CIVIL AVIATION AUTHORITY OF NEW ZEALAND

Briefing to the Incoming Minister

November 2023

CIVIL AVIATION AUTHORITY
OF NEW ZEALAND
Te Mana Rererangi Tūmatanui o Aotearoa

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Contents

From the Chief Executive and Director of Civil Aviation

As the Government's primary civil aviation safety and security regulator, the Authority's paramount priority is ensuring the safety and security of aviation system users. It is through the delivery of this priority that the Authority plays a crucial role in supporting and facilitating opportunities for New Zealand's economic growth and enabling better social and environmental outcomes for New Zealanders.

The Authority protects and enables in the traditional, new aviation, and aerospace sectors

The majority of New Zealanders know the Authority through their interactions with our frontline staff (and detection dogs) who undertake security screening and checks at airports. But our work to keep the system safe — while largely unseen by the public — is far more extensive than this. We regulate everything from traditional aircraft, emerging aviation technologies, airports, airlines, and cargo agents, to pilots, engineers, and providers of aviation security and air navigation services. As new aviation systems (such as large drones and autonomous aircraft) come into operation, the aviation system, and the risks within it, becomes more complex. The Authority is the only civil aviation regulator in New Zealand.

Daily, we assess licensing and certification applications; provide safety and technical advice; enforce aviation rules and laws; engage with our international partners, regulated parties, and government agencies; perform investigations; and monitor flight activity. These core functions are essential in the identification and management of security and safety risks across a large and complex system. They also enable better social outcomes for New Zealanders through aviation-based emergency services, agriculture, tourism, air travel and by maintaining international and domestic supply chain connectivity.

The effective delivery of our functions enables New Zealand to uphold its reputation as both a trusted trade partner, and a safe and secure destination to fly to and within. In turn, this provides opportunities to improve economic outcomes for New Zealanders. A good example of this is our work to make changes to airport security screening requirements, in response to the findings of the 2022 International Civil Aviation Authority Organization (ICAO) security audit of New Zealand. New Zealand is now keeping pace with changing international standards, enabling domestic exporters and importers to retain bilateral and multilateral trade agreements with overseas parties, and to create further business opportunities.

Supporting the sector by facilitating opportunities for growth

With our remote geographical location, New Zealand's tourism industry is heavily dependent on international air travel. After several years of financial uncertainty for the sector, pre-COVID passenger volumes are forecast to return by December 2024. Meeting this increased screening demand has been challenging, with passenger and airline activity fluctuating and staff shortages resulting in longer than anticipated screening queues. We are implementing changes to airport security by strengthening queue management systems and rolling out advanced scanners which will shorten queue times in the long-term. A key part of this work is our collaboration with the Ministry of Transport and the sector on the Queues Taskforce - an Authority-led initiative which identifies solutions and mitigations to airport security risks and issues. A related initiative is the Authority's collaboration with industry in the Security Stewardship Group, which includes airlines, airports, cargo handlers and their representative groups.

Although the sector is still in recovery, opportunities for growth exist in the development of emerging aviation technologies and the modernisation of the aerospace sector. These novel technologies have often not been tried or tested anywhere else in the world, making safety requirements difficult to ascertain and assessments complex. Examples of this include suborbital unpiloted aircraft and high altitude solar powered aircraft.

For New Zealand to be an attractive environment for innovators to develop and test new aviation technologies, the country requires a sufficiently resourced and fit-for-purpose regulatory regime. We are collaborating with the Ministry to enable this requirement now and into the future. To realise the potential economic and environmental benefits of these new technologies, the Authority needs to not just regulate but to facilitate, so that innovative businesses can realise their vision and safely integrate new technologies into the aviation system. To support innovators, we have established an Emerging Technologies Programme and Unit which coordinates sector and government activities and works closely with regulated parties on the safety and security requirements for their products.

Both the sector and system users are taking an active interest in environmental sustainability, notably in sustainable aviation fuels (including infrastructure and supplies). In addition to our facilitation of innovative aviation technologies — which often provide green solutions and lower emissions — we are working with the Ministry as well as other government agencies and organisations to develop a more sustainable system. This work includes participating in Sustainable Aviation Aotearoa — a public-private leadership body focused on decarbonising aviation.

To uphold New Zealand's reputation as a safe and secure trading partner and destination requires a timely and flexible response to issues and risks

While there are many opportunities for the sector ahead, the sector's risk profile has changed since the pandemic resulting in new safety and security challenges from skill-fade, competition for frontline staff, and increased demand for airport screening and the regulation of new technologies. International and legislative requirements have also increased since 2019. In the short-term, the Authority must implement the Civil Aviation Act 2023 and prepare New Zealand for its 2025 ICAO safety audit. These are complex pieces of work that are fundamental to enabling a safe and secure aviation system. Each of these challenges has the potential to significantly impact the safety and security of system users, create additional costs and inefficiencies for the system, and result in a loss of confidence in the Authority as a regulator. There is the additional potential loss of mutual recognition between nations, impacting opportunities for trade and tourism growth.

The Authority's ability to respond quickly to changing sector requirements and emerging risks is constrained by its financial position. Pre-COVID, the Authority funded 99.9% of its aviation security functions, and 87% of its regulatory function through a mixture of fees, levies and charges collected from system participants. The growth in aviation activity pre-COVID, and thus the Authority's revenues, enabled it to respond more quickly and strategically to changes in the aviation system than it can today. This previous model enabled the Authority to take an agile response to emerging risks by using its revenue to quickly develop new functions or increase staffing levels. As a result of the pandemic, the Authority is currently dependent on Crown funding to deliver its core safety and security functions. The Crown funding has restrictions on how that funding is used, reducing our flexibility, and often requires Cabinet approval to make any material changes. The Authority was also required to utilise all its financial reserves prior to accessing additional Crown funding. Before the pandemic we would have used our reserves to implement risk mitigations quickly and as needed, without requiring Crown support.

The Authority is undertaking a funding review to return us to a cost recovery model for the functions we undertake. The funding review is scheduled to be effective from January 2025 at the earliest. Until the funding review is complete, the Authority will remain dependent on Crown funding, which limits our ability to respond to sector changes with the flexibility and timeliness the sector requires.

This briefing is separated into three parts that inform you of the Authority's place within New Zealand and the global aviation system. The first part outlines the Authority's current key issues and opportunities; the second part outlines who we are and what we do; and the third part outlines components of the New Zealand aviation system.

We look forward to working with you in our key role of protecting and enabling safety and security in aviation, and, through this, supporting economic opportunities, environmental outcomes, and social connections for the benefit of New Zealand.

Keith Manch
Chief Executive and
Director of Civil Aviation

Part One

Critical Issues and Enablers for CAA

This is an overview of issues and enablers you will encounter as Minister for Transport with responsibility for civil aviation. These are the Authority's top priorities, as they are critical to international commitments and obligations, supporting fit for purpose regulation, implementation of regulation and continued operations. Focusing on these areas will ensure that aviation regulation is able to play its role in mitigating risks and supporting the safety of aviation, while embracing the associated economic, social, and environmental opportunities afforded by aviation and aerospace activity to improve our society.

The sections below are expanded upon in the rest of this briefing. In the next three to six months, the Authority will seek to brief you in more detail on these priorities, their associated challenges, and the steps we are taking to embrace opportunities.

Critical Issues

Financial position

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To enable the opportunities emerging from new technologies while maintaining the safety and security performance of the aviation system, we need sufficient investment and flexibility in the system to ensure it remains fit for purpose. The Authority is focused on keeping regulation up to date, maintaining a workforce with the requisite regulatory and technical capacity and capability, and working closely with regulated parties. However, current resourcing levels are not matched to either the risks or the opportunities that exist.

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Recruiting and retaining the right people

Having sufficient investment in our people and valuing their regulatory and technical knowledge is critical to the Authority being able to deliver regulatory outcomes today and into the future.

- In a changing aviation environment with industry expectations of innovation at pace, the Authority is facing a growing capacity and capability gap in its staffing skills balance.
- The ability to attract and retain talent in a recovering aviation environment is challenging. The Authority is often competing with industry to recruit people with aviation and/or regulatory expertise, and cannot easily match private sector packages.
- The ratio between the Authority's frontline and support staff is 79 to 21, reflecting the core operational focus in what we do. However, in addition to recruiting and retention pressures in essential regulatory roles, the Authority's supporting functions (such as digital and policy) are also strained. This requires careful prioritisation of where we allocate our people resourcing.

Regulatory system design

The Authority, like many front-line regulators, is dealing with an out-of-date and not fit for purpose regulatory regime. This creates cost to the industry and inefficiency for sectors, as well as impacting the timely delivery of regulatory outcomes.

- To ensure the design of the aviation regulatory system remains effective, the Ministry contracts the Authority to develop regulatory policy and the associated civil aviation rules.
- Our capability and capacity to respond to new and emerging risks and technologies has diminished in recent years, due to resource pressures and competing priorities. Our rules programme is unable to keep up with the pace and scale of change.
- As a result, the Authority is not fully enabling innovation and its economic, social, and environmental benefits. This issue is compounded through the increasing misalignment of New Zealand's civil aviation rules with the International Civil Aviation Organization (ICAO)'s Standards and Recommended Practices, which are updated far more swiftly than our rules programme can operate.
- The Authority is obliged to allocate its regulatory resources to mitigating the areas of highest risk, but we have a reduced capacity to respond to identified risks and to take advantage of opportunities through system design.
- Ultimately, the current rules programme is unable to ensure that the long-term safety and security performance of the system can be sustained.

ICAO audits

New Zealand is a founding member of the International Civil Aviation Organization (ICAO), a UN technical agency that sets standards and global norms for safe, secure civil aviation. Through our membership of ICAO, we influence and lead the development of international best practice, in line with the New Zealand Government's commitment to the rules-based order.

- Maintaining currency with ICAO requirements is critical to New Zealand having a successful aviation sector. This continually puts pressure on the aviation system generally, and the Authority in particular, to be effectively resourced, and to have the right people and regulatory systems that are subject to oversight and audit by ICAO.
- ICAO periodically audits all member states, including New Zealand, to assess their level of compliance with internationally agreed technical standards for aviation safety and security, authorising frameworks and oversight mechanisms.
- The Authority is responding to the findings of an ICAO audit of New Zealand's aviation security system conducted in 2022. While the audit confirmed that New Zealand's compliance with international aviation security standards is generally high, it identified areas requiring improvement. Implementing the Authority's Corrective Action Plan responding to the findings will affect our resourcing and prioritisation of regulatory and policy work programmes for several years.
- The Authority is currently leading the preparation for an ICAO audit of New Zealand's compliance with aviation safety standards and oversight mechanisms. This audit is likely to be scheduled for 2025. We anticipate it will confirm a very high level of compliance with aviation safety standards.

AvSec operating constraints

The Authority's largest business group, the Aviation Security Service (AvSec), screens and searches passengers, crew and baggage for prohibited items, primarily on flights departing New Zealand. This service delivery function is one of the critical layers that provide assurance to travellers and the aviation industry of a robust, vigilant and globally connected aviation security system.

Like many industries and businesses, AvSec's return to its pre-pandemic operational capacity has been impacted by a tight labour market and the need to train new staff to a high standard before their deployment. International passenger volumes and the number of flights are increasing more rapidly than anticipated, placing additional pressure on a system that must balance maintaining security standards with facilitating passengers smoothly through security screening.

- Passenger screening times and long queues could introduce airport security risks and reduce international trust in our security system. This has the potential to create reputational issues for New Zealand, impacting tourism levels, economic prosperity and our ability to get goods to international markets.
- Auckland International Airport's integrated terminal building works are prioritising the new building over improvements to the domestic terminal. This has capped the screening lane configuration at the domestic screening point to its current 5 lanes for the next 6-7 years. Alongside growing passenger and flight numbers, this may increase the likelihood of long queues forming at peak times. It will also see the number of peak times increase throughout the day as capacity/demand is smoothed.
- While AvSec is focused on rebuilding staffing levels, it is currently holding multiple vacancies. The Authority's ability to respond to recruitment pressures is limited from its dependence on Crown funding to support delivery of its core functions. It is also without reserves or a mechanism for reserves restoration. This restricts the Authority's ability to respond quickly to changes in its operational context, such as increased screening capacity, as its expenditure - and the activities it purchases - must first be approved by Cabinet through the Budget process.
- AvSec can employ casual staff to meet fluctuating seasonal demand, and is currently recruiting for the summer period. Casual staff cannot perform all the duties of a trained Aviation Security Officer, however, so capacity to address security screening delays remains constrained. Furthermore, AvSec staff can be redeployed to meet demand, but responding in one area could introduce new risks and unintended outcomes for the security system as a whole.
- The Authority is leading an initiative in collaboration with the Ministry and industry partners to enhance queue management systems, tools and processes to respond to these challenges in innovative ways.

