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Smarter systems, safer world

How AI is reshaping safety for cities, citizens, and nations





Artificial intelligence (AI) has sparked widespread debate, with enthusiasts and alarmists alike weighing in on its risks and potential impact. Yet, amid the discussions on job losses and the rise of machines, the tangible, nuanced ways AI can improve society often get overshadowed. When deployed responsibly, with the right governance in place, AI offers significant potential—particularly in transforming public safety.

AI is already elevating security on multiple fronts. It's protecting individuals, securing infrastructure, ensuring workplace safety, and strengthening national defense. And the administrative power it provides should not be overlooked. From streamlining operations to improving decision-making, AI-driven tools can also enhance productivity, freeing up resources that can be redirected toward proactive safety measures. Yet, with Al's increasing role comes the need for ethical oversight. The technology must be used in a transparent and fair way, ensuring that progress doesn't come at the expense of privacy or bias. An ethical framework needs to ensure that there are clear lines of responsibility and accountability, as well as accounting for other key factors such as safety, sustainability, and societal impact that may need to be considered.

Only with such ethical frameworks in place can AI truly fulfill its promise in both public safety and broader societal contexts. When deployed responsibly and with proper governance, AI presents a significant opportunity, particularly as a catalyst for transforming the concept of safety across all dimensions of society.

Think AI-supported surveillance systems spotting hazards an employee might miss, technology detecting individuals on train tracks and alerting authorities, or smart glasses used at border crossings to instantly verify documents. These advancements are more than just innovations—they could be indispensable towards creating safer environments. In this article, we will focus specifically on two major areas of AI: **Vision AI** and **Generative AI (GenAI)**, which both hold considerable potential for improving safety in the public sector.

Defining Vision AI and Generative AI

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Vision AI: A branch of artificial intelligence focused on enabling computers to interpret, analyze, and understand visual information from the world, typically through image or video processing.

Generative AI (GenAI): An artificial intelligence system that can create new content such as text, images, audio, or video based on patterns learned from existing data.

The bottom line

With many governments and public sector services facing significant fiscal constraints, AI offers a critical avenue to more effectively navigate resource shortages. The cost-saving potential of AI, coupled with its ability to enhance service delivery, presents a compelling return on investment (ROI) that cannot be ignored.







In the UK, AI could unlock a staggering £119 billion worth of productive work each year across large enterprises.

Beyond the fiscal aspects, the state carries a profound responsibility to make decisions that directly benefit public safety. By leveraging this technology, public sector bodies can deliver smarter, safer solutions, bridging the gap between limited resources and growing needs. Here, safety in public services revolves around four key areas:

- Preventing issues before they arise
- Staying informed about current events
- Using resources efficiently
- Safeguarding essential systems.

This includes individual safety, secure workplaces, protecting critical infrastructure, and ensuring national security. This means a focus on promoting proactive threat mitigation, sharper situational awareness, smarter resource use, and building resilient infrastructure.

From managing healthcare priorities to issuing disaster warnings to handling citizenship claims, AI can support decision-making in complex, high-stakes environments where safety is paramount. As it continues to evolve, AI's role in safeguarding society across all dimensions—individual, workplace, infrastructure, and national security—will only become more critical.

Embracing AI in public services is therefore not merely about adopting new technologies; it's about fundamentally transforming how these services are delivered to better protect citizens, cities, and society.

Learn more about how AI can unlock UK productivity on techUK's blog article >



How AI makes individuals safer

Public safety spans a vast range of government responsibilities, from law enforcement and crime prevention to emergency responses in the face of natural disasters. Governments have a fundamental duty to safeguard their citizens and AI represents a powerful tool to fulfill that obligation more effectively.

Traditional approaches to crime deterrence and disaster management remain constrained by the technology—constraints AI is poised to break.

