Long-Term Insights Briefing

Looking forward to 2050, how could the use of new and emerging technology improve the efficiency and effectiveness of the New Zealand corrections system?

DEPARTMENT OF CORRECTIONS
ARA POUTAMA AOTEAROA

What is the Department of Corrections and what do we do?

The Department of Corrections – Ara Poutama Aotearoa (Corrections) is the organisation within the justice sector that administers prison and community sentences and orders, and assists in people's rehabilitation and reintegration into the community.

The Corrections Act 2004 sets out Corrections' statutory purpose which is to improve public safety and contribute to the maintenance of a just society by:

- ensuring that the community-based sentences, sentences of home detention, and custodial sentences and related orders that are imposed by the courts and the New Zealand Parole Board are administered in a safe, secure, humane, and effective manner.
- providing for corrections facilities to be operated in accordance with rules set out in this Act and regulations made under this Act that are based, amongst other matters, on the United Nations Standard Minimum Rules for the Treatment of Prisoners.
- assisting in the rehabilitation of offenders and their reintegration into the community, where appropriate, and so far as is reasonable and practicable in the circumstances and within the resources available, through the provision of programmes and other interventions.
- providing information to the courts and the New Zealand Parole Board to assist them in decision making.

We have approximately 11,000 staff, and we work with approximately 11,133 people in prison and 25,636 people in the community as of 31 January 2026. Corrections provides health, education, rehabilitation, and reintegration services to the people in our management, to reduce their risk of reoffending and improve public safety.

Our organisational strategy, Hōkai Rangi recognises we need to do things differently to achieve better outcomes for the people we manage, as well as our staff and communities.

Corrections is required to produce a Long-Term Insights Briefing (LTIB) once every three years

What is a Long Term Insights Briefing?

The Public Service Act 2020 requires departmental chief executives to publish a Long-Term Insights Briefing (LTIB) at least once every three years. Our next LTIB is due to be published in early 2026.

LTIBs are required to make publicly available:

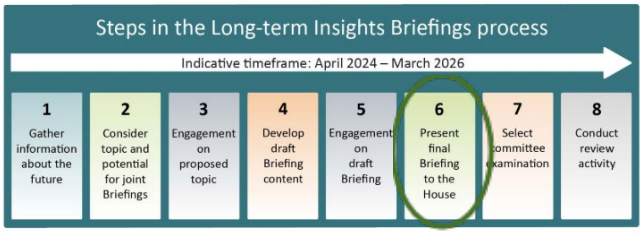
- information about medium- and long-term trends, risks and opportunities that affect or may affect New Zealand society, and
- information and impartial analysis, including policy options for responding to the trends, risks and opportunities that have been identified.

LTIBs are intended to help us think and plan for the future. They are not government policy and are developed independently of ministers. They are intended to bring a focus to long-term issues and challenges, and promote public debate on important matters for New Zealand.

We consulted on our draft briefing before finalising it

The Department of Prime Minister and Cabinet (DPMC) has issued guidance to assist agencies in developing LTIBs, including an eight-step development process (outlined below) and criteria for selecting LTIB subject matter. We are at step five of this eight-step process.

Table 1: LTIB process



Public consultation is required at two critical points; on the choice of topics, and when a draft is developed. We publicly consulted on our draft Briefing from 5 January – 1 February 2026:

LTIBs are also required to undergo Select Committee scrutiny and the relevant Ministers must present a copy of the briefing to the House of Representatives as soon as it is reasonably practical after receiving it.

Our first LTIB explored what our future prison population might look like

Our previous LTIB - Long Term Insights on Imprisonment, 1960 to 2050 - was developed jointly with the other Justice Sector agencies. It explored long-term insights about imprisonment, including how and why the prison population has changed over the past 60 years.

In this LTIB, we want to build on the work done previously and explore what impacts the predicted changes in society, particularly the increasing use of technology, will have on our future corrections system.

Future prison population - the people we could be managing over the next 25 years (up to 2050)

Corrections is responsible for 18 prisons across New Zealand (15 for men and three for women) for people who have either been sentenced to a term of imprisonment or have been remanded in custody while they wait for their case to be heard.

The prison population is a product of many variables which may be impacted by future changes. While the prison population will likely be a smaller proportion of the New Zealand population in the future, if current trends continue it is likely to be larger than the current prison population.

As we learned from our first LTIB, published in 2023, there are many factors that influence the make-up of our future prison population. If the current trends continue our prison population is likely to consist of middle-aged people on average (average age range of 30- 40 years old), with a high concentration of people serving sentences for violent and sexual offences, and a greater proportion of people on remand.

Corrections also manages a wide variety of community-based sentences and orders, including people on parole and on home detention.

Any increased use of technology will need to account for the types of people serving sentences and the ways that they might interact with this technology.

There are changes already happening in the world today that will impact the future of our corrections system

There are several trends nationally and internationally which are likely to impact the corrections system in the future.

Increasing technology use across society

Our previous justice sector LTIB notes: "Over coming decades, the justice system is likely to expand its use of existing technology and new, innovative forms of technology will be introduced ... Technology could be more extensively integrated into infrastructure and service delivery within the criminal justice system. It is likely that new ways of detecting and responding to crime will emerge, which could have implications for the prison population, human rights, the rule of law, and could exacerbate existing disparities in the prison population."[1]

Increasing use of technology is likely to shape society over the next 50 years. The rate of adoption of new technologies is accelerating, and technological solutions are being applied more and more throughout the justice system.

A constrained fiscal environment

As noted in Treasury's Long-Term Fiscal Forecasts, as New Zealand's population is expected to age, there may be a shrinking tax base in the future. This may lead to a more fiscally constrained environment which Corrections must operate within.

Alongside the reduced tax base, there are likely to be increased costs across government as it responds to the increasingly unstable natural environment. For example, it is likely there will be more frequent severe weather events which will place increasing fiscal pressure on the government.

These constraints may lead to greater use of technology-based solutions across the public sector as an alternative to manual or personnel driven practices. Technology adoption may accelerate over time as advancements become more mainstream and their costs reduce.

Changes in the broader social context - impacts of global mega-trends on New Zealand corrections system

'Megatrends' are defined as long-term (>10 years) global changes in individual, social, and technological structures that are expected to have a significant impact in the future. Megatrends are known in the present day, but their future path may be unknown. They differ from trends, which are unlikely to last as long, and disruptors, which are a singular occurrence causing radical change on a global scale.

There are six key global megatrends which are likely to directly impact on New Zealand: geopolitical tensions, climate change and nature, persistent inequity, polarised perspectives, an ageing and changing population, and the accelerating technology landscape. [1] Each of these global megatrends will impact on different aspects of New Zealand society:

- *Geopolitical tensions:* Rising global geopolitical tensions are prompting New Zealand to reassess its trade dependencies and strengthen regional alliances, particularly in the Indo-Pacific.
- *Climate change:* Climate change is intensifying weather extremes in New Zealand, threatening biodiversity, agriculture, and coastal communities, and driving urgent adaptation and mitigation efforts.
- *Persistent inequality:* Despite economic growth, persistent inequality in New Zealand continues to affect access to housing, education, and health outcomes, especially for Māori and Pasifika communities.
- *Polarised perspectives:* Increasing polarisation in public discourse is challenging New Zealand's social cohesion and trust in institutions, particularly around issues like climate policy and Treaty obligations.
- *An ageing and changing population:* New Zealand's ageing population and shifting demographics are placing pressure on health services, pensions, and workforce planning, while also reshaping community needs.
- *Accelerating technology landscape:* Rapid technological advancement is transforming New Zealand's economy and labour market, creating opportunities for innovation but also risks of digital exclusion.

Each of these trends will impact the New Zealand corrections environment, in some way either through increasing costs or through the types of prisoners we manage.[2]

For our prison population, who often lack other protective factors, or come from more economically disadvantaged backgrounds, the impacts of some of these trends may be more keenly felt at an individual level.

[1] https://www.deloitte.com/nz/en/Industries/government-public/perspectives/the-power-of-megatrends-for-strategists-and-decision-makers.html

[2] https://www.justice.govt.nz/justice-sector-policy/key-initiatives/key-initiatives-archive/justice-sector-long-term-insights-briefing/

Our future corrections system may be more technology enabled than is currently the case

While the previous LTIB touched on the impacts of technology on the prison population, it did not look at any topic within this this broad subject area in depth. This LITB provides an opportunity to explore the potential risks and impacts of technology on our future corrections population.

Technology is becoming increasingly present in society, from checking our social media status on our smart phones to scanning our groceries in the supermarket, technology is all around us.

New and emerging technologies are already being slowly introduced to the New Zealand corrections system. With the continued advancement of technology comes the likelihood that it will play an increasing role across the corrections system and society in general. This is likely to present both challenges and opportunities for Corrections. This LTIB considers some important technology-related issues which may confront us in the future.

By looking at how new and emerging technologies are being used in other jurisdictions, technology solutions could be used to improve:

- *efficiency of systems, processes, and infrastructure.* For example, smart building technology can be used to improve operational efficiency and enhance infrastructure, creating a safer and more secure environment for both prisoners and staff. Data analytics systems can be used to help staff to better understand and manage individual risks.
- *safety and security of both prisoners and custodial staff.* For example, emerging surveillance technologies, such as video analytics and facial recognition, have the potential to provide more accurate real-time tracking of prisoners, enabling more proactive and effective management and improved safety for staff, prisoners and the public.
- *rehabilitation and reintegration outcomes.* For example, using technology to provide better communication options for prisoners to maintain community and family connections, improved education options, telehealth services to improve health outcomes / meet additional health support needs.

The COVID-19 pandemic was a catalyst in the adoption of technology in prisons and community settings across the world

The most common and widely used technology included:

- hybrid court hearings using audio-visual technology
- investment in digital infrastructure
- biometric identification, and
- advances in the use of electronic monitoring.