Critical Enablers

Authorising environment

A new legislative framework for civil aviation – the first since 1990 – will better enable the Authority to focus on contemporary issues, risks and opportunities. It will better support New Zealand to get where it wants and needs to go by taking advantage of aviation and aerospace activity, with the Authority playing a key role, in partnership with the Ministry and regulated parties.

- The Civil Aviation Act 2023 will come into effect in April 2025, covering almost all the Authority's activities. To implement the new Act, we have established a comprehensive programme across the Authority and the Ministry to ensure that existing and new statutory powers and functions are authorised and effectively delivered.
- Key changes in the new Act include:
  - a new drug and alcohol regulatory regime
  - new protections relating to safety information (often referred to as "just culture")
  - provisions for advancements in technology, such as aircraft operated without a pilot on board
  - provision for the Ministry to manage independent reviews of regulatory decisions made by the Director (but not overturn them)
  - removing the requirement for AvSec to hold an aviation document, which will enable easier "whole-of-Authority" responses to issues and provide increased clarity on roles and accountability
  - modernising enforcement and investigations powers by aligning with the Health and Safety at Work Act (HSWA) 2015

Emerging technologies

Collaboration between the Authority, broader government, and industry is critical to enabling successful technical innovations in aviation. The Authority needs to understand innovators' operating contexts, objectives, and challenges. To maximise the benefits that can accrue to NZ from emerging technologies in aviation and aerospace, it is critical that we plan together how regulation can progress in a safe, secure manner, to gain the economic, social, and environmental benefits available.

- The Authority is collaborating with other government agencies and industry bodies to enable emerging technology activity in aviation. The rapidly growing activity spans emerging technologies, aerospace, and aviation sectors, creating a complex regulatory environment.
- Sector demands and advancements in technology are moving much faster than the Authority's resourcing model and rules development processes can respond. In support of the Aerospace Strategy launched in July 2023, we are engaging with the Ministry of Business, Innovation and Employment (MIBE) on funding transfers to support our efforts to build the necessary regulatory capacity and capability in this area.
- We have established an Emerging Technologies Unit to act as a bridge between the Authority and our stakeholders in the emerging technologies, aerospace, and aviation sectors. This unit is actively engaging stakeholders to support their understanding of rule requirements and certification pathways, and our understanding of their business and investment needs.
- We also liaise regularly with international regulators, as we are all facing similar challenges and can learn best practice from each other.
- The Authority's activities in the emerging technology area also support the long-term aspirational goal of both ICAO and the New Zealand Government to reduce carbon emissions in aviation, through innovations such as sustainable aviation fuels and alternative propulsion methods.

Becoming a values-based, modern regulator

It is essential for the effective functioning of New Zealand's aviation system that the Authority is responsive to societal, technological and environmental changes. We are using our values of collaboration, transparency, integrity, respect and professionalism to review our approach, and to build strong relationships that improve the overall performance of the system.

- The Authority's values were initially developed to guide our internal behaviours and relationships, and are now central to our approach as a regulator. We are committed to enabling aviation sector recovery and growth through responsive, adaptive regulatory interactions.
- The Authority has introduced new ways of working to address priority issues in the system, using intelligence to identify and act effectively on areas of highest risk. We are collaborating across organisational and industry boundaries to respond effectively to emerging and time-sensitive issues. Recent cross-functional activities include:
  - Establishing an internal taskforce to address "unacceptable" queues at aviation security screening points across the country
  - Promoting a "Work Together, Stay Apart" safety campaign of enhanced engagement between the Authority and participants to reduce collisions and near-miss events at unattended aerodromes
  - Convening forums with sports aviation industry bodies to address specific safety concerns presenting in the sector.
- Our continuous improvement focus is both external and internal. To that end, we have recently refreshed our monitoring policy and reviewed the Authority's investigation and enforcement functions. These performance improvement activities ensure we are working effectively and meeting strategic and regulatory obligations and goals.
- Through the EMPIC project, we have invested significant financial resources in a new online services platform to more efficiently manage regulatory processes and functions. The platform modernises administrative processes, such as licensing and certification, and allows regulated parties to engage with the Authority more easily and more smoothly. The Authority will increasingly move its business and services online, in keeping with its aspiration to be a modern regulator.

The resources and tools we need to be effective

It is important the Authority is sufficiently resourced to enable it to deliver effective and efficient aviation safety and security regulatory activities, while keeping pace with the rapidly changing global and domestic aviation system.

EMPIC-EAP

The Authority is replacing its core aviation regulatory platform the Aviation Safety Management System (ASMS).

ASMS was originally developed in 1986 and the current version uses programming language and third-party solutions that are no longer supported. The Authority can no longer make code changes or know what risk future Microsoft patch changes may pose to the system. The Authority regards the risk of this core regulatory platform no longer being able to support regulatory operations as high and aims to replace ASMS as soon as it can.

The Safety Regulatory System Programme was initiated in late 2021 to replace ASMS with commercial-off-the-shelf software called EMPIC-EAP. This is a cloud-hosted, German software-as-a-service solution used by more than 40 international aviation agencies.

The programme's priority is to implement a system that enables ASMS to be decommissioned. The programme consists of the core EMPIC implementation project and other projects required to replace ASMS functionality. EMPIC-EAP will allow us to perform all core Authority and other regulatory obligations, including:

- medical certification of pilots and air traffic controllers
- technical areas including aircraft type certification and registration
- personnel licensing of flight crew, air traffic controllers and maintenance personnel
- organisational approval of air operators,
- air traffic management, aeronautical service providers, maintenance companies and flight schools
- surveillance activities and risk-based oversight

Cabinet approved funding of $16.4M in May 2021 through a multi-year capital appropriation for the core EMPIC solution. Elements of the Safety Regulatory System Programme will need to be delivered from baseline. The project is on track and will continue in phases until late 2024.

AvSec technology investments

Given evolving global aviation security risks and threats, there is a need for AvSec to balance security effectiveness and business efficiency.

AvSec has a large screening technology modernisation programme under way, which commenced 7 years ago. The programme is funded from a multi-year capital appropriation approved in Budget 21, which included $88.8 million for aviation security infrastructure.

The programme is investing in, and rolling out, new technology such as Advanced Imaging Technology (AIT) body scanners and computed tomography (CT) x-ray scanners, and automated smart lanes. While AIT and CT technologies have been introduced to meet increased security requirements, over time, they will also help with improved passenger facilitation and operational efficiencies at major airports.

A recent focus of the programme is AvSec's enhanced implementation of Non-Passenger Screening (NPS) capabilities, including investment in the infrastructure and equipment that support this activity. NPS refers to the screening of individuals who are not passengers (for example, airport employees, baggage handlers, or maintenance workers) and who access the security enhanced areas of airports. This is a long-standing regulatory requirement that was brought further into focus following the 2022 ICAO security audit of New Zealand. Work to improve NPS has involved AvSec collaborating with airports and their workers to boost security culture, alongside the planned enhancements to infrastructure and equipment.

Integral to the overall modernisation programme is AvSec's future planning to respond to strategic requirements, supported by the AvSec Research and Development portfolio. This includes a trial programme for emerging aviation security technologies, systems, and security techniques, using a manner and methodology approved by the Director. Subject to further regulatory assessment and prioritisation, AvSec is also considering further automated detection, behaviour detection, the use of AI and checkpoint management to meet the trifecta of efficiency, passenger facilitation, and security in the New Zealand aviation setting.

Return to Asteron Centre

In July 2021, the Authority vacated its National Office (located in the Asteron Centre in Wellington) as it was shown to be unsafe for occupation. Engineering reports identified significant seismic strengthening work was required to bring the building up to the new building standard code.

Temporary work sites across multiple locations have been established while seismic work is carried out, although these only cater for approximately 50% of the Authority's National Office employees, with the remaining employees working remotely. This has provided several culture and wellbeing challenges.

The Authority has 15 years left on its fixed-term lease at the Asteron Centre. In 2021, Management explored numerous options to terminate the lease early, but this was not economically or practically viable. This means the Authority needs to return to the Asteron Centre and reinstate fixtures and furniture (albeit all furniture used in the temporary locations will be reused).

This presents an opportunity to reconfigure the Asteron Centre layout to meet the Authority's core regulatory safety and security regulatory activities, while also accommodating and implementing the changing ways of working. It also aligns with Te Kawa Mataaho Public Service Commission 'flexible by default' expectations and the Government Property Group's workplace design guidelines.

The Board approved the business case in December 2022, with the project estimated to cost $5.263M ($0.748M OPEX and $4.515M CAPEX). The project is currently targeting a relocation back to the Asteron Centre in February 2024.

Part Two

Understanding the Civil Aviation Authority of New Zealand

Who we are

The Civil Aviation Authority (CAA or the Authority) is a Crown entity responsible to the Minister of Transport. The CAA includes seven business groups which collectively deliver aviation safety and security for New Zealand. Civil aviation in New Zealand operates in a system established and maintained by the Civil Aviation Act 1990 (the Act).

We are mandated to: **undertake safety, security, and other functions contributing to the aim of achieving an integrated, safe, responsive, and sustainable transport system.**

The Authority exercises these functions under several Acts and delegations, including the:

- Aviation Crimes Act 1972
- New Zealand Bill of Rights Act 1990
- Chicago Convention on International Civil Aviation 1944
- Civil Aviation Act 1990
- Crimes Act 1961
- Crown Entities Act 2004
- Health and Safety at Work Act 2015
- Hazardous Substances and New Organisms Amendment Act 2015
- Official Information Act 1982
- Privacy Act 2020
- Public Finance Act 1989
- Transport Accident Investigation Commission Act 1990
- Trespass Act 1980.

Additionally, the following expectations set by previous governments are incorporated into the way we conduct our operations:

- The Treaty of Waitangi - Te Tiriti o Waitangi obligations
- Environmental protection obligations, such as emissions reduction and sustainability
- Collective pay agreements.

Governance

The Minister appoints a Board to ensure the Authority performs well, manages risks prudently, and is sustainable over the longer term through a well-structured strategy.

Leadership

The Authority's leadership team manages the Authority's risks and requires that the Authority operates efficiently and effectively, delivering via its three key pathways:

- leadership and influence
- active regulatory stewardship
- professional regulatory practice.

We are part of the New Zealand transport system

Aviation is part of the wider transport system moving people and goods over land, sea and by air. The Authority contributes to the government's five outcomes for a transport system in New Zealand that improves the wellbeing and liveability of all New Zealanders.

Fig 1: Transport Outcomes Framework

Our purpose and what we do

Our strategic framework

OUR VALUES

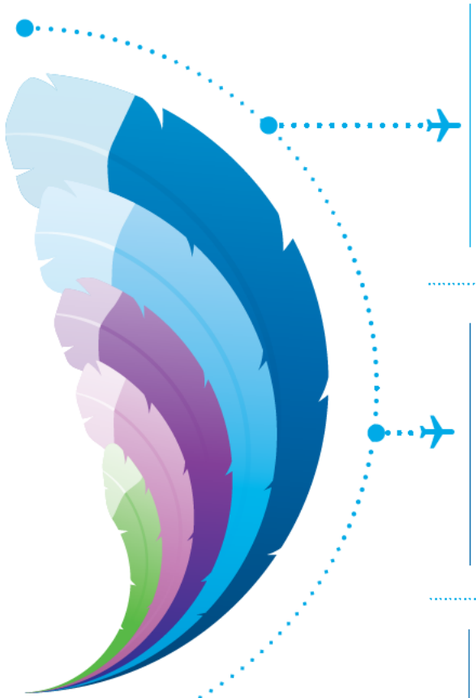
Collaboration
Me mahi tahi

Transparency
Me mahi pono

Integrity
Me mahi tika

Respect
Me manaaki

Professionalism
Kia tū rangatira ai



OUR PATHWAYS

Leadership and Influence

Through regulatory leadership we influence a safe and secure civil aviation system for New Zealand.