Al in practice

The practical applications of AI in the domain of public safety are already underway. For instance,

Predicting behavior, not just recording it

In Australia, anti-social behavior at a bus terminal is being addressed with AI-supported cameras designed to detect and predict aggressive behavior and alert security personnel before situations escalate. This pilot project, supported by Fujitsu, represents a forward-thinking approach to public safety which detects suspicious behavior without personally identifying suspects.

facial recognition systems and biometric technologies are improving the accuracy and efficiency of criminal identification. In-car police cameras provide real-time data for immediate situational awareness, while drones offer surveillance capabilities that were previously impossible. Additionally, crowdsourced crime reporting platforms, powered by AI, are creating a more connected and informed public, enabling law enforcement to respond more effectively to local threats that directly impact individuals.

Al is therefore crucial for keeping people safe. It goes beyond simple tools and helps improve how we protect citizens and workers alike, making it a vital part of any modern government. Video Behavior Analytics (VBA) goes beyond surveillance, analyzing behavioral patterns in real time to pre-empt incidents, creating a proactive response system.

By moving from reactive to proactive management of anti-social behavior, the project aims to create a safer, more secure environment for all. If successful, this model could be expanded to other transportation hubs and public spaces, setting a new standard for how technology can be used to protect the public.

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Case study

Al-driven surveillance in penitentiaries

Challenge

Penitentiaries face significant challenges in monitoring multiple cameras simultaneously. Human guards, despite their vigilance, can miss critical incidents when overseeing numerous video feeds, leading to delayed responses to aggression or security breaches.

Solution



Fujitsu collaborated with penitentiary authorities to introduce Video Behavior Analytics (VBA). By working closely with the institution, key pain points were identified, and focus was placed on highrisk behaviors, such as inmate aggression and tailgating through security checkpoints. The system was tailored to detect these specific behaviors, providing pre-built behavior catalogs for aggression detection and out-of-the-box capabilities for safety breaches.

Results

This AI-driven approach has the ability to transform surveillance from passive monitoring to proactive incident prevention, with the VBA system acting as 'one guard per camera.' By enabling realtime detection of critical events such as violence or unauthorized access attempts, the system can not only enhance guard safety through timely threat alerts but can also significantly reduced response times during critical incidents. Moreover, the system's adaptive capabilities can allow finetuning of behavior recognition over time, addressing evolving security needs. This proactive approach can lead to potential cost savings by preventing incidents and subsequently reducing medical, legal, and operational expenses.

Al's role in creating safer, more productive work environments

The safety of individuals extends beyond public spaces and into the workplace. When decisions in the workplace compromise safety, the consequences can be damaging, leading to anything from large-scale industrial accidents to severe injuries.

Al has the potential to reduce human errors that so often lead to workplace accidents. It can be used for <u>hard-hat detection</u> in potentially dangerous working construction environments, or to <u>identify improper</u> <u>Personal Protection Equipment (PPE) usage</u> in locations where contamination is high, such as hospitals. All of which allows organizations to identify risks earlier, protecting workers before issues escalate from potentially harmful to imminently risky.



Boosting productivity

- The average employee saves
 ~5 hours / week, 20 hours / month or
 32 days / year when using GenAl
- An organization with
 1,000 users using GenAI could
 save 32,000 days / year
- Based on average EU labor costs, this time saved is worth potentially

Utilizing AI across an entire organization

Beyond safety, AI is revolutionizing productivity by relieving workers of monotonous tasks such as processing documents and summarizing information. In the public sector, GenAI tools are already being used to streamline bureaucratic tasks, reduce workloads and allow employees to focus on higher-level work. For instance, revenue agencies can use AI systems for predictive analysis and real-time data processing. Similarly, in healthcare, AI can generate medical reports to support with emergency responses, relieving medical staff from the burden of repetitive documentation and freeing up their time to focus on patient care. €6.8 million saved by bolstering productivity with GenAI solutions¹.

This demonstrates a compelling argument for integrating AI across all levels of the organization to support productivity targets. By prioritizing GenAI in the development of comprehensive digital workplace solutions, companies could address several pressing challenges, including employee disengagement, high turnover rates, and the widening digital skills gap.