While some of these technologies were already being used to a limited extent in the New Zealand corrections system, use increased over the COVID-19 period. In addition, this period made people more comfortable with using these technologies which has created a shift in people's willingness to interact with technology.

Prior to the pandemic, several countries were already introducing new technologies for security, surveillance and more efficient management of people on sentences.[3]

New Zealand-specific technology considerations

There has been some research looking at the impacts of different types of technology on prison populations in other jurisdictions. However, there has been little research into the implications of increasing technology use in the New Zealand context.

There are technology and data considerations that are unique to New Zealand which will need to be considered more fully as we become more reliant on technology-based solutions. For example, how do changes in technology intersect with our privacy legislation and what impacts will this increasing use of technology have on our Treaty of Waitangi obligations?

Last year the Government Chief Digital Officer (GCDO) published guidance for the use of Artificial Intelligence (AI) with the aim of managing the potential risks of using AI across the public sector. The GCDO noted that "AI is evolving rapidly and if inaccuracy or misuse were to cause failure in public service delivery, the consequences could be serious.

Public services are rightly held to a high standard, and privacy, security and ethical risks need to be carefully considered and well managed. It's critical that agencies understand and make informed decisions about these risks to maintain public trust and protect the integrity of their systems and the Public Service as a whole."[4]

It is obvious that the increased use of technology will have impacts across New Zealand, beyond just the corrections system. We anticipate the answers to the questions above will be given broader consideration over time. Corrections will need to remain vigilant to these developments. This is to ensure we can maximise the use of technology while recognising its potential impacts and how these may need to be mitigated.

[3] McKay, C (2022) The carceral automaton: Digital prisons and technologies of detention. International journal for crime, justice and democracy 11(1):100-119

[4] https://www.digital.govt.nz/standards-and-guidance/technology-and-architecture/artificial-intelligence/public-service-artificial-intelligence-framework

We have identified four key aspects of our New Zealand corrections system and looked at how we can maximise the benefits, and mitigate the risks of using new technologies in these areas

Technology is a broad topic. We couldn't cover all aspects of technology that may have an impact on Corrections in the future in this document. Instead, we have focused on a few subject areas.

Each of the first four chapters of this LTIB looks at one area where technology could play a significant role. The final chapter looks at some of the policy considerations which could enable future technology use in these areas.

The subject of each chapter is as follows:

- *Improving system productivity and resilience*: How could technology enable a more efficient and resilient prison network?
- *Supporting our frontline workforce:* How could new and emerging technology be used to complement our workforce in the future and improve their safety and security?
- *Improving outcomes:* How could new and emerging technology be used to improve rehabilitation and reintegration outcomes both in prisons and in community settings?
- *Rising use of electronic monitoring technology:* How can Corrections take advantage of new and emerging technology in the community?
- *Future policy directions:* How can we maximise the benefits, and mitigate the risks, of new and emerging technologies across the New Zealand corrections environment?

Some of the technology terms used in this document

Artificial Intelligence (AI)
A field of computer science focused on building systems that can perform tasks requiring human-like intelligence, such as reasoning, learning, and decision-making.

AI-enabled Technologies
Technologies that incorporate artificial intelligence to enhance their capabilities, such as predictive analytics, automation, or adaptive learning.

Biometric Systems
Technologies that identify individuals based on unique biological traits like fingerprints, facial features, iris patterns, or voice.

Cloud Computing Technology
The delivery of computing services—including storage, processing, and software—over the internet, allowing remote access to data and applications.

Digital Connectivity
The infrastructure and technologies that enable access to digital networks and the internet, such as broadband, Wi-Fi, and mobile data.

Digital Services
Services provided electronically through digital platforms, including online applications, virtual consultations, and e-learning tools.

Facial Recognition Technology
A biometric system that identifies or verifies individuals by analysing facial features from images or video.

Internet of Things (IoT)
A network of interconnected physical devices that collect and exchange data via the internet, such as sensors, cameras, and smart appliances.

Machine Learning Software
Software that uses algorithms to learn from data and improve performance over time without being explicitly programmed for every task.

Smart Technology
Devices or systems that use sensors, connectivity, and AI to operate interactively and autonomously, such as smart locks or smart lighting.

CHAPTER 1: Improving system productivity and resilience: How could technology enable a more efficient and resilient prison network?

This chapter looks at the potential impacts of new and emerging technology on our future prison network. With the adoption of new technology comes benefits, risks, and other implications that need to be fully understood.

Technology is advancing faster than policy development. Understanding technology's risks and benefits and how it can be used to achieve equitable outcomes is hard at the pace it is evolving.

What does our current corrections prison network and system look like?

New Zealand's current prison network consists of 18 sites, a number of which have poor quality beds or facilities and are reaching the end of their useful life. As the demographics and complexity of needs of the prison population change, our current facilities may not provide right mix of beds to meet the needs of the future prison population.

New Zealand's prison population has fluctuated in the short-term but has steadily grown over time. The 2025 justice sector projections indicate the prison population is anticipated to increase to 14,230 prisoners by June 2035.

Over the last twenty years Corrections has seen significant changes to the size, make-up, and complexity of the prison population. Increasingly those Corrections manage have health, alcohol, and addiction challenges. The levels of gang influence and violence are rising, and increased numbers of people are being held on remand.[5]

Significant growth and change to the remand population has fundamentally altered how people move through the criminal justice system and access programmes and services. 20 percent of people in prison were on remand in 2014, rising to 36 percent in 2019 and 45 percent in 2024. The 2025 Justice Sector Projections indicate that over 50 percent of the prison population will be on remand by 2050. For young people, Māori, and women this is already the case.

Planning is already underway to enable Corrections to manage our physical and digital assets in the future

Corrections Long-Term Network Configuration Plan 2025 – 2045 (LTNCP)

Our Long-Term Network Configuration Plan (LTNCP) is a 20-year plan designed to address anticipated prison population growth, quality issues within the existing prison network, and inform all future significant capital investments in the prison network. It has a focus on prudent fiscal management while planning for a quality, fit-for-purpose prison network with safe environments that enable staff to do their job and support effective rehabilitation outcomes, and with sufficient capacity to meet demand.

Corrections Digital Statement of Intent

Corrections' Digital Statement of Intent 2024- 2027 describes Corrections' vision and goals to ensure its digital presence aligns and supports the delivery of our organisational strategy Hōkai Rangi.

The Digital Statement of Intent's three key themes are:

- *Strengthening our digital foundations* – We will continue to strengthen and maintain our digital infrastructure. Our foundation technologies need to be reliable, accessible and fit-for purpose so we can build out and innovate securely
- *Extending our digital services and capability* – People are at the heart of everything we do. Our aim is to continue incrementally extending the way our technology systems, services and infrastructure provide support, so we deliver value to our people and our stakeholders.
- *Transforming our digital services* - Growing our capability to foster innovation towards supporting Corrections to manage emerging technologies, to improve digital inclusion, and grow digital equity for all our people.

How could technology improvements address issues in the New Zealand prison environment?

The corrections environment presents several distinctive challenges to adapting new technology. Within the corrections and justice systems moral, ethical, and legislative issues must be considered in the application and use of technology and must be weighed against potential risks.[6]

Additionally it takes time to plan and build new prison infrastructure. The lead time to develop and build new prison infrastructure is likely to mean that we are unable to plan for, and incorporate, new technology as soon as it becomes available. In the New Zealand context, it is possible that the technology available today is likely to be the technology that will be used in the future.

Future investment in Corrections digital technology could deliver the solutions that will achieve a number of benefits across the department.

Given the nature of Corrections' work, there are many necessary but time-consuming and manual tasks. This includes tasks such as completing segregation paperwork, undertaking cell head counts, and tracking prisoner belongings. Identifying a

[5] Corrections Long-Term Network Configuration Plan 2025 - 2045

[6] Knight, V., Reisdorf, B., & Van De Steene, S. (2023). Digital maturity of prisons: A global survey. *Digital Maturity of Prisons: A Global Survey*.

technology solution that allows staff to quickly and accurately carry out these types of tasks could free up staff time. This time could provide an opportunity for more meaningful engagement with people in prison, improved wellbeing, and participation in professional development.

Future investment in technology and digital solutions could also contribute to a range of other benefits, including:

- *Faster and more-informed operational decision making* – resulting from access to real-time information about the condition of prison facilities, such as broken cell doors or locks.
- *Reduced risk of data loss and increased information security* – resulting from real-time high-speed connectivity and more reliable back-up of supplier data. It also reduces the vulnerability of information to being accessed inappropriately.
- *Increased efficiency of supplier operations* - resulting from a reduction in time-consuming, manual workarounds that our suppliers must adopt in the prison environment due to a lack of digital connectivity. Initial analysis has provided anecdotal evidence of the efficiencies our suppliers would be able to make. These changes would provide an opportunity to renegotiate our contracts with our suppliers, which are currently structured around the significant workarounds they implement to work in our prison facilities. Additionally, this could potentially lead to improved attractiveness to suppliers – Corrections wouldn't be limited to suppliers that are willing to implement workarounds to operate without digital connectivity, making it a more attractive customer for suppliers.

Improvements in digital technology also have specific benefits for people in prison. These include:

- *Increased access to justice.* Corrections will be able to support the people we manage to have increased access to their counsel or to audio-visual hearing links for parole hearings, trials and sentencing – reducing the time it takes to have matters resolved.
- *Improved health and wellbeing for people we manage.* Our partners (including NGOs, iwi, Health Providers, Social Service Providers etc) will not be as constrained by the costliness and difficulty of 'in prison' visits to support people we manage. This means people we manage could potentially have more ready access to the support and services they need to maintain their health, mental-health and wellness. This supports our goal to create 'humanising and healing' environments for people under our management.
- *Access to audio-visual 'virtual' visits* for friends and family who would otherwise be unable to visit with prisoners. This ongoing contact would help maintain prisoner's connections with friends and family.[7]

The potential of AI to support prison operations

AI technologies are already being used in overseas corrections environments to support decision making. For example, to support decisions about whether a pretrial defendant should be detained in jail, facilitate the selection of rehabilitation services suitable for various offender needs, assist in determining whether a prisoner should be granted parole, and assist in determining appropriate case management for community supervision.[8]

AI-enabled technologies provide opportunities to automate certain tasks (e.g., note-taking, data entry, and video surveillance) and increase the efficiency of overburdened officers, freeing them up to perform other activities. Implementing AI into Corrections has the potential to positively impact numerous operations that facilitate making decisions and performing tasks.

