



MARKET RESEARCH SPACE INDUSTRY

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1. Executive Summary

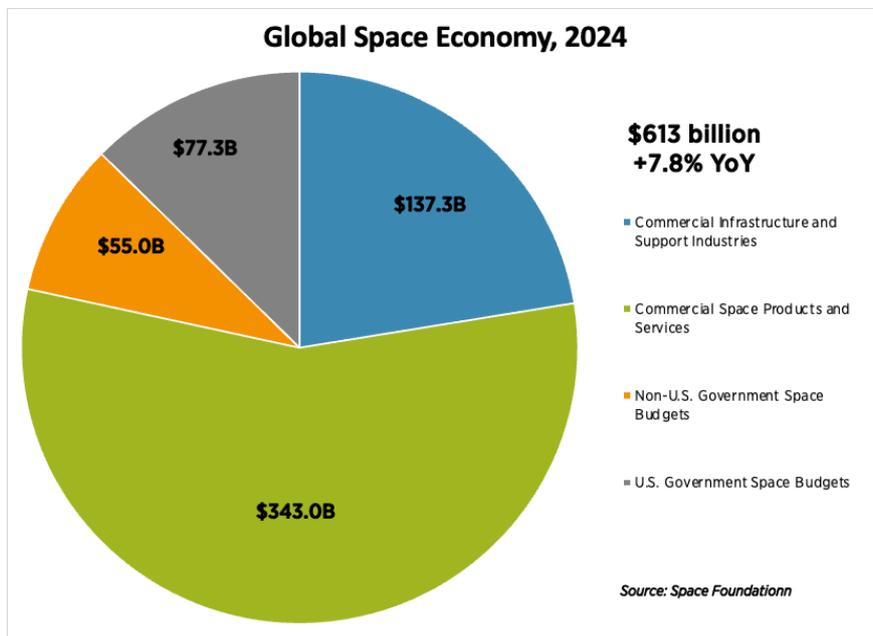
New Zealand Space Sector

The space industry is one of the fastest growing sectors in New Zealand, showing strong signals of sustained expansion, innovation, and commercial opportunity. In 2024, the sector contributed NZ\$2.68 billion to New Zealand's economy, supporting around 7,000 direct and 10,000 indirect full-time jobs¹. The industry has grown faster than the national economy, with revenue's up 50% in five years and a goal to double to \$5 billion by 2030¹.

Key drivers of this growth include:

- ◆ Innovations in satellite communications⁹.
- ◆ Increasing integration with advanced aviation³.
- ◆ Rising defence-space collaboration².
- ◆ Shifting geopolitics making NZ an attractive neutral base⁵.
- ◆ Significant commercial leadership with minimal reliance on government funding¹⁰.

These drivers ranging from innovation in satellite communications to stronger defence-space collaboration are elevating New Zealand's position in a global industry expected to exceed US \$1.8 trillion by 2035⁶. The country's regulatory agility, and growth of industry 4.0 technologies (AI, robotics, 3D printing) further reinforce its emergence as a competitive commercial player.



2. Market Trends

The New Zealand space economy is transitioning into a hybrid commercial-government model, characterised by a mix of start-up and well-established firms. These privately funded firms vary in size and serve both government and non-government customers. This contrasts sharply with overseas space sectors, which are predominantly government funded.

More recently there has been a considerable shift in the market toward defence-related applications, more sustainable space practices, the growth of new space economy exploration, and launching satellites, especially those that increase telecommunication services.

The sector is focusing on making its practices more sustainable to ensure the longevity of the industry through different methods. This involves shifting to alternative fuels such as hydrogen and electric powered spacecrafts with the intention of reducing the carbon emissions from using traditional rocket fuels on launches⁸. Additionally, there has been wider consideration of the pollution in the orbital environment. This issue arises from the presence of 50,000 trackable objects in orbit, of which only 10,000 are operational satellites⁹, making the remaining 40,000 trackable objects just orbiting debris. Missions have taken place to reduce the debris to make room for the planned increase of operational satellites in orbit.

The sector has also experienced a shift towards the new space economy, which is the rising commercialisation of private space companies which are investing in launches, satellites, and other space related activities without any government support. This shift can be seen globally as 78% of total growth in the industry was contributed by the commercial sector of the space industry¹⁰. While Government space spending only contributed for 22% of the sectors growth¹⁰.