Success is when our stakeholders are engaged, and when we see behaviours improve as a result of what we do

Active Regulatory Stewardship

We monitor and care for the civil aviation regulatory system through our policy and operational responsibilities.

Success is when our regulation is fit for purpose and our reputation is strong

Professional Regulatory Practice

We act to identify risk and reduce it through intelligence-led intervention.

Success is evident in the reduction of risk to safety and security within the system

OUR VISION AND PURPOSE

A safe and secure aviation system – so people are safe, and feel safe, when they fly

OUR BUILDING BLOCKS

People

Our highly skilled, professional workforce – building engagement through culture, capability, leadership, and diversity

Regulatory strategy

Our whole-of-system regulatory approach; intelligence-led, risk-based, supported by our:

- Regulatory Capability Plan
- Horizon 2030 (AvSec's Security Delivery Strategy)

Digital

Our technology and information management supports our regulatory role and our people. Our systems and information are protected and well-managed

Resource stewardship

Responsibly managing our physical and financial resources and working towards financial and environmental sustainability

Communications and engagement

Our engagement – communicating effectively as one organisation with our stakeholders to understand and influence our environment

Strategic and business planning, reporting, quality, and assurance

Clear goals, clear pathways, and a performance and quality cycle that supports success

How we measure and report on our progress

Our interventions

Our interventions relate to the following aspects of the civil aviation system.

ENTRY

Exercise of control over entry into the New Zealand civil aviation system

- Quality and timeliness of rules and standards
- Robust entry renewal and amendment certification tasks
- Licensing procedures carried out effectively and efficiently.

ON-GOING OPERATION

Exercise of control over sustained operation in the New Zealand civil aviation system

- Applying a risk-based approach to safety and security system oversight
- Communicating effectively to the aviation community and stakeholders
- Ensuring participants are operating within their legal obligations through effective inspection and monitoring
- Responding appropriately to unsafe practice
- Effectively investigating occurrences
- Effectively monitoring, auditing and inspecting.

EXIT

Exercise of control over exit from the New Zealand civil aviation system

- Informed decision-making through intelligence and analysis.

Ensure threats are identified and associated risks are managed and international standards for security are met

- Effective screening activities.

What we deliver

OUTPUTS

OUTPUT CLASS	OUTPUT
Output Class 1: Policy & Regulatory Strategy	International Relations and International Civil Aviation Organisation Obligations
	Ministerial Servicing
	Policy Advice
	System Level Design and Intervention
	Rules and Standards Development
	Pacific Support
Output Class 2: Outreach	
Output Class 3: Certification and Licensing	
Output Class 4: Monitoring, Inspection and Investigation	
Output Class 5: Security Service Delivery	Screening Activity
	Audit Performance; Access Control; Maritime Security Services

Indicators of our success

OUR VISION AND PURPOSE

A safe and secure aviation system - so people are safe, and feel safe, when they fly

- The frequency of accidents and fatalities remains low
- Risk interventions demonstrate effective mitigation
- New technologies enabled
- Security incidents remain at zero
- Increasing confidence reported in our biennial 'Feel Safe' survey*.

PATHWAY - LEADERSHIP AND INFLUENCE

- The Authority's domestic and international reputation grows positively (based on a composite of ICAO scores, stakeholder surveys, and performance against Output Class 1 - Policy & Regulatory Strategy).
- The Authority's outreach and influencing activities are positively received (based on outreach quality scores drawn from Output Class 2 - Outreach).

PATHWAY - ACTIVE REGULATORY STEWARDSHIP

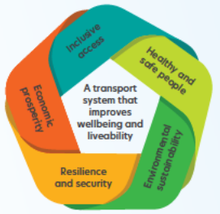
- New Zealand aviation operators are free to operate internationally and domestically (based on composite of ICAO scores, signed international agreements, and the quality scores drawn from Output Class 3 - Certification and Licensing).
- The civil aviation regulatory system demonstrates value for money for Government, participants and users of the aviation system (based on value for money assessments).

PATHWAY - PROFESSIONAL REGULATORY PRACTICE

- The Authority's security service delivery is effective (lack of security incidents, and performance against Output Class 5 - Security Service Delivery).
- The Authority's certification and licensing activities are effective (assessment drawn from Output Class 3 - Certification and Licensing).
- The Authority's monitoring and investigation activities are effective (assessment drawn from Output Class 4 - Monitoring, Inspection and Investigation).

* *Measured biennially through Kantar Public - last conducted in 2022*

Transport outcomes and benefits



SAFE AND SECURE PEOPLE

Through decreasing number of accidents, deaths and injuries in the sector, as well as increasing confidence in the safety and security of the system.

MINIMISED ENVIRONMENTAL IMPACT

Through reduced greenhouse gas emissions.

POSITIVE ECONOMIC IMPACT

Through minimising the aviation-related barriers for movement of people and goods, and lower social cost of air accidents and incidents.

IMPROVED RESILIENCE AND SECURITY

Through reduction of risk due to adoption of safety management systems (SMS) throughout the sector, and few or zero security incidents in the aviation sector.

Our place in the global aviation system

Civil aviation is a globally interconnected system governed by the International Civil Aviation Organization (ICAO), of which New Zealand is a member. ICAO is a United Nations specialised agency, established in 1944 to manage the administration and governance of the Convention on International Civil Aviation (the Chicago Convention). The Authority is New Zealand's designated agency to manage all technical interactions with ICAO regarding safety and security matters.

ICAO works with 193 Member States and industry organisations to reach consensus on international civil aviation Standards and Recommended Practices (SARPs). ICAO strives to support a safe, efficient, secure, economically sustainable, and environmentally responsible international civil aviation system. ICAO Member States incorporate SARPs into national legislation to ensure that their international civil aviation operations and regulations conform to global norms. Consequently, adoption of these 'global practices' enables the global aviation network to operate safely and reliably in every region of the world.

The Civil Aviation Act 1990 (the Act) and the Civil Aviation Act 2023 (coming into force in 2025) empower the Minister of Transport to make civil aviation rules to implement New Zealand's obligations under the Chicago Convention. The Act also states that the rules shall not be inconsistent with ICAO standards to the extent adopted by New Zealand.

International comparison and ICAO audits

ICAO audits all Member States on their level of compliance with ICAO standards and recommended practices (SARPs) on a cyclic basis. The audits are focused on a State's compliance with its international treaty law obligations for aviation safety and security compliance and oversight.

Safety

ICAO's Universal Safety Oversight Audit Programme Continuous Monitoring Approach (USOAP-CMA) is a systematic and objective assessment of a State's safety oversight system. It assesses whether the State has implemented the critical elements of a safety oversight system, as well as implementation of the SARPs and other procedures and guidance material.

USOAP-CMA audits take a continuous monitoring approach. States are expected to continuously update their compliance status and conduct ongoing online self-assessments through an online portal. This is then supplemented by a periodic on-site audit.

The overall audit results in an Effective Implementation (EI) score. The EI score is important, because it indicates to other States how well we conform to ICAO's SARPs. It can be used to form a view on the safety and reliability of an individual State's civil aviation system.

ICAO last fully audited New Zealand in March 2006, resulting in an EI score of 83.59%. A USOAP-CMA audit was scheduled for December 2016; however, the November 2016 earthquake-related closure of the Authority premises resulted in just one audit area being assessed (accident and incident investigation at the Transport Accident Investigation Commission (TAIC) office).

That limited scope audit increased New Zealand's overall EI score to 85.63%. ICAO has since revalidated the EI score for New Zealand, using new methodologies, which is now sitting at 84.56%.

The Authority is anticipating a full ICAO safety audit of New Zealand in 2025, after which the next validated EI score will be publicly released. Planning for the audit is under way with the Ministry of Transport and aviation stakeholders. In the past year, the Authority has also strengthened its CMA capability and put in place structures and processes to ensure continuous compliance monitoring.

As a result, we are expecting a far higher EI score in 2025, based on our self-assessed level of compliance across all audit areas.

ICAO EI score (as at August 2023)

New Zealand's EI score can influence the Authority's ability to enter into bilateral agreements with other States (such as Australia, the United States, Singapore, Canada, Europe). These agreements can help ease the regulatory burden on New Zealand's aviation organisations operating in, or using services from, those countries.

New Zealand	84.56%
Australia	95.04%
Canada	94.95%
OECD Average	83.57%
World Average	67.46%
Asia-Pacific Average (APAC)	65.31%

Consequently, a downgrade or stagnation of New Zealand's EI score could have a negative impact on New Zealand's reputation as a safe and secure place to operate. It might also have an adverse effect on the reputation of New Zealand-made aviation products overseas.

The Authority has some concerns that, in recent years, there has been insufficient priority assigned at a State-level to adopting ICAO SARPs into New Zealand legislation and rules. As a result, New Zealand's level of compliance is beginning to lag that of States it generally compares itself to such as Australia and Canada. Despite this, New Zealand's EI score remains substantially better than those seen in the Asia-Pacific region (65.31% on average) and close to the OECD average (83.57%).

Ministers have set, through Letters of Expectation, an aspiration for New Zealand to have a target EI score in the upper quarter of OECD countries. Notably, the EI score of most States has dropped in the past two years. This could be linked to a change in ICAO's audit methodology in 2021 and the pandemic's impact on States' aviation safety oversight capabilities.

Security

ICAO uses the Universal Security Audit Programme Continuous Monitoring Approach (USAP-CMA) to determine the status of implementation of ICAO security SARPs by States. It is conducted by a separate area of ICAO than that involved in the USOAP-CMA. ICAO conducted a security audit of New Zealand in mid-2022. This was a key focal point for the Authority, given the importance of these audits for our international reputation.

The security audit scope included the full range of New Zealand's aviation security legislation, regulation, policies, practices, and procedures and assessed those for compliance against the corresponding ICAO standards. This audit assessed New Zealand's legislative framework State-level aviation security threat and risk assessments, operational response functions involving government agencies such as Police, Immigration NZ, and Customs, as well as CAA's oversight of aviation security activities and delivery.

Audit results showed that New Zealand's compliance with international standards is high. However, the audit found some areas where controls and mitigations for maintaining civil aviation security need to be enhanced. ICAO issued 20 findings, with recommendations to improve our aviation security system. To address ICAO's findings, the Authority submitted a corrective action plan (CAP) to allow ICAO to monitor implementation of improvements to the system. This plan will drive much of our security work programme and continuous improvement focus for the next few years.

Influencing the international arena to benefit New Zealand

The ability for New Zealand to maintain and grow its international air transport linkages is dependent on a high level of compliance with international safety, security, and environmental standards. Good performance in these areas helps build New Zealand's reputation as a safe and secure place to visit and to do business with.

The pace of international regulatory change is increasing with the emergence of new technologies and the drive for greater environmental sustainability across the global aviation system. As such, there is a growing need for New Zealand to work to ensure that the international standards that will be imposed on our aviation sector are effective, reasonable, and focused on risk.

In our role as NZ's technical representatives to ICAO, we engage in ICAO fora (both regional and global), and by working with like-minded States to enhance our influence where appropriate. We enjoy a reputation as being relatively non-aligned and trustworthy, and this is becoming increasing valuable as the wider geo-political environment evolves. We work with small Pacific States and the Pacific Aviation Safety Office (PASO) to help ensure that the interests of the region are well represented.

As well as participating in ICAO fora, we are also responsible for managing formal communications with ICAO, including formal proposals for amendments to standards and the filing of compliance status information.

We are signatory to a number of bilateral and multilateral technical agreements with other States. Some of these agreements provide for mutual recognition of certification and oversight activities between the CAA and our counterparts in other jurisdictions. These can provide significant cost and efficiency savings for New Zealand businesses operating in those jurisdictions or under the oversight of other National Aviation Authorities. We make use of our bilateral and multilateral relationships to share information on aviation standards, rules, procedures, and processes. By learning from the different experiences of partner States, we can enhance our effectiveness and efficiency as a regulator, to the benefit of the aviation sector and the public.

Supporting our Pacific neighbours

The Authority provides technical advice and assistance to many Pacific States through the Pacific Aviation Safety Office (PASO). The Authority's focus is assisting Pacific island countries (PICs) to build their safety and security capacity and expertise.[1] Much of the Authority's work in the Pacific is funded by the Ministry of Foreign Affairs and Trade (MFAT) as part of the long running Pacific Aviation Security Capacity Programme (PASCP).