AI enabled smart technology is increasingly being used to support security and surveillance in prisons in overseas jurisdictions.[9] In some US prisons a mass monitoring system monitors all prisoner phone calls. The system employs speech recognition technology, semantic analytics, and AI machine learning software to create a database of words that can flag suspicious calls, including threats such as criminal conspiracy or drug smuggling into prison.[10]

We also need to be aware of the risks that come with increasing technology use

The use and application of advanced surveillance technology within prisons such as biometric recognition, Radio Frequency Identification (RFID) tracking, and AI based monitoring can potentially raise privacy and human rights concerns.

Some of the monitoring technologies currently used internationally require continuous monitoring and surveillance without consent. This could result in the dehumanisation of prisoners by treating them as subjects under observation rather than individuals with rights.

It is critical that any personal information and / or data that is captured through new smart technology relating to surveillance be implemented with caution. This could be through the appropriate data governance policies and procedures to safeguard the privacy of both prisoners and those who interact with them, including their family members.

Using technological solutions in place of human interactions also potentially creates a risk of some prisoners having almost no human contact during their time in prison. This lack of human contact has the potential to lead to psychological harm for those individuals.

While AI and data technology can be useful for identifying patterns and monitoring, it potentially has major human rights and privacy implications. Surveillance cameras (CCTV) are already being used in our prison environments to a limited extent. This type of technology, when combined with other new surveillance technologies, including biometric data, has the potential to capture significantly more of people's data,

[7] Adams, D. & J. Fischer (1976). The effects of prison residents' community contacts on recidivism rates. *Corrective & Social Psychiatry & Journal of Behavior Technology, Methods & Therapy, 22*(4): 21-27.

[8] Redden, J., Inkpen, C., DeMichele, M., & Criminal Justice Testing and Evaluation Consortium. (2020). Artificial Intelligence Applications in Corrections. U.S. Department of Justice, National Institute of Justice, Office of Justice Programs. http://cjtec.org/

[9] E Imandeka, AN Hidayanto, M Mahmud, *Smart prison technology and challenges: a systematic literature review*, in IAES International Journal of Artificial Intelligence Vol 13, No 2, June 2024 pp 1214 - 1226

[10] Ibid

which can be used, stored, manipulated, and disseminated, raising privacy concerns. The use of AI, especially when based on personal data, can also create concerns about fairness, bias, and potential discrimination.

While there are benefits to introducing digital technology in prisons, these advances must be weighed against the potential impacts on a person's culture, human rights, respect for privacy, data protection and safety. The following are examples of these tensions:

- In Singapore, human rights groups are challenging the accuracy, necessity and fairness of technology in prisons, for example automated head counts and monitoring. Due to the constant surveillance and lack of privacy, people in prison reported feeling disrespected and dehumanised.
- The lack of data protection laws and policies in India has raised concerns over the potential misuse of technology in prisons including the disproportionate targeting of marginalised communities.
- In Australia, rights groups have warned the government that facial recognition technology currently used in prisons is 'riddled' with racial biases which has the potential to exacerbate negative impacts on Aboriginal and Torres Straight Islander people.[11]

In a prison context, there is a power imbalance between people and agencies collecting the information, which is such that even if people are not comfortable with the way that their personal information is being collected and used, they are unlikely to feel they are in a position to do anything about it. Given the likely continuing over-representation of Māori in our prison population, there may also be Māori data sovereignty implications that could be exacerbated by the use of these surveillance technologies.

New Zealand's Privacy Act 2020 and the Office of the Privacy Commissioner provide some safeguards for individuals. However, they don't address Māori data sovereignty or collective data privacy. As noted by Cormack and Kukutai (2022)[12] "a range of government initiatives have been developed to try to respond to Māori Data Sovereignty (Sporle et al., 2020), but ongoing structural inequities mean there are significant barriers to achieving the sort of transformational change needed (Kukutai & Cormack, 2020)."

What could the use of new and emerging technologies look like in our prisons?

Continuing with the same technology

If Corrections choses or is required to maintain its current investment in technology and digital services with no consideration to future changes and needs, over time there would likely be significant impacts for staff and people in prison as the technology we use becomes increasingly outdated.

As our technology becomes increasingly outdated, it will become more and more difficult to meet our organisational goals and international obligations. This reliance on outdated systems could limit opportunities to reduce administrative burden, collate and collect required data for good decision making, and could potentially impact rehabilitation and reintegration outcomes.

Reliance on outdated systems could reduce potential resourcing efficiencies and custodial staff may come under increasing pressure as they rely on outdated systems. This could reduce job satisfaction and could increase staff turnover as staff become frustrated with ongoing requirements to undertake manual tasks that have been automated elsewhere. This could become increasingly problematic in an environment where it is difficult to recruit new staff because of the demographic changes which are likely to impact on our future potential workforce.

Some integration of new technology into our system

While future fiscal constraints may limit investment, it is likely that Corrections would still need to make some investment in digital technologies in the future as legacy technology becomes redundant, end of life or out of service.

A moderate and strategic investment in technology and digital services would focus on digital foundations to enable better services to be put in place over time. A moderate investment in new technology would also likely provide efficiencies in services and benefits in terms of staff safety and security.

This will help Corrections to manage future security and safety considerations, particularly in the context of a rising prison population.

Corrections is currently upgrading a number of digital services in prisons to improve the digital connectivity of our prison sites. This provides a foundation for additional use of digital technologies to support our work within prisons. Our Digital Statement of Intent sets out Corrections commitment to investing in Cyber Security, Information Management (IM) and the modernisation of core systems to enable our people to work safely, anywhere, anytime.

Full integration of new technology including use of AI and Virtual Reality

'Smart technology' using AI and other integrated data systems is beginning to be used across government agencies in other jurisdictions to improve management systems and optimise services.[13] Some overseas literature demonstrates the use of intelligent technology in prison settings, such as the use of the Internet of Things (IoT) in monitoring systems, which integrate data into global monitoring systems based on wireless sensor networks and cloud computing technology, as well as the use of video surveillance and analytics systems, digital and self-service devices.[14]

Using the IoT would enable all prison systems to be integrated into a unified monitoring system that could track prisoners' movements and monitor their wellbeing in real time. For example, in some overseas jurisdictions a network of cameras

[11] Global Prison Trends 2024 report. Penal Reform International Global Prison Trends 2024 - Penal Reform International

[12] In Hepp A, Jarke, J, Kramp, L, (2022) *New Perspectives in Critical Data Studies: The Ambivalences of Data Power*, Palgrave MacMillan

[13] JR Gil-Garcia, J Zhang, G Puron-Cid, "Conceptualizing smartness in government: An integrative and multi-dimensional view." Government Information Quarterly, vol 33, no 3, pp 524-534, 2016

[14] E Imandeka, AN Hidayanto, M Mahmud, *Smart prison technology and challenges: a systematic literature review*, in IAES International Journal of Artificial Intelligence Vol 13, No 2, June 2024 pp 1214 - 1226

and sensors can track prisoners in real time and feed them into an AI system that uses facial recognition technology and motion analysis to generate daily reports on each prisoner's activity and use AI to flag unusual behaviour.[15]

While this type of technology would have benefits for staff safety, it would require significant investment. Even comparatively wealthy countries have struggled with the cost of implementing smart technologies in prison environments. For example, the United Arab Emirates (UAE) has been a world-leader in implementing smart technology across its building infrastructure but has struggled to implement this same technology in its prisons. Research examining the potential challenges in the implementation of smart technologies in prison buildings in UAE identified that old and outdated prison buildings are the most significant barrier to introducing smart technology.[16]

As noted above, the introduction of this type of smart technology could also create ethical and privacy concerns. Overseas studies are already noting that reliance on smart technology in prisons can create social and privacy issues for prisoners. Knight and Steen (2017) note that in Belgium where 'PrisonCloud' (a form of Cloud-based technology designed for the prison environment) was introduced, the increased technology-based monitoring of individuals had negative impacts on prisoners' wellbeing.[17]

[15] P. Puolakka and S. Van De Steene, "Artificial intelligence in prisons in 2030: an exploration on the future of AI in prisons," Advancing Corrections Journal, vol. 11, pp. 128–138, 2021.

[16] Aldhaheri, M.A. and Xia, B. (2022), "Challenges to developing smart prisons in the United Arab Emirates", *Facilities*, Vol. 40 No. 11/12, pp. 793-808. https://doi.org/10.1108/F-02-2022-0015

[17] Knight, V. & Van De Steene, S. (2017) *Digitizing the Prison: The Light and Dark Future*, Prison Service Journal May 2017 No 231

CHAPTER 2: Supporting our frontline workforce: How could new and emerging technology complement our workforce in the future and improve their safety and security??

Predicted future demographic changes may impact Corrections' ability to recruit and retain staff.

As New Zealand's population ages, a larger proportion of the workforce will be nearing retirement age. This could lead to increased turnover and a shrinking pool of experienced candidates, particularly in frontline roles. Urbanisation trends and population decline in some rural areas may also make it more difficult to recruit staff in certain locations, especially where prisons or community corrections sites are located outside major centres.

The increasing diversity of New Zealand's population — particularly growth in Māori, Pacific, and Asian communities — may require Corrections to further adapt its recruitment strategies to better reflect and engage with these groups. A more culturally responsive approach may be needed to attract and retain staff from diverse backgrounds, especially in regions with high Māori and Pacific populations.

As other sectors also face workforce shortages, Corrections may be competing for talent in a tight labour market. This could drive up the need for more competitive remuneration and improved working conditions.

