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Demystifying the adoption of AI in police forces across England & Wales

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Contents

Executive Summary

This report, developed by the techUK Justice and Emergency Services Committee's AI sub-group, examines the current and emerging use of Artificial Intelligence (AI) across Police Forces in England and Wales. Drawing on publicly available case studies, reports, and procurement data, it aims to "de-mystify" AI in policing by showing how it is being applied in practice, the benefits it delivers, the challenges it poses, and the opportunities it presents for the future.

Scope

The analysis:

- Defines and classifies AI, its component technologies, and their relevance to policing.
- Reviews the national policing vision, digital strategy, and governance frameworks for AI use.
- Maps confirmed operational deployments of AI across forces.
- Identifies benefits, challenges, and future considerations for adoption.

Key Conclusions

- **Police are alert to the changes technology is introducing.** Police Vision 2025 outlines the changing nature of crime as a result of new technology enabling different types of crime and the changes which are required to use the same technology to keep the public safe. The Digital Strategy for Policing outlines the way in which the Service needs to be transformed by investing in skills, competencies, and development of new capabilities
- **Widespread but uneven adoption.** While all forces in England and Wales use some form of AI-enabled technology (notably data analytics, ANPR, and PND), advanced AI capabilities like machine learning-driven decision support are concentrated in certain forces. This "patchwork quilt" approach limits interoperability, knowledge sharing, and equitable access to benefits across all Forces
- **Machine Learning dominance.** Machine learning is the most deployed AI technology, reflecting the police's need to analyse large, complex, and incomplete datasets. Other technologies including Generative AI have no confirmed operational use
- **Tangible operational benefits.** AI is improving efficiency, speeding investigations, enabling real-time decision support, and enhancing public safety. Examples include automated redaction, domestic abuse risk assessment tools, and live facial recognition
- **Strong governance frameworks in place.** The NPCC Covenant, Responsible AI Checklist and work done with Probable Futures, force-level ethics committees, data ethics Authorised Professional Practice (APP), Data Driven Technology Authorised Professional Practice (APP), data protection requirements, and the NPCC AI playbook provide a solid ethical foundation and responsible use of AI
- **Persistent challenges.** Data quality, interoperability, bias, explainability, transparency, and sustainability issues need to be resolved to enable the Police to maximise the benefits they get from AI
- **Emerging opportunities and risks.** Innovations such as agentic AI systems could transform policing but also challenge existing governance and oversight models, requiring cautious, supervised piloting

- **Lack of national metrics on adoption of AI.** In this report we have used publicly available data to identify how AI is being used. Other reports have used a survey-based approach by asking Forces. This could be made more transparent by collecting data at a national level to enable the deployment of AI to be tracked, metrics on the adoption and usage of AI, and the outcomes being obtained.

1.0 Introduction and Overview

Policing is at a pivotal point:

"The communities we serve are increasingly diverse and complex, necessitating a more sophisticated response to the challenges we face now and in the future. Whether it be child sexual exploitation, domestic abuse, cybercrime or new threats from serious and organised crime like human trafficking or terrorism, the leaders of the service acknowledge that if we are to meet our communities' needs, the service must continue to adapt to the modern policing environment" (Policing Vision 2025, p.2).

AI is a key part of that modern policing environment giving criminals new ways to commit crime but also providing the Police with new tools to fight crime. Alongside other technologies it will also allow the Police to create new capabilities, increasing digitisation thereby bringing operational efficiencies at a time when public sector finances are under constant pressure.

Despite the advantages which AI can bring, there remains concern around the use of AI in Policing from a range of stakeholders: civil society which worries that AI used could reflect biases and disproportionately target minorities, the police regarding the best way to ensure the correct safeguards and governance are in place to roll-out AI nationally, technology companies on how best to work with Police to overcome obstacles in the Policing environment to maximise the benefit from AI, and academia/public sector partners on sharing data which might then be processed using an AI model to enable forecasting.

This paper looks to 'de-mystify' the use of AI in Policing by focusing on how it is practically being used by the Police Service in England and Wales to deliver tangible benefits by:

- Defining what AI is, looking at the different types of AI, highlighting the component parts of AI, and outlining the broad range of technologies used in AI
- Highlighting the Vision for Policing, how AI is central to the National Policing Digital Strategy, and the framework which Police have put in place for using AI
- Explaining the main AI technologies which Police Forces in England & Wales have been using and providing details of the case studies identified to provide a practical representation of how these technologies are being used
- Outlining the benefits which AI can deliver across the Police Service and the potential which AI can unlock
- Highlighting the potential which AI could unlock for the Police Service and what the future of the Service could look like as a result
- Providing some conclusions on the key things which Policing leaders should think about in using AI.

2.0 What is AI?

Given that AI has been around since the 1950's and involves a plethora of technologies there are many views on what AI is with no industry standard agreed definition. In this paper, we've adopted the definition provided by the AI Action Plan for Justice given its relevance to Justice and Emergency Services as a whole and to explain the constituent parts of AI we've used the Interpol and United Nations Interregional Crime and Justice Research Institute (UNICRI) classification given it's relevant to Policing. In this section, we've avoided given a historical overview of how AI has been used over the decades by Policing and have not provided an exhaustive list of technologies which can be considered part of AI. However, it is important to know what type of AI technology Police Forces are using so we identify these in a later section when we discuss how the technology is being used.

2.1 Defining AI

As the AI Action Plan for Justice makes clear "AI is used as an umbrella term for tools including machine-learning, large-language models and emerging agentic capabilities; tools that enable machines to process data, make inferences, learn and provide recommendations traditionally requiring human intelligence" (AI Action Plan for Justice, 31 July 2025).

2.2 Components of AI

The Interpol and UNICRI AI toolkit in their Technical Reference Book (Interpol and UNICRI, 2023) breaks AI into four components which have to interact in order to produce a result. These are:

- **Algorithms** are a "series of instructions to perform a calculation or solve a problem that is executed automatically by a computer" (Interpol and UNICRI, 2023). Algorithms that have been trained on data to undertake a specific task can be said to have mathematically modelled reality so are known as models. Algorithms can be written in a variety of different programming languages and whilst there are several types of algorithms the ones found in most AI systems are machine learning algorithms
- **Data** is crucial because in AI systems which use machine learning models the data is used to train the model so that it can recognise patterns in the data and therefore make predictions when it encounters new data. The quantity and quality of the data are key considerations because in order to be effective the data needs to be an effective representation of all the combinations that will be found in reality and there needs to be a lot of it so that the model understands the likelihood of different combinations arising
- AI systems run on **computers** which provide the processing, storage, and security needed in order to perform the tasks required
- The **human** is a key part of any responsible AI system which in Policing is especially important. Models developed for AI are built by humans and can inadvertently reflect our conscious or unconscious cognitive biases. These biases can be mitigated by being aware of common human biases, ensuring that data being used to train models is free from biases, and rigorously assess and monitor any models that have been developed. In each of these steps, errors can still creep in so it's important that any

decisions taken on the basis of AI systems have the “human in the loop” to review and ultimate take the necessary decisions.