Another development in the industry is that satellite telecommunication is becoming mainstream in the sector. Satellite broadband internet subscribers have been growing exponentially, increasing from 1,500 in 2020 to 37,000 by 2024³. This number is expected to rise, especially since the unprecedented number of satellites in orbit is estimated to increase from the 10,000 satellites that are in orbit today to 100,000 by 2032³.

3. Space and Defensive Sector

The biggest development is that the sector has the opportunity to work extensively with the New Zealand defence force (NZDF). The NZDF is looking to acquire more space assets to benefit the national defence and help prevent cyber-attacks². This motive to use space assets for defensive purposes has led New Zealand and Australia to join Operation Olympic Defender which is a US led space initiative involving members of the five eyes alliance which includes the UK, Canada, and the US⁹.

4. Key Highlights in the Industry

Highlights in the Industry

- ◆ The signing of a moon exploration treaty, the Artemis Accords in 2021, thereby cementing global partnerships with the US, UK, Australia, Canada Italy, Japan, Luxembourg, Korea, Ukraine, and the UAE.
- ◆ Hosting the world's first fully private orbital launch range.



- ◆ Rocket Lab’s Mahia Peninsula site supports up to 120 launches per year⁸.
- ◆ NZ firms developing:
 - Reusable spaceplanes⁸.
 - Solar-powered satellite systems⁸.
 - Technologies for Mars mission support⁸.
- ◆ Strong regulatory environment enabling agile R&D⁸.

5. Competitive Landscape

Industry Participants

Key industry participants range from established firms offering launch services to emerging companies specialising in aerospace components. The competitive landscape is diverse, reflecting rapid growth and innovation across a wide range of products and services and a focus on advanced manufacturing.

Company	Regions Present	Type of product	Owners
Rocket Lab	◆ New Zealand	<ul style="list-style-type: none"> ◆ Spacecrafts ◆ Components and Subsystems ◆ Satellite Components ◆ Launch Services 	◆ Peter Beck
Kea Aerospace	◆ New Zealand	<ul style="list-style-type: none"> ◆ Kea Atmos ◆ Electric Powered Aircraft 	◆ Mark Rocket
Dawn Aerospace	<ul style="list-style-type: none"> ◆ New Zealand ◆ Netherlands ◆ United States 	<ul style="list-style-type: none"> ◆ Satellite Propulsion Systems ◆ Space Launch Vehicles ◆ Turn-Key Systems ◆ In-space propulsion 	<ul style="list-style-type: none"> ◆ Stefan Powell (CEO) ◆ James Powell ◆ Tobias Knop ◆ Jeroen Wink ◆ Robert Werner
Astrix Astronautics	◆ New Zealand	<ul style="list-style-type: none"> ◆ Inflatable Solar Arrays ◆ High gain antennas for small spacecraft ◆ Deployable subsystems ◆ Rigidising Components 	<ul style="list-style-type: none"> ◆ Willam Hunter ◆ Max Daniels
Zenith Tecnica	<ul style="list-style-type: none"> ◆ New Zealand ◆ Australia ◆ United States 	<ul style="list-style-type: none"> ◆ 3D printing for aerospace components ◆ Contract manufacturing services ◆ Machining near-net EBM ◆ HIP for improved material performance 	◆ Success with Grace Limited (Parent company)
KiwiStar Optics	<ul style="list-style-type: none"> ◆ New Zealand ◆ Australia 	<ul style="list-style-type: none"> ◆ Telescope lenses ◆ Astronomical spectrographs ◆ Optical components 	◆ Electro Optic Systems Holding Limited (Parent Company)
Gilmour Space Technologies	◆ Australia	<ul style="list-style-type: none"> ◆ Eris Launch Vehicle ◆ ElaraSat Bus/Platform ◆ Modular G-Sat Small Satellite Bus/Platform 	◆ Adam and James Gilmour
Quasar Satellite Technologies	◆ Australia	<ul style="list-style-type: none"> ◆ Ground station services ◆ Space domain awareness ◆ Software-Defined solutions ◆ API services 	<ul style="list-style-type: none"> ◆ Dr Ilana Feain (founding director) ◆ Phil Ridley (CEO)
SkyKraft	◆ Australia	<ul style="list-style-type: none"> ◆ Air traffic surveillance ◆ Satellite Communication 	◆ James Prior
Hypersonix Launch Systems	◆ Australia	◆ Developing hydrogen powered scramjets with defensive and space capabilities	<ul style="list-style-type: none"> ◆ Dr Micheal Smart ◆ David Waterhouse
Valiant Space	◆ Australia	<ul style="list-style-type: none"> ◆ Fluid control components and thrusters ◆ Full propulsion systems ◆ Non-toxic thrusters and valves ◆ Custom-engineered products 	<ul style="list-style-type: none"> ◆ Michel Douw ◆ Andrew Uscinski



