



2026 COMMERCIAL DEMONSTRATOR

EXPRESSION OF INTEREST

NEW ZEALAND AIRPORTS



# Our Vision for Next Generation Aircraft

Aviation connects New Zealand to the world. Air travel is vital to our economy – it is how many of our exporters distribute high-value goods and how we import critical goods and services to our shores. It ensures our people can continue to connect with others and is fundamental to our world-class tourism proposition. To this end, aviation and its infrastructure, delivers a strategic public service.

However, flying creates harmful carbon emissions, and these are incredibly difficult to abate. Even with the full deployment of aviation decarbonisation technologies, including next generation aircraft (electric, hybrid and hydrogen powered aircraft), and sustainable aviation fuel (SAF), getting to net zero by 2050 is a mammoth task for any airline. While we recognise the huge challenge, we see New Zealand as being uniquely placed for deployment of next generation aircraft. Our domestic network, with short-range routes, is ideally suited for early aircraft deployment, benefiting from New Zealand's largely renewable electricity grid.

We launched our Next Gen Aircraft project in November 2022, a project under our Flight NZO<sup>TM</sup> initiative which sets out a vision of working towards operating a fleet of next generation aircraft from 2030. To enable this, significant change must occur across the aviation industry, from regulations and airport infrastructure to social licence and renewable energy growth. We cannot afford to wait for aircraft technology to be fully ready before we start the change process – we need to start now.

To advance this pace of change, in 2026 will aim to fly our first next-generation aircraft as a commercial demonstrator. This will not be a 50-seat aircraft flying the length of New Zealand; it's likely to be a small plane, starting on short routes. But it's a start and we can't accomplish this alone. This expression of interest presents the first opportunity for New Zealand airports to join us deliver on this critical work programme.



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## Call for Expressions of Interest

This Expression of Interest (EOI) is an invitation to submit an Expression of Interest for the 2026 commercial demonstrator NZ Airports opportunity.

This EOI is the first step in a multi-stage procurement process designed to explore the commercial demonstrator with interested airports.

#### **Expression of Interest**

By: Air New Zealand Limited

For: 2026 Next Gen Aircraft, Commercial Demonstrator (NZ Airports)

## **Supporting Documentation**

<u>Air New Zealand Supplier Code of Conduct</u> About Air New Zealand

Air New Zealand
<a href="https://www.airnewzealand.co.nz">www.airnewzealand.co.nz</a>
185 Fanshawe Street
Auckland, New Zealand

## Key Dates & Information\*

1 August 2023 **EOI Released** 

22 August 2023 | Respondent Q&A Session

5 September 2023 (5:00pm NZST)

Deadline for Questions

12 September 2023 (3:00pm NZST)

Deadline for Submissions

November 2023

Shortlisted airports notified

Q4 2023

RFP commences

Q2 2024

Successful airports announced

## If you would like to respond, please contact:

nextgenaircraft@airnz.co.nz

- \* Additional materials and EOI response documents will be sent on completion of an NDA
- \* All dates outlined are indicative and subject to change. Respondents will be informed of changes.

## 1.2 Response Types

Air New Zealand is open to a range of packaged or individual EOI responses. Airports can elect to respond as individuals, grouped airport responses, or consortia groups. Examples are described below:

#### **INDIVIDUAL RESPONSE**

- An individual airport responding as either primary airport base, secondary destination airport or both.
- Individual submissions will be evaluated on their own merits and if successful in the
  evaluation phase, Air New Zealand will match compatible airport pairs to progress to the
  RFP phase.

#### JOINT AIRPORT RESPONSE

- Two airports responding as a pair, covering both a primary airport base and secondary destination airport needs.
- If successful joint airport submissions will progress the RFP process as one submission. Airports are encouraged to provide additional individual submissions if they wish to be considered as an individual respondent as well. This allows Air New Zealand to evaluate an individual airport on its own merits too.