It is worth remembering that whilst AI systems built on models can analyse vast swathes of data, can pull out patterns, and can make predictions, they will only ever be predictions. As such they “are not some kind of magical crystal ball that can see into the future, and they may not necessarily happen, they are purely extrapolations based on the data, context and situation. **They are just probabilistic outcomes, not facts**” (Interpol and UNICRI, 2023). This is especially key when thinking about the use of AI systems in Policing given negative unintended consequences that can occur.

3.0 Using AI in Policing

3.1 Policing Vision

The Policing Vision 2025 sets out what the Police Service will look like in the future. It envisages public protection being informed by local community priorities, continued development of specialist capabilities able to deal with a range of existing and new crime types, attracting and retaining confident professionals who are able to use their skills to navigate their complex environments, and working in collaboration with partners to enable a joined up approach to policing support services and community safety.

Key to this vision of the future is the adoption of technology whether that is providing new channels that the public can use to contact the Police, using new tools to quickly analyse evidence in progressing cases, automating administrative tasks in order to free up officers, making use of new sources of intelligence to improve the overall police intelligence picture, or providing all information to criminal justice partners in a digital format.

3.2 Digital Strategy

The Digital Strategy for Policing 2020-2030 builds on this Vision to articulate how technology can transform key aspects of the Police service, the key data and technology enablers that will enable this digital transformation, the capabilities that will need to be invested in to achieve this, and how policing will need to be organised to achieve this.

The Digital Strategy takes account of key digital trends which are influencing our society including: on-line crime which is global and doesn't respect borders, increasing use of digital creating large amounts of on-line data, vulnerability to digital manipulation making it difficult to determine real from fake, impact of new technologies, convergence of physical and digital realities, new crimes and new victims, and the future of work.

The Police in England and Wales are focused on transforming the way in which they work to be able to continue protecting the public from harm from traditional or new threats and are focused on developing the capabilities which they need in order to do this. Achieving this requires further development in digital policing to ensure that the Police have the tools, skills, and resources needed to combat new crime coming from the use of technology, but also to harness digital tools to make themselves more efficient in detecting and resolving crime. It is against this backdrop that AI systems are being investigated and used.

3.3 Regulatory Frameworks

Any AI systems which the Police design, build, develop, or use, have to conform to national and international regulatory frameworks to ensure the responsible development and use of AI. These regulatory frameworks have been developing rapidly with various countries implementing them in 2023 and 2024.

3.4 Framework for using AI in Policing

In August of 2023 the UK government released a pro-innovation approach to AI regulation which proposed five cross-sectoral and clear ethical principles for existing UK regulators to

apply within their remits to drive ethical development and deployment of AI. This set the UK's expectations for responsible AI innovation, these principles are:

- Safety, security and robustness
- Appropriate transparency and explainability
- Fairness
- Accountability and governance
- Contestability and redress.

These ethical principles are now being put into practice with assurance mechanisms and standards, often referred to as tools for trustworthy AI. AI Assurance tools are supporting the responsible adoption of AI by affording clear operational pathways for ethical principles. The TechUK whitepaper released in November 2024 entitled 'Ethics in Action: From White Paper to Workplace' offers practical insights, tools, and examples from industry best practices that demonstrate successful achievement of each principle. It aims to offer organisations information as they explore practical approaches to implementing these principles.

While these cross sectoral ethical principles are welcomed, we saw in September 2023, the Covenant for Using AI in Policing set out the principles that would be used in Policing, outlining the need for collaboration to ensure the ethical and lawful use of AI, and how the Police would engage with the broader landscape of organisations across Government, Academia, and Industry on AI.

The National Police Chiefs' Council in their AI strategy extended these principles which all Forces, who are members of the National Police Chief Council (NPCC), have adopted and will apply when developing or using AI.

The eight principles it identified are:

- **Accountability** – A single individual will be accountable for the operation and outputs of any AI used who will be trained and will part of the established governance framework
- **Robustness** – All AI in policing will only be used for the purpose for which it was designed, trained, and authorised for. Any data used in the AI will be robust.
- **Transparency** – Maximum transparency will be applied by default so that the public are aware when AI is being used by Forces, AI will undergo scrutiny, and a third party should be able to scrutinise the AI incl. its algorithms, use scenarios, and underlying data
- **Evidence Led** – AI Technology should be academically and rigorously tested before it is deployed. If not available, then academic trials should be conducted
- **Explainability** – AI should be able to explain its outputs so that a human can understand why it has reached its decision
- **Responsibility** – For AI being deployed to the public the intensions should be identified before deployment enabling outcomes and impact to be tracked
- **Lawfulness** – All usage of AI will comply with all laws, standards, and regulations ensuring that AI is being used in a lawful way
- **Value for Money** – Delivering Value for Money is key. The NPCC will support Forces to understand the changing AI landscape to become a more intelligent customer, enabling sustainable procurement, and generating value for money.

In addition to outlining eight guiding principles the AI Strategy also identified the need to communicate clearly with all stakeholders including the wider public on how it intended to use

AI, identified 3 key priorities for using AI, and also confirmed the need for collaboration across a variety of agencies to deliver AI.

3.5 Probable Futures – Responsible AI Checklist

As part of operationalising the Covenant and the NPCC AI strategy, there has been significant investment from the Policing community to create guidance, tools, and governance to help Forces adopt and exploit the opportunities offered by AI.

A major research project known as PROBabLE Futures has been set up to "develop a framework to understand the implications of uncertainty and to build confidence in future Probabilistic AI in law enforcement, with the interests of justice and responsibility at its heart" (Home Page, Probable Futures Research Project).

Working with the NPCC, PROBabLE Futures has developed a tool known as the Responsible AI Checklist which helps Police Forces navigate the ethical and legal implications of implementing AI. It highlights that not every policing challenge needs an AI solution, that AI should "contribute positively and proportionately" (RAI Checklist, p.25) to resolving the policing challenge and provides a series of questions about the AI solution being developed to ensure there is full transparency and to determine if the solution is appropriate. Through discussion of the completed questions and engagement with the local ethics committee all stakeholders get a thorough understanding of the problem, the AI solution, its potential risks, and how the solution is proportionate. This focus on the responsible use of AI is a key tenet of Police thinking from the Covenant and is embedded in all guidance.

3.6 Authorised Professional Practice

The College of Policing has published a number of Authorised Professional Practice (APP) guides which are relevant to AI and should be considered. The Data Ethics APP focuses on ethical considerations when collecting, storing, processing, sharing or using data. It lays out principles which all Police officers should consider when using data as part of their role. These are:

- Humans (assisted by technology) are responsible for making the decisions
- The safety and wellbeing of the public should always be prioritised
- The highest standards of respect and dignity should be followed
- There should be no discrimination against individuals nor should they be disadvantaged
- Procedures for collecting, storing, processing, sharing or using data should be proportionate the policing task
- Any procedures developed for handling data should be based on robust evidence, the data should be well understood including the potential for biases in the data
- There should be an evaluation of the level of risk to the data subjects prior to and after the data procedures have been followed.