4 in 5 (81%) users agree that GenAI saves them time and means they are more productive in their role.

Forward-thinking organizations are not

just using AI to mitigate risk; they are reimagining how workplace safety and productivity is enforced and upheld. By investing in AI, businesses and public sector bodies alike are reducing worker stress, enhancing productivity, and ultimately, creating a safer and more efficient working environment.

<u>Learn more from the GenAI digital story</u> <u>on Fujitsu.turtl.co</u> >

¹ <u>https://fujitsu.turtl.co/story/genai-at-work-philosophy-progress-and-performance/page/6/1</u>

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Securing critical infrastructure, supporting disaster prediction

The scope of safety considerations extends from the individual to the protection of entire cities and populations. As climate change intensifies, it presents ever-growing threats to critical infrastructure—ranging from extreme weather events to rising sea levels. In this context, AI has emerged as a powerful tool, providing government officials with deeper insights into potential natural disasters and their consequences.

Combined with converging technologies, like Digital Twin and Computing, AI can predict not only the likelihood of disasters but also the scope of their damage, identifying the systems most likely to fail. Through analyzing weather patterns, flood data, and infrastructure vulnerabilities, AI can help determine the probable timing and severity of floods, earthquakes, or hurricanes. This allows governments to prepare in ways that were previously impossible, such as ensuring emergency response teams are prepositioned in vulnerable areas or prioritizing evacuations in high-risk zones.

Fujitsu tsunami warning system A model for global disaster preparedness

This approach saves lives. Fujitsu, alongside Tohoku University and the University of Tokyo, have been using AI to support tsunami flood prediction for the City of Kawasaki. Through the conduction of evacuation field trials involving citizens and an online disaster prevention course - citizens' evacuation actions can be reviewed.

This predictive capability offers unparalleled resilience, empowering emergency response services to act quickly and decisively before, during, and after disaster strikes. With AIdriven insights, officials can make datainformed decisions to mitigate damage, safeguard lives, and protect essential infrastructure. As the effects of climate change grow more severe, AI will play a crucial role in fortifying cities and public services against increasingly unpredictable and dangerous natural events. During a field trial, participants will be notified about the arrival time and the flooding height of a predicted tsunami through a special smartphone application developed by Fujitsu. The aim is to identify the most effective ways to use the technology to support local communities in sharing information amongst residents and avoid cases of people being left behind during evacuations.

Lean more about AI to support tsunami flood prediction on the Fujitsu press release >



The impact of AI in national security issues

Al's impact on safety extends beyond local communities to national borders. Just as AI is revolutionizing sectors like healthcare, human resources, and business, it is also transforming how governments manage border security and national defense. In an era of increasing global threats, from terrorism and cyber-attacks to humanitarian crises, AI offers new tools to secure international borders more efficiently and fairly.

Al's role in border management is multifaceted. The traditional focus on surveillance, AI-enabled document processing, driven by natural language processing (NLP), helps streamline immigration workflows. It can also rapidly process visas, passports, and other travel documents, identifying potential discrepancies or fraudulent activities. Moreover, GenAI, through chatbots or virtual assistants, can relieve immigration officials of repetitive tasks, such as answering frequently asked questions, allowing them to focus on more complex responsibilities. Border-focused AI technologies go even further by integrating advanced algorithms to detect subtle, often imperceptible emotional expressions, analyze biometrics like fingerprints, and utilize facial recognition to flag potential risks. These systems, built upon decades-old surveillance technologies, have now evolved to become fully automated. AI-powered systems can make preliminary determinations about threats without the inherent biases or limitations of human operators. This shift enables authorities to respond swiftly and with precision to potential dangers.

As AI continues to advance, its capacity to assess risks, secure borders, and ensure national security will only grow more critical. The ability of these AI-driven systems to process vast amounts of information ranging from behavioral cues to biometric data—creates a safer, more secure environment on a national scale.