Having a capable, engaged, and enabled workforce is crucial for day-to-day operations and to making progress towards our organisational outcomes. New and emerging technology may offer some solutions to help staff to meet the demands of their role, while feeling safe and supported.

We may need to look at technology to enhance how staff provide our services.

Our current staff work across a wide variety of roles and settings

Currently we have more than 11,000 staff working across the country in prisons, community sites, and corporate offices. These roles include, but are not limited to:

- Corrections officers
- Case managers
- Probation officers
- Nurses
- Psychologists
- Specialist Māori practitioners
- Programme facilitators
- Bail support staff
- Administration officers

Our prison workforce

Our custodial staff work across our prison network to support people to engage in day-to-day activities and rehabilitation programmes and help them navigate the prison environment. They also monitor the prison to help maintain a safe environment, and escort people in our management to hearings and appointments.

Corrections currently manages almost 11,000 people in our prisons, with almost half of these people at any given time being on remand. As noted earlier, it is likely that this prison population will increase in the future. At the same time, demographic changes may mean it could become more difficult to recruit staff to work in prisons.

Our community-based workforce

Our community staff are responsible for administering 10 types of community-based sentences and orders in line with the specific conditions imposed by the courts or the New Zealand Parole Board.

Community corrections staff work in various roles, including probation officers, case managers, and other professionals who manage offenders in the community. They work to support offenders in meeting the conditions of their sentences, reducing re-offending, and ensuring public safety.

Recent technology investments demonstrate the opportunity that continuing to adopt new and emerging technologies presents to enhance staff safety and wellbeing

Corrections officers face a range of unique workplace challenges that may impact both their physical and psychological wellbeing (Dowden & Tellier, 2004).[18] Technology may offer some solutions to address some of these workplace challenges.

Technology is already beginning to be introduced in New Zealand prisons to support staff safety. The body worn camera (BWC) project at Corrections was completed in 2023. The cameras are now used by prison staff to enhance the safety of people in prison and staff.

Full body scanners at some sites enable people entering the prison system to undergo a body scan rather than a potentially intrusive full strip search. Providing this alternative offers a more humanising approach and avoids escalating tense situations that can now be avoided. The gradual introduction of full body scanners at all prisons will result in a less intrusive process for people entering prison and is also a preferred option for staff.

[18] Corrections officer wellbeing training challenges. https://www.corrections.govt.nz/resources/research/journal/volume_5_issue_1_july_2017/corrections_officer_wellbeing_training_challenges/

Examples of technology currently being used in prisons in overseas jurisdictions include AI enhanced real-time location systems for staff and people in prison, video analytics to monitor movement, and AI-powered communication analysis to identify potential threats.[19] The most commonly used technology within prisons overseas to enhance staff safety are:

- Real-time locating systems (RTLS) - RFID tags, wearable devices, and other technologies can track the location of both staff and prisoners using AI to analyse the data from these technologies, allowing for tailored responses to incidents.
- Video analytics - AI-powered systems can analyse video footage to identify patterns of behaviour, detect potential conflicts, and alert staff to unusual activity.
- Body-worn cameras - these cameras provide a record of interactions and can be used to de-escalate situations and ensure accountability.
- Person-down sensors - these sensors can alert staff to emergencies, such as a medical issue or a fall.

Internationally, countries are testing more advanced technologies and digital solutions in the day-to-day running of prisons, focussing on the safety of staff and people in prison. Examples are advanced video surveillance and the use of biometric identification systems such as eye scan, fingerprinting, facial and voice recognition.

Biometric systems can be linked to digital calendars, including prison appointments systems, which supports greater movement of people within prisons without staff assistance by providing real time data available about where people are at any given time, location and movement.[20] This approach has been implemented in places such as Northern Ireland, where staff report benefits such as reduced pressure on staff, empowering people who are detained, and improved monitoring.[21]

Using technology to monitor prisoners can reduce the need for prison staff to interact with people in prison, particularly those who pose a higher risk to safety. South Korea and Hong Kong are trialling 'robot wardens' with three-dimensional cameras, sensors and pattern recognition algorithms to identify irregular or inappropriate behaviours.[22] However, as noted in Chapter One, these technologies can create significant concerns for prisoner wellbeing and rights. It is also possible they are less able to accurately identify risks, and potentially over-respond impacting trust, which is critical to a stable prison environment. Technology that reduces or replaces staff interactions with prisoners could also reduce rapport between staff and prisoners and reduce opportunities for staff to gauge changes in prisoner behaviour. Technology use would need to be balanced alongside the need to provide meaningful human contact.

Using virtual reality technology to enhance staff training and wellbeing

Custodial staff training and wellbeing is critical to the functioning of prisons. Virtual reality (VR) offers the potential to create a safe way to test out various training scenarios before moving to more practical applications.

VR is usually defined as "an artificial or computer-generated, three-dimensional representation of reality, which is experienced through the senses, and which is interactive" (Van Gelder, Otte & Luciano, 2014). The purpose of VR is to provide a real-life interactive simulation through virtual scenarios, which the user can visualise with HDM (a device placed on the head/helmet with a built-in display and lenses that provides a virtual wide viewing angle) and take control with hand movements (using a hand-controlled device, Kamińska et al., 2019).[23]

VR could be used for training purposes by virtually responding to critical incidents, such as riots or hostage situations, in a safe and controlled environment. VR simulations can replicate high-stress scenarios allowing staff to practice and refine their responses without the risk of harm. This enhances their preparedness for real-life situations and contributes to a sense of confidence and resilience.[24]

VR technology could also be used to provide custodial staff with immersive experiences to reduce stress and enhance relaxation by allowing staff to immerse themselves in environments that simulate serene landscapes, calming scenarios, or guided meditation sessions can be accessed during breaks or designated relaxation periods. [25]

Community corrections staff could potentially also benefit from technology to improve their safety and wellbeing

Community Corrections staff play a critical role in planning and managing community-based sentences and orders including home detention, intensive supervision, supervision, community detention, community work, release from prison on conditions, and parole with or without residential restrictions.

Some community corrections sites have trialled providing staff with smartphones that have built-in security and safety features. These phones include applications which allow staff to access key information related to their caseload, including addresses, most recent case notes, level of assessed risk, and safety alerts. The phones also include an electronic check-in/check-out feature for staff to communicate about their location and duration of visits, including a function to check in and out of home visits.

There is also the potential for new technology, such as portable duress alarms, location tracking and safety apps, to increase safety for staff working in the community.

[19] Longley , B. (2022) Five emerging technologies for prisons wanting to become safer and more efficient. Synetics.
[20] Global Prison Trends 2024 report. Penal Reform International Global Prison Trends 2024 - Penal Reform International
[21] Global Prison Trends 2024 report. Penal Reform International Global Prison Trends 2024 - Penal Reform International
[22] McKay, C (2022) The carceral automaton: Digital prisons and technologies of detention. International journal for crime, justice and democracy 11(1):100-119
[23] https://virtual.reality.for.inmates.training/
[24] https://mhs.com/blog/transforming-correctional-staff-wellbeing-with-innovative-technology/#:~:text=VR%20applications%20can%20also%20focus,system's%20safety%20and%20rehabilitation%20goals
[25] https://mhs.com/blog/transforming-correctional-staff-wellbeing-with-innovative-technology/#:~:text=VR%20applications%20can%20also%20focus,system's%20safety%20and%20rehabilitation%20goals

Easier access to this information supports better decision making on individuals, allows staff to make safer decisions, and enables better mobility as staff can complete more tasks while away from the office.

Simple technology changes can also lead to efficiencies in administration tasks, enabling staff more time to focus on positive engagements. Since COVID-19, staff have become more mobile with the use of laptops becoming standard throughout the organisation. With the growing use of laptops and mobile phones, existing software and electronic systems are being updated to enable staff to upload documents and information including case notes.

This enables staff to work from other locations such as police stations, courts, marae or other partner locations, to better support people on sentences, work collaboratively, and reduce barriers to reporting.

Use of body worn cameras (BWCs) in community settings

While the use of BWCs in New Zealand prison sites is well-established, use by probation officers working in communities is a matter for ongoing consideration. Overseas, the trend towards using BWCs for frontline Corrections staff in the community is growing. Some jurisdictions have begun trialling their use for community-based staff. However, there are also protections and policies to be developed around privacy, ethics, and the potential impact on frontline relationships.

In New Zealand, Ministry of Justice Bailiffs use BWCs to record interactions between Bailiffs and individuals they visit for court-ordered purposes, such as serving court documents or enforcing conditions of bail.

Bailiffs activate the BWC to record each time they visit a person at their home or place of business. The Bailiff begins recording just before they approach a property and stop recording when they leave the property. Bailiffs will advise each person they interact that their BWC is recording. The information recorded by the BWCs is collected, used, and stored in accordance with the Privacy Act 2020.

Using integrated information systems and technology

Integrated software that shares information between justice sector agencies would provide faster access to up-to-date information, to improve decision-making and risk management. While this already occurs between some justice sector agencies, for instance we receive information from the courts system and police, the systems themselves are not fully integrated. Any systems integration work across the corrections system would need to be cognisant of the work that is already underway across the wider Justice sector. For example, in March 2023, the Chief Justice launched the Digital Strategy for the Courts and Tribunals of Aotearoa New Zealand. The Digital Strategy sets out the judiciary's objectives and guiding principles for use of technology in courts.[26]

In a New Zealand context, one of the biggest impediments to better data sharing between justice sector agencies is a lack of robust identity management, with data sharing systems often relying on full name and date of birth to match individual's records. Without being confident that we are talking about the same individual, we can't be confident we are making the right decisions.

For example, probation officers, tasked with monitoring and supporting individuals under their supervision, often face difficulties due to a lack of information about individuals during their time in custody. Workforce shortages can further strain the communication channels between justice system, prison and community corrections settings.