This key APP calls for a need to thoroughly understand the data being used for any system but is especially relevant for AI tools which are trained on large amounts of data to ensure that the data does not contain any biases, is subject to scrutiny, and there is a thorough understanding of how it will impact the public.

The Data Driven Technologies APP reinforces this point by setting out the 3E model (Engage, Evolve, and Embed) when rolling out any new solution which is being driven by data. As with other guidance it calls for robust governance including local ethics committees, the need to be

aware of risks from the technology and how they will be managed, the need for transparency, and national oversight.

Whilst not an APP, the College of Policing has also issued guidance on Building AI-enabled tools and systems aiming to support police officers as they navigate the challenges and risks to realise the benefits from AI. This guidance reinforces the need for Forces to horizon scan for AI based opportunities in the marketplace, emphasises the need for Forces to have an AI Lead, outlines the benefits of working together with other Forces, criteria for developing potential use cases, the need for robust governance, and outlines key considerations throughout the delivery of any AI project.

3.7 Artificial Intelligence Playbook

The AI playbook brings together and summarises all of the guidance that has been provided by NPCC, College of Policing, and other bodies to provide a single repository of knowledge which Police Forces should consider when thinking about AI.

It reinforces the need for a collaborative approach amongst Police Forces and other criminal justice agencies by sharing resources and best practices to maximise the benefit from scarce resources, avoid duplication, and deliver new capabilities. It assesses AI solutions through 3 key pillars – do they enhance productivity, improve effectiveness, or counter the criminal threat from AI.

It emphasises that delivering AI successfully is a collaborative endeavour taking a variety of different roles and a number of stakeholders who each contribute their unique knowledge and skills. It also classifies AI into different forms not based on technology but on capabilities offered to police giving a new way to think about how AI can be used in operational settings.

To achieve the benefits from the different forms of AI that could be used it also provides a view of the project lifecycle with the various activities and actions which Forces should be undertaking to ensure they deploy AI responsibly.

As with other guidance it outlines the need to engage the public so that trust in police can be maintained through a shared understanding of the technology which is being used, the policing problem it is designed to resolve, and how the public are being safeguarded by its proportionate use.

3.8 Other Guidance

Other detailed guidelines which the Police have to comply with include:

- Surveillance camera code of conduct
- ICO guidance on AI and data protection
- CDEI National Ethics and Policing guidelines
- Biometric and surveillance camera guidelines.

3.9 Ethical Dimension

In developing AI for policing, the ethical dimension is hugely important. Policing in England and Wales already operates within a strong and well-established ethical framework, centred around the College of Policing's Code of Ethics, which sets out the core principles of accountability, fairness, integrity, objectivity and respect for human rights (College of Policing,

2014). These principles apply to all police officers, staff and volunteers, and therefore extend naturally to the use of advanced and emerging technologies.

To complement this, many forces have developed dedicated ethics committees or data ethics panels—often involving independent academics, legal experts, community representatives and civil society organisations—to scrutinise proposed AI-enabled and data-driven tools (NPCC, 2021; Police Foundation, 2022). These bodies work alongside police officers and staff to ensure that systems are designed responsibly, assessed before implementation and evaluated continuously once in use. Their role includes examining issues such as potential bias in training data, the proportionality of deployment, compliance with legal obligations, and the transparency and contestability of model outputs.

The purpose of this ethical governance is to ensure that AI contributes positively to policing outcomes while avoiding unintended harm to the public. Key ethical risks include the reinforcement of historical biases within crime, intelligence and criminal justice datasets, which can lead to disproportionate impacts on certain groups if not properly mitigated (Police Foundation, 2022). Transparency and explainability pose additional challenges, particularly where complex models make it difficult for officers, oversight bodies or citizens to understand how a decision or recommendation has been derived (ICO, 2020). Automation bias—where users place excessive trust in outputs—creates further concerns about the erosion of professional judgement (College of Policing, 2023).

Privacy and proportionality must also be carefully managed, especially where AI processes large volumes of sensitive data such as incident logs, custody information or intelligence reports (ICO, 2022). To manage these risks, forces increasingly rely on rigorous Data Protection Impact Assessments (ICO, 2020), model auditing and validation, independent ethics reviews (NPCC, 2021), and ongoing monitoring for fairness and performance drift. Clear accountability structures, human-in-the-loop oversight, and transparent documentation—such as model cards and algorithmic impact assessments—are essential to ensuring that AI supports legitimate policing aims while safeguarding the rights and freedoms of citizens (PDS, 2023; College of Policing, 2023).

3.10 Governance of AI in Policing

As artificial intelligence becomes increasingly adopted across sectors, Responsible AI practitioners have emerged as essential human infrastructure to operationalise ethical principles and regulatory requirements. techUK's April 2025 whitepaper entitled 'Mapping the Responsible AI Profession: Current Practice and Future Pathways' reveals that this professional field stands at a critical juncture - evolving from an emergent discipline into an essential organisational function yet still defining its formal structure and boundaries.

The growing complexity of AI systems demands increasingly sophisticated governance approaches. Organisations recognise that effective responsible AI practice requires both dedicated expertise and distributed responsibility, with responsible AI practitioners often serving as orchestrators rather than sole owners of AI ethics and governance. However, three critical gaps currently undermine the effectiveness of responsible AI practitioners and threaten the UK's AI leadership ambitions:

- The absence of clear role definitions and organisational placement
- The lack of structured career pathways
- The absence of standardised skills and training frameworks

These gaps create tangible business risks: inconsistent ethical implementation, potential regulatory non-compliance, reputation damage, and barriers to establishing stakeholder trust. They also threaten the broader economy by potentially hindering the UK's ability to establish leadership in responsible AI innovation and adoption.

Just as privacy experts became indispensable during the internet's expansion, responsible AI practitioners are now becoming the critical for the UK's AI future. By addressing these gaps, the UK can cultivate user trust, demonstrate regulatory readiness, and attract investment - building a foundation for adoption and confidence in AI.

Alongside Responsible AI Practitioners and ethicists, Chief Constables are supporting the operational use of AI and alongside Police and Crime Commissioners (PCCs) ensure that the use of AI is "fair and lawful, balancing ethics, right to privacy, unbiased treatment and consent, with the absolute right to a fair trial" (NPCC, 2023, p.5). Advice is received from ethics committees which have been established in Forces to ensure that AI is used ethically and in line with the principles of the Covenant.

This is supplemented by guidance from National Data and Analytics Board which provides oversight and governance on a range of issues including Data Quality, Data Protection, Freedom of Information, etc.

3.11 Importance of Peer-to-Peer Support

As we start to implement AI systems in policing and across the wider Justice sector it's important that we recognise that some stakeholders may be resistant to the technology or fearful of its usage. In addition to ensuring robust Governance around the use of AI, we also need to ensure that we explain to stakeholders why we're using AI, what it is specifically doing, why it is beneficial to use it, and how we'll keep then engaged.

The recent AI Action Plan for Justice provides an excellent set of resources for thinking about how you can engage with stakeholders and provides a set of principles that should be used throughout the entire project lifecycle to ensure that AI is being used in a robust, responsible, and ethical way.

