



The new partner in investigations

A white paper on leveraging AI with governance and integrity.



The future of justice: transforming investigations with AI



Modern investigations are at a tipping point. Overwhelmed by an ever-increasing volume of digital evidence and constrained by limited resources, investigative bodies face a crisis of capacity that threatens the very timeliness and quality of justice.

Case backlogs are becoming strategic risks, and the immense administrative burden on skilled investigators is leading to burnout, high turnover, and a loss of invaluable expertise. Artificial Intelligence (AI) presents not just a potential solution, but an essential evolution in investigative practice.

This white paper serves as a guide for leaders in law enforcement, regulation, and government on how to navigate the adoption of AI safely, ethically, and effectively. We will demystify core AI concepts, explore the robust governance frameworks emerging in Australia and globally, and demonstrate that the path to leveraging AI is not one of unmanaged risk, but of responsible implementation.

Using the purpose-built Comtrac platform as a practical example, this paper will show how a "human-in-the-loop" design, built on the pillars of fairness, security, and transparency, can empower investigators, clear backlogs, and ultimately enhance community trust and safety. The question is no longer if we should use AI, but how we can harness its power with integrity and purpose.

What is AI & why is it essential for modern investigations?



With data volumes growing rapidly and resources stretched thin, investigative bodies are facing new levels of complexity. Artificial Intelligence (AI) is no longer a futuristic concept. It is now an essential tool for navigating this landscape. It offers a way to manage overwhelming workloads while also improving the quality and timeliness of justice.

Key definitions: Core AI concepts explained



Artificial Intelligence (AI)

A broad field of computer science focused on creating systems that can perform tasks that typically require human intelligence. This includes capabilities like learning, reasoning, problem-solving, and understanding language.



Machine Learning (ML)

A subset of AI where systems are "trained" on large datasets to identify patterns and make predictions or decisions without being explicitly programmed for that specific task.



Large Language Models (LLMs)

A type of AI model trained on vast amounts of text data. LLMs are the engines behind generative AI, capable of understanding, summarizing, generating, and translating human language.



Natural Language Processing (NLP)

A branch of AI that gives computers the ability to understand, interpret, and manipulate human language. NLP is what allows a tool to "read" a document and extract key information.

Distinguishing automation from intelligence

It's crucial to understand the difference between simple automation and true intelligence. Automation follows a pre-set list of rules, essentially a script. It works well for repetitive, predictable tasks. AI, particularly a platform like Comtrac, takes things further. It does more than just follow instructions.

It can analyse unstructured data in an exhibit, summarise its relevance to a specific element of an offence, and generate content to support an investigator in building their case. This is the difference between using a checklist and having a partner.

Breaking the backlog: Confronting the modern investigative crisis



Delays as a strategic risk

Case backlogs are not merely an operational headache; they represent a strategic risk to the justice system. Delays can lead to failed prosecutions, eroded public confidence, and denied justice for victims.



The human cost

Investigator overload is a direct cause of burnout and high staff turnover. This constant churn drains agencies of invaluable experience and institutional knowledge.



Eroding trust

When investigations move slowly, the quality of evidence can degrade, and community trust in the institutions meant to protect them diminishes.

Workforce enablement through AI

AI offers a powerful solution to these pressures by augmenting, not replacing, human expertise.



A productivity multiplier

In the face of budget constraints, attrition, and shrinking frontline capacity, AI acts as a force multiplier. It allows a single investigator to accomplish more, processing evidence with greater speed and accuracy.



Focus on high-value work

AI lifts the immense administrative burden from investigators' shoulders. By automating the repetitive, time-consuming tasks of sifting through documents and pre-filling forms, it frees professionals to focus on critical fieldwork, interviewing witnesses, and exercising human judgment.



Retention and wellbeing

By reducing the burnout associated with monotonous tasks, AI allows staff to engage in more meaningful and impactful work. This not only improves job satisfaction but is a key strategy for retaining experienced personnel.