These information gaps can lead to challenges in formulating relationships, developing effective rehabilitation strategies, and ensuring the safety of both staff and people under management. Furthermore, the administrative burden and contrasting data systems and technology in use across different areas can further complicate the communication process.

There is a need for access to more integrated information systems that can bridge the communication gap between justice settings, prisons, and community corrections services, to ensure a seamless flow of critical information that is essential for effective supervision and rehabilitation[27] While the technology is available to do this, current legislative and privacy settings make accessing this information difficult.

Integrated case management software has the potential to improve communication and streamline workflow between various parts of the justice system including from within prison and not community probation. For example, using case management software solutions designed to centralise data related to people under our management, whilst making vital information more accessible and manageable for probation officers, judges, police and rehabilitation and reintegration providers.[28]

Integrated systems could potentially include access to information on a person's behaviour while in custody, their mental health status, and other relevant factors that better enable community correction staff to meet the individual needs of those who are on a community sentence or order.

What are the barriers to utilising new and emerging technology?

If we cannot modernise in a timely way it could put our staff at risk and make it hard for them to make a difference.

In the prison system

As noted in the previous chapter, much of our current infrastructure was not designed to incorporate the technology that is available today. For example, prisons are made of steel reinforced concrete which impacts the viability and accessibility for services such as WIFI and constrains where technology can be installed safely.

This ageing infrastructure can also make it difficult for prison sites to utilise technology. For example, while the technology for full body scanners is available and has been installed in five

[26] https://www.justice.govt.nz/justice-sector-policy/key-initiatives/te-au-reka/

[27] Perry, Nancy (2023) Advancing Community Corrections: Using technology to improve case management https://lexipol.brightspotcdn.com/95/11/a3ce38ee480884fb288288b41714/corrections1-advancing-community-corrections-nov-2023.pdf

[28] Perry, Nancy (2023) Advancing Community Corrections: Using technology to improve case management https://lexipol.brightspotcdn.com/95/11/a3ce38ee480884fb288288b41714/corrections1-advancing-community-corrections-nov-2023.pdf

prison sites to date, its installation required changes to the receiving area in each prison to ensure there was sufficient space for the technology. For example, Arohata Prison required a full receiving office upgrade to be able to install this technology.

In the community

Our community corrections staff cover a wide range of areas, including traveling to remote locations. In remote locations our staff are reliant on local cellular networks to connect to the technology they require.

While all main cities and towns are covered by the cellular network, large parts of rural New Zealand, including key highways and many small rural areas, are not. For example, Northland and the East Coast, where we have a significant number of people in our management in the community, are poorly served by the current cellular networks.

While it can be very difficult and expensive to provide cellular coverage to areas with uneven terrain, in the future emerging technologies may reduce or eliminate the reliance on traditional cellular networks. For example:

- Low Earth Orbit (LEO) satellite networks (e.g., Starlink, OneWeb) are rapidly expanding and offer high-speed internet access with global coverage, including remote and rural areas. These systems bypass terrain limitations and can be deployed with minimal ground infrastructure.
- Mesh networking and private wireless networks may allow devices to communicate directly with each other or through local hubs, reducing dependence on centralised cellular towers.
- Edge computing and IoT integration could enable localised data processing and transmission, allowing systems to function effectively even with intermittent connectivity.
- Hybrid communication models, combining satellite, radio, and short-range wireless technologies, may offer more resilient and cost-effective solutions tailored to specific geographic and operational needs.

As these technologies mature and become more affordable, they may offer Corrections new options for maintaining secure, reliable communications in challenging environments.

Not having timely access to information about what interactions people are having with other agencies can also limit the support our community Corrections staff can provide to the people they work with.

Barriers to data-sharing

As noted above, despite having some formal agreements and frameworks for interagency data sharing, operational barriers can prevent staff from accessing relevant information when it is needed. These barriers may include:

- System fragmentation, where data is held in siloed platforms that are not interoperable or accessible across agencies.
- Privacy and consent constraints, which may limit what can be shared and with whom, even when agreements exist.
- Lack of integration at the operational level, meaning that while data sharing is enabled at a strategic or policy level, it is not embedded into frontline workflows or digital tools.
- Limited training or awareness, where staff may not know what information is available or how to access it appropriately.

Addressing these gaps would require not only technical solutions — such as integrated case management systems or secure data platforms — but also cultural and procedural shifts to ensure that frontline staff are empowered, supported, and trusted to use shared information responsibly and effectively.

CHAPTER THREE: Improving outcomes - How could new and emerging technology be used to improve rehabilitation and reintegration outcomes both in prisons and in community settings?

Technology can help improve rehabilitation and reintegration outcomes

As covered in the previous chapter, our future prison population is likely to be larger but our workforce could potentially be smaller. To bridge this gap, we may need to turn to technology-based solutions to deliver rehabilitation and reintegration programmes.

This chapter explores the idea that increasing people in prison's access to digital technologies could:

- lead to improved rehabilitation outcomes,
- address recidivism,
- provide people in prison with opportunities to be autonomous, self-determining, and maintain their connection to culture and community,
- promote digital literacy.

Our school children are experts in digital technology, while people in prison constitute one of the most impoverished groups in the digital age.[29] Although not all people in prison lack digital skills, it is argued that there is a growing digital divide in society, with many people in prison finding themselves at the extreme end of this divide.[30]

Enabling access to services can better support the reintegration of people we manage

The world is increasingly digital and internet-based, but prisons are not. This lack of access to technology could potentially further separate the groups of those that are digitally capable and those that are not.

There is a challenge in adequately preparing people in prison for release into a digitally driven society. There is growing use and implementation of simple and effective technology that can have a significant impact on the behaviours of people before they are released.

We have already introduced kiosks into all our prison sites. Once logged in, kiosk users can see personalised content and access self-service functions, including: accessing their trust account balance and transactions, making canteen orders, making requests and complaints, updating phone numbers, requesting meetings with their PCO or case manager, or making health appointments. These kiosks are designed to support people in prison to function independently from corrections officers and have more control over how they spend their time; as well as learning or maintaining familiarity with technology used outside of prisons to more successfully rehabilitate.

Supporting people to use technology to access services upon leaving prison can support reintegration by helping people understand how they can access services available to them. Examples of social services we (along with other government agencies) provide support to access/register with are:

- financial support with Work and Income
- student loans
- identity documentation: drivers licence, passport, 18+ card, birth and marriage certificates
- housing or accommodation, and
- employment.

We are still in the early stages of adopting new technology, and upgrading, enhancing current software and programmes

Corrections wants to use technology to provide opportunities for people in prison to act independently (for example, through the use of kiosks on prison sites that allow prisoners to access, change, or update their information), have increased access to online educational resources, participate in more virtual programs and finding ways to safely increase access to WIFI.

Changes such as Audio-visual link (AVL) appointments and access to computers for people in prison are becoming permanent fixtures due to the benefits experienced for people in prison and staff.

For example, Christchurch Men's Prison has opened a new, purpose-built AVL facility. This facility has allowed people to connect to court hearings, meetings with their lawyers, or have virtual visits with friends and family. Originally required due to COVID-19, one example of the benefits of virtual appointments is that less staff are needed to transport people off-site for court hearings. This results in a quicker, safer and more comfortable experience for prisoners and staff.

Access to computer-based learning

Some people in prison have the option of engaging in computer-based learning through Corrections' secure online learning suites. Each prison has at least one computer suite that provides secure, controlled, and monitored access to approved education, life skills, employment, and reintegration focused content.

The suites are facilitated by education tutors and learners can increase their digital skills, literacy and numeracy, work towards qualifications, and prepare for employment before they are released.

Improving technology in our women's prisons

There are currently three women's prisons across New Zealand. In comparison to men, women will likely experience disadvantage by not having physical access to family and

[29] Jewkes, Y., & Reisdorf, B. C. (2016). A brave new world: The problems and opportunities presented by new media technologies in prisons. Criminology & Criminal Justice, 16(5), 534–551

[30] Champion, N., & Edgar, K. (2013). Through the gateway: How computers can transform rehabilitation. Prison Reform Trust and People in prison Education Trust.

support networks due to there being fewer opportunities to be closer to their family and support networks.

Christchurch Women's Prison has been the target pilot site for in-cell technologies and services. The purpose was to provide greater access to communication platforms using in-cell technology for women to support pro-social connections with their families.

Technology is becoming more widely used in rehabilitation and reintegration programmes overseas

Access to technology supports people's rehabilitation and reintegration

International evidence (Imandeka 2024)[31] suggests that access to technology while in prison plays a critical role in reducing recidivism by providing people with the tools and support to successfully rehabilitate and reintegrate back into communities. This includes smart technologies like digital learning platforms and vocational training simulators which can better prepare people in prison for employment opportunities.[32]

Technology can help people in prison to maintain contact with their families and support networks

Research highlights that maintaining regular contact with family members can contribute to lower reoffending rates, as these relationships provide emotional support and stability.[33]

Prisons are often in geographically remote locations. This means it can be costly and time consuming for friends and family to travel to prisons to maintain relationships with those in prison. Technology can enable people to be closer to their support networks or family by using AVL to remain connected.

Access to digital devices

In New South Wales (NSW), Australia, people in prison have access to digital tablets that provide regulated access to various services, including phone calls, entertainment, education, and communication with their families. These tablets are a key component of the NSW Offender Digital Services platform, aiming to improve prisoner wellbeing, reduce reoffending, and facilitate rehabilitation.

Tablets can vastly improve people in prison's access to the outside world, providing opportunities for communication and access to larger libraries of educational or entertainment media.

Individual tablets can enable communication with support networks or family during wider windows of time, than fixed phones or kiosks. People in prison can have the opportunity to take greater responsibility for coordinating AVL contact with friends, family, and children, and professional appointments like with therapists.[34]

The use of AI-enabled rehabilitation and reintegration programmes

AI-enabled rehabilitation and reintegration programmes are being used in overseas jurisdictions to deliver rehabilitation and reintegration services tailored to the specific needs of the person in prison.