The PASCP has several opportunities over the next few years to build aviation security capability and capacity in PICs. Initiatives include:

- Providing nine PICs with new security screening systems comparable to systems being operated in New Zealand, Australia, and the United States, enhanced with Dual Imaging Explosive Detection and Explosive Trace Detector systems.
- Providing ongoing operational and technical training for the new screening systems, plus a comprehensive service and maintenance agreement over seven years to ensure PICs have enduring implementation support.
- Replacing Airport Identity Card systems across PICs, including tamper-proof security features, to ensure alignment with ICAO Guidance Material.

The Authority is also developing its own views about further work that could be done to assist PICs to enhance their current aviation safety and security practices. This includes enhanced sharing of information on safety and security matters, and further supporting PASO as it evolves into a regional aviation safety and security entity.

These ideas and initiatives build off the work and, critically, the relationships forged through the work of the PASCP, with a clear intent to facilitate an ethos of "in the Pacific, for the Pacific, by the Pacific".

1 PASO was formed as a result of the Pacific Islands Civil Aviation Safety and Security Treaty signed by the Cook Islands, the Federated States of Micronesia, Kiribati, Nauru, Niue, Palau, Papua New Guinea, Samoa, the Solomon Islands, Tonga, Tuvalu, and Vanuatu. New Zealand, Australia and Fiji are associate members.

Our core safety and security regulatory functions at a glance

The Authority's regulatory functions span both safety and security domains and are the core activities supporting our regulatory framework.

Our core operational regulatory functions

Functions	High-level definitions
System and practice design	We ensure that the aviation regulatory system remains effective by developing regulatory policy, civil aviation rules and guidance material that aligns with New Zealand legislation and international conventions.
Communications and engagement	We engage operationally and strategically with regulated parties and other external stakeholders to deliver maximum regulatory benefit for New Zealand.
Information and education	We provide and foster information, advice, and education to assist the aviation community, together with passengers, to operate safely and securely.
Security service delivery	We provide security services at airports and at navigation facilities to keep passengers, aircrew, and others, safe and secure on the ground and in the air.
Certification and licensing	We provide written assurance (a certificate, licence, or other approval) that an organisation, individual, aircraft, or product meets the specific requirements of applicable civil aviation rules.
Monitoring	We plan and conduct activities to provide assurance that current certificates and licences remain valid; that relevant legislation is otherwise being met; and that aviation risks within the system are being identified and managed. Monitoring forms the baseline of our intelligence picture.
Investigation	We examine accidents, incidents, and other occurrences to ascertain what happened and why, and to determine appropriate responses, including actions to share lessons learned and prevent recurrences.
Administrative and judicial action	We use a range of administrative and judicial actions to obtain compliance, to address risk, to change behaviour, and to impose or seek penalties. Our actions are proportionate and in the public interest.

Creating a safer aviation system

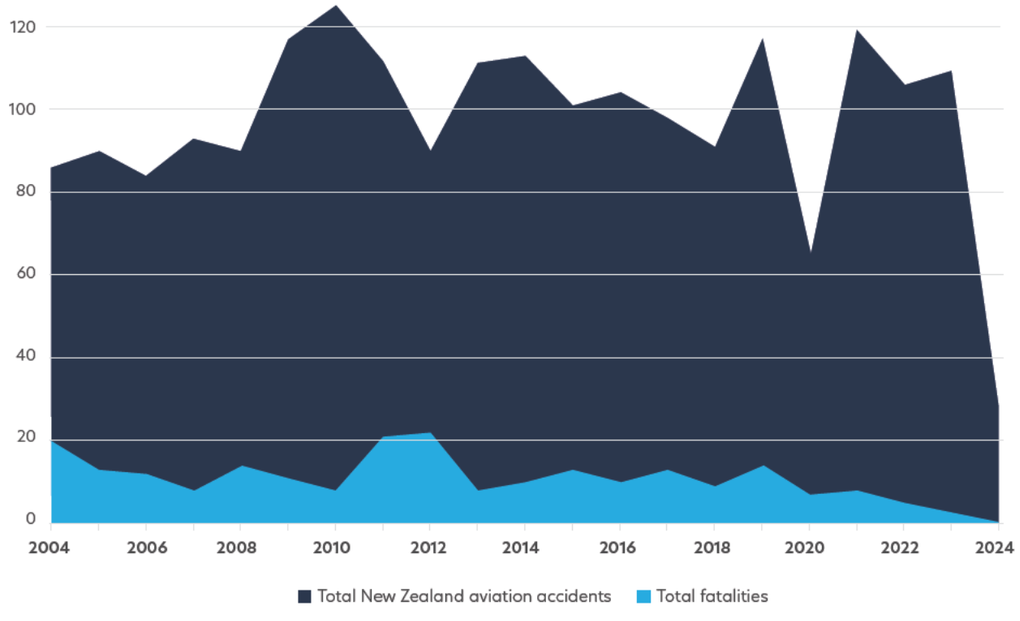
A key principle of New Zealand's aviation regulatory framework is that everyone shares a responsibility for safety and security. We ensure that aviation participants meet the standards set by Parliament and the Minister of Transport and ensure the aviation system is safe and secure.

Improving safety performance

Overall, safety in New Zealand's civil aviation system has improved over the past twenty-five years. Since 1998, aviation accidents and fatalities have continued to decline as new aircraft technology is utilised, regulatory interventions more effectively target risk, and participants in the system implement better ways to detect and minimise risks.

Following the return of commercial aviation activity in 2021, the public air transport accident rate, which covers passenger transport in large, medium, and small aeroplanes and passenger transport in helicopters, has been relatively steady. Commensurate with the increase in participants in the civil aviation system, there has been a slight recent upward trend in the overall air transport accident rate and a stable/continuation trend for commercial non-passenger.

Aviation accidents and fatalities annually



All commercial aviation operators have certified Safety Management Systems (SMS) in place. This requires operators to take a hazard identification and risk management approach to operations, in line with ICAO's SMS mandate.

CAA oversight of aviation participants is moving to an intelligence-led, risk-based approach to monitoring and inspection, and certification activities. This approach utilises data and information gathered from a range of sources, which is in turn developed into intelligence that is used to identify areas of focus in support of aviation safety outcomes.

Reporting requirements

The Authority also has broad reporting requirements, both internationally and domestically, and statutory obligations to provide a harm/activity reporting system to the public and aviation sector. This allows the Authority to provide the Ministry, ICAO, and the wider public with an accurate account of activity, harm, and social cost within the system. The consequences of not appropriately identifying and mitigating harms in the aviation sector could be catastrophic- not only through loss of life and property, but also economically. Reputational damage would have a significant impact on our tourism industry and supply change disruptions would cost millions to consumers and businesses.

State Safety Programme and National Aviation Safety Plan

New Zealand has an aviation State Safety Programme (SSP), which is an ICAO-mandated document that States use to articulate how they will achieve a safe aviation system. It sets out New Zealand's safety policy and objectives, risk management methodologies, safety assurance systems and how safety promotion activities are delivered.

The current SSP was produced in 2018 and has become out of step with changes to the wider aviation environment. We are currently working alongside the Ministry to develop an updated SSP that will reflect New Zealand's aviation safety framework into the future. It is expected that ICAO will audit New Zealand on its implementation of the SSP in 2025.

In addition to the above, there is another ICAO requirement for States to develop a National Aviation Safety Plan (NASP), which sets out the specific actions that States will take to deliver a safe aviation system over a 3–5-year period. New Zealand does not currently have a NASP, but we will be working with the Ministry to produce one within the next two years. Addressing the need to update and implement the SSP and NASP will provide clarity, align New Zealand with international norms, and reduce risk across the system.

Intelligence-Led, Risk-Based Regulation In Action

"Work Together - Stay Apart" Safety Campaign

In 2022, CAA analysis of safety incidents and occurrences revealed an unacceptably high number of fatal accidents, and an increasing rate of critical "near-miss" events near unattended aerodromes. As a result, we launched a regulatory intervention to address airborne conflict at unattended aerodromes called "Work Together - Stay Apart".

Engagement is at the heart of this proposed approach, as there are contributing factors across multiple domains including aerodrome management, individual pilots, certified and noncertified organisations, and volunteer flying clubs. All participants have a role to play to address the factors and improve safety performance at unattended aerodromes. Airborne conflict is a shared risk after all.

CAA is seeking to influence the behaviour of aviation participants and address the contributing factors using targeted actions and regulatory tools, with a strong focus on engagement, information and education.

"Work Together - Stay Apart" is a focus area for the Authority in 2023 and 2024.

Ensuring a secure aviation system for New Zealand

Aviation security is about ensuring that security threats and risks to the aviation system are appropriately mitigated. By doing so, the aviation security system contributes to the objectives of being and feeling safe when using the aviation system.

Our aviation security system is part of the wider national security system, where all parts assess threats, identify vulnerabilities, and apply layers of mitigations to reduce risks and threats. Aviation security in New Zealand and globally is more dynamic than ever before. Intelligence indicates that aviation's attractiveness as a terrorist target has not changed in a post COVID-19 world. It is important that our aviation security system is positioned to anticipate, proactively adapt, and respond to this ever-changing environment.

Regulatory responsibilities

In addition to the public-facing service delivery functions provided by the Aviation Security Service, the Authority has broad security regulatory responsibilities. These span multiple airlines (foreign and domestic), aerodromes, air traffic services, regulated air cargo agents and the secure supply chain.

CAA's regulatory role is critical to assessing security risks, and monitoring and advising on security performance to ensure security measures across the entire aviation security system are working effectively and efficiently to proactively defeat these risks before they emerge.

To this end, the Authority closely engages with New Zealand's wider national security system and key international partners to ensure that we are well informed on current and emerging threats. We sit on ICAO's security-focused Panels and Working Groups to influence, where possible, the development of new global civil aviation security standards.

ICAO requires New Zealand to maintain a National Aviation Security Programme (NASP) to safeguard civil aviation operations against acts of unlawful interference. The Authority is leading work to revise the current NASP to clarify roles and responsibilities for all participants, agencies, and stakeholders within the New Zealand aviation security system. The NASP sits underneath other key national security documents and is used to ensure system resilience and incident response readiness.

AvSec

AvSec delivers an operational security regulation function for the Authority and is the largest business group in the Authority's workforce. AvSec is the sole provider of aviation security screening services at New Zealand's six security designated airports: Auckland, Wellington, Christchurch, Dunedin, Invercargill, and Queenstown. AvSec's functions and activities are described in Figure 1 on the following page.

Under the current Act and the Civil Aviation Act 2023, the provision of aviation security services is contestable. However, successive governments have exercised a provision in the Act enabling the Minister of Transport to Gazette a Notice specifying that only AvSec may provide security services.

AvSec is currently required to hold an aviation document issued by the Director in accordance with the civil aviation rules. The Director has regulatory oversight of AvSec's operations. The requirement for AvSec to hold an aviation document changes in April 2025 when the Civil Aviation Act 2023 comes into force. While there will be no requirement for AvSec to hold an aviation document, the Board will be required to demonstrate that AvSec operates in a way that is equivalent to the requirements specified in Civil Aviation Rules.

AvSec's Horizon 2030

Horizon 2030 was established in 2021/2022, setting out a strategic plan for AvSec to deliver an effective and efficient aviation security service that is trusted, professional and responsive.

Horizon 2030 is a forward-looking strategic plan that constantly monitors and reviews AvSec's operating context and security delivery capability to ensure that we are ahead of the evolving security and aviation landscapes.

Figure 1: AvSec's functions and activities

Screening of passengers and crew

Checking passengers and crew for explosives, weapons, dangerous goods and other prohibited items.

Searches

- Passengers
- Crew
- Cargo
- Baggage
- Aircraft
- Airport workers
- Airport and navigation facilities
- Vehicles

Security patrols

Airport facilities including:

- Terminal buildings
- Navigation facilities
- Gate lounges
- Check-in counters
- Airside and tarmac
- Carparking
- Airport perimeters
- Baggage halls

Behavioural detection

Observing and analysing peoples' behaviour at airports to identify potential crimes against aviation (currently at Auckland and Christchurch Airport only).

Screening of baggage

Including checked-in stowed baggage and cabin baggage at security-designated airports for all international flights and domestic flights larger than 90 seats.

Screening of bulk and duty-free goods

Goods entering sterile areas at security-designated airports.