Enhancing border security with Vision AI



Challenge

Fujitsu is currently collaborating with a national border force to revolutionize security protocols through the implementation of cutting-edge Vision AI technology. The border force wanted to streamline and enhance checks, particularly for individuals entering via land and sea routes. Here, there was a challenge to create a contactless and efficient crossing experience, without impacting the clear need for high levels of security national borders are expected to maintain.

Solution

If successful, this technology could dramatically reduce wait times, minimize the need for physical interactions, and elevate overall security measures. By using advanced AI to assess travelers in real-time, the system aims to identify potential risks more swiftly and accurately than traditional methods. This AI-driven approach has the potential to be adapted for other border crossing points, including airports, making it a versatile and scalable solution for global security operations.



Results

Although still in its early stages, the project shows great promise. It has the potential to transform how borders are managed, setting a new global standard for contactless, efficient, and secure border protocols. This initiative may serve as a model for how AI can enhance national security while improving the traveler experience.

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Safety on all fronts

The public is no longer a passive recipient of services but stands to benefit from the radical shift AI is driving. Today's surveillance is far more intelligent, proactive, and constantly evolving, whether it's preventing crime, preparing for natural disasters, alerting for signs of medical distress, or securing national borders, AI enables pre-emptive safety measures to become commonplace. We are no longer merely capturing images for evidence but actively analyzing them in real-time, reducing human error, and enhancing community safety. However, with this immense power comes the responsibility to ensure AI is used ethically. The potential for bias, invasion of privacy, or misuse demands a thoughtful and transparent approach. Only by maintaining stringent ethical standards can AI truly fulfill its promise of enhancing safety and productivity while respecting fundamental rights and freedoms.

Technology has long been synonymous with progress, and nowhere is this more evident than in the transformative role AI is playing in the public sector—especially when it comes to safety. From protecting individuals to securing workplaces, safeguarding infrastructure, and enhancing national security, AI is reshaping the way safety is managed across the board.



A safer society built on the foundation of AI

However, the first steps towards this new society require careful planning. Governments and organizations must begin by identifying the unique safety challenges they face, establishing robust governance structures to ensure AI is used responsibly and ethically. Moreover, conducting an AI maturity assessment is crucial to gauge how well-positioned an organization is to deploy AI solutions effectively.

The future of safety is not about turning society into a surveillance state but about empowering communities with technology to protect themselves while also enhancing individual productivity. AI has broader benefits, aiding users, automating monotonous tasks, freeing up time for more meaningful and creative work in a safer environment. The future of AI in the public sector is one where citizens can trust that their safety is prioritized, their rights are respected, and their time is optimized. To bring this world into fruition, the choice of a strong technology partner to deliver AI-driven transformation is essential. With extensive knowledge, real-world experience, and a proven track record of successful use cases, Fujitsu brings a unique consultancy approach to AI implementation. This means that solutions, such as <u>Fujitsu Kozuchi</u>, are tailored to each organization's specific needs and challenges.

At Fujitsu, we collaborate closely to understand your challenges, goals, and workflows. Using trusted frameworks, we assess where improvements can be made across operations, ensuring the right foundations, guardrails, and processes are in place to support continued AI growth.

Public sector organizations are moving from traditional data models to more dynamic approaches that turn real-time insights into actionable strategies, helping predict or prevent key events. Here, we recognize the value of integrating AI and advanced data services with current systems, rather than replacing them. This is a transition that must be done correctly. The stakes are too high to ignore. The public sector cannot afford to lag; when it does, lives and livelihoods are impacted. The future of safety and productivity lies in this technological evolution, and the time to act is now, with Fujitsu as your trusted guide and partner.

Take the next step in Al innovation

with Fujitsu Kozuchi and see how we can shape a safer society together.

<u>Contact us</u> to discover more about Fujitsu Kozuchi, our world-class AI.

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GenAI has been used in the creation of this content



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