to support responsible probabilistic AI in law enforcement? |
| WP7 | How can project research impact and influence our partners, stakeholders and the wider law enforcement ecosystem? |
| How is the project framework applicable to other domains and research contexts? |