Specifically, they have committed to setting up a network of AI Champions who will "provide peer-to-peer support, guide effective tool usage, and escalate challenges" thereby "strengthening trust and encouraging domain-specific AI exploration" (Section 3.2, AI Action Plan for Justice, MoJ, 2025).

Given that AI adoption will require close collaboration between a variety of different stakeholders, it's important that we think about and build in peer-to-peer support mechanisms across Police Forces to enable improvements to be suggested in the way AI is used, to be able to flag any issues promptly with its operation, to ensure it is being used effectively, and to help shape its responsible usage.

4.0 Adoption of AI in Policing

4.1 Quantifying how AI is being used by Police

As outlined in the recent Police Foundation report on Policing and Artificial Intelligence (Muir & O'Connell, 2025) it is hard to quantify exactly how much AI is being used in UK Policing.

As the report outlines:

- Freedom of Information requests have identified that around 15% of Police Forces use algorithmic decision aids (Couchman, 2019; Oswald and Grace, 2016)
- National Police Chiefs' Council (NPCC) have stated all Forces use data analytics and a third have advanced analytical capabilities (NPCC, 2023)
- Survey from 9 Forces in England and Wales identified that they were either using or wanted to use AI for a range of purposes including: improving back office/support functions, redaction, resource allocation, intelligence, optimising investigations amongst others (Muir & O'Connell, 2025).

4.2 Current Operational Uses of AI

Across England and Wales, a number of Police Forces have been implementing AI either in a standalone capacity or included within other systems. These systems make use of a variety of AI technologies and in a number of cases are combining different technologies together in order to improve their efficiency and effectiveness.

Table One provides a summary of the AI in use within Police Forces based on publicly available case study data, reports, RFI responses, and procurement data to demonstrate how AI is being used operationally in production environments. Whilst this provides an overview of how AI is being used, there is a drawback of this methodology in that for operational reasons Police Forces do not always publicly disclose the systems they are using or suppliers they are working with. It also doesn't include any proofs of concepts or pilots which are currently being trialled. It is likely therefore to be an under-estimate on the extent of its usage.

AI Method	System	Supplier	What it Does	Force Implemented
Machine Learning Defined as "Machine learning (ML) refers to algorithms that leverage new data to improve their ability to make predictions or decisions" (Covenant for Using Artificial Intelligence (AI) in Policing, NPCC)	Harm Assessment Risk Tool (HART)	Durham Constabulary & Cambridge University	Predictive policing tool designed to assess the likelihood that a suspect would commit a serious crime within the next two years. It used machine learning techniques to evaluate a wide range of data, including past criminal history, demographics, and interactions with the police. Its use has since been discontinued.	Durham
	PredPol	Geolitica	Between 2013 and 2018, Kent Police used PredPol, a predictive policing tool that used historical crime data to forecast daily hotspots for offences like burglary and vehicle crime. The software produced maps highlighting 250m² zones where officers were encouraged to conduct short, high-visibility patrols. The software based on machine learning technology was integrated into daily operations to support proactive policing, but its usage has since been discontinued.	Kent
	Qlik Sense Analytics System	Unknown	Self-service analytics platform using policing and local authority data which incorporates predictive modelling, offering dynamic offender risk assessments and intelligence profiling to help triage cases based on perceived risk.	Avon & Somerset
	Perpetrator Risk Tool	Unknown	System enhances existing domestic abuse risk assessments (like Domestic Abuse, Stalking and Honour-Based Violence Risk, Identification, Assessment and Management Model) through machine learning that provides supplementary perpetrator-based risk classifications.	Hampshire
	Traumatic Brain Injury Forensics	University of Oxford, Thames Valley Police, National Crime Agency,	Machine learning framework which aids forensic investigators in assessing whether described assaults could cause Traumatic	Thames Valley

		John Radcliffe Hospital, Lurtis Ltd. and Cardiff University	Brain Injury (TBI) by predicting injury outcomes.	
	Data Driven Insights Platform	Accenture	The Data-Driven Insights platform helps officers and staff make faster, better decisions by bringing together data from across the force into one secure system. It uses advanced analytics and AI to spot patterns, understand trends, and provide real-time insights — all accessible from mobile devices.	West Midlands
	THRIVE	Untrite	AI-driven platform that helps emergency call handlers make better decisions faster by transcribing calls, assessing threats, and surfacing critical information—all in real time—while reducing manual workload. It uses Machine Learning and Natural Language Processing technologies.	Humberside
Neural Networks Defined as "An artificial neural network is a computer structure inspired by the biological brain, consisting of a large set of interconnected computational units ('neurons') that are connected in layers. Data passes between these units as between neurons in a brain. Outputs of a previous layer are	Neural Network	Northamptonshire Police	Designed to predict the likelihood of recovering forensic evidence—such as fingerprints or DNA—from crime scenes. By analysing historical data on crime type, location, point of entry, and modus operandi, the system could forecast whether forensic evidence was likely to be found. Its predictive capability enabled officers to prioritise resources more effectively, improving evidence collection rates, and leading to enhanced audit performance.	Northamptonshire
	neoFACE incl. Operator Initiated Facial Recognition mobile app	NEC Corporation	Used in both live and retrospective facial recognition operations, helping officers match faces against watchlists in real-time or analyse images post-incident. Used for event-based surveillance typically using fixed camera networks. Utilises neural networks and computer vision technologies.	South Wales The Met Leicestershire Gwent Cheshire

used as inputs for the next, and there can be hundreds of layers of units" (Parliamentary Office of Science & Technology)	CorsightAI	Corsight	Used in both live and retrospective facial recognition operations. Fast processing speed, able to use low resolution images, and can be integrated into a variety of hardware platforms. Utilises neural networks and computer vision technologies.	Essex
	FACEVacs	Cognitec Systems	FaceVACS-DBScan ID 5.5.0 is used in PND to perform retrospective face matching against custody images and other police-held facial data. Utilises neural networks and computer vision technologies.	All Forces
	Various	Civica, NDI-Recognition Systems, QRO Solutions, Bedroq, MAV Systems Ltd., Leonardo, Suilvision, Traffic Automation Ltd.	Automatic Number Plate Recognition (ANPR) uses neural networks for number plate detection, character segmentation and recognition. It also uses computer vision for image preprocessing, ROI detection, and real-time tracking.	All Forces
Natural Language Processing Defined as "The use of linguistics and computer algorithms to attempt … have computers to understand 'aspects' of written or spoken text. The algorithms used may or may not use machine learning" (Kyle Porter, 'Text Analytics / NLP in a Policing Context'. Lecture delivered 5 Aug 2022)	Chat as a Service	Futr	AI-powered live chat system enables domestic abuse victims to safely and discreetly contact police online, 24/7. It supports real-time multilingual translation, allowing users to communicate in over 100 languages. The system includes a quick-exit button for safety, ensures user anonymity, and is accessible via the police website—without requiring app downloads or user registration.	Suffolk
	Lancashire Voice	Hewlett Packard Enterprise Intelligent Voice	Lancashire Constabulary employs voice-to-text transcription and NLP to process, categorise, and manage its annual volume of 999 and 101 emergency calls—over 1.2 million calls. By the end of 2021, the system had processed 730,000 calls.	Lancashire