Kintim (2024) notes that "AI-powered technologies revolutionize prison education through personalized modes of learning targeting individual needs and skill levels. Most prison education programs lack resources and uniform curricula, often failing to resonate with justice-involved individuals. AI overcomes these shortcomings by customising the content through assessments regarding each individual's learning style, cognitive ability, and career aspirations."[35]

Traditional mental health care in corrections settings often struggles to meet the needs of this population due to limited resources, overcrowding, and a lack of trained professionals.

AI systems can enhance mental health monitoring and support for incarcerated individuals by providing continuous, real-time assessments of their mental health status. For example, AI-powered wearable devices can track physiological indicators of stress, mood, and sleep patterns, alerting mental health professionals to potential issues before they escalate. Additionally, AI-driven platforms can offer virtual mental health assessments and therapy sessions, providing incarcerated individuals with access to care even in facilities with limited mental health resources.[36]

These technologies can be particularly beneficial in identifying individuals at risk of self-harm or suicide, allowing for timely interventions and improved access. By improving access to mental health care and providing continuous monitoring, AI can help address the mental health needs of incarcerated individuals more effectively.[37]

While the potential benefits of AI in improving rehabilitation and reintegration in prisons are significant, it is equally important to acknowledge and address the potential risks and ethical dilemmas associated with its use. One of the key dilemmas is the potential for AI to be used in ways that prioritize efficiency or cost-saving over the quality of care and individual well-being. For example, there is a risk that AI could be used to reduce the need for human intervention in mental health care, leading to a depersonalisation of services and a reduction in the quality of care provided.

The use of AI in prison settings raises important questions about the balance between security and rehabilitation. While AI can enhance security by identifying potential risks and preventing incidents, it is essential that these measures do not come at the expense of individuals' rights or undermine the rehabilitative goals of the corrections system. The use of AI must be carefully calibrated to ensure that it supports, rather than hinders, the rehabilitation and reintegration of incarcerated individuals.[38]

---

[31] Imandeka E, Putra POH, Hidayanto AN, Mahmud M (2004) Exploring the World of Smart Prisons: Barriers, Trends, and Sustainable Solutions, https://onlinelibrary.wiley.com/doi/10.1155/2024/6158154

[32] Davis. L, Bozick. R, Steel. J, Saunders. J, & Miles, J (2017) Evaluating the effectiveness of correctional education: A meta-Analysis of programs that provide education to incarcerated adults. RAND Corporation

[33] Bales, W. D. & D. P. Mears (2008). Inmate Social Ties and the Transition to Society: Does Visitation Reduce Recidivism? *Journal of Research in Crime and Deliquency* 45(3): 287-321.

[34] Johnson, A. (2024) "free" Prison tablets: In promise and in practice. https://epic.org/free-prison-tablets-in-promise-and-in-practice/

[35] https://celsir.org/how-artificial-intelligence-supports-inmate-rehabilitation/

[36] https://emhicglobal.com/case-studies/the-potential-of-ai-to-enhance-mental-health-in-correctional-facilities-benefits-for-staff-and-incarcerated-individuals/

[37] ibid

[38] https://emhicglobal.com/case-studies/the-potential-of-ai-to-enhance-mental-health-in-correctional-facilities-benefits-for-staff-and-incarcerated-individuals/

Virtual reality technology is being used to offer 'real world' experiences rehabilitation interventions and education and training to people in prisons

VR has been used successfully overseas in mental healthcare and education (Cornet & Van Gelder, 2020; Martirosov & Kopecek, 2017). For example, in the psychology field, researchers used VR specifically for assessments, therapies, and treatments (Ticknor, 2019), such as Exposure Therapy and Cognitive Behavioural Therapy. Treatment results were positive in several studies, indicating that VR considerably reduces anxiety and stress levels and, consequently, can be considered a valuable improvement tool (Grillon et al., 2006; Krisch et al., 2016; Powers & Emmelkamp, 2008).

Overseas studies have also shown promising results in VR application in substance abuse treatment including smoking and alcohol addiction. From an educational perspective, VR can be an effective method to raise awareness of the various dangers associated with alcohol and alcoholic driving (Montgomery et al., 2006).[39]

The Virtual reality for training inmates (VIRTI) project is a large-scale research project looking at the outcomes of using VR technology to deliver education, rehabilitation and reintegration programmes to people in European prisons. It improved the educational environment and expanded the training offered to people in prison, who generally had limited access to technical facilities because of their closed and restricted environment.[40]

The VIRTI project found that VR use in corrections facilities has numerous advantages from the vocational education point of view. Without leaving their cells, prisoners can participate in an immersive experience with access to tools and role-plays and familiarise themselves with different knowledge that they would not otherwise be able to experience inside a prison. They can visit a virtual construction site or a commercial kitchen (Zoukis, 2016), role-play as a mechanic, carpenter, chef or shop assistant in an engaging and safe environment, apt even for participants who have reduced digital literacies (these types of skills are the same that employers have increasingly valued over time) (Herold, 2018).

VR can help people who have been in prison for long periods to reintegrate into society

In 2020, the state of Colorado introduced a programme for people who were convicted in their youth and have already served 20 years of their sentence. To be ready for life outside of prison, prisoners prepare for their reintegration through VR. For three years, they are immersed in everyday scenes (which were utterly unknown to them). This is particularly helpful as some systems and rules did not exist when they were teenagers at the time of their conviction.[41]

The programme also helps prisoners learn real-life skills they missed while incarcerated, such as grocery shopping and using public transportation, in a safe and simulated environment.[42]

Use of VR has already been trialled in a New Zealand prison with promising results

In 2019, a literacy and numeracy programme developed in New Zealand (McLauchlan & Farley, 2019) used VR setups in a classroom to represent a mechanic's workshop. The programme revealed that participants did not take long to learn its functionalities. For instance, identifying car parts, manipulating instruments, and following instructions. Participants reported that they "had it all down by the first session... real easy once you know what you're doing." (p. 7).[43]

Researchers also observed a high-level of engagement compared to conventional learning, with prisoners feeling more motivated to attend classes and less prone to withdraw. Several prisoners expressed their willingness to continue their VR educational progress after release, developing self-confidence within the learning context.

Finally, researchers documented increased literacy/numeracy scores of all prisoners who participated in the project, with prisoners also expressing positive feedback about their increased skills: "Real good. Have definitely brushed up on a few skills and learned some new ones. Mostly literacy though." (p. 7).[42]

The researchers found that VR technology contributed to prisoners' personal development and empowered them with new opportunities of being educated and partakers of content that will possibly help their acquisition of market skills and social reintegration.[44]

Technology-based programmes still need to be tailored to meet the needs of people in prison

In New Zealand, Māori are significantly over-represented in the prison population, and this is likely to continue into the future. Australia also has similar issues with over-representation of indigenous people in its prison statistics, with indigenous people being imprisoned at a vastly higher rate than non-indigenous people, and their representation in prison being many times higher than their representation in the general population.[45]

We need to better understand the impact and opportunity of the introduced technology for indigenous people in prison. The lack of literature, research and insights into use of technology for indigenous people to connect with their culture on their rehabilitation and reintegration journey is a challenge and opportunity.[46]

The technology introduced as a result of COVID-19 has led to benefits for delivering programmes within prisons by providing or increasing peoples access and capability to use technology, particular for those on longer sentences, or older people in prison preparing for release.

However, while technology is enabling delivery of these

[39] https://emhicglobal.com/case-studies/the-potential-of-ai-to-enhance-mental-health-in-correctional-facilities-benefits-for-staff-and-incarcerated-individuals/
[40] Innovative Criminal Justice Solutions https://prisonsystems.eu/showcasing-the-transformative-potential-of-virtual-reality-in-prisons-professional-education/
[41] https://nij.ojp.gov/library/publications/using-virtual-reality-prepare-inmates-release
[42] ibid
[43] https://jvwr-ojs-utexas.tdl.org/jvwr/article/view/7391
[44] ibid
[45] Pfeifer, Jeffrey (2022) Technology and Indigenous People in prison: Guiding Principles for the Development of Effective and Responsive Programs. Journal of Australian Indigenous Issues.
[46] Pfeifer, J.E., Winterdyk, J., Hutton, F., Wright, S., Banks, C. and Trounson, J.S. (2018). 'Indigenous youth and crime: An international perspective'. In B.H. Bornstein & M.K. Miller (eds.). Advances in psychology and law: Volume 4. New York, NY: Springer

programmes, research identified the need for programmes and services to be adapted to meet indigenous-specific needs.[47] Research with indigenous people in the Australian prison system found that to increase the relevance of programmes for indigenous offenders, consideration needed to be given to:

- incorporating an understanding of indigenous society and its collectivist approach, and the resistance of many indigenous people to disclose information about themselves, rather than relying on programmes developed from a Western perspective that emphasise self-disclosure, self-awareness and individual responsibility;
- recognising the place of violence in indigenous communities and how it contributes to offending;
- enhancing those elements that appear to make programmes effective, such as skill development and education, by making them relate more directly to the experiences of indigenous people and their communities;
- increasing responsiveness and participation by addressing the issues that preoccupy indigenous prisoners, and making programmes more enjoyable and engaging; and
- involving elders and indigenous facilitators.

With the increasing pressure to implement technology-based interventions, services and programmes in prisons, should not overlook the lack of indigenous specific programmes in general, and the opportunity to increase access through digital based interventions.[48]

What could the use of new and emerging technologies look like for Corrections to support rehabilitation and reintegration outcomes?

Continuing with the same technology

In a future scenario where there are constrained resources it is possible that we would not be able to continue to offer the same level of face-to-face rehabilitation and reintegration programmes. It is also likely that people will need to be placed in prisons away from their families and support networks. This will place additional pressure on our AVL networks as people will be reliant on these systems to keep connected to their families.

While prison kiosks are a step forward in terms of supporting people in prison to access services they need, this technology may not be sufficient to meet future needs.

