

New Zealand Space and Advanced Aviation Strategy 2024–2030





Ministry of Business, Innovation and Employment (MBIE) Hīkina Whakatutuki – Lifting to make successful

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Foreword from the Minister for Space

I am pleased to launch the refreshed New Zealand Space and Advanced Aviation Strategy to drive the growth of our space and advanced aviation sectors into the future.

New Zealand's involvement in space has grown significantly during the past ten years, expanding from a nation with no orbital launch capability to being third in the world for the number of annual launches to date in 2024.

The Government supports the development of New Zealand's space and advanced aviation sectors. I want these sectors to thrive, to lift prosperity and deliver further benefits for New Zealand. The most recent report on the space sector found it contributed \$1.69 billion to our national economy in 2018-19 and supported 12,000 jobs. And a 2019 Ministry of Transport study shows the use of drone technologies is forecast to benefit the economy by \$4.6-\$7.9 billion over 25 years. These sectors have continued to develop since these two reports, with the emergence of new firms and research activities.

I want New Zealand to be a globally competitive hub for space and advanced aviation research and development, testing, launch and data applications. The Government is building the world's best regulatory regimes for space and advanced aviation to take full advantage of our clear skies, low population density and isolation. In future New Zealand will be positioned as the location of choice for space and advanced aviation sectors.

Having a supportive regulatory regime is key and I am working with the Minister of Transport to make changes to ensure that by the end of 2025, New Zealand will have an aviation regulatory environment that supports innovation while maintaining safety and protecting our national interests, including national security and New Zealand's foreign policy interests.

This strategy will support the growth and development of New Zealand's space and advanced aviation sectors, contributing to enhanced productivity and a growing economy. I'm excited to see the direction the sector is heading in and look forward to New Zealand becoming an even greater hub of space and aviation activity.

Hon Judith Collins KC

Minister for Space

A strategy to support the growth of our space and advanced aviation sectors

Our mission is to double the size of New Zealand's space and advanced aviation sectors by 2030.

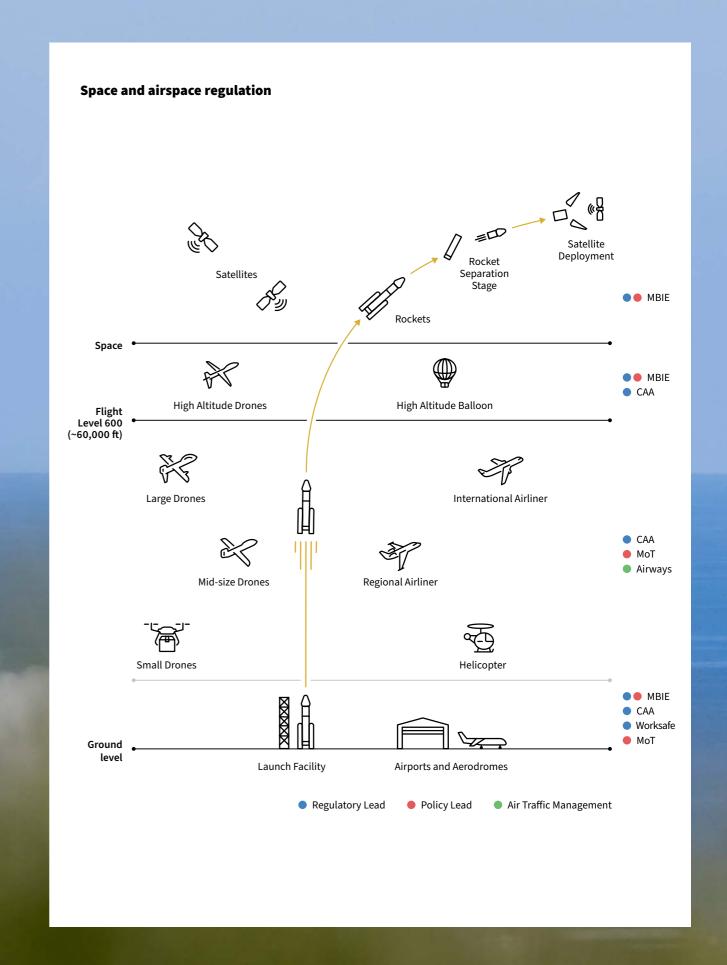
We want thriving space and advanced aviation sectors in New Zealand to help rebuild our economy. These sectors are already innovative and inspiring, employing a productive and highly skilled workforce to develop capabilities that improve our lives. We have an opportunity to take this even further.

By 2030, space and advanced aviation will be key contributors to New Zealand's economy. New Zealand's capabilities will have greater international recognition, and generate more export revenue, high quality employment, research and development activity, and foreign direct investment. This will enable New Zealand to better realise the opportunities that the space and advanced aviation sectors present to grow and diversify our economy.