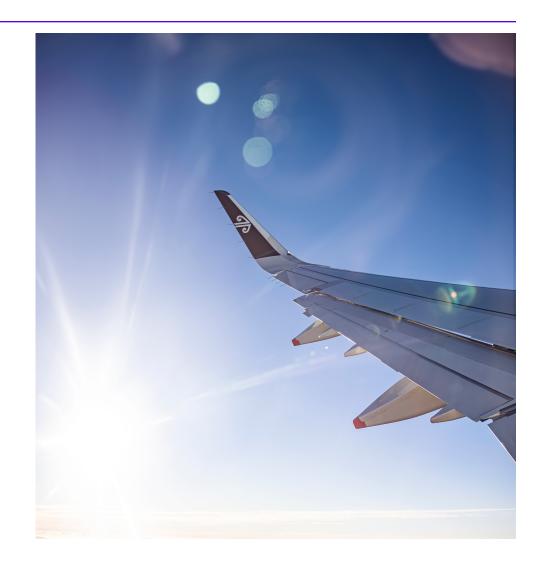
#### JOINT AIRPORT AND SUPPORTING LOCAL GOVERNMENT RESPONSE

- One or two airports responding as individuals or a pair, combined with local council support.
- Air New Zealand encourages airports to seek local government input even at this early stage given how important local government will be in ensuring infrastructure for next gen aircraft scales across New Zealand.

#### JOINT AIRPORT AND PARTNER/COMMERCIAL PARTNERS

• One or two airports responding as individuals or pairs combining with commercial partners such as lwi, freight/logistics providers, local lines companies, energy providers etc.

There may be other packaged response types airports are considering, prior liaison with Air New Zealand is encouraged to ensure the package is understood.



# 1.1 The Opportunity

#### THE OPPORTUNITY FOR NEW ZEALAND AIRPORTS

This EOI is looking for two airports, a single primary airport base and a single airport destination for our 2026 commercial demonstrator. This provides an excellent opportunity to be a leader in the transition to a lower carbon aviation sector in New Zealand. The two selected airports will also play a critical role in upskilling airports across New Zealand towards this purpose.

We are taking a 'crawl', 'walk', 'run' approach to building next generation aircraft capability while maintaining our unequivocal safety-first approach. This first deployment will be a limited operation, it will allow the airport partners to be some of the first in the world to learn from next generation aircraft in operation. This means New Zealand airports will help shape the design of new airport infrastructure globally, co-create and update regulations and help re-design a new domestic network allowing more Kiwis to connect by travelling on fleets of next generation aircraft.

#### **KEY GOALS OF THE COMMERCIAL DEMONSTRATOR**

- 1. Support the development of regulatory change ahead of 2030
- 2. Advance changes in airport infrastructure ahead of 2030
- 3. Test next-gen aircraft technology in the "real world" and take learnings to scale the implementation
- 4. Support and grow build public confidence
- 5. Provide opportunity for domestic and global aviation industry partners to learn about next gen aircraft technology



# THE 2026 COMMERCIAL DEMONSTRATOR OVERVIEW

- A commercial operation driven by the desire to test the viability of next gen aircraft technology
- Deploying certified aircraft powered by battery, hybrid or hydrogen propulsion
- Operating within air transport operator regulations defined by the NZCAA
- Carrying either cargo or passenger commercial payloads
- Advancing the pace of change needed in regulations and infrastructure
- A learning opportunity for Air New Zealand ahead of Q300 fleet replacement
- A learning opportunity for industry stakeholders ahead of potential fleet replacement or supplementation from 2030

#### **CONCEPT OF OPERATIONS:**

Flights between one airport base, and one destination airport:



- An airport base to overnight aircraft, accommodate refuelling / recharging, engineering and maintenance facilities and crew base
- A destination airport to accommodate aircraft turn arounds & operations

The network will initially be restricted to this one bi-directional route within operational range of the aircraft selected. Limiting operations to one route achieves the following:



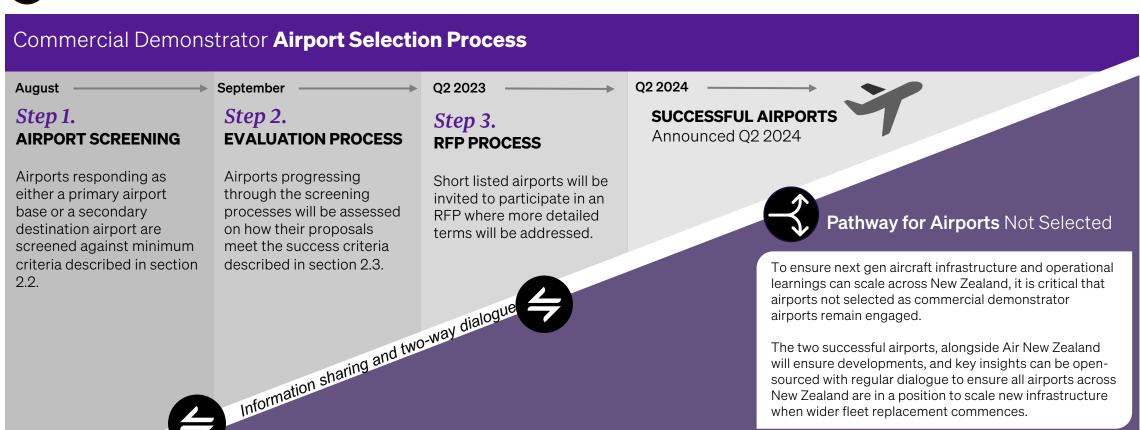
- Risk management is focused on one use case and one area of operation
- Limits infrastructure development costs
- Provide higher level of safety assurance



## 2.1 Airport Selection Process



All airports being considered must meet the minimum requirements identified in section 2.2 in order to progress to the evaluation stage. For airports not selected to progress into the Request for Proposals (PFP) process, there will be a pathway for ongoing engagement to prepare for larger fleet replacements from 2030.



Longer term decisions surrounding larger turboprop fleet replacements are not considered through this EOI process

## 2.2 Airport Screening



# Minimum **Airport Criteria**

Airports responding are asked to respond as either a primary airport base, secondary destination airport or both. Airports responding must meet minimum requirements set out in the adjacent table or have a demonstrable pathway to achieving the minimum requirements in time for 2026 in order to progress to the evaluation stage.

1

## **AIRPORT BASE, PRIMARY**

#### Description

The primary airport will be the main base of operations, where aircraft will be stored overnight, recharge / refuel capability and support any planned maintenance activities.



#### **Minimum Requirements**

- Ceritifed airport and capable of IFR operations
- Sealed Runway > 1200m with runway lighting
- RFS capability min CAT3
- Air Traffic Control service<sup>1</sup>
- Capability to overnight aircraft
- Maintenance facilities
- Current Air New Zealand destination

2

### **DESTINATION AIRPORT**, SECONDARY

#### **Description**

The destination airport must support aircraft operations and refueling/recharging and be within viable range<sup>2</sup> of a primary airport base



#### **Minimum Requirements**

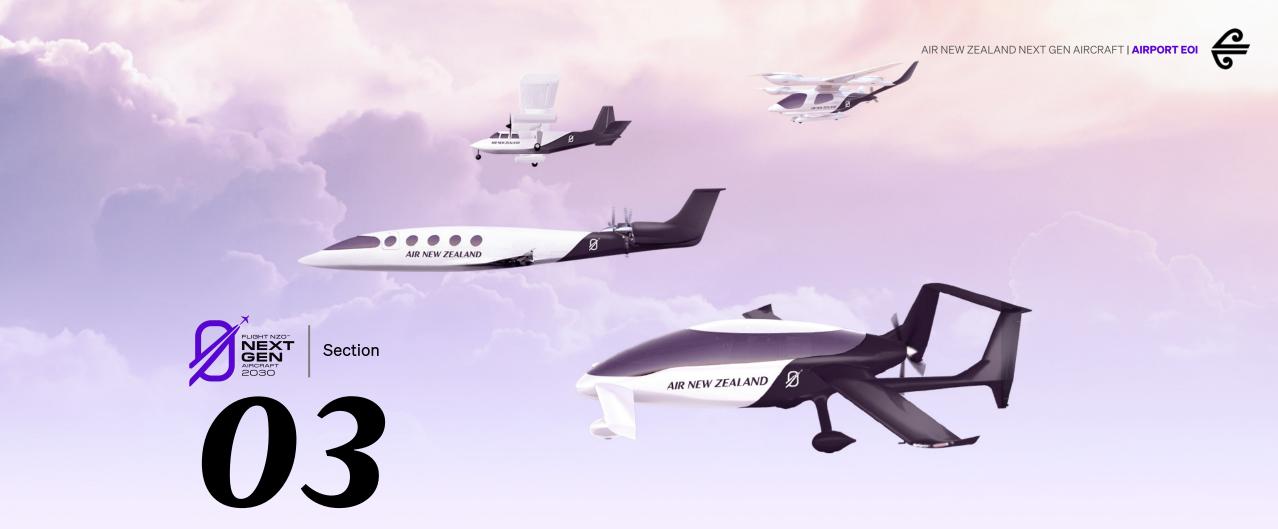
- Ceritifed airport and capable of IFR operations
- Sealed Runway > 1200m with runway lighting
- Current Air New Zealand destination