Some integration of new technology into our system

As the cost of technology like personal tablets comes down, it may become viable to supply people in prison with personal devices to access services and keep in contact with families. Based on overseas experiences, these devices would need to be carefully managed and the software on them would need to be tailored to our New Zealand prison environment.

While additional use of technology could offset some potential constraints in rehabilitation and reintegration programmes, this would likely be limited to additional vocational programmes as these have been extensively trialled in overseas jurisdictions.

Full integration of new technology including use of AI and Virtual Reality

There is the potential for better outcomes if the corrections system becomes more responsive to the needs of people under our management, allowing us to intervene more quickly through better use of data.

AI systems could provide access to tailored, cost-effective rehabilitation and reintegration interventions. The integration of AI with other emerging technologies, such as VR and augmented reality (AR), could be used to create immersive therapeutic environments that support mental health and rehabilitation. For example, VR can be used to simulate real-world scenarios, helping individuals develop coping strategies and social skills in a controlled and supportive environment. These technologies are already developed and are beginning to be introduced in overseas jurisdictions.[49]

[47] https://www.aic.gov.au/sites/default/files/2020-05/rpp090.pdf

[48] Pfeifer, Jeffrey (2022) Technology and Indigenous People in prison: Guiding Principles for the Development of Effective and Responsive Programs. Journal of Australian Indigenous Issues

[49] https://emhicglobal.com/case-studies/the-potential-of-ai-to-enhance-mental-health-in-correctional-facilities-benefits-for-staff-and-incarcerated-individuals/

CHAPTER FOUR: Rising use of electronic monitoring- How can Corrections take advantage of new and emerging technology in non-custodial settings?

Community corrections has evolved with the adoption of new technology. For example, the use of electronic monitoring to manage people on sentences or orders in the community.

This chapter explores how Corrections could take advantage of new and emerging technology in non-custodial settings. For example, different uses of electronic monitoring systems, use of technology for reporting and tracking, and use of technology to understand and respond to risk.

What is electronic monitoring?

Electronic monitoring (EM) is used to monitor compliance with the curfew, full residential restrictions or whereabouts conditions, sentences, or orders imposed by the courts or the New Zealand Parole Board. We also provide EM services for Police under a shared service model for EM bail.

As part of EM, Corrections' role includes assessing suitability for EM, installing and managing equipment, approving absences/leave, assessing whether conditions have been breached and providing information about non-compliance. Corrections' national electronic monitoring team operates 24/7, 365 days a year from operations centres in four locations, alongside field staff in each region.

EM does not physically prevent people from leaving their property, or entering a location they are excluded from, but will result in alerts being issued for potential non-compliance.

We use electronic monitoring at a higher rate than other comparable jurisdictions

New Zealand uses electronic monitoring conditions at a significantly higher rate than all comparable jurisdictions – between twice and ten times as high, dependent on the jurisdiction.

Other jurisdictions are exploring AI options to support community corrections

The effective management of people on sentences or orders in the community is crucial to ensuring public safety and supporting rehabilitation. Changes in electronic monitoring technology have the potential to change the way we carry out our functions.

The emerging use of artificial intelligence (AI), new and emerging technology has ushered in transformative tools and solutions, enhancing the efficiency and effectiveness of offender management practices.[50]

Using electronic monitoring to provide additional support for people being electronically monitored in the community

The potential use of AI in community corrections to manage and analyse data could support early intervention efforts to alert officers to direct resources to those people in immediate need of help and / or possibly at risk of recidivism.[51]

An example of emerging technology overseas is the use AI wearable devices which could monitor biological data to assess an offender's stress and mood and send alerts to community health at the same time as alerting the corrections monitoring facility to ensure the appropriate intervention takes place.

In the United States, the National institute of Justice (NIJ) 2020 report, Tapping into artificial intelligence: Advanced technology to prevent crime and support re-entry identified tested and readily deployable technology solutions which are being used in community corrections across three areas:

- Providing real-time Risk-Need-Responsivity (RNR) assessments
- Promoting intelligent offender tracking, and
- Enhancing programming through mobile service delivery.[52]

While this may seem ideal, using this type of technology in a New Zealand context could prove difficult as New Zealand has a lot of protections around health data, and section 11 of the New Zealand Bill of Rights Act 1990 means we can't direct or dictate engagement with healthcare in New Zealand.

AI-Enhanced Electronic Monitoring and GPS Tracking

New AI technology is being used overseas to enable the real-time collection and processing of data and identifying patterns of those being electronically monitored. AI algorithms are enhancing the effectiveness of tracking devices whilst enabling law enforcement to enforce curfews, establish zones, and monitor movements more accurately.[53]

The research and development agency within the U.S. Department of Justice is seeking to expand the use of AI to create new ways to better support their community supervision officers. One application they are exploring is the use of machine-learning algorithms to provide real-time guidance to community supervision officers and to intervene with offenders in periods of crisis. The precision of machine learning, coupled with the latest mobile communications and wearable technology, could give community supervision officers the ability to identify those most in need or at risk and tailor timely interventions, enabling them to provide help or

[50] Woodland, Evelyn (2024) AI revolution in offender management retrieved 27/03/2025 https://www.govnet.co.uk/

[51] Cohen, T., C. Lowenkamp, and S. Vanbenschoten. (2016). "Does Change in Risk Matter?" Criminology and Public Policy 15:263-296.

[52] Martin, Eric and Moore, Angela (2020) Tapping into artificial intelligence: Advanced technology to prevent crime and support reentry

[53] Woodland, Evelyn (2024) AI revolution in offender management retrieved 27/03/2025 https://www.govnet.co.uk/

prevent recidivism in real time.[54]

Risks and disadvantages of increasing technology use in non-custodial settings

While AI is likely to be a useful tool in identifying risk and providing support where needed, there is a risk with some AI models, that the data itself can create biases and wrongly profile individuals based on faulty data assumptions.

Data quality—the accuracy, relevance, and completeness of the data—is another common barrier to effective AI. Human decision-making and machine learning require ample and reliable data, but larger datasets are more likely to contain inaccuracies, incomplete records, errors, and duplicates.[55]

Any AI model that relies so heavily on large amounts of data should ensure that the data itself is not compromised. One example of where faulty data led to incorrect outcomes was the use of the COMPAS (Correctional Offender Management Profiling for Alternative Sanctions) tool in the U.S. The COMPAS tool used an AI algorithm to assess potential recidivism risk. Recidivism is where another crime is committed after someone is released from prison. In 2016, ProPublica investigated COMPAS and found that African American defendants are almost twice as likely as white defendants to be labelled a higher risk but not actually reoffend, however COMPAS tended to make the opposite mistake with whites, meaning that it was more likely to wrongly predict that white people would not commit additional crimes if released compared to black defendants.

In the case of recidivism, what COMPAS had was not conviction data on a subsequent crime, but rather the arrest record of people who had already been in prison once. In most states in the U.S, African Americans are arrested faster on the suspicion of committing a crime. Hence the data that was used to train the COMPAS model reflected prejudice in society rather than criminal behaviour.[56]

The amount of data generated by GPS monitoring can create problems for analysing and storing this data. The volume of data generated by this monitoring activity can make data management particularly challenging, especially since the data generated includes information about individuals and their movements and activities. Often the amount of data generated is too large and varied to analyse quickly and accurately manually so systems are reliant on AI tools to analyse and manage this data. Data storage can be costly and can create security and privacy risks if storage is insufficiently secure.[57]

Any expanded use of technology needs to take into account the impacts of the technology on people's privacy.

Integrated data systems could potentially enable significant amounts of data about an individual to be accessed and shared between agencies. While Corrections has information sharing agreements in place with other agencies, the more information is shared the higher the risks to people's privacy.

EM significantly impacts on the privacy and freedom of movement of the individuals subject to such a control. The use of electronic monitoring must have robust oversight to ensure evidence can be provided that any expanded use is justified as necessary, effective and appropriately restrained.

While Corrections primary focus is on public safety, it is still vital to recognise that people in our management still have privacy rights that we are legislatively required to uphold. These rights are set out in the legislative frameworks for EM and in the New Zealand Privacy Act 2020, which sets out the criteria about how, when and why personal information can be shared.

What could the use of new and emerging technologies look like in the future in Corrections non-custodial settings?

Continuing with the same technology

If the trend of increasing use of EM continues, it is likely that our current systems will not be adequate for managing the increased numbers of people being monitored. It is likely we will struggle to recruit sufficient staff to support and monitor the numbers of people who will be on EM. Technology can enhance efficiency, but it cannot fully replace the need for skilled personnel to interpret data, make decisions, and engage with individuals.

EM technology is constantly evolving and we regularly update our technology as new EM technology becomes available. However, with this technology evolving so rapidly, there is a risk that new technology that can hack, block, or alter the information we receive from EM monitoring may become available and used by people who wish to interfere with the EM process.

Technology failure is also a growing risk, particularly as systems age. This can lead to disruptions in service, increased maintenance costs, and reduced system resilience. In addition, natural disasters — such as earthquakes, floods, or severe weather events create the risk of damage to physical infrastructure which could disrupt connectivity to current EM devices.

Some integration of new electronic monitoring technology into wider justice sector systems

Integrating new EM technologies into broader justice sector systems could create opportunities to better monitor and manage people and intervene where needed. Improved interoperability between systems would enable earlier interventions, better risk assessment, and more coordinated support across agencies. This integration would be particularly useful at the interfaces between different justice settings, for example between courts, police, probation, and custodial environments, where seamless information flow could enhance the ability to monitor and manage individuals effectively.

Even if Corrections invests in some additional EM technology, without other uplifts in technology and infrastructure, it may not be able to use the new EM technology fully. For example, any new EM technology would need to be compatible with any existing monitoring systems. Ensuring that any new EM

[54] https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2016/09/use-of-electronic-offender-tracking-devices-expands-sharply
[55] https://www.datamation.com/big-data/big-data-challenges/
[56] https://networkreadinessindex.org/the-risks-of-unintelligent-adoption-of-artificial-intelligence/
[57] https://www.datamation.com/big-data/big-data-challenges/

technology is used to its full potential will require investment not only in infrastructure but also in capability-building and change management.