Intelligent Automation Defined as “Intelligent Automation (IA) refers to the integration of robotic and intelligent systems from various emerging technologies, thereby increasing the scope of automation beyond simple rule-based tasks” (NHS Transformation Directorate, Understanding RPA)	RPA	Various Vendors	Robotic Process Automation (RPA) is being used by many Forces in order to automate repetitive tasks in order to free up their front line staff to perform other activities. The NPCC National RPA Programme has signed up 29 Forces with 3 Pathfinders including West Mids, Lancashire, and Dorset.	29 Forces
	DocDefender	NEC	AI-powered tool developed that automatically scans documents for sensitive or personal information—like names, addresses, or case details—and redacts them quickly and accurately. It helps police and legal teams prepare files for court or public release by reducing the time and risk involved in manual redaction. Uses Machine Learning, Natural Language Processing, and Intelligent Automation.	Bedfordshire
Computer Vision Defined as “a technology that enables the extraction, analysis and interpretation of information from images or video, often using machine learning to recognise objects, people, scenes or events” (Glossary of Terms for Artificial Intelligence in Policing, June 2025, Office of the Police	Various	Various	Number of instances of Machine Vision being used in association with other technologies. Facial Recognition and ANPR uses covered under entries on neural networks.	All Forces

Chief Scientific Adviser)				

From the publicly available data we accessed:

- There were 13 systems in production which utilised AI technologies and 2 that had been de-commissioned
- Machine Learning was the most used AI technology which isn't surprising given the data rich environment which the Police operate in which is often complex and incomplete, and the need to find correlations amongst these disparate data sets
- A large number of Forces are using specific systems which use AI technologies as they have been rolled out as a result of central initiatives. This includes the use of neural network technology in PND and computer vision in ANPR systems
- Some technologies are available to all Forces but not yet being used by all including redaction capabilities, Robotic Process Automation, and Microsoft Copilot as part of 365 roll-out
- There are very few national systems. Rather the deployment of AI resembles a 'patchwork quilt' of systems which have been developed by specific Forces. This lack of national provision means that not all Forces are benefiting from the available systems and inhibits inter-operability between the Forces.

A selection of the case studies which we access are shown in Table Two below and summarised in Annex A.

AI Method	Case Study Featured	Force Used
Machine Learning	Cellebrite – Digital Forensics	South Wales Police
Neural Networks	Untrite – Thrive	Humberside Police
Natural Language Processing (NLP)	Multi-Lingual Live Chat	Suffolk Police
Intelligent Automation	Blue Prism – Use in MASH	Thames Valley Police
Computer Vision	neoFACE facial recognition	South Wales Police

Table Two: Case Studies for different AI technologies being used by Police Forces

4.3 Further Uses for AI

There are a large number of potential uses for AI in policing including:

- Using AI tools to **train police officers in virtual environments** enabling them to get continuous feedback on their performance enabling them to learn and to adjust their approach to key situations like crowd control
- **Automated incident reporting and case management** by using NLP to automate police report writing and case documentation enabling administrative tasks to be streamlined thereby freeing up officers to undertake higher value work
- **Social media monitoring** by using machine learning to monitor social media for unrests, threats, or signs of criminal activity. This could provide police officers with an important source of intelligence enabling them to target resources
- **Intelligent drones** in order to aid policing of large public events enabling real-time intelligence to be gathered and to allow police officers to react to changing behaviour of crowds
- Using AI tools like machine learning to **review large volume of police inspectorate reports** to extract the key lessons learned so that performance of all police forces can be improved

- **Mental health monitoring** by using AI driven tools to analyse patterns of behaviour, intensity of tasks assigned, and response to stress offering recommendations for intervention
- **Public sentiment analysis** by using AI tools to monitor social media to assess public reaction to police forces, gauge public sentiment towards police, and enable police to adopt different approaches in order to improve community relations
- **Automated detection of traffic violations** by automatically identifying who has ran a red light, who has been speeding, and who has been parked illegally
- Improve road safety by **predicting where accidents are more likely to occur based** on previous accident data and looking at other factors such as road and weather conditions, this can help police run targeted campaigns and undertake other pro-active measures
- Deter cybercrime **by monitoring and identifying cyber threats** such as hacking, phishing, and on-line fraud in real-time, giving police a valuable set of tools to tackle cybercrime.

A large number of reports accessed for this research included a selection of use cases. It would be good to collate these together and create a national bank of use cases for Policing assisting the process of thinking about how AI could maximise the benefits it gets from AI.

4.4 Continuing Development of AI Technology

4.4.1 Agentic AI

Given that large amounts of attention, resources, and finance are being invested in AI by global technology companies, it is highly likely that new AI innovations will become available or new uses will be identified for existing technologies which might be applicable for Police.

Currently agentic AI is in the news, and all the major technology companies are marketing their preferred agents, agentic systems, and even agent fleets. Agentic AI systems exhibit a degree of autonomy in planning, decision-making, and executing tasks across multiple steps or goals which go beyond simple input-output tasks. In a policing context they could enable:

- Complex tasks to be automated which currently take time such as providing investigative support
- Pull data from multiple sources, allow hypotheses to be tested, and suggestive new investigative actions for rapidly evolving cases
- Streamlined command-and-control operations by recommending resource deployment based on information provided and recommended resourcing models.

The adoption of AI in Policing, though, raises some issues that would need to be worked through:

- The Covenant mandates human in the loop decision making. How would this coexist with a technology which is designed to autonomously make decisions without further input?
- Auditing agentic AI to the standard needed for Policing could be difficult because they often use complex chains of reasoning

- Most agentic systems are evolving technically and given that Policing involves situations including ambiguity, trauma, and incomplete data it's not clear how they would perform.

It is likely, therefore, that agentic AI will take a number of years to be adopted by the Police and will need supervised pilots involving human-led validation and ethical oversight to be able to provide the reassurance which various stakeholders will need.

4.4.2 Generative AI and Large Language Models

Further use of LLMs could help automate further tasks in Policing. It could automate routine but resource-intensive tasks such as drafting crime reports, summarising large volumes of unstructured evidence, or generating interview transcripts with key themes highlighted for investigators. More advanced generative systems could support intelligence analysis by synthesising open-source intelligence, producing composite images from witness descriptions, or simulating scenarios for training purposes.

However, these opportunities are accompanied by considerable risks. Generative AI models can produce inaccurate or fabricated ("hallucinated") outputs, may embed or amplify biases present in their training data, and can be vulnerable to prompt injection or misuse. In a policing context, such risks raise critical legal and ethical considerations, including compliance with evidential disclosure obligations, safeguarding sensitive data, and ensuring human verification of outputs before operational use.

The adoption of this technology will require rigorous validation, transparent performance reporting, and oversight by force ethics committees, with a clear emphasis on "human-in-the-loop" decision-making to maintain accountability and public trust.

4.4.3 Explainability in AI

More explainable AI can help make AI's decision-making processes more transparent and understandable to human users, enabling them to interpret why an AI has reached a specific output or recommendation. In policing, more explainable AI could enhance trust and accountability by allowing officers, oversight bodies, and the public to see the reasoning behind AI-assisted decisions—whether that is a risk assessment score, an investigative lead, or an alert from a surveillance system.