- 1. The ATC requirement is not a safety-based requirement but a stakeholder involvement requirement
- 2. Expected aircraft range will be provided to responding airports through an EOI Supplement

# 2.3 Airport Evaluation Criteria

Airports progressing through the screening process will be evaluated against the evaluation criteria identified below. This criteria is designed to be transparent, however both the aircraft selection and commercial use case for the commercial demonstrator are being evaluated in parallel, and these dependencies have not been incorporated into this framework.

Criteria	Description
Aligned Values, Strategy and Roadmap	<ul> <li>Shared organisational values aligned to advancing sustainability across the industry and an ambition to continue tackling aviation's impact on climate change</li> <li>Collaborative approach to problem solving and willingness to work through multiple challenges with Air New Zealand and other industry participants</li> <li>Capacity and capability to support regulatory development</li> <li>Willing and able to take on an airport leadership role to advance next the development of next gen aircraft</li> <li>Open and willing to share learnings and insights with the wider aviation sector</li> <li>Strength of existing relationships with mana whenua iwi and willingness to engage with potential Māori partners</li> </ul>
Operational Feasibility	<ul> <li>Suitable airport weather environment that lowers the risk of early operations for next gen aircraft</li> <li>Suitable route options allowing aircraft deployment on manageable sector lengths given limited aircraft range.</li> </ul>
Commercial Enablers	<ul> <li>Ability to minimise initial cost barriers for commercial demonstrator operations with a long-term strategy on how airports should support longer-term decarbonisation goals</li> <li>Willing to explore creative options for commercial models and commercial use cases to support operations</li> <li>Collaborative approach to solving short-term capital needs of commercial demonstrator operations</li> </ul>
Energy and Infrastructure Access	<ul> <li>Capacity to support new charging infrastructure, new electricity infrastructure and hydrogen refuelling needs</li> <li>Fit for purpose hangarage, available maintenance facilities</li> <li>Committed to adopting/setting industry standards to enable multi-operator, multi-use, future proofed infrastructure</li> </ul>



Air New Zealand Background

## 3.1 Air New Zealand Company Strategy

## AIR NEW ZEALAND COMPANY INFORMATION

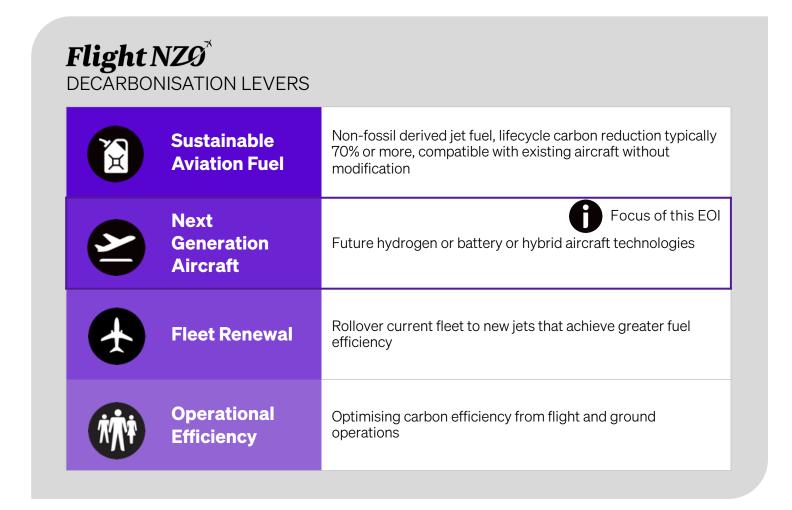
Air New Zealand is a world-class airline, with a strong customer proposition and modern fleet. Underpinned by digital innovation, driving improvements in customer experience and profitability through its refreshed strategy, Kia Mau.