This strategy sets out our plan for the space and advanced aviation sectors (referred to collectively as the aerospace sector), covering aircraft and spacecraft that operate at different altitudes, from drones that operate at low levels to rockets that reach Earth's orbit and beyond. These sectors include transportation, research and development, manufacturing, operations and application of data.

Aerospace technologies are essential to the day to day functioning of our country, enabling navigation and communication, security and defence, environmental monitoring, disaster response and recovery, weather forecasting, and natural resource management.

Space and advanced aviation are regulated under the Outer Space and High-altitude Activities Act and the Civil Aviation Act respectively. While traditional aviation is not within the scope of the Space and Advanced Aviation Strategy, the development and adoption of advanced aviation technologies supports the traditional aviation system.



New Zealand is open for business

Our unique geography makes New Zealand a great location for space and advanced aviation activities

New Zealand has multiple natural advantages which make it an ideal place to develop, test and operate space and advanced aviation technologies. Our uncrowded skies, coupled with our relatively low population density, means there is plenty of space for testing out innovative concepts in the air and on the ground. New Zealand is also a great location for Earth observation satellite calibration and validation and has a range of suitable sites for space and advanced aviation ground infrastructure.

We are committed to leading the world in space and advanced aviation regulation

The Minister for Space announced in September 2024 that by the end of 2025, New Zealand will have the world's best regime for advanced aviation. New Zealand already has a best-practice regulatory regime for space and high-altitude activities, designed to support sector growth while managing risks. We are committed to ensuring our space and advanced aviation regulatory regimes are nimble and responsive, keep pace with innovation, and reflect New Zealand's values. Combined with our geographic advantages, New Zealand will be well positioned to become a location of choice for aerospace activities.

We have a proven track record of space and aviation innovation

New Zealand is well-known for developing creative solutions to problems. We are home to a thriving innovation ecosystem that encourages world-leading research and development activity. Our future-focused policy and regulatory settings make New Zealand an attractive location to develop new space and aviation products and ideas. New Zealand companies are transforming our access to space, developing new transportation solutions and applying aerospace-enabled data in new ways to solve problems and improve our daily lives.

New Zealand is business friendly

New Zealand has long been recognised as a great place to do business, regularly appearing as one of the top 10 countries to do business in reports from organisations like the World Bank and the Economist Intelligence Unit. New Zealand has a business-friendly taxation system that supports capital investment. The Research and Development (R&D) Tax Incentive supports R&D expenditure in New Zealand by providing a 15 per cent tax credit on eligible R&D costs. We have close ties with global markets and free trade agreements with major trading partners.



The future

The Space and Advanced Aviation Strategy sets five objectives to support doubling of the size of the space and advanced aviation sectors by 2030. These objectives will help us to leverage opportunities and address barriers to growth, building on our existing strengths and supporting the development of new capabilities that will help to grow our economy and address challenges New Zealand is facing.



1. Develop our sovereign space capabilities with a national space mission

Satellites deliver a wide range of essential services that underpin daily life in New Zealand. Improving our capability to develop, access and use space technologies will deliver benefits for New Zealanders and demonstrate the capability of our space and advanced aviation sectors to the world.

Actions

- Establish a national mission through the development, manufacture, launch and operation of one or more sovereign satellites and application of the data collected to meet a government need, such as supporting our maritime domain awareness and broader space domain awareness.
- Develop education and public engagement initiatives to maximise the inspiration value of a national space mission.
- Ensure government is well positioned to use aerospace-enabled data through capability building and improve access to datasets to support the delivery of public services like disaster response and recovery.



2. Establish a world-leading regulatory environment for space and advanced aviation

Efficient and easy to navigate regulatory regimes for advanced aviation and space will position New Zealand as a world-leading location for development, testing, launch and flight operations.

Actions

- Develop a new Civil Aviation Rule for experimental or developmental aircraft and systems operations to allow rapid iteration and testing of advanced aviation vehicles and technologies.
- Explore the provision of external regulatory advice to support efficient regulatory decision making by the New Zealand Space Agency and the Civil Aviation Authority for space and advanced aviation activities respectively.
- Amend the Outer Space and High-altitude Activities Act to improve the effectiveness of space and high-altitude regulation, and future proof the regulatory regime to ensure it continues to safely and securely enable innovation and protect New Zealand's interests.



3. Unlock trade and investment

Domestic demand and investment alone will not be sufficient to support our space and advanced aviation sectors to double in size. Increasing international trade and investment in New Zealand companies will be critical for sector growth.

Actions

- Promote New Zealand's aerospace sector to the world through trade missions and participation in key international aerospace events including the International Astronautical Congress and the Space Symposium.
- Work closely with our international partners to promote cooperation and reduce barriers to trade including restrictive export controls and domestic sourcing requirements.



4. Build an aerospace-capable workforce

New Zealand's aerospace sector requires a talented and skilled workforce to expand to meet its potential. We will need to grow our domestic talent pool and compete to attract international talent.