Potential applications include providing human-readable justifications for predictive policing outputs, highlighting key factors in offender risk classification, or explaining how an algorithm matched a facial image in a watchlist.

The main risks lie in over-simplification (providing explanations that are technically inaccurate but appear convincing) or the exposure of sensitive data or proprietary model details. From a policy standpoint, explainability is essential to meet legal obligations under the Data Protection Act 2018 (Part 3), to comply with the Criminal Procedure and Investigations Act (CPIA) disclosure duties, and to support independent audit and appeal mechanisms.

To ensure that the AI deployed in policing can be more explainable (and thus more usable) Forces could:

- Embed explainability requirements into procurement specifications and vendor contracts
- Train officers and analysts to interpret AI outputs critically

- Integrate explainable AI outputs into governance workflows, ensuring that explanations are reviewed alongside predictions before operational action is taken
- Piloting AI tools that prioritise explainability in parallel with existing decision-making processes to validate their reliability and usefulness in real-world policing contexts.

By prioritising explainability from the outset, policing can ensure that future AI deployments are not only accurate, but also justifiable, auditable, and trusted by both practitioners and the public.

5.0 Benefits & Challenges of using AI in Policing

5.1 Benefits of using AI in Policing

The key benefits to Police of using AI are:

A. Operational Efficiency – improving efficiency of the Police by speeding up their work, improving the accuracy, and saving police officer time

- **Productivity Improvements.** AI can have positive productivity impacts by speeding up the ability to complete routine tasks, by enabling police officers to quickly search across a lot of information, by speeding up the ability to identify subjects of interest, and by using digital tools in order to analyse case information
- **Improve accuracy.** Using AI the Police can undertake routine events like redacting forms being sent to CPS in a fraction of the time and at a higher rate of accuracy than could be achieved by humans
- **Speeds Up Investigations.** Provision of a variety of tools from facial recognition, ANPR cameras, forensic data analysis allows Police to speed up the process of analysing large amounts of digital evidence enabling them to quickly identify key leads.

B. Decision Support – enhancing Police decision making capabilities by providing real-time information, bring together and analysing large amounts of complex data, and spotting patterns

- **Enhance decision making.** Use of virtual assistants such as that used by Humberside Police in their control room when dealing with Domestic Abuse (DA) calls enabled them to bring together all the available information from a variety of systems, initiate tasks without the need to go into every single system separately, and bring together key information in real-time to support officers making key decisions on complex calls or high pressure situations. The tool enabled Humberside Police to save 7 mins 50 secs on each call which across 25,200 DA calls per year would enable them to save 3,290 man hours or a saving of 29% on DA call handling
- **Real-time information.** Provides real-time information enabling police to adjust their decision making, react to events as they unfold, and provide key information enabling better decisions to be taken. Whilst there is no quantification of the amount of time this saved or the productivity improvements that were gained, providing access to real-time information has undoubtedly helped to enable police to respond more effectively and react to fast moving situations as they unfold
- **Supports Complex Investigations.** Using technology like machine learning enables police to analyse large data sets, spot patterns, and identify connections which humans could miss.

C. Public Safety – providing new ways for the public to engage with the Police and providing the Police new tools that enable them to apprehend suspects quicker

- **Offer new communication channels.** Suffolk Police deployed multi-lingual live chat technology to support victims of domestic abuse allowing them to interact with Suffolk Police electronically to gain support and share information providing a new channel of communication which resulted in 54 conversations being held which would have been difficult to achieve otherwise

- **Enhance Public Safety.** Using technology such as facial recognition enables Police to quickly identify suspects and apprehend them quicker and improves public safety especially during large public events.

D. Resource Optimisation – using tools and intelligence information to focus Police where you need them most

- **Frees Up Officers.** Technology can free up officers to focus on investigating and resolving crime rather than a range of other repetitive tasks which in a budget constrained environment helps the police to achieve their objectives
- **Predictive Policing.** Use of AI to analyse historical crime data and identify patterns which can help police to identify where they should deploy their limited resources.

5.2 Challenges of Using AI in Policing

Based on our review of the solutions being used in Policing and the various reports that have been published outlining how technology is being used by Police we have identified a number of challenges to be overcome to enable widescale adoption.

5.2.1 Data Quality

Police data is often siloed, inconsistent, incomplete, of varying quality, and locked away in legacy systems which not only make it difficult to access but also means that securing high quality data to develop and train AI systems is problematic. Ensuring data quality requires ongoing efforts to standardise: data collection, data entry, and data storage across all Forces in England and Wales. This would then provide high quality and standardised data which could then be used nationally to build and train AI models.

5.2.2 Interoperability

Due to the unique way in which Forces are organised there are a large number of different systems in use by the Police Service as a whole and these systems don't always talk to each other. This can result in information gaps or require officers to switch between multiple systems, reducing efficiency. As the TechUK report on 'Demystifying Digital Interoperability in Policing' made clear inter-operability between policing systems is key (TechUK, 2024). Developing standardised API's and data exchange protocols is essential to address this challenge.

5.2.3 Human Oversight

While AI can process vast amounts of data quickly, it lacks the nuanced understanding and ethical judgment that human officers possess through experience. There's a risk of over-reliance on AI systems, potentially leading to a degradation of officers' skills or a tendency to defer to AI recommendations without critical evaluation. Implementing a "human-in-the-loop" approach, where AI assists but doesn't replace human decision-making, is crucial.

5.2.4 Algorithmic Fairness

AI systems trained on historical data may perpetuate or even amplify existing biases. Regular bias audits should be conducted, examining AI outputs for disparate impacts on different demographic groups. For instance, if an AI system consistently recommends higher bail amounts for certain ethnic groups, this bias needs to be identified and corrected.

5.2.5 Data Privacy & GDPR Compliance

Data protection needs to be rigorously enforced by using measures such as employing end-to-end encryption for all data transmissions. Strict access controls to data should also be implemented ensuring that only authorised personnel can access sensitive information. Data minimisation principles should also be used, so that only the data which is necessary for the specific policing purpose is collected and processed.

5.2.6 Explainability of AI

It is vital to understand what the AI system is doing and for a human to be able to understand why it has made its recommendations. Algorithms can be complex and difficult for an expert to understand so it is key that any AI system is able to explain its reasoning, why it has recommended specific actions, and to be able to be over-ridden. Importance of AI explaining its decisions in an evidenced based format which can be scrutinised given the consequences of making a wrong decision in a policing context.

5.2.7 Transparency

Transparency in AI decision-making is crucial for maintaining public trust. Police forces should be prepared to explain how AI systems arrive at their recommendations or decisions. This might involve creating simplified explanations of AI processes for public consumption or allowing independent audits of AI systems used in policing.

5.2.8 National Solutions

Whilst individual police forces in England and Wales have embraced AI there is a need to consistently roll-out the technology across all Police Forces by providing national solutions so that everyone can benefit from the tools that have already been deployed, share the costs associated with the tools, and have a national platform they can use. A national provision of tools would provide police officers with a set of tools enabling them to more effectively combat crime.