Kia Mau drives a relentless focus on three clear opportunities, executed through excellence and innovation across four key business drivers. Serious about Sustainability is the driver this piece of work links to. Our Sustainability framework and reporting can be found <a href="here">here</a>. Further company information can be found <a href="here">here</a>.

## AIR NEW ZEALAND DECARBONISATION ROADMAP

Air New Zealand is committed to reaching net zero carbon emissions by 2050. To get us to that long term goal, we have also set an ambitious 2030 interim science-based carbon reduction target that has been validated by the Science Based Targets initiative requiring a 28.9% reduction in carbon intensity.

To reach these decarbonisation goals, multiple levers must be pulled in parallel. More information on our 2030 Science-Based Target and our decarbonisation levers can be found at Flight NZO™ - Air New Zealand.



## 3.2 Next Gen Aircraft Overview



## MISSION NEXT GEN AIRCRAFT OVERVIEW

In 2021 we launched our <u>Next Gen Aircraft, Product Requirements Document</u> looking for world leading next gen aircraft manufacturers. The outcome from this process was to launch Mission Next Generation Aircraft. A project created to accelerate the development of next generation aircraft technologies and the infrastructure for commercial aviation in New Zealand.

## Mission Next Gen Aircraft has two ambitious goals:

- Fly the first commercial demonstrator flight from 2026
- 2. Begin replacing the Q300 domestic fleet with a more sustainable aircraft likely green hydrogen or battery hybrid systems from 2030

Over the next three years Air New Zealand will be focused on supporting the building, testing, and certifying of aircraft and associated infrastructure. The learnings we will take will pave the way for our long-term focus of delivering an aircraft that can replace our Q300 domestic fleet.

Key to successfully delivering this is partnering with airports to build the capabilities and knowledge we need to support next gen aircraft. Our commercial demonstrator programme is the first step.

## THE OPPORTUNITY FOR NEW ZEALAND -

UNLOCKING NEXT GEN AIRCRAFT POTENTIAL

# New Zealand is a country reliant on air travel, with limited ground-based substitutes;

Kiwis are amongst the most frequent fliers per head of population. This is driven by the geography, characterised by mountainous regions, islands and peninsulas, and compounded by the fact New Zealand has no high-speed train network and limited highway roading. In addition, New Zealand has relatively uncongested airspace, with a well managed and resourced air traffic management system, benefiting from recent technology upgrades.

## High availability of renewable power:

Currently over 80% of grid electricity is renewable with power coming from both hydro and geothermal sites with recent growth in wind generation. New Zealand's grid is forecast to reach 90% renewable by mid 2020's with a government goal to reach 100% by 2030.

## 3.3 Next Gen Aircraft Partners



## **COMMERCIAL DEMONSTRATOR PARTNERS** AIRCRAFT OVFRVIFW1

Our commercial demonstrator partners have the most compelling aircraft options available to make commercial services in 2026 a reality.

These partners were selected out of the PRD process Air New Zealand completed in 2022

While these aircraft are smaller in size to our existing fleet, they represent the ideal type of aircraft to operate early, learn from and drive change in advance of our larger fleet replacement needs in the 2030's



#### **VOLTAERO** CASSIO 330

Origin: France Hybrid-electric engine All new, clean sheet design 4x seats, excluding crew More details here



#### **BETA TECHNOLOGIES** CX300

Origin: USA Battery-electric All new, clean sheet design 5x seats, excluding crew More details here



#### **EVIATION** ALICE

Origin: USA Battery-electric All new, clean sheet design 9x seats, excluding crew More details here



#### **CRANFIELD AEROSAPCE HYLANDER**

Origin: UK Hvdrogen-fuel cell Retrofit of BN Islander 6-8x seats, excluding crew More details here

#### TURBOPROP FLEET REPLACEMENT

The vision of Mission Next Gen is to see the domestic fleet of turboprops transition to next generation aircraft from 2030 onwards. To meet that challenge, we have partnered with manufacturers Airbus, Embraer, Heart Aerospace, ATR and Universal Hydrogen who are developing next gen aircraft capable of carrying between 30-100 passengers. These partners were selected out of the PRD process and balance a mix of technology options including battery-hybrid, hydrogen-fuel cell, and hydrogen combustion propulsion options. While these aircraft are only concepts today, we are partnering with these companies to understand the market potential and also advance the R&D that needs to occur here in New Zealand to support these future aircraft.

