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Aviation engineering industry in New Zealand

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Overview

New Zealand's aviation industry is scaling up to meet growing international demand for sophisticated aviation products and services.

High-grade aluminium from New Zealand is used on Airbus's growing fleet of A380 jumbo jets, while New Zealand's largest aviation companies have well established and broad international customer bases.

Their reputation for quality is helping smaller, specialised aviation providers to build new markets overseas.

The standard of New Zealand's work in the sector is recognised through the approvals and certifications its companies have received from original equipment manufacturers and aviation regulators around the world.

Increasingly, New Zealand's aviation industry is working to provide comprehensive, one-stop solutions to international customers across the areas of training, general aviation, airport infrastructure, aircraft cabin interiors and maintenance, repair and overhauls.

Fast facts

- New Zealand is responsible for 9 percent of the world's airspace, according to the Civil Aviation Authority of New Zealand.
- New Zealanders were early users of commercial flights and the country was the first to import aircraft from international manufacturer Boeing early in the 20th century.
- According to the New Zealand Civil Aviation Authority, there are about 9,000 active pilots and 3,830 aircraft in the country.
- At least 500 different private aircraft and helicopter models are able to be serviced in New Zealand.
- New Zealand aviation exports were worth NZ\$800 million in 2006 – industry group Aviation New Zealand forecasts this will grow to NZ\$2 billion by 2020.



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International innovations

[Right Hemisphere](#)

Nine of the top 10 United States aerospace and defence companies – including Airbus, Bell Helicopter and Pratt & Whitney – use 3D product graphics management systems designed by Right Hemisphere. This allows them to source, sell and service products more effectively by delivering the right 2D and 3D product graphics to customers, partners and employees across their extended enterprises.

[New Zealand Aluminium Smelters](#) and [Titanox Development](#)

New Zealand Aluminium Smelters supplies very high grade aluminium for use in the aerospace industry including on the wings of Airbus's new 380 super jumbo wings. Now Titanox Development in Tauranga has created a process for the manufacture of titanium aluminide-based powders, which can be converted into coatings and formed objects that are especially suited to the aviation component industry.

[Falcomposite](#)

Strengths in the use of advanced composite materials that first evolved in New Zealand's world-leading marine industry are reaching new levels of sophistication in the aviation industry. Falcomposite has developed a fully aerobatic sports aircraft kit made up of about 20 structural components that are fast and easy to assemble.

[Air New Zealand Engineering Services](#) and [SMI Group](#)

Air New Zealand Engineering Services is developing complex composite structures for aircraft interiors. A digital veneer system developed by the superyacht interiors company SMI Group, creates luxury finishes for private jets that are light and flame-resistant – vital in this safety-conscious industry.

[University of Otago Aviation Medicine Unit](#)

The Aviation Medicine Unit at the University of Otago's Wellington School of Medicine is the only aviation medicine programme in the world to offer distance education training, and is supported by academic staff with strong links to the aviation industry.

[Omaka Aviation Heritage Centre](#)

The Aviation Heritage Centre and Park at Omaka, Marlborough, combines the largest private collection of World War I aircraft in the world with artifacts and personal items that belonged to some of the era's famous aviators, such as Manfred von Richthofen (The Red Baron). The centre is supported by a developing vintage aviation restoration business park.

International collaborations

[Christchurch Engine Centre](#)

The centre is a joint venture between United Technology Corporation's Pratt & Whitney and Air New Zealand Engineering Services. The centre



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provides engine overhaul and repair services for all Pratt & Whitney JT8D, Rolls-Royce Dart and International Aero Engines (IAE) V2500 engines.

CTC Aviation

This United Kingdom-owned company has established an airline pilot training operation in Hamilton that is rapidly expanding to meet international demand for pilots trained in New Zealand's diverse environment and air conditions.

Airwork NZ

Based at Ardmore in Auckland, Airwork NZ is one of only three companies worldwide approved to overhaul Eurocopter gearboxes and is an approved Honeywell maintenance centre for small turbine engines. The fixed wing division provides maintenance for Fairchild Metros, Fokker F27s and Boeing 737s.

Air New Zealand Design Engineering

This division of Air New Zealand has formed a collaborative group to refurbish Boeing Business Jets that includes, among others, the New Zealand superyacht interiors company SMI Group.

Safe Air

A subsidiary of Air New Zealand, Safe Air operates the largest specialist propeller facility outside the United States and services a range of General Electric, Pratt & Whitney and Rolls Royce engines for military transport and maritime surveillance aircraft. It also carries out B737 maintenance, repair and overhaul work and re-fit work for Air New Zealand Design Engineering.

Airways New Zealand

As the country's air traffic control and air navigation services provider, Airways New Zealand regularly hosts groups of international air traffic controllers at its Christchurch training centre and has completed a major training programme for the United States' Federal Aviation Authority (FAA).

Historical milestones

- 1914 New Zealand aviator Richard Pearce achieves powered flight from his farm in Canterbury.
- 1915 Vivian and Leo Walsh establish the New Zealand Flying School at Kohimarama using sea planes to train pilots, including two from Boeing – the company's first exports.
- 1916 Henry Wigram establishes the Canterbury (NZ) Aviation Company at Sockburn (later Wigram) air base.
- 1935 Commercial air services begin on New Zealand domestic routes.
- 1936 New Zealander Jean Batten achieves the fastest solo flight from England to Australia.
- 1965 National airline Air New Zealand established and Auckland International Airport opened.



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1986 Deregulation allows for foreign ownership of New Zealand commercial airlines.

Industry contacts

[Aviation New Zealand](#)

Aviation New Zealand officially represents the country's aviation export sector to the global marketplace.

[New Zealand Civil Aviation Authority](#)

New Zealand's Civil Aviation Authority has close relationships with other aviation regulators, as well as working relationships with New Zealand industry.

[Nelson Marlborough Institute of Technology](#)

NMIT is the country's largest pilot training provider and delivers a range of engineering and avionics programmes to New Zealand and international students.

[Airways New Zealand](#)

Airways New Zealand is the country's air traffic control and air navigation services provider.

[New Zealand Trade and Enterprise](#)

New Zealand Trade and Enterprise (NZTE) is the New Zealand government's economic development agency and works with the aviation industry to build up its capability and increase its international connections.

[Investment New Zealand](#)

A specialist unit within NZTE, Investment New Zealand is New Zealand's investment promotion agency and assists corporate investors to relocate their businesses to New Zealand, establish greenfield operations, and invest and work with New Zealand companies. It also matches strategic sectors like aviation to international investors to help fill gaps in New Zealand's value chain.