Can we use AI for investigations? Governance, ethics & precedent



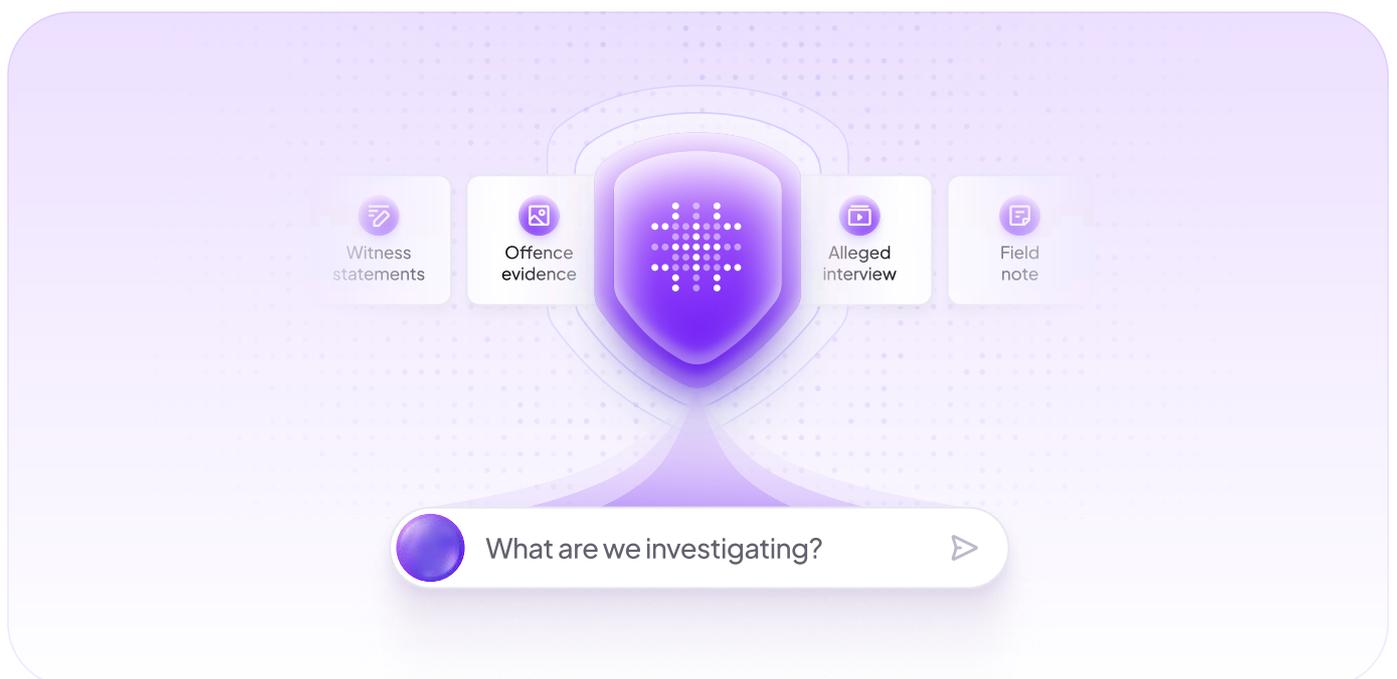
The question is not *if* we can use AI, but *how* we can use it responsibly. A robust framework of governance, ethics, and legal precedent is essential for deploying AI tools in the sensitive context of investigations.

Global & local standards: Australia's AI governance landscape

Australia is actively developing a cohesive approach to AI governance.

National Framework for the Assurance of Artificial Intelligence in Government was released on June 21, 2024. This builds upon the foundational.

Australia' AI Ethics Framework from 2019. Each state and territory is now in the process of either adopting the National Framework directly or aligning their own policies with it, creating a more unified national standard.



AI frameworks by jurisdiction

State	Framework name	Synopsis	Key features
NSW	AI Assurance Framework	First mandatory state-level AI risk assessment system	<ul style="list-style-type: none"> • Mandatory algorithmic impact assessments • Public register of high-risk AI systems • Risk tiers for AI projects • Independent auditing requirements
QLD	FAIRA Framework	Foundational AI risk assessment tool	<ul style="list-style-type: none"> • Two-stage assessment (components + values) • Requires ethical impact statements
WA	AI Assurance Framework	Mandatory pre-deployment evaluation	<ul style="list-style-type: none"> • Aligns with ISO 38507 governance management • Focuses on lifecycle risk
ACT	AI Policy & Assurance Framework	Integrated governance model	<ul style="list-style-type: none"> • Combines procurement rules with ethics review • Mandatory public consultation for high-risk AI • Includes algorithmic transparency register
NT	AI Assurance Framework	Ethics-focused implementation guide	<ul style="list-style-type: none"> • First Nations data sovereignty provisions • Remote community impact assessments
VIC	National Framework Adoption	Early adopter of federal guidelines	<ul style="list-style-type: none"> • Uses national framework as baseline • Sector-specific AI ethics committees
SA	National Framework Adoption	Relies on national principles	<ul style="list-style-type: none"> • Provides guidelines for use of GenAI and LLMs.
TAS	No dedicated framework	Emerging policy development	<ul style="list-style-type: none"> • Regional AI adoption program • Data partnership initiatives