Esper Satellite Imagery	<ul style="list-style-type: none"> ◆ Australia ◆ Asia-pacific ◆ Chile ◆ Canada 	<ul style="list-style-type: none"> ◆ Mineral Exploration ◆ Precision Agriculture ◆ Climate monitoring ◆ Disaster response ◆ Environmental monitoring 	<ul style="list-style-type: none"> ◆ Shoaib Iqbal ◆ Przemyslaw Lorenczak
SPS Automation Limited	<ul style="list-style-type: none"> ◆ New Zealand 	<ul style="list-style-type: none"> ◆ Automated Robotic Systems 	<ul style="list-style-type: none"> ◆ William and John Rolleston
Syos Aerospace	<ul style="list-style-type: none"> ◆ New Zealand ◆ Australia ◆ United Kingdom 	<ul style="list-style-type: none"> ◆ Heavy lift drones ◆ Ground vehicles ◆ Autonomous aerial systems 	<ul style="list-style-type: none"> ◆ Samuel Vye

6. Advanced Aviation Sector

When considering the space industry, it's highly important to mention the advanced aviation sector as the two are closely interlinked.

They share technologies, such as materials and structures, propulsion systems, avionics, and navigation. Both sectors leverage common infrastructure, as many spaceports are co-located with major aviation hubs and benefit from shared logistics, advanced manufacturing and maintenance. This integration extends to simulation and testing capabilities, including wind tunnels and computational fluid dynamics, are also mutual areas of research.

In 2024, the sector generated an estimated NZ\$530 million in revenue, with 16% of exports going to markets like the US, Australia, Canada, Israel, and the Pacific Islands³. Advanced aviation has been supported by government initiatives that update regulatory frameworks to enable rapid iteration and testing of new technologies and establish restricted airspace all in timely manner. Between space and advanced aviation there has been great strides in developing new technologies including:

- ◆ Reusable spaceplanes and solar powered high-altitude aircraft¹⁴.
- ◆ New energy and power systems¹⁴.
- ◆ Autonomous electric vertical take-off and landing (VTOL) and integration technology.
- ◆ Operations and payload innovation, especially in Dawn Aerospace's Aurora spacecraft¹¹.

This collaboration between advanced aviation and space positions the sector as a critical enabler of innovation and sustainable growth in aerospace operations.

7. New Zealand Space Industry SWOT

The New Zealand space industry is ideal for developing space and aviation technologies.

Strengths

- ◆ Commercially led industry with a hybrid space economy.
- ◆ Strong growth projections and rising private investment.
- ◆ Improving regulatory frameworks.
- ◆ Local advanced manufacturing capabilities in machining and carbon fibre.
- ◆ Neutral geopolitical position.



- ◆ Geographic advantages:
 - Low air traffic.
 - Dark skies.

Weaknesses

- ◆ Access to capital and talent constraints.
- ◆ Knowledge gaps and limited collaboration cohesion.
- ◆ High sensitivity to global geopolitical shifts:
 - Generates 29% of revenue from abroad through exports³.
- ◆ The uncertain policy and macroeconomic landscape are continuing to challenge deal makers as 32% of US of I&S (industrial and service). For example, the US trade war.
- ◆ Moderate-high barriers to entry for start-ups:
 - As start-ups need a large amount of capital to break into the market due to the high cost of obtaining the right equipment/assets.
- ◆ University program cuts risking future workforce capability as:
 - Shrinks the talent pipeline.
 - Increases skill shortages.
 - Greater reliance on foreign talent.
 - Slower innovation and R&D capacity.

Opportunities

- ◆ Satellite telecommunications boom as satellite numbers are growing exponentially.
- ◆ NZ as a neutral launch and operations location.
- ◆ Increasing global demand for commercial launch capacity.
- ◆ Defence-space integration.
- ◆ Rising foreign investment into both commercial and government linked space ventures.