Engagement, research and staying informed and current

- Reviewing, inquiring and staying abreast of aviation security techniques, systems, processes, practises, procedures, devices and technology.
- Working with domestic and international aviation security and border agencies and industry bodies.

Maritime security response

Maintaining preparedness to provide security to maritime sector in response to a security threat.

Operating the airport identity card system

Screening persons with privileged access to secure areas.

Explosive detection dogs

Checking aircraft, cabin and stowed baggage, unattended or suspicious items, terminal facilities, lounges, VIP events, cargo, carparks, etc.

Screening of non-passengers (airport workers)

Checking for prohibited items.

Providing security services to NZ Police

Supporting New Zealand Police in their functions and duties connected to aviation security (e.g. bomb threat call-outs, route and vehicle clearances, behavioural detection).

Co-operating with police, crown agencies and airport operators

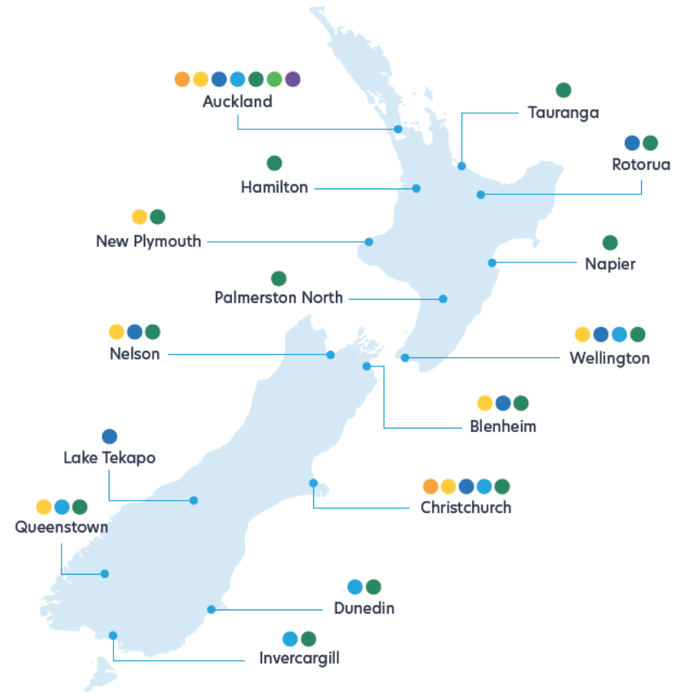
For the purpose of supporting the delivery of aviation security services and achieving greater efficiencies and joint agency outcomes.

Collaborating

Collaborating with international bodies and agencies (such as TSA, CATSA) to maintain alignment to international standards, mutually recognise and support technological advances, and share expertise.

Participants with Security Activities Regulated by CAA

- 3 ANZA
- 61 RACAs
- 14 Airline Operators
- 1 Aviation Security Service Provider
- 14 Aerodromes
- 1 Air Traffic Services



- 50 Foreign Air Operators

Building a responsive, resilient and secure aviation system

Over the past few years, the Authority has responded quickly to significant threats to the safety and security of New Zealanders, such as COVID-19, significant weather events and other central government directions. Due to the increased frequency of threats, it is important that the Authority contributes to building the resilience of the transport system. We must be prepared for and able to respond to events in conjunction with the Ministry of Transport. We have strong relationships with all government agencies and their response functions.

We play an active role when the Ministry's Transport Response Team (TRT) is activated to respond to predicted or occurring events. We also take part in All-of-Government exercises to test planning arrangements for major terrorist incidents, to provide assurance that major security operations will be effective when activated.

New Zealand is exposed to multiple risks, threats and hazards that affect the resilience of the aviation system and the wider transport network. These include natural hazards (including climate change) and hazards caused by human activity (deliberate or accidental).

We must be able to respond effectively to natural hazards

The Authority has responded rapidly and effectively to a range of natural hazards over the past few years, including the eruption at Whakaari - White Island, the 2023 Auckland floods and Cyclone Gabrielle. Cyclone Gabrielle affected not only passenger and freight movement on both a domestic and international level, but also had a significant impact on aerodromes, air traffic control, and other aviation-related infrastructure. Despite these challenges, we were able to play a crucial role in response and recovery, swiftly returning aviation to a functioning state.

Given the critical nature of this aviation-related infrastructure to the economy and society, it is important that we are well prepared for future events. The ability for frontline regulators to be timely and respond easily to such events ensures minimum disruptions to the aviation system. To be successful, it is important that front-line regulators have sufficient redundancy to undertake this work.

We protect our key assets through effective cyber-security controls

With continued advances in technology and the growing levels of complexity in aviation systems, the safety, security, and resilience of the global aviation system is becoming increasingly reliant on effective cyber-security controls. The need for effective cyber-security controls - encompassing information security, physical security, and personnel security - is common across a wide range of sectors and is by no means unique to aviation.

Both ICAO and the New Zealand Government have mandatory requirements and expectations for the Authority and aviation organisations to mitigate cyber-security risks. We are engaging with the Ministry and the security community on options for appropriate measures that could be implemented by aviation organisations in the current regulatory environment. Voluntary controls across the sector are likely to act as an interim measure until central government initiatives for critical infrastructure protection are progressed into a regulatory regime.

We keep abreast of international response and resilience activity

While much of our focus is on domestic threat and risks, the Authority also contributes to many international fora. We are part of the "Safer Skies" initiative, created by Canada, which provides a cooperative formal international platform to consolidate discussions on conflict zones in relation to civil aviation. This prevents the accidental or deliberate downing of commercial aircraft. The challenge now is for the Authority to maintain a current and sophisticated understanding of a constantly evolving international and domestic aviation environment, in a broader global context of uncertainty. It is important for the Authority to build strong relationships, share timely information appropriately and be prepared to support and respond to events.

We respond in a flexible manner to emerging threats and risks

Following the 15 March 2019 Christchurch terror attacks, the Authority responded rapidly to ensure the safety and security of the travelling public. The Director instructed AvSec to undertake security screening for aircraft departing Christchurch airport with more than 30 passenger seats. This was a prudent risk management response to New Zealand's heightened national terrorism threat level and to keep the travelling public safe and secure. This new level of screening was implemented within 7.5 hours.

Civil aviation has long been a high priority target for terrorists globally. A successful attack against civil aviation can inflict mass casualties, cause widespread economic and social disruption, generate significant public anxiety, and act as a platform to highlight the attacker's message.

The hardening of global civil aviation to harmful acts has seen threat actors continue to develop novel and innovative methods to circumvent security controls to conduct an attack on civil aviation. The Authority is continuing to evolve its national security risk assessment and management approach to gain assurance that its security regulatory system is well-positioned to counter security risks in the New Zealand context.

Being responsible stewards of our regulatory system

The Authority plays a critical role as steward of the aviation regulatory system. We progress quality policy and regulatory thinking to ensure the foundations are in place to design, deliver and implement effective aviation policy and continually improve our regulatory system.

Our regulatory stewardship role is becoming increasingly important as the aviation sector faces significant changes from new and emerging technologies and international moves towards decarbonisation. New technologies, including alternative aircraft fuels such as Sustainable Aviation Fuels (SAFs), create new safety and security risks, and regulators worldwide are struggling to keep pace with change.

In this environment, modern regulatory approaches are needed to maintain the high level of safety that the public expects, while minimising regulatory burden so the industry can thrive. Regulatory stewardship aims to ensure that all the different parts of a regulatory system work well together to achieve its goals, and keep the system fit for purpose over the long term.

To achieve this, we ensure that potential issues with our regulatory system are thoroughly assessed, and we deliver high-quality regulatory solutions.

Keeping our Civil Aviation Rules up to date

The rules establish the minimum regulatory safety standards that participants must demonstrate to enter and operate within the New Zealand civil aviation system. The rules are divided into parts and each part contains a series of individual rules which relate to a particular aviation activity. The rules belong to the Minister of Transport.

The Act empowers the Minister of Transport to make the rules. We provide the policy and legal drafting for the development and amendment of the rules, under contract to the Ministry.

Some rules are overly prescriptive and have become out of date, and others are structured in a way that is not well aligned with modern regulatory practices. Aside from creating both aviation safety and legal risks, this can create an increased regulatory burden on the aviation sector and hinder innovation. Rapid changes in technology across the sector require a flexible and responsive regulator, and good regulatory stewardship is critical to achieving this.

We are working to find the right balance between prescriptive and performance-based rules. While performance-based rules can provide a high degree of flexibility for participants, they can also create uncertainty and implementation challenges, so are not appropriate in all situations.

Where appropriate, we use a range of regulatory tools, such as education programmes, CAA Notices and Advisory Circulars, to enable certain technical or administrative requirements to be updated more frequently by the Director. These tools support us to be responsive and flexible in defining technical standards and acceptable means of compliance with rules. CAA recognises the need for rulemaking to become similarly responsive and flexible, thereby ensuring a more effective, timely delivery of regulation.

We also have processes in place to enable people (Authority staff, the sector and the public) to raise issues about the rules and the wider regulatory system.

We assess all these issues and identify the most appropriate regulatory intervention to use in each situation. This may include developing guidance material, initiating communications activities, or, where necessary, a rule change. We also assess changes made to ICAO Standards and Recommended Practices to ensure that New Zealand rules remain aligned, as required by the Chicago Convention. These two processes are the primary mechanisms we use to identify where rules require reviewing and updating.

However, funding to support rules drafting has remained stagnant for several years and is a constraint on our ability to deliver more rule projects. In addition, the downstream capacity for enacting rule changes is also limited by the capacity of the Authority's Rule Drafting capacity (1 FTE) and of the Ministry's rules programme.

There are currently over 60 open and pending issue assessments in the workplan and around 25 of those would be considered medium or high priority. Prioritisation processes ensure that risks are managed as effectively as possible within current resourcing.

Key Rule projects that are currently being progressed are outlined in Appendix 1.

Civil Aviation Act 2023

From 5 April 2025, the Authority will operate under new primary enabling legislation, the Civil Aviation Act 2023.

It repeals and replaces both the Civil Aviation Act 1990 and the Airport Authorities Act 1966 with a single modern statute that provides fit-for-purpose legislation for safety, security, and economic regulation of civil aviation now and well into the future.

The new Act touches almost all aspects of the Authority and requires a comprehensive implementation programme to make sure that existing and new statutory powers and functions are authorised and effectively delivered. This work is happening in a context of time and resourcing constraints and uncertain funding that will create pressure on business-as-usual activity. It will particularly impact subject matter expertise and operational practice and guidance support for frontline staff and the sector.

Authority implementation work includes:

- Operationalising amendments that account for new and emerging technologies and the responsibilities a person has while operating these, as well as providing new intervention powers for constables and specially authorised people to respond to serious misuse of aircraft that have no person on board. These amendments provide a mechanism for the Authority to support the integration of emerging technologies and provide a durable regulatory regime into the future.
- Working with the Ministry to remake all existing Civil Aviation rules to reflect the new Act. While the Act allows for streamlined certification of these rules, the work still requires careful project management to deliver the rules and allow sufficient time for implementation before the Act comes into force.
- Developing and implementing new Aviation rules to better manage the risk of impairment from drugs or alcohol by requiring operators in the commercial aviation sector to create and implement Drug and Alcohol Management Plans, including provision for random testing.
- Increasing capacity and developing processes to support and respond to a new independent panel for the review of certain regulatory decisions made by the Director of Civil Aviation. This provides participants with a lower cost option to challenge decisions and will likely result in an increased workload preparing case information for the reviewer.

- Workforce training to update inspectors, Aviation Security Service officers, and other staff on key changes impacting the way they work.
- Modernising enforcement and investigation powers: Including clarifying CAA inspectors' powers and aligning them with the powers of inspectors under the Health and Safety at Work Act 2015. This includes introducing new enforcement tools such as enforceable undertakings as an alternative to prosecution.
- Strengthening aviation security by clarifying regulatory powers, protections, and tools at security designated aerodromes, and expanding the aviation security regime to enable short-term additional security measures in temporary "landside security areas".
- Improving assurance and oversight of the Aviation Security Service by removing the inherent conflict of it operating under an aviation document issued by the Director when it is a business group of the Authority.
- Improving the quality and types of safety information reported to the Authority by strengthening incident and accident reporting, including providing certain protections from enforcement action for people who self-report incidents.
- Updating operational processes, collateral, and guidance so that regulatory practice and decision making is aligned with the new Act.
- Making and remaking delegations to CAA staff and others that reflect new statutory powers and requirements.
- Sector engagement and education around new requirements, processes, and other associated matters.