From broad policy to sector-specific practice: AI guidelines take shape in policing

Alongside these broad governmental frameworks, sector-specific principles and guidelines are increasingly being developed to address unique operational contexts. By addressing the unique challenges of each field, these frameworks support more consistent, responsible use of AI across organisations and jurisdictions. See the following key example.

Australia New Zealand Policing Advisory Agency (ANZPAA) Police AI Principles

These principles are designed to guide the ethical and responsible use of AI by Australian and New Zealand Police, promoting consistency across jurisdictions and reinforcing a commitment to community safety and trust.

The ANZPAA principles mandate that police organisations ensure:



Transparency

Clear information about the use of AI systems is made publicly available to the greatest extent possible.



Human oversight

AI is only used to inform decision-making, not to make decisions independently. Appropriate human oversight and control are required at all stages of the AI system's lifecycle.



Proportionality and Justifiability

The use of AI systems must be reasonable, necessary, proportionate, and lawful, while respecting human rights.



Explainability

AI systems can be described in a meaningful and accessible way so that their use can be understood and challenged.



Fairness

AI systems are designed and used in a way that respects equality and fairness, and they are not used to unjustly discriminate against or harm individuals or communities. Potential biases must be identified and managed via risk assessments.



Reliability

AI systems are designed and used in a way that respects equality and fairness, and they are not used to unjustly discriminate against or harm individuals or communities. Potential biases must be identified and managed via risk assessments.



Accountability

Police organisations retain primary accountability for the AI system and the decisions it informs, including for systems obtained through external vendors.



Skills and Knowledge

Members have the appropriate training, skills, and knowledge to develop, deploy, and operate AI systems, including understanding their capabilities, limitations, and risks.



Privacy and Security

Privacy and security are at the forefront of the design and use of AI systems, ensuring compliance with all relevant privacy and data management obligations.

The pillars of responsible AI: The Comtrac approach

Comtrac's platform was designed with the pillars of responsible AI at its core. We have thoroughly assessed potential risk factors in the creation and maintenance of our AI tools to ensure they are fair, secure and transparent.



Fairness

AI must be used to mitigate, not perpetuate, bias.

The challenge

A key risk in AI is the potential for biased or inaccurate output based on the underlying data.

Comtrac's solution

Comtrac AI is designed to minimize this risk by operating on controlled, user-provided documents rather than uncontrolled external datasets. Through advanced prompt engineering and expert-led context enhancement, outputs remain consistent, accurate, and relevant to the matter at hand.



Privacy & security

Sensitive investigative data must be protected at all costs.

The challenge

Using public or commercial AI tools carries a significant risk of confidential or privileged information being absorbed into a public large language model, making it available to others.

Comtrac's solution

Comtrac ensures secure and compliant use of AI by running Azure OpenAI within a private tenancy, certified under ISO/IEC 27001 and assessed by IRAP. Customer data is never used to train GenAI models, nor shared with external providers. This closed-loop environment provides maximum protection for sensitive information.



Transparency & accountability

There must always be a "human in the loop."

The challenge

Authors using AI must remain responsible for the final output and cannot be absolved of their professional and ethical obligations.

Comtrac's solution

Comtrac enforces human oversight at every step. AI-generated outputs are clearly labelled, linked to source exhibits, and require explicit user acknowledgement of responsibility. Documents are never auto-transmitted or filed without human review, ensuring accountability is always maintained.

Deep dive example: The Courts & AI, NSW Supreme Court Practice Note SC GEN 23

A landmark development in AI governance is the NSW Supreme Court's Practice Note SC GEN 23, which commenced on February 3, 2025. This note provides clear directives on the permissible and prohibited uses of Generative AI in legal proceedings.

Investigation Management Australia Pty Ltd, trading as Comtrac, has formally affirmed its platform's full alignment with the Practice Note. The response document highlights a commitment to preserving legal integrity.



Risk Mitigation

Comtrac acknowledges the risks of AI "hallucinations" (inaccurate content). The platform mitigates this by strictly using AI to generate summaries of evidence from user-uploaded exhibits, which are tied directly to those sources. It deliberately does not auto-cite legislation or case law, requiring human users to perform and verify all legal reasoning and citation independently.