Threats

- ◆ NZ is being outspent by:
 - 20x by the US, with the local spend being US\$200 a head².
 - 10x by the UK, with the local spend being US\$20 a head².
 - NZ's local spend is US\$11 a head².
- ◆ Risk of falling behind Europe and Asia as they all outspend NZ on a per capita basis.
- ◆ Talent shortages.
- ◆ High capital requirements for new entrants.

8. Regulations

The regulations within the New Zealand and Australian space sector are heavily controlled by the Government, the New Zealand space agency, and the Australian space agency. These agencies help to shape policy in regulating space activities in a manner that ensures public safety when space activities are taking place, while simultaneously encouraging innovation and growth within the industry⁴. These are the latest regulations for both countries space activities.



The Outer Space High Altitude Activities Amendment Bill 2025 (NZ)

The outer space high altitude activities amendment bill has been presented by Hon. Judith Collins, Minister of Defence and Space, to help manage national security and other risks to the national interest posed by ground-based space infrastructure. Whilst seeking to support rapid sector growth in safe controlled environments. It endeavours to amend the outer space, and high-altitude activities act 2017 by imposing an authorisation regime on the following certain activities:

- ◆ Telemetry, tracking, and control of space objects including acts that could degrade or disrupt satellite operations¹².
- ◆ Space surveillance and identification of space objects¹².
- ◆ Satellite data reception¹².

The goal is to regulate activities and discourage foreign investors/operators from operating in NZ who don't align with the values outlined in the bill, while encouraging growth and innovation in the sector by loosening restrictions.

Space (launches and returns) Act 2018 (Australia)

The Space (launches and returns) Act of 2018 is aimed towards achieving a reasonable balance between safety protocols and fostering growth within the industry¹³. The Australian space agency plans to meet this objective by removing the barriers to participate in space activities to facilitate more innovation and entrepreneurship in the sector. This removal of barriers to participation includes:

- ◆ Simplifying licensing and regulatory flexibility¹³
- ◆ Lowering financial and insurance barriers¹³
- ◆ Streamlining processes for low-risk ventures, by reducing the time to market¹³
- ◆ Ensuring regulation evolves to meet real world entrepreneurial needs¹³

This is balanced by the introduction of licensing and permits for launching space objects and for high powered rocket activities, to make sure firms are complying to all safety standards to minimise risk to themselves and other people that could potentially be effect by space activities.

9. Spillover to Other Industries

The space sectors influence has now extended beyond itself and into other industries within New Zealand and Australia. It has continued to rapidly evolve and integrate itself into other industries, resulting in new opportunities and problems for firms and governments. These sectors advanced manufacturing, agriculture, mining, and consumer technology.

Advanced manufacturing

Precision engineering and fabrication businesses are benefiting from increased demand for high-precision aerospace components, driving innovation in materials and production processes.



Agriculture and Mining

In agriculture and mining, satellite-enabled services are improving productivity through data-driven decision-making, crop monitoring, and disaster response⁷ delivering annual benefits estimated at AU\$1.5 billion for agriculture and AU\$115 million for mining⁶.

Consumer technology

Space-based navigation systems like GPS are critical for logistics and transportation. Consumer goods are increasingly reliant on satellite connectivity for smart devices and data processing⁷.

These spillovers highlight the space sector's role as a catalyst for technological advancement and economic growth beyond its traditional boundaries.

10. Outlook

The New Zealand and Australian space sectors are entering a transformative decade which will be driven by commercial leadership, strong government backing, and global partnerships. Given that the global space economy projected to surpass US\$1.8 trillion by 2035, both nations have an opportunity to capture a meaningful market share through innovation in satellite telecommunications, and integration with the defence force.

New Zealand's neutral geopolitical stance and Australia's strategic collaborations, such as NASA's Artemis program position the region as an attractive destination for foreign investment.

However, challenges remain as local spending lags global leaders. Coupled with the talent shortages across both countries which threatens future capability and, consequently, high entry barriers persist for start-ups.

Beyond space, spillover benefits into advanced manufacturing, agriculture, mining, and consumer technology will amplify economic impact, which reinforces the sector's role as a catalyst for innovation. If these trends continue, New Zealand and Australia are well-positioned to become influential players in the global space economy driving sustainable growth and technological leadership through 2030 and beyond.

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