The implementation programme is limited to delivering statutory requirements and work that is necessary to transition to the new regime.

The Ministry and CAA are working closely to implement the Act, with the programme overseen by an interagency Steering Group of senior officials. The Authority has established a core programme team that is currently engaged in detailed workstream scoping to define the required work and likely resourcing needs. This work will be completed in the second quarter of 2023/24.

Designing the regulatory system to support effective regulation

In recent years, the Authority's regulatory approach has been undergoing a shift from audits and inspections focused on compliance and individual cases, to a mix of performance and risk-based approaches to regulation, sophisticated risk management, and other regulatory tools. This is work in progress.

Effective and efficient regulation of the aviation system relies on the Authority understanding the operating environment, the risks the Authority regulates, system risks, harm, the nature of regulated parties and changes in the regulatory system. With that understanding, the Authority can focus resources to the areas of most risks, then identify and mitigate risks before they result in harm or catastrophic harm.

- Risk-based regulation means that when risk is assessed, consideration is given to factors such as attitudes and behaviours, skills, business systems and resources. The Authority uses an intelligence-led approach towards risk-based regulation. This means assessment of risk is based on information gathered from audits, investigations, and incident reporting. We act according to the data we receive and hold (intelligence-led), and according to the level of risk assessed for a sector, organisation, person or aircraft (risk-based). This approach allows us to utilise data and information to inform and target our interventions.
- Performance-based regulation focuses on outcomes rather than applying prescriptive standards. It establishes performance objectives, without specifically detailing the means of compliance required to achieve the objectives. This provides the sector and the Authority with flexibility to adapt to meet the challenges of a rapidly changing sector, new and emerging technologies, and a changing operating environment. Performance and risk-based regulation enables us to target specific risks in the aviation system more efficiently. An outcome of targeted intervention is that the number of interventions may decline. For example, more time might be spent monitoring and inspecting those operations that present as high risk, rather than monitoring and inspecting all operations to determine their compliance with the rules. By being more targeted to those operations that pose unacceptable safety risks, we are better able to influence behaviours in the aviation sector.

Building our regulatory and aviation security intelligence functions

In the 2023/2024 financial year, the Authority stood up a regulatory intelligence function and consolidated its information, research, and data capability. Our intelligence maturity remains low but is starting to progress and be recognised as a key enabler of our regulatory approach.

A parallel function within the Authority is aviation security intelligence. The Authority is well-connected with the broader intelligence and security community and other agencies regulating harm. We receive relevant information from multiple sources, including our own frontline Aviation Security Officers and from standard audits and monitoring. However, capacity in the aviation security intelligence space is very low and not commensurate with the security risks being regulated.

The Authority will build upon this baseline to achieve a robust intelligence-led, risk-based approach to regulation, and meet its statutory reporting requirements.

Concluding the New Southern Sky programme

The New Southern Sky (NSS) is a programme to modernise New Zealand's airspace and air navigation systems through the implementation of the Cabinet- directed National Airspace and Air Navigation Plan. The aim of NSS is to deliver safety, social, economic, and environmental benefits through a coordinated and collaborative approach across the aviation sector.

NSS has been led by the Authority in partnership with MoT and the Airways Corporation (New Zealand's only air navigation service provider) since 2014, and the programme will formally close at the end of 2023. Over 50 projects and tasks have delivered major regulatory and infrastructure changes, accruing safety, efficiency and environmental benefits for individual operators and the wider aviation system. Most changes are now embedded as businesses as usual, and the remainder (consisting of a small number of minor rule changes) have been incorporated into the Authority's regulatory work programme. An independent NSS programme benefits analysis is planned for the end of 2023 at the conclusion of the programme.

Future-focussed regulatory activities

Emerging technologies and innovative solutions to contemporary issues bring additional complexity into the aviation and regulatory systems. They test and challenge traditional aviation models and ways of thinking. Our regulatory stewardship role requires us to ensure the systems remain fit for purpose as we facilitate and authorise new approaches.

Expanding the emerging aviation technologies programme

The spectrum of emerging aviation technologies is varied and extends beyond uncrewed aircraft (drones) and aerospace activities. It includes:

- low emission or zero emission propulsion systems
- sustainable fuels
- new systems for traffic management
- emerging weather forecasting demands and solutions
- cyber and physical security
- radically new training requirements
- system-wide infrastructure
- digitally driven ecosystems and,
- novel flying platforms (currently 600 designs in play).

Our approach

Regulating emerging aviation technologies has been, and continues to be, a challenge for the Authority. Sector demands and advancements in technology are moving much faster than the Authority's resourcing model and rules development processes can enable a response.

Within these constraints, our approach is based on an Emerging Technologies Programme (ETP) that acts as a bridge between the CAA and our emerging technologies aerospace and aviation stakeholders. The ETP provides the most effective ongoing regulatory interface possible, to enable the safe and effective integration of emerging technologies into the civil aviation system. It also serves to ensure that the Authority is alert and responsive to rapidly evolving technological advances. Such focus allows the Authority to maintain the regulatory framework required to support sustainable aviation and to develop innovative approaches, while managing the risk.

We have set up a foundational Emerging Technologies Unit within an Emerging Technologies Programme structure to coordinate this effort.

This unit has begun to:

- provide guidance to the sector and internally, through better application systems, processes, and guidelines, to support stakeholders' full understanding of rule requirements and certification pathways
- proactively engage with stakeholders, and work collaboratively to give effect to intelligence- led, risk-based regulation of emerging technologies, and manage the expectations of all parties (innovators and regulators alike)
- facilitate and lead the CAA's domestic and international engagement on emerging technology information sharing and expertise exchange. Where practical and appropriate, align with internationally accepted practices that support the safe integration of emerging aviation technology
- identify opportunities for process and other changes through whatever available means that will increase the effectiveness of emerging technologies regulatory engagement and output.

Cross-agency work

To help understand emerging aviation technologies that may enter the New Zealand aviation system in the next decade and beyond, the Authority has created an Emerging Aviation Technologies Forum, in collaboration with industry, and supported by the Ministry of Transport and New Zealand Defence Force. The Forum met for the first time in April 2023 and has been wholeheartedly embraced by a wide spectrum of stakeholders, with the necessary skills, knowledge, and experience to contribute to building a picture of aviation system technical developments over the next ten years and beyond.

Regulatory updates

The Ministry of Transport-led work to assess the future regulatory settings for drones, includes potential rule changes and improving education and safety promotion.

The policy objectives of this work are to maintain appropriate standards of safety and security; enable drone innovation and development; lay the early groundwork for future drone integration; and to foster social licence, including managing public concerns about drones.

There are also future-focused regulatory development activities underway within the Authority's work programme, including proposals to modernise Civil Aviation Rules to enable aircraft with alternative propulsion systems, such as electric aircraft. It is likely that additional rule modernisation work will be needed to enable other advanced and emerging aviation technologies.

Testing and trialing

MBIE's Airspace Integration Trials-led Programme (AITP) aims to facilitate the safe testing, development, and market validation of advanced drones, and accelerate their integration into New Zealand's aviation system by leveraging the potential for innovation under the Rules. AITP partners will test and demonstrate unmanned aircraft for a range of purposes including passenger transport, cargo delivery, agricultural services, and risk management and monitoring services.

This work is overseen by the cross-agency Unmanned Aircraft (UA) Leadership Group with senior representatives from the Authority, the Ministry of Transport, MBIE and Airways. The UA Integration Leadership Group provides strategic governance, guidance, and oversight of the work programme to achieve the safe integration of drones into New Zealand's airspace.

Aerospace Strategy

The Authority, alongside the Ministry of Transport, is supporting the implementation of the MBIE-developed Aerospace Strategy, which was launched in July 2023. The Aerospace Strategy is intended to drive the emerging aerospace sector towards an ambitious 2030 vision, identify needs and opportunities in the sector for economic development and innovation, and present significant growth opportunities from an economic perspective.

Risks

Although the interconnected work streams with MBIE has involved MBIE reallocating some funds to resource a small number of positions, the Authority overall is not well resourced to address the demands of emerging aviation technologies, which are increasing in both volume and complexity.

We are in the process of trying to address these resourcing challenges and are in discussions with both the Ministry of Transport and MBIE. However, if the Authority is not adequately resourced in both capacity (minimum number of staff required to address growing demand) and capability (sourcing of specialist and niche expertise to support the regulation of novel aviation technology), several risks may realise:

- lost opportunities for New Zealand, including deterioration in sector growth and failure to realise strategic aims
- poor regulatory decision-making (which could result in regulatory failure or certification backlogs)
- lack of alignment with the international system, resulting in a negative impact on New Zealand's reputation.

Contributing to a lower emissions transport system

Being responsive to new 'greener' technology

A key outcome for transport is to become increasingly environmentally sustainable. Key to achieving this outcome is transitioning to net zero carbon emissions, and maintaining biodiversity, water quality and – importantly for aviation – air quality. Reducing the impact of aviation emissions on the environment is now at the forefront of many aircraft designers and new technologies are constantly challenging the status quo.

While the Ministry of Transport takes the lead on most aviation environmental matters, the Authority can play a role to support environmental outcomes. As a result, we are adapting our ways of working to respond to the challenges associated with climate change. To meet this global challenge, New Zealand is a signatory to ICAO's long-term aspirational goal (LTAG) for international aviation of net-zero carbon emissions by 2050. This historic agreement calls on each State to commit to emissions reduction in a socially, economically, and environmentally sustainable manner and in accordance with its national circumstances. Enabling the use of new technologies is an essential part of New Zealand being able to meaningfully contribute to achieving this goal.

The use of electric aircraft will increasingly become a feature of our system response. To ensure that we can respond proactively to this new and greener technology, our regulatory system will need updating. For example, our maintenance and training rules will likely need amending to appropriately address the risk around electric engines. The Authority is currently working to modernise our regulatory framework so that it does not present any unnecessary barriers to the uptake of new and emerging 'green' technologies.

Air New Zealand has indicated its intent to conduct commercial demonstrator flights of zero emission aircraft in New Zealand from 2026. A key item of work for the Emerging Technologies Unit is to provide an interface for CAA regulatory teams to work with Air New Zealand's Net Zero Project Team as they develop regulatory pathways for zero emission aircraft in New Zealand. This role is vitally important as it will provide a structured, programme-oriented approach to developing a regulatory system that supports New Zealand's transition to a sustainable aviation sector. Further, it has a longer-term goal of preparing for Air New Zealand's partial domestic fleet replacement with zero emission aircraft in the 2030s.

Lower emissions: leading by example

The Authority is committed to reducing our own emissions and is continually introducing sustainable practices to support the Carbon Neutral Government Programme. We commenced work in 2023 to identify, measure, and create a carbon emissions reduction plan to achieve net zero by 2050, as New Zealand shifts to a low-emissions economy.

We have started the transition of our fleet to electric vehicles where operationally acceptable. We are implementing sustainability activities in procurement, business operations, and policy documents. We are working towards embedding sustainability into the workplace culture and are developing a community by creating and launching a crown agency networking group. We also expect to achieve Toitū certification by early 2024.

Meeting our emissions reduction targets will take innovation, investment, and commitment. The Authority is now making a meaningful and demonstrable change in how we operate on a day-to-day basis to lower our emissions.

Environmental benefits of New Southern Sky

As part of the NSS programme, various initiatives have been implemented to help offset CO2 emissions in the aviation space. This includes the introduction of Performance Based Navigation (PBN) into the New Zealand aviation system. In New Zealand, most routes between cities are already relatively direct; however, the implementation of PBN provides additional benefits by designing shorter and more efficient approaches to landing. These shorter approaches can reduce flight time, save direct operating costs for aircraft, reduce fuel consumption and costs, reduce CO2 emissions, and save passenger time.

Since the implementation and trials of key programmes and initiatives, NSS has already seen various environmental benefits in New Zealand, including:

- avoiding CO2 emissions by approximately 12.3M kg per annum through various initiatives from NSS
- avoiding approximately 2.3M kg of additional fuel burn per annum and 7.5M kg of CO2 emissions through Airport Collaborative Decision-Making implementation
- avoiding approximately 136,000 kg of additional fuel burn through the introduction of PBN (based upon a trial at Christchurch and Wellington airports)
- avoiding approximately 414,000 kg of CO2 emissions through the introduction of PBN (based upon a trial at Christchurch and Wellington airports).