> Air New Zealand's global long-term partners offer multiple compelling options for turboprop fleet replacements



## **LONG TERM AIRCRAFT PARTNERS**





More details here

Hydrogen aircraft Hvbrid aircraft



More details here



Hydrogen aircraft More details here









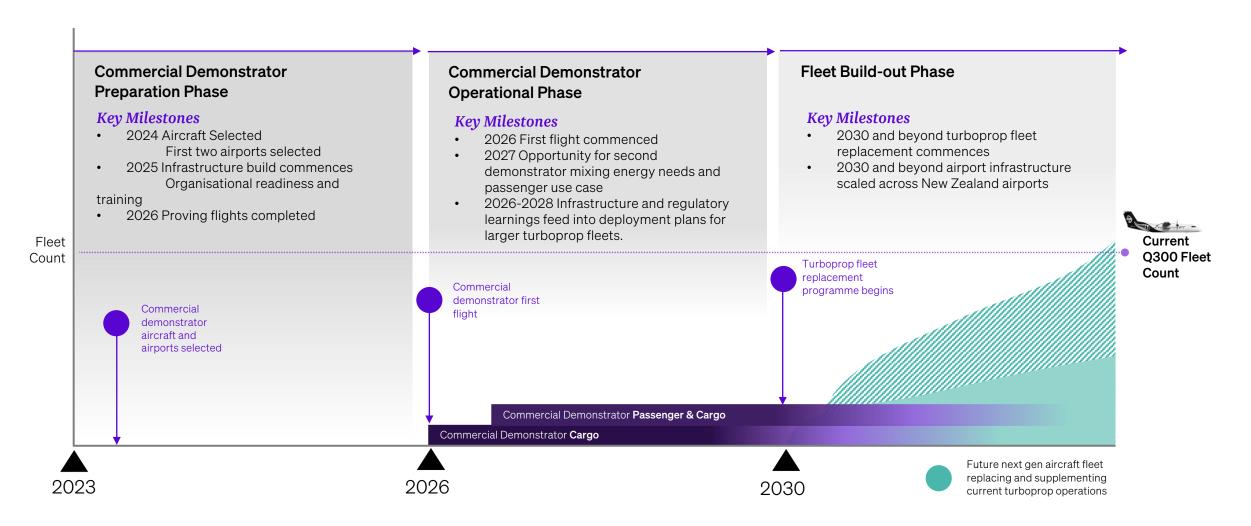
All technologies More details here



Hybrid aircraft More details here

More detail on the aircraft performance specifications will be provided to respondents in confidential EOI response package document.

# 3.4 Next Gen Aircraft Roadmap





# 4.1 Partnering With Us

The graphic below describes roles and responsibilities in the partnership approach we are looking to adopt with both airports and the broader industry to enable the goals of the commercial demonstrator

- Willing and supportive mindset to working through challenges inherent with early technology deployment
- Jointly manage airside footprint, infrastructure or availability and operations
- Provide conventional aeronautical services required;
- Provide emergency Fire Services, Air Traffic Control etc
- Provide an operationally favourable environment for commercial demonstrator to succeed



#### **2026 COMMERCIAL DEMONSTRATOR**

- Joint industry initiative with joint learnings, developments and understanding
- Accelerating operational, customer technology & commercial learnings
- Together enabling the accelerated decarbonisation of domestic aviation using next gen aircraft

- Develop fit-for-purpose regulations for aircraft and operations
- Create an end-to-end supply chain for new energy options and supporting services
- Jointly collaborate to advance opportunities to grow decarbonisation potential of next gen aircraft

BROADER
NEW ZEALAND
AVIATION
INDUSTRY



FIRST FLIGHT



AIR NEW ZEALAND

- Air operators certificate holder for 2026 aircraft
- Manage commercial carriage
- Manage staffing and operations
- Overall planning activities and management

# AIR NEW ZEALAND 5

A STAR ALLIANCE MEMBER