Actions

- Establish the Prime Minister's Space Prizes to inspire the next generation of aerospace professionals.
- Continue the New Zealand Space Scholarship which supports internships for graduate students at prestigious international space research institutes.
- Ensure immigration settings, including for the Green List and Skilled Migrant Category are appropriately targeted to address skill gaps and prioritise skilled migrants.
- Implement education initiatives that will lift achievement and prepare students to pursue aerospace careers.



5. Accelerate aerospace innovation

For New Zealand's aerospace sector to attract customers, investors, and skilled workers we need to continue to produce innovative and novel products that meet global market demands.

Actions

- Partner internationally on advanced research with world-leading research institutes, including our current partnerships with NASA, the German Aerospace Center (DLR) and SmartSat CRC.
- Explore innovative ways for the government to apply aerospace technologies to address scientific, societal and national security challenges.



Progressing our broader space interests

Supporting the objectives to grow our space sector, the following principles will inform New Zealand's international space engagements and the development of future space policies.



Protecting and advancing New Zealand's national security interests

The space domain enables a deeper understanding of New Zealand's strategic environment, including improving the timeliness of information on security issues. The New Zealand government will continue to use space-based assets and capabilities to protect and advance New Zealand's national security interests, which includes New Zealand's economic wellbeing, the security of our Pacific partners, and a strong and effective international rules-based system. Currently we rely heavily on space assets owned by international partners for this use, however, we will explore developing sovereign space capabilities to enhance New Zealand's national security and to contribute to our international security partnerships.

Alongside developing our own space capabilities, we will expand operational space cooperation with our international defence and security partners to support New Zealand's national security and contribute effectively to collective security efforts. The potential for conflict in space creates additional risks to New Zealand's interests, including the potential for disruption to critical national infrastructure that needs to be understood and managed.



Regulating to ensure space activities are safe and secure

The key purpose of the Outer Space and High-altitude Activities Act 2017, which governs space regulation in New Zealand, is to facilitate the development of New Zealand's space industry and provide for its safe and secure operation. This includes preserving New Zealand's national security and national interests and adhering to our international obligations relating to space activities. The government will continue to facilitate an enabling environment for space technologies in New Zealand, to encourage their uptake and integration, alongside fit-for-purpose regulation.

Along with safety and ensuring we comply with our international obligations, national interest is an important part of the licensing and permitting process for space activities. New Zealand's broad interests are consistent and enduring. When assessing the proposed operation of payloads, broad consideration of national interest is required to assess and respond to changing domestic and international circumstances and ensure New Zealand's interests can be considered as applicable at the time. Payload permit applications, including those with national security applications, will continue to be assessed on a case-by-case basis.



Promoting the responsible uses of space internationally

New Zealand will continue to advocate for effective international rules, norms and standards in space. New Zealand is party to the main international space treaties which are reflected in our domestic laws and policies. Although these international agreements provide the legal framework for space activity, the global space context has evolved in the decades since the agreements were reached, including through the growing number of countries and commercial operators active in space, the development of new space technologies and the rapid increase in the amount of space activity. New Zealand supports ongoing efforts to advance international agreement on norms, rules and principles of responsible behaviour in space.



Promoting sustainable space and Earth environments

Space debris threatens the long-term usability of Earth orbit, posing risks to the delivery of satellite services that we rely upon in our daily lives. New Zealand aims to lead sustainable space access through our bestpractice regulatory regime and through creating innovative and flexible policies to enable space activity that will improve the safety and sustainability of Earth orbit, such as our active debris removal policy. Enabling this innovative activity from New Zealand also presents an economic opportunity. We also support international efforts to reduce space debris generation, protect the long-term sustainability of space and preserve cultural and scientific uses of the night sky.

Space technologies can also be used to support sustainability on Earth. Building on our partnership with the Environmental Defence Fund on MethaneSAT, a satellite mission to monitor and study global methane emissions, the government will continue to explore ways in which we can use space-enabled services and data to understand and mitigate environmental challenges New Zealand is facing.

Learn more

The New Zealand Space Agency is the front door for space activity in New Zealand

Visit the <u>New Zealand Space Agency website</u> for information on space policy, regulation and sector development.

You can contact the New Zealand Space Agency at nzspaceagency@mbie.govt.nz

The Civil Aviation Authority is New Zealand's specialist aviation safety and security regulator

Visit the Civil Aviation Authority website for information on regulations for advanced aviation and emerging technologies.

You can contact the Authority's Emerging Technologies Unit at EmergingTech@caa.govt.nz

For international investors and people interested in doing space and advanced aviation business in New Zealand

Visit <u>NZTE.govt.nz</u> – the website of New Zealand Trade and Enterprise, the New Zealand government's international business development agency. New Zealand Trade and Enterprise can:

- help you locate aerospace investment opportunities in New Zealand.
- help you locate New Zealand aerospace companies, products and services.
- provide you with information about doing business in New Zealand.

For people looking to start, manage or grow their space or advanced aviation business

Visit <u>business.govt.nz</u> for tools and advice from government and industry to support the success of your business.