Any new EM technology is likely to generate increasing volumes of data. This data will need to be stored and managed effectively. This includes continuing to ensure data security, compliance with privacy legislation, and clarity around data ownership and access. Long-term storage solutions must also be scalable and resilient, particularly in the context of growing digital footprints and evolving legal obligations.

Full integration of new EM technology including use of AI for tracking and monitoring

There is the potential for better outcomes if systems become more responsive to the needs of people under our management, allowing us to intervene more quickly through better use of data.

Full integration of new EM technology would be likely to provide the best monitoring outcomes. If AI systems are fully integrated into monitoring systems, this could replace some of the staff who could otherwise be needed to manage the likely increased numbers of people being electronically monitored.

However, a greater reliance on technological solutions for monitoring people in our management could increase the risks of system failure in the event of a natural disaster. It may also increase the risks of privacy breaches in the case of a system or data breach, as significantly more data about any individual would be stored in any associated systems.

CHAPTER 5: Future policy directions – How can we maximise the benefits, and mitigate the risks of new and emerging technologies across the New Zealand Corrections landscape?

Corrections is governed by the Corrections Act 2004 and the Corrections Regulations 2005 which provide the legal framework for how the corrections system is managed and operates.

There are a number of national and international human rights standards in place to ensure safe detention.

Domestic human rights standards:

- Human Rights Act 1993 - this protects people from unlawful discrimination
- New Zealand Bill of Rights Act 1990 - protects the rights of people who have been arrested or detained and the rights of people charged with an offence. NZBORA also protects the right to a fair trial and right to justice
- Crimes of Torture Act 1989 - this prohibits torture

International human rights standards:

- Universal Declaration of Human Rights (UDHR) - sets out basic rights and freedoms to which all people are entitled, regardless of nationality, race, or status.
- International Covenant on Civil and Political Rights (ICCPR) - legally binds signatory states to protect fundamental civil and political rights
- Standard Minimum Rules for the Treatment of Prisoners (Nelson Mandela Rules) - sets minimum standards for the humane treatment of prisoners.
- Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (CAT) - prohibits torture and requires signatories to prevent, investigate, and punish acts of torture and ill-treatment.
- United Nations Rules for the Treatment of Women Prisoners and Non-custodial Measures for Women Offenders (Bangkok rules) - provide guidance addressing the specific needs of women prisoners to ensure gender-sensitive, humane, and equitable treatment.

Any implementation of new and emerging technology must consider Corrections legal obligations, and any requirements to develop policies, procedures, training and guidance to ensure its use is ethical and safe.

In using new technology like AI and VR we need to navigate a complex legislative environment

While our work in Corrections is governed by the Corrections Act 2004 and the Corrections Regulations 2005, there are a number of other Acts which would impact on our ability to use new technologies.

The Government Chief Digital Officer (GCDO) has recently published an AI framework for agencies on the use of AI. This guidance notes that "Government agencies need to use AI in ways that are in line with the existing laws, regulations, conventions, policies and guidance that govern or have application for public service AI use."[58]

Rather than introducing specific legislation to manage AI use in the public sector, the AI framework identifies that, when using AI and new technologies, agencies need to consider the wider legislative and policy context, including the:

- Treaty of Waitangi
- Official Information Act 1982
- Bill of Rights Act 1990
- Human Rights Act 1993
- Copyright Act 1994
- Public Records Act 2005
- Public Service Act 2020, and
- Privacy Act 2020.

The use of new technology needs to be balanced against privacy, ethical considerations and human rights

Within prison facilities, video analytics and AI powered tools could potentially enhance reintegration and rehabilitation activities, and safety and security measures. It could also reduce administrative burden within prison and community contexts.

Whilst there are many benefits to utilising AI technology, there is limited research, policies and frameworks that adequately inform, guide and support its growing use. The lack of 'ethical guardrails' increases the risk of breaching human rights and exacerbating existing inequalities resulting in further harm.

The use of AI across Corrections facilities overseas is steadily growing but it remains ad hoc and lacks a clear framework for the appropriate application within this unique setting.[59]

Managing privacy risks of new technology

Unlike traditional surveillance methods, AI video analytics systems guarantee uninterrupted surveillance, ensuring that all activities are monitored without disruption or error 24/7.

The Privacy Act 2020 establishes a comprehensive ethical framework for handling personal information, emphasising transparency, consent, accuracy, security, and responsible use and disclosure.

The Privacy Commissioner released guidance on AI in 2023 to support New Zealand in its implementation of AI tools. The guidance sits alongside the Privacy Act which applies whenever there is a collection, use, or sharing of personal information.

[58] https://www.digital.govt.nz/standards-and-guidance/technology-and-architecture/artificial-intelligence/public-service-artificial-intelligence-framework#:~:text=Government%20agencies%20need%20to%20use,Treaty%20of%20Waitangi

[59] Puolakka, Pia & Van De Steene, Steven. (2021). Artificial Intelligence in Prisons in 2030: an exploration on the future of AI in prisons. 126-136.

The guidance highlights key considerations that all New Zealanders must consider when implementing AI tools. If Corrections implements AI technologies across its systems, it would need to conduct a comprehensive privacy impact assessment, ensure privacy policies govern AI tools, and set clear expectations through privacy statements.

The Privacy Commissioner notes that there are specific concerns about Māori privacy and AI tools, including:

- Concerns about bias from systems developed overseas that do not work accurately for Māori.
- Collection of Māori information without work to build relationships of trust, leading to inaccurate representation of Māori taonga that fail to uphold tapu and tikanga.
- Exclusion from processes and decisions of building and adopting AI tools that affect Māori whānau, hapū, and iwi, including use of these tools by the Crown.[60]

Potential system bias

Biases based on gender, socioeconomic status and related personal characteristics could find their way into an AI system, which could potentially lead to discriminatory decisions. The technological reasons underlying the bias problem are complex, but the presence of bias in any form is a serious ethical concern that must be addressed for AI systems to be used effectively, especially in correctional settings.[61]

AI algorithms use historical data that may reflect existing societal biases that can be perpetuated or even amplified in correctional contexts. For example, studies have shown that AI-based risk assessment tools used in policing can disproportionately target minority communities.

Balancing AI with a human perspective

Overreliance on AI can erode professional discretion and undermine the importance of human judgment in correctional decision-making. Users of AI systems may over-rely on the technology's perceived objectivity and certainty, especially if doing so can take pressure off an already overbooked schedule.[62] The human judgment of correctional staff is irreplaceable, especially when it comes to understanding the nuances of a correctional client, case, or situation.

AI has the potential to streamline processes, enhance decision-making and improve staff and prisoner safety in prison or those being managed in the community however, it must be balanced with the risks of potential biases, harm, and errors.[63] Before implementing AI based technology and tools, careful planning, diligent design processes, input from diverse stakeholders, and meaningful oversight are needed to protect both the humans involved and the integrity of the system. A comprehensive and enforceable ethical framework is the first step in that process

Ethical standards of practice

The United Nations Educational, Scientific and Cultural Organization (UNESCO) has established the Global AI Ethics and Governance Observatory to provide global resources for policymakers, regulators, academics, the private sector and civil society to find solutions to the most pressing challenges posed by AI. In November 2021, UNESCO produced the first ever global standard on AI ethics '*Recommendation on the Ethics of Artificial Intelligence*'.[64]

At its core is the protection of human rights and dignity which is unpinned by ten core principles, these include:

Proportionality and do no harm	Transparency and explainability
Safety and security	Human oversight and determination
Right to privacy and data protection	Sustainability
Multi-stakeholder and adaptive governance and collaboration	Awareness and literacy
Responsibility and accountability	Fairness and non-discrimination

The development of future policy relating to the application of AI can be considered against the 11 key policy areas highlighted in the Recommendation on the Ethics of Artificial Intelligence, these include:

Source: UNESCO Recommendation on the Ethics of Artificial Intelligence[63]

Considerations of Māori data sovereignty will be important in introducing and using new technology in a corrections context

Data Sovereignty typically refers to the understanding that data is subject to the laws of the nation within which it is stored. Indigenous Data Sovereignty perceives data as subject to the laws of the nation from which it is collected.

[60] https://www.privacy.org.nz/assets/New-order/Resources-/Publications/Guidance-resources/AI-Guidance-Resources-/AI-and-the-Information-Privacy-Principles.pdf
[61] Mokhtar, Ruth (2025) The transformation of Correctional Facilities using artificial intelligence technology. Seton Hall university
[62] Cameron, Robert (2024) Correctional AI Promise, risks and the way forward.
[63] Mokhtar, Ruth (2025) The transformation of Correctional Facilities using artificial intelligence technology. Seton Hall university
[64] https://unesdoc.unesco.org/ark:/48223/pf0000381137

Māori data is a taonga. It is protected under Te Tiriti o Waitangi and the United Nation's Declaration on the Rights of Indigenous Peoples.

Māori Data Sovereignty recognises that Māori data refers to the rights and interests of Māori in the collection, ownership, and application of their own data. Māori data sovereignty supports tribal sovereignty and the realisation of Māori and iwi aspirations.

Whilst there is no formal and or nationally agreed upon framework or policy regarding Māori data sovereignty, Te Mana Raraunga (TMR) – the Māori Data Sovereignty Network advocates for the realisation of Māori rights and interests in data, and for the ethical use of data to enhance the wellbeing of Māori, and Māori language and culture. [65]

Their work includes a Māori Governance Model which provides guidance for the system-wide governance of Māori data, consistent with the Government's responsibilities under te Tiriti o Waitangi.

Corrections will need to be cognisant of any future progress or work in this space.

[65] https://www.kahuiraraunga.io/_files/ugd/b8e45c_803c03ffe532414183afcd8b9ced10dc.pdf