This will also contribute to the government's aspirations outlined in the Emissions Reduction Plan.

Creating and maintaining a professional and respectful workplace

People are at the heart of everything we do and our workforce connects us with the aviation sector around New Zealand. To continue to attract and retain talent, we are focused on creating a safe, respectful, and inclusive workplace. This in turn allows people to bring their best to their work to ensure our skies are safe and secure.

Over the last few years, the Authority has focused on creating a positive and collaborative work environment, while also building engagement through culture, capability, leadership, and diversity. As a modern regulator, we are continuously looking at ways to attract great people to work for the Authority. Our highly skilled and professional workforce is a critical factor in allowing the Authority to deliver on its safety and security objectives. For details of our current organisational structure and staffing numbers, see Appendix 2.

Continuous professional growth ensures we have the technical expertise to meet our core responsibilities as well as the leadership required to support our regulatory role. The upcoming twelve months will see a stronger focus on building the capability and capacity of our people to undertake their roles.

What we have recently achieved

Over the past twelve months, we have:

- Implemented a new remuneration framework in January 2023, completing our first remuneration round using the new framework in July 2023. During this process, we implemented the Public Service Pay Agreement (PSPA) and aligned our remuneration outcomes across the three collective agreements and wider Public Service outcomes. This created a stable industrial relations environment with our three unions (E tū, Nupe and PSA) through to mid-2025 when our three Collective Employment Agreements will expire.
- Developed and started to implement our Kia Toipoto 2023 – 2025 action plan to address Māori, Pacific and ethnic pay gaps.
- Started a more deliberate approach to workforce planning in alignment with the Authority's Business Planning process to make sure we are looking ahead to the capability needed for the future, with a core focus on the capability needed to perform our core regulatory functions.
- Focused on leadership, including agreement of leadership expectations which provide clarity to our leaders on what leadership means at the Authority, and which will form the basis for new leadership development initiatives. We continue to run core management and frontline leadership skills programmes.
- Established a Senior Managers Group (SMG) consisting of senior people managers at the Authority. This is part of a wider Leadership and Management Committee structure which drives the management and leadership of the organisation and provides better links and information flows between strategy and operations. The SMG takes collective ownership across the Authority to look for improvements and lead changes in five key focus areas: safety, security, intelligence, investment, and people. A new senior leadership programme to build capability in this group is underway.
- Implemented "activity-based working" at our new temporary Wellington head office building. This will prepare us to become a more modern organisation that supports flexibility, collaboration, and wellbeing when we return to our permanent home, Asteron, in early 2024.
- Progressed multiple initiatives to deliver the Authority's Health, Safety and Wellbeing (HSW) strategy, including active management of HSW risks, and the rollout of Wellbeing Workshops for all staff and all leaders to promote and support wellbeing in our workplace. This workshop is now embedded into our induction programme for new frontline officers.
- Stabilised our People Operations function, re-establishing the recruitment team disestablished during COVID-19 and putting in place an HR systems function. Focus is now on building these services and improving reporting to support the Authority managing its workforce.
- Continued to embed our organisational values into our core people processes such as induction, performance management, recruitment, and leadership development. We are looking at how we can support people to embed the values as part of their everyday work.
- Continued to promote diversity and inclusion through active support of Employee Led Networks and events such as International Women's Day, Pride, Matariki, Te Wiki o te Reo Māori and our own internal Celebration of Aviation Day.

Building strong, constructive external relationships

As New Zealand's primary civil aviation safety and security regulator, the Authority takes an active role in regulatory stewardship using stakeholder engagement to lead and influence so that participants, Government, and the wider aviation sector can make informed aviation security and safety decisions.

Our engagement stretches across the organisations and individuals who help us maintain the security and safety of the aviation system i.e., international groups, government agencies, sector groups and system participants. This work is particularly important at a time when the aviation sector requires additional support from the Authority to address changes in its risk profile, and operations, since the pandemic.

International groups

Effective engagement with the world means New Zealand and the Authority make a credible contribution to international discussions and initiatives. Ongoing membership of, and engagement with, international bodies allow the Authority to remain at the forefront of industry developments and to influence global debates on safety and security issues.

Key international groups for engagement include the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA), the European Aviation Safety Agency (EASA), the Federal Aviation Administration (FAA), the Australian Civil Aviation Safety Authority (CASA), and the Pacific Aviation Safety Office (PASO). The Authority also maintains a strong working relationship with the United States Transportation Security Administration (TSA). This cooperation ensures information-sharing on best practices and means to address common issues.

Government agencies

We work across government to contribute to the safety and security of all New Zealanders through collaboration on projects and participation in government groups. We work closely with our monitoring agency the Ministry of Transport, as well as other central government agencies, including MBIE, MFAT, the Treasury, DPMC and Police. Transport Crown entities (e.g., Maritime New Zealand, Waka Kotahi, Transport Accident Investigation Commission) and New Zealand's border agencies also contribute to discussions around wider system, security, and regulatory policy settings.

The Ministry of Transport is a key stakeholder in the development of aviation safety and security policy. We collaborate through:

- Joint projects such as the New Southern Sky programme.
- Work to build the resilience of our aviation system and improve the regulatory framework, such as through the civil aviation rules and the Civil Aviation Act 2023.
- Our participation in the Transport Response Team (TRT) which responds to transport sector emergencies.
- Our membership on Sustainable Aviation Aotearoa – a public-private leadership body focused on decarbonising aviation.

The Authority is a member of several cross-sector government groups including the New Zealand Customs-led Border Executive Board (BEB), NZSIS-led Combined Threat Assessment Group (CTAG), and the Ministry of Transport-led Transport Sector Leaders group. We also contribute to all-of-government security responses as needed such as providing behavioural detection expertise, and explosive detection dog teams.

Sector groups

Examples of Authority-led sector groups include the Aviation Community Advisory Group (ACAG); the Aviation Security Stewardship Group (SSG) and the Aviation Community Medical Liaison Group (ACMLG). These bodies engage with the Authority on various issues, advocate for their constituents, and provide valuable advice to the Authority on emerging issues and risks.

System participants

Daily, we work with regulated parties to assess licensing and certification applications; provide safety and technical advice; enforce aviation rules and laws; engage with our international partners, regulated parties, and government agencies; perform investigations; and monitor flight activity.

We also engage regulated parties through outreach and education activities, to ensure they are provided with the information (and access) required to enable a safe and secure aviation system.

Part Three

Aviation Sector Facts and Figures

Aviation sector profile

Aviation in New Zealand is characterised by the high number and wide variety of operations considering the size of the country and its population. We have one of the highest global rates of aircraft and pilot licences per capita. The aviation sector is comprised of a variety of sub-sectors, each with unique characteristics and challenges, personnel, operators, and various supporting infrastructure.

New Zealand's active aviation document holders (at 1 July 2022 and 1 July 2023)

Organisations	2023	2022
Australian AOC Operating with ANZA Privileges	6	3
Part 102 Unmanned Aircraft Operator Certificate	155	141
Part 109 Regulated Air Cargo Agent	61	63
Part 115 Adventure Aviation Operator	20	20
Part 119 Part 121 Air Operations Large Aeroplanes *	4	3
Part 119 Part 125 Air Operations Medium Aeroplanes *	16	16
Part 119 Part 135 Air Operations Helicopters and Small Aeroplanes *	137	142
Part 108 Air Operator Security Programme *	51	48
Part 129 Foreign Air Operator	62	59
Part 137 Agricultural Aircraft Operator	109	108
Part 139 Aerodrome Certification	28	27
Part 140 Aviation Security Organisation	1	1
Part 141 Training Organisation	41	43
Part 145 Maintenance Organisation	50	50
Part 146 Design Organisation	11	12
Part 147 Maintenance Training Organisation	4	4
Part 148 Manufacturing Organisation	11	12
Part 149 Recreation Organisation	6	7
Part 171 Telecommunication Service Organisation	1	1
Total	**774**	**760**

* Not reported last year

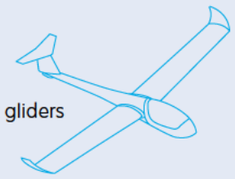
Organisations	2023	2022
Part 172 Air Traffic Service Organisation	1	1
Part 173 Instrument Flight Procedure	2	2
Part 174 Meteorological Service Organisation	3	3
Part 175 Information Service Organisation	2	2
Part 19F Supply Organisation	24	25
Part 92 Dangerous Goods Packaging	40	40
Synthetic Training Device (Airlines)	8	8
Synthetic Training Device (General Aviation)	36	43
Total	**890**	**884**

Individuals	2023	2022
Part 66 Aircraft Maintenance Engineer	3,114	3,064
Part 66 Certificate of Inspection Authorisation	219	235
Part 66 Certificate of Maintenance Approval	411	320
Pilot licences	30,061[1]	29,593
Air Traffic and Flight Service licences	1,290[2]	1,244
Total	**35,095**	**34,456**

1 This includes 3751 with active class 1 medical certificates and 4064 with active class 2 medical certificates, including ATPL Aeroplane licence holders with 1244 active class 1 medical certificates and 978 with active class 2 medical certificates.

2 This includes 657 with active class 3 medical certificates.

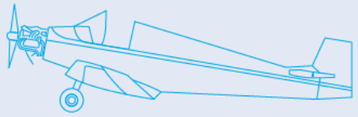
Types of Regulated Aircraft in New Zealand

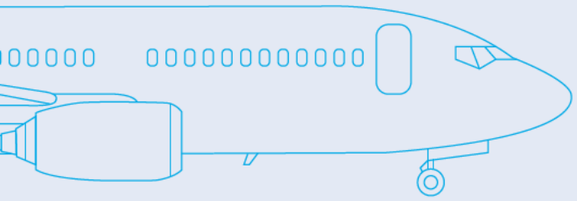


3
amateur-built gliders
2022 – 3

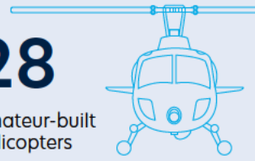
281
gliders
2022 – 289

332 amateur-built aeroplanes
2022 – 323





2,022 aeroplanes
2022 – 2,028



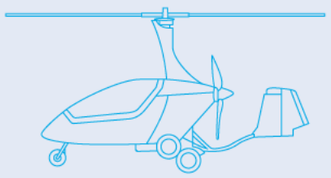
28
amateur-built helicopters
2022 – 27

902
helicopters
2022 – 895

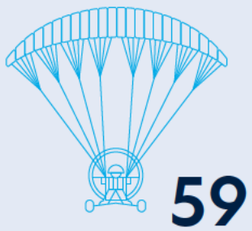
65
balloons 2022 – 61

217 microlight class 1
2022 – 216

997 microlight class 2
2022 – 986



80 gyroplanes
2022 – 75



59
power gliders
2022 – 56

18
hang gliders
2022 – 18

283
parachutes
2022 – 281

132
paragliders
2022 – 119

Total **5,419**

AvSec Figures 2022/2023

11.8 million
passengers passed through screening points
2021/22 – 5.4 million

5.0 million
international passengers
2021/22 – 0.8 million

6.8 million
domestic passengers
2021/22 – 3.9 million

88%
of passengers processed within 10 minutes
of entering security screening queue
2021/22 – 95%

26,480,867
bags scanned
2021/22 – 16,613,230

31
Explosive Detector Dogs operated
2021/22 – 31

21,444
Airport Identity Cards issued
2021/22 – 13,490

407,368
prohibited and dangerous items removed from the travelling public
2021/22 – 169,432

52,961,734
scanned images analysed
2021/22 – 33,226,460

Appendices

The following appendices provide further information on the Authority and its operating environment:

Appendix 1

Rule developments, policy projects and ministerial engagement

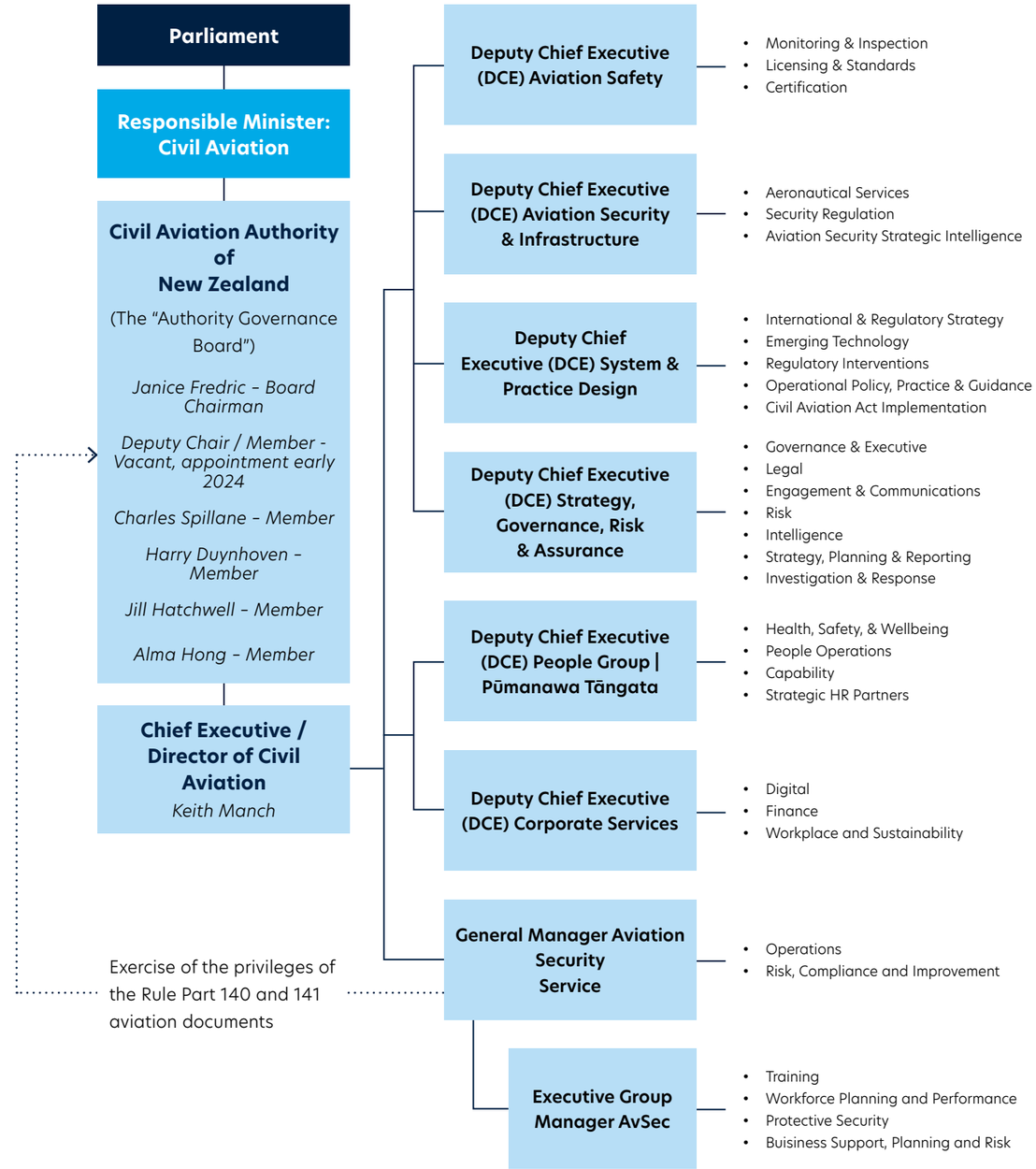
Our Rule development and key policy projects are driven by strategic priorities and transport sector goals. The following are the upcoming pieces of work in which you will be engaged over the next few months to two years:

Rule Project	Context	Ministerial Engagement
Assorted Issues	The Assorted Issues policy project consists of issues that exceed the criteria of an omnibus rule amendment (very minor, typo-level changes), yet do not warrant an individual stand-alone rule change process. Individually, these changes are not likely to meet cost-benefit or significance thresholds to be prioritised for rule development. There are eleven proposals being included in the suite of Assorted Issues: • Part 61 Night Vision Imaging Systems (NVIS) • Part 91 Aircraft call signs • Part 91 Performance-based Communication and Surveillance (PBCS) • Part 145 Maintenance Organisation Rating Requirements • Part 129 Foreign Aircraft Operations • Part 91 Helicopter hover entry/exit • Part 121 Flight Attendant ground instructors • Part 43 Duplicate Inspections • Definition of an introductory flight • Definition of a crew member • Definition of cost-sharing flights. **Current status:** Rule drafting is currently underway.	s 9(2)(f)(iv)
Runway Condition Reporting	This project proposes amendments to rule 139.103 that requires all aerodromes to provide real-time runway surface condition reporting. 26 affected aerodromes are currently covered by an exemption to the rule requirement which expired on 5th November 2020. The rule amendments will require aerodromes, where they meet specific applicability criteria, to provide real time runway surface condition reporting using standardised reporting methods. **Current status:** This project is complete; however, the rules do not become effective until 30 November 2023.	

Policy Project	Context	Ministerial Engagement
ICAO Alignment	Various amendments to New Zealand Civil Aviation Rules to align them with ICAO Standards and Recommended Practices (SARPs). **Current status:** The Regulatory Impact Assessment (RIA) is complete. Awaiting review from the Ministry of Transport.	s 9(2)(f)(iv)
Air Navigation Services Regulatory Framework	The purpose of this project is to review a range of rule parts relating to the provision of air navigation services and associated information, with the aim of putting in place a more modern and performance-based rules framework. As well as looking at Parts 171 (Aeronautical telecommunication Services – Operation and Certification), 172 (Air Traffic Service Organisations Certification) and 65 (Air traffic Services Personnel Licences and ratings), this project will also consider Part 174 (Aviation Meteorological Service Organisations Certification).	
Upset Prevention Recovery Training (UPRT)	Building on the initial issue assessment, this project aims to investigate the approach New Zealand should take regarding the implementation of upset prevention and recovery training (UPRT). UPRT is an ICAO requirement aimed at preventing "loss of control" accidents.	
Mapping of Part 91 Appendices	The purpose of this project is to identify how best to address an issue with existing civil aviation rules related to how technical standards for navigation and communication equipment are prescribed.	
Alternative propulsion systems	This project is a scan of all Civil Aviation Rules to identify rules that may need to be reviewed or created to support the introduction of alternative propulsion systems (electric aircraft, hydrogen, sustainable aviation fuels) into New Zealand's civil aviation system. This project is a scoping exercise to understand: • the size of the problem • the current regulatory impediments to the deployment of alternative propulsion technology • how rule changes may mitigate safety risks in a manner equivalent with current mitigations for traditional aviation fuel.	

Appendix 2

Organisational structure and staff numbers



Staff numbers

Regulatory function

In 2022/23, CAA had a regulatory staff establishment of 360.69 full time equivalent (FTE) positions. Many staff are technical experts responsible for the certification and monitoring of aviation sector participants and have generally come from an aviation background rather than the public sector. (CAA FTE include fixed term and permanent employees as well as employees on leave without pay or parental leave. It excludes contractor and casual employees).

Security service

In 2022/23, AvSec had a staff establishment of 1,336.6 FTE. Most are front-line service delivery staff, based in airports around the country, with a national office team based in Wellington. (AvSec employs casual or fixed-term Load Assistants for short term surge capacity at busy times or to fill shortfalls in Officer numbers. Numbers of Load Assistants vary month on month. Load Assistants are not part of AvSec's budget establishment and therefore not included in the establishment quoted above).

Appendix 3

Funding sources

The Authority has three primary sources of revenue:

- aviation participant fees and charges – for licensing and certification
- passenger levies and charges – for civil aviation regulatory functions and security screening
- funding from the Crown – for policy advice, rules and standards development and the administration of the Health and Safety at Work Act 2015 designation for the CAA.

As required by section 72B (3B) of the Civil Aviation Act 1990, the Authority maintains separate accounts for the performance of two of its operating functions. The separation of accounts is continued in the Civil Aviation Act 2023.

Revenue Percentage (Prospective 2022/23)

	2023/24 Budget		2022/23 Actuals (unaudited)		2021/22 Actuals		Pre-Covid	
	Fees, levies and charges	Crown contribution	Fees, levies and charges	Crown contribution	Fees, levies and charges	Crown contribution	Fees, levies and charges	Crown contribution
The Authority (CAA and Aviation Security Service combined)	71%	29%	73%	27%	37%	63%	97.2%	2.8%
The CAA (regulatory function)	75%	25%	83%	2%	57%	43%	89.2%	10.8%
The Aviation Security Service (AvSec)	69%	31%	73%	27%	29%	71%	99.9%	0.1%

Output Class	Funded through
1. Policy and Regulatory Strategy • International relations and ICAO obligations • Ministerial servicing • Policy advice • System level design and intervention • Rules and Standards Development • Pacific support	• Crown funding • Ministry of Transport contract revenue (rules development) and Ministry of Foreign Affairs and Trade (Pacific Security Fund activity) • Levies
2. Outreach	• Levies • Other revenue
3. Certification and Licensing	• Levies • Fees and charges • Other revenue
4. Surveillance and Investigation	• Crown funding • Levies • Fees and charges • Other revenue
5. Security Service Delivery • Screening activity • Audit performance; access control; and maritime security services	• Contracted services • Passenger security levies • Crown funding - Maritime • Other revenue

Appendix 4

Key contacts and Board member profiles

Chief Executive and Director of Civil Aviation

Keith Manch

s 9(2)(a)

Deputy Chief Executive Strategy, Governance, Risk and Assurance

Dean Winter

s 9(2)(a)

Board Chairman

Janice Fredric

s 9(2)(a)

Authority Board Members

Legislation provides for up to seven board members to be appointed. The Authority Board is currently made up of six independent non-executive members appointed by the Minister of Transport.

The Board has diverse capability and experience in governance across varied portfolios ranging from central and local government through to commercial operations.

Janice Fredric - Chairman

Janice was appointed as Chairman of the Board in December 2019.

Janice is an experienced Chair and professional director with 20 years governance experience. She has a broad portfolio of directorships with experience in commercial, Crown and not-for-profit sectors.

An experienced leader with strong commercial and financial acumen, Janice has governance experience as both a regulator and a regulated party. Janice has held senior executive positions in the finance and banking sectors and professional services both in New Zealand and internationally.

Jill Hatchwell

Jill is a professional director and is a Chartered Member of the Institute of Directors. Her executive career spans over 40 years culminating in the establishment of a successful financial and management consultancy partnership, working with a range of clients in both the central government and private sectors. Jill has accumulated experience across a number of industries including investment companies, aviation, education, property, professional sport, the bloodstock industry and the resources sector.

Jill currently serves on the boards of NZX-listed Chatham Rock Phosphate Ltd and SMW Group Ltd and represents the aviation industry on the board of ServiceIQ (the industry training organisation representing the service sectors in New Zealand). She is a member of the Audit and Risk subcommittees of all three entities.

Jill was appointed to the Board in July 2019.

Charles Spillane

Charles was appointed to the Board in December 2019.

He has been the Chief Executive at Dentons Kensington Swan since 2016 – one of New Zealand's leading national commercial law firms.

Charles was previously the General Manager Corporate Affairs and General Counsel at Auckland International Airport Limited. Charles began his law career after graduating from the University of Auckland in 1996 in arts and law.

Hon. Harry Duynhoven QSO

Hon. Harry Duynhoven QSO is an experienced independent consultant with a history of working in the public policy industry. Harry was a long-serving Member of Parliament and was the Minister of Transport Safety between 2005 and 2008. He was appointed to the Board in May 2019.

Harry was Mayor of the New Plymouth District Council from 2010 to 2013 and remains a councillor.

He is currently a member of the Air Quality Asia Board. Since 2014 he has run Duynhoven Solutions, a consultancy service in Energy, Transport, Aviation, Safety and Governance.

Alma Hong

Alma Hong joined the Authority Board in August 2022. She holds tertiary qualifications in Computer and Communications Engineering from the United Kingdom.

She is currently on the Quotable Value Ltd Board, two major programme boards for Government, the council for spatial technology industry and the sub-board of Diversity and Inclusion for NZTech. In 2019/2020 Alma was vice chair of the InternetNZ policy review panel.

Alma has undertaken consultancy work for major New Zealand organisations including the Electricity Authority and Beef and Lamb New Zealand. She has also held Chief Information Officer and senior executive management roles in media and broadcasting, emergency services, transport and local government.

CIVIL AVIATION AUTHORITY
OF NEW ZEALAND
Te Mana Rererangi Tūmatanui o Aotearoa