5.2.9 Ethics

The ethical dimension of using AI in Policing is topical and attracts a lot of vigorous debate so the continued role of ensuring that we invest in responsible AI is key as well as ensuring that developers work with relevant Force ethics committees as their solution is being designed and built to ensure that all stakeholders are bought into the need for the system, that it will be able to achieve what it needs to, and that continued monitoring is undertaken to ensure that it continues to operate without adverse outcomes. A set of national solutions will also need a national ethical framework. However, the ethical dimension also needs to take into account the needs of the public, their right to privacy, and the desire which some members of the public may have to opt out of AI.

5.2.10 Sustainability

AI solutions are energy intensive which given the desire for the UK to achieve Net Zero will mean that new systems will have to be developed using green coding principles and that technology companies will need to invest in finding more sustainable ways to develop and operate AI systems otherwise the technology will be constrained by our ability to provide enough energy to meet its needs.

5.2.11 Cybersecurity Risks

AI systems deployed in policing are vulnerable to a range of cyber threats that could compromise operational integrity, data security, and public trust. These include adversarial attacks, where inputs are subtly manipulated to mislead AI models (e.g., altering an image to evade facial recognition), and model poisoning, in which malicious actors corrupt training data to degrade performance or introduce bias.

AI platforms may also be targeted for data breaches, exposing sensitive intelligence, personal information, or operational tactics. The increasing use of cloud-based AI services adds potential risks from misconfigured access controls or third-party vulnerabilities. Additionally, some generative AI systems can be exploited through prompt injection or other manipulation techniques to disclose confidential data or behave unpredictably. To mitigate these risks, policing should integrate AI-specific threat modelling into cyber risk assessments, continue to adopt secure-by-design procurement and development practices, continue to regularly audit AI systems for vulnerabilities, and ensure that cybersecurity and AI governance teams work in close coordination.

6.0 Future Considerations

AI represents not merely an incremental improvement, but a paradigm shift that will fundamentally redefine policing in England and Wales over the next decade. We stand at an inflection point where the convergence of advanced algorithms, ubiquitous data, and sophisticated analytics can create an entirely new model of public safety—one that is more predictive, preventative, and community-responsive than ever before.

6.1 The Transformative Potential Ahead

The foundation of ethical frameworks, proven use cases, and demonstrated operational benefits already exists, but this is just the beginning. Looking forward, AI could enable policing to evolve from reactive incident response to proactive community protection through:

- **Predictive Community Safety**: AI systems could identify emerging risks and vulnerabilities before they manifest as crimes, enabling police to work with communities to address root causes rather than simply responding to consequences.
- **Hyper-Personalised Policing:** Advanced analytics could enable tailored approaches to different communities, recognizing that effective policing must be adaptive to local contexts, cultural sensitivities, and specific community needs.
- **Real-Time Intelligence Ecosystem:** Integrated AI platforms could create a dynamic, continuously learning system that synthesizes information across all aspects of public safety—from traffic patterns to social media sentiment—providing officers with unprecedented situational awareness.
- **Augmented Human Capability:** Rather than replacing human judgment, AI could amplify officer intuition and expertise, providing real-time analysis, risk assessment, and decision support that enhances rather than supplants professional policing skills.

6.2 Building Tomorrow's Police Service Today

Success requires more than coordinated national action—it demands bold leadership willing to reimagine policing for the digital age. This means:

- **Embracing Continuous Innovation:** Establishing policing as a learning organization that rapidly adopts emerging technologies while maintaining rigorous ethical standards and community accountability.
- **Fostering Public-Private-Academic Partnerships:** Creating collaborative ecosystems where police, technology companies, universities, and communities co-develop solutions that serve the public interest.
- **Investing in Next-Generation Officers**: Developing a police workforce that is as comfortable with accelerated decision-making with human in the loop as with traditional investigative techniques, while maintaining the human empathy and judgment that are irreplaceable.
- **Leading Global Best Practice:** Positioning England and Wales as the world's exemplar of ethical AI policing, sharing lessons learned and establishing international standards for responsible law enforcement technology.

6.3 The Imperative for Action

The window for shaping AI's role in policing is narrow. Without proactive leadership and coordinated implementation, we risk fragmented adoption that undermines both effectiveness and public trust. More critically, delay means ceding the opportunity to establish ethical AI as the global standard for law enforcement.

The path forward requires sustained investment, collaborative implementation, and unwavering commitment to ethical AI principles. But beyond these fundamentals, it demands vision—a willingness to embrace the transformative potential of AI while ensuring it strengthens rather than weakens the sacred trust between police and the communities they serve.

6.4 Our Collective Responsibility

With proper execution, AI will not simply enhance police effectiveness—it will create a new paradigm of public safety that is more equitable, more responsive, and more effective at preventing harm before it occurs. This transformation will strengthen not only public safety but also democracy itself, by demonstrating that advanced technology can serve human flourishing when guided by ethical principles and community values.

The future of policing is being shaped today. The question is not whether AI will transform law enforcement, but whether that transformation will reflect our highest aspirations for justice, safety, and human dignity. The choice—and the opportunity—remains ours to make.

7.0 Key Conclusions

This report was originally created to "distinguish between genuine advances and marketing narratives designed to attract talent and investment" (Milmo, D and Kerr, D, 2025) as a way of de-mystifying AI. By focusing on how AI is being practically used in the Police Service in England and Wales we have aimed to show how this technology can bring benefits to the Police making them more efficient and effective as a result.

Our key conclusions are:

- **Police are alert to the changes technology is introducing.** Police Vision 2025 outlines the changing nature of crime as a result of new technology enabling different types of crime and the changes which are required to use the same technology to keep the public safe. The Digital Strategy for Policing outlines the way in which the Service needs to be transformed by investing in skills, competencies, and development of new capabilities and a plethora of guidance has been developed for Police Forces to be able to adopt AI
- **AI in policing is firmly established, but unevenly deployed.** While all forces in England and Wales use some form of AI-enabled technology (notably data analytics, ANPR, and PND), advanced AI capabilities like machine learning-driven decision support are concentrated in certain forces. This "patchwork quilt" approach limits interoperability, knowledge sharing, and equitable access to benefits across all Forces
- **Maximising the benefits from AI will require central control and financing.** To avoid the "patchwork quilt" and ensure that all Police Forces benefit from the advantages posed by AI will require central control and financing to be able to develop national solutions which can be made available to every Force
- **Machine Learning dominates current AI use cases.** ML systems are the most deployed AI technology in policing, reflecting the sector's data-rich environment and need for pattern recognition in complex, incomplete datasets. Other AI types — such as generative AI — are either in very early pilot stages or absent from confirmed operational use
- **AI is delivering measurable operational benefits.** Documented benefits include improved efficiency, faster investigations, better decision support, and enhanced public safety. Case studies show AI reducing manual workload, speeding up evidence analysis, and enabling new channels for public engagement (e.g., multilingual domestic abuse chat)
- **Strong governance frameworks exist.** The NPCC Covenant, NPCC AI Strategy, NPCC RAI Checklist, Authorised Professional Practices, ethics committees, data protection requirements, and NPCC AI playbook provide a solid ethical and legal framework to enable Police Forces to engage with AI in a proportionate way to resolve specific policing problems
- **Potential Guidance Saturation.** To ensure that Forces are provided with guidance to implement AI in a way which is legal, ethical, and proportionate a lot of time has been spent producing guidance. Whilst the guidance provides tangible benefits there is also a lot for Forces to digest and understand to be able to make the most of AI. The NPCC AI Playbook has been helpful in codifying the vision, summarising the guidance, and bringing it all together but careful thought is needed to the volume of guidance being generated to prevent it from being so voluminous that no single individual is able to keep up with it
- **Key challenges exist which need to be resolved to maximise benefits from AI.** Barriers include poor data quality, lack of interoperability, bias and fairness risks,

limited explainability, and sustainability concerns. These hinder scaling AI solutions across forces and could undermine public trust if left unaddressed