Confidentiality

The platform directly addresses the court's concerns about data privacy. By using a secure, private Azure OpenAI tenancy, it guarantees that confidential material entered by users is never used to train external models and is not made publicly available.



Adherence to Prohibitions

Comtrac's platform explicitly prohibits the use of AI to generate the content of affidavits, witness statements, or expert reports. This aligns with the court's core requirement that such evidentiary material must reflect a person's own knowledge and not AI-generated content.



Permissible Uses

The platform's features are designed to align with the permissible uses outlined in the Practice Note. This includes assisting with the creation of evidence relevance summaries (to aid in chronologies or lists), and providing pre-filled content for standard forms.



Human-in-the-Loop

Comtrac's design emphasizes human oversight and final control. Users are required to review and take responsibility for all outputs, ensuring they meet their professional and ethical obligations to the court.

Get the full breakdown

[Contact us](#)

Reach out to the Comtrac team at innov8@comtrac.com.au if you would like a full breakdown and response to the New South Wales Supreme Court Practice Note.

How do I use AI effectively? Practical application & best practices



The most effective AI tools are not generic, one-size-fits-all solutions. They are purpose-built to solve specific problems for specific professionals.

Aligning to Comtrac's AI-assisted evidence mapping

Comtrac offers a purpose-built AI for investigators. Our award-winning platform uses targeted models designed to improve investigative accuracy and efficiency. A key differentiator is our proprietary AI model, which analyses data and exhibits related to an offence. It excels at:



Extracting key evidence to substantiate findings.



Uncovering hidden connections or overlooked patterns across multiple pieces of evidence.



Mapping evidence directly to the legal elements of an offence.

This AI-assisted evidence mapping enhances the expertise of every investigator, from new recruits to seasoned veterans. It supports law enforcement, regulators, and other bodies in maintaining the highest standards of investigation while achieving significant time savings. All AI-driven work is subject to human review, ensuring every output aligns with the most stringent AI governance standards.

Putting it into practice: Implementation & change management



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Overcoming "Paralysis by Fear"

Risk aversion is a natural response to new technology. The key to overcoming it is demonstrating a commitment to ethical and secure design. By using platforms like Comtrac—which prioritize data security, transparency, and human oversight—organizations can build the internal and public trust needed for confident adoption.



Navigating internal barriers

Procurement processes can be challenging, and frontline staff may feel a sense of "change fatigue." It is vital to frame AI not as another burden, but as a tool for empowerment that reduces administrative load and allows staff to focus on the work they find most rewarding.



Leading the change

Successful implementation requires strong leadership. Leaders must champion the new technology, clearly articulate its benefits, provide comprehensive training, and actively support their teams through the transition. By building momentum from the top and demonstrating clear value on the frontline, organizations can successfully integrate AI to create a more efficient, effective, and resilient investigative capability.

Conclusion

The journey toward integrating Artificial Intelligence into the fabric of modern investigations is not a leap into the unknown, but a strategic imperative. As we have explored, the challenges of data saturation and resource scarcity are unsustainable, directly impacting investigator wellbeing and the quality of justice. AI, when deployed correctly, offers a powerful antidote: a productivity multiplier that returns skilled professionals to the high-value work of critical thinking and human-led inquiry.

The path forward is illuminated by a maturing landscape of governance, from Australia's National AI Framework to sector-specific guidelines and the clear directives from the courts. These frameworks are not barriers but guardrails, ensuring that technology serves our legal and ethical standards.

The principles of responsible AI, including fairness in application, unwavering security for sensitive data, and absolute transparency through human-in-the-loop accountability, are not abstract ideals. As demonstrated through the Comtrac platform, they can be engineered into the very core of an investigative tool. By using private, secure AI models, prohibiting the drafting of evidentiary material, and ensuring every AI-assisted step is reviewed and owned by a human, we can build systems that are both powerful and principled.

The future of investigation is not a choice between human and machine, but a partnership between them. For leaders, the time for "paralysis by fear" is over. The time has come to lead the change, to champion the tools that empower our teams, and to strategically embrace the technologies that will build a more efficient, effective, and just future for our communities.

Contact us for a demonstration and see how Comtrac aligns your operational and strategic goals.



Scan to request a custom demo of the Comtrac investigation management platform

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