- **Transparency and public trust are essential for AI legitimacy.** Without openness about how AI systems work, their accuracy, and their oversight, public confidence in AI-assisted policing could erode. Forces should proactively publish usage details, independent audits, and bias assessments
- **Future adoption will require bold leadership and national strategy.** Emerging technologies like agentic AI present potential for transformative policing capabilities, but they also challenge existing governance models. Coordinated investment, ethical oversight, and preparation for new AI paradigms are essential to avoid fragmented or harmful adoption
- **Lack of national metrics on adoption of AI.** In this report we have used publicly available data to identify how AI is being used. Other reports have used a survey-based approach by asking Forces. This could be made more transparent by collecting data at a national level to enable the deployment of AI to be tracked, metrics on the adoption and usage of AI, and the outcomes being obtained.

Appendix 1: Case Studies Referenced

Machine Learning – Digital Forensics – Use of Cellebrite in South Wales Police

Used by a number of Police Forces in England and Wales, Cellebrite products provide a set of tools enabling data to be collected from a wide variety of sources (including the extraction of data from mobile phones), using AI-driven algorithms and machine learning it can then analyse the data including encrypted data and can reconstruct key communications, all data can be visualised providing police officers with the ability to understand how this data fits together, data can be shared across multiple agencies, and actionable intelligence identified.

These digital forensics tool helped South Wales Police to act on a tip that an address in South Wales was being used to distribute indecent images of children. Using Cellebrite products they were able to crack the passcode to the device containing the images and successfully prosecute the perpetrator. (Ref: South Wales Police Crack the Passcode to Device with Indecent Images of Children - Cellebrite)

Neural Networks – Use of Untrite Thrive in Control Room in Humberside Police

Using a combination of AI technologies including neural networks Untrite Thrive "brings together different fabrics of digital technology, around transcription, data mapping and risk analysis to support human operators making better quality decisions with better quality data to enable policing to keep the public and officers themselves, as safe as possible".

The platform utilises advanced proprietary Natural Language Processing (NLP) and ML models and algorithms to analyse call transcripts in real-time. It employs named entity recognition to identify key information such as names, addresses, and potential weapons mentioned in the call, helping prioritise urgent cases.

The machine learning component of Untrite's system continuously learns from historical data, improving its ability to identify patterns indicative of high-risk situations. For example, it might recognise combinations of words or phrases that have previously been associated with severe domestic abuse cases, allowing for faster escalation and response.

Untrite worked with Humberside police to provide a Police Control Room AI assistant for domestic abuse cases which captured data more accurately, recognised key information provided first time removing the need to repeat key information, and assisted human operators by bringing information from all existing systems in order to provide the control room operator with a complete view and enabling them to interact with other systems from one console saving them time. (Ref: Untrite Thrive - Untrite: Decision Intelligence AI Platform).

Natural Language Processing – Use of Futr to create multi-lingual live chat in Suffolk Police

Suffolk Police have used NLP to launch a multi-lingual live chat service for victims of Domestic Abuse using a product provided by Futr.

This provides victims of domestic abuse with a way of getting support discreetly and enabling Police to signpost the victim to other agencies or charities. Because victims can use their own language to express themselves it makes it easier for them to gain support.

With 54 total conversations and an average live chat lasting for 40 mins in one month Suffolk Police were able to offer support discreetly and in the victim's own language. (Ref: Suffolk Constabulary: Live chat for domestic abuse victim support | Futr)

Intelligent Automation – Use of Blue Prism by Thames Valley Police to protect vulnerable children and adults

Thames Valley Police used intelligent automation provided by Blue Prism in its Multi Agency Safeguarding Hub (MASH) to protect children and adults at risk of abuse and neglect by enabling the automated triage of 14,000 tasks every month.

Intelligent automation "now works across a plurality of systems to respond to triggers and carry out much of the administrative burden automatically, from intelligently researching signals that indicate a risk may exist for a child, to notifying the schools and agencies that need to know. It is returning thousands of hours to the force's staff".

As a result of using intelligent automation 390,000 hours have been returned to the organisation, the response time to support a vulnerable child has been reduced to 1Hr, and faster and better decisions are being made on quality data. (Ref: Thames Valley Police: A Force for Automation | SS&C Blue Prism).

Computer Vision – Use of NEC's NeoFace by South Wales Police to provide Live Facial Recognition

South Wales Police have used NeoFace from NEC to provide real-time surveillance using CCTV cameras mounted on Police vehicles and to cross check images and recorded video taken at crime scenes against almost half a million photos held in South Wales custody image database.

The benefits of using machine vision technology include:

- Ability to search for images across offender databases speeding up identification
- Ability to search for individuals in a large crowd enabling police to spot key individuals
- Keeping public safer by being able to identify key individuals based on intelligence even in large crowds.

This has already had immediate benefits enabling South Wales Police to identify individuals including those recalled to prison it might have previously missed. (Ref: Live Facial Recognition Software | NEC Software Solutions).

Further information

techUK

techUK is a membership organisation launched in 2013 to champion the technology sector and prepare and empower the UK for what comes next. It is the UK's leading technology membership organisation, with more than 1,020 members spread across the UK. We are a network that enables our members to learn from each other and grow in a way which contributes to the country both socially and economically.

By working collaboratively with government and others, we provide expert guidance and insight for our members and stakeholders about how to prepare for the future, anticipate change and realise the positive potential of technology in a fast-moving world.

Justice and Emergency Services (JES) Programme

The Justice and Emergency Services programme provides a forum for Justice and public safety stakeholders from national policing bodies, local forces, fire and rescue and justice partners, to collaborate with tech industry.

The programme serves as a platform for exploring the latest innovations, discussing challenges, and building networks while advocating for the role of technology in enhancing public safety services. The programme has a number of working groups that facilitate regular collaboration between the public and private sectors.

Groups include Digital Justice, Driving Interoperability in Policing, Public Safety and Security SME Forum, Fire Innovation Forum, VAWG and RASSO Tech Working Group.

JES Management Committee

The JES programme is overseen by an elected board of 28 techUK members responsible for setting its strategic direction. The committee has identified three key priorities for their 2024/2026 tenure: Demystifying AI, Digital Skills, and Procurement.

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