



**AIRWAYS**  
International



▶ **Supporting the ATM  
industry to thrive**

# AIRWAYS

Airways is a world-leading provider of commercial air navigation services and is responsible for managing all domestic and international air traffic operating within New Zealand's 30 million square kilometres of airspace. Around 6% of the world's airspace is managed by Airways.



We've provided air navigation services in **more than 65 countries**



**25+ years** of air traffic services training



**4000+** Instrument flight procedures designed



**65+** TotalControl simulators delivered



**800+** international ATC students trained



**60+** AKO virtual courses delivered



Airways International Ltd is the commercial arm of Airways New Zealand – providing training, digital solutions, aeronautical information management, procedure design and aviation consultancy services globally to air navigation service providers (ANSPs), airlines and airports.

We offer globally recognised air traffic control (ATC) training programmes, advanced simulation and selection solutions, and interactive learning resources to help our customers achieve lower training costs and higher success rates.

We also partner with airports, governments, aviation technology suppliers and other ANSPs to develop future-ready innovative procedures and air traffic management (ATM) solutions, through leading-edge thinking, nimble execution and strong collaboration.

 **Airways Training**  
Courses, programmes, partnerships

 **AKO**  
Airways Knowledge Online

 **AirBooks**  
Interactive digital learning

 **TotalControl**  
ATC simulation

 **SureSelect**  
ATC selection

 **Aeropath**  
Aeronautical information & flight procedures

 **AirShare**  
Uncrewed traffic management

# Global partnerships

Airways International partners with some of our industry's best aviation experts to deliver projects and services that improve the quality of ATC training, reduce congestion and environmental impacts, and create efficiencies for our customers.

## MITRE

We have partnered with not-for-profit U.S. based organisation MITRE to carry out several complex airspace design projects, where we will jointly deliver efficient and safe airport operations in some of the world's busiest and most complicated airspace.



## Osprey Consultancy Services

We are collaborating with Osprey, a UK military consultancy company, working together on airspace and flight procedure design projects and opportunities across Europe.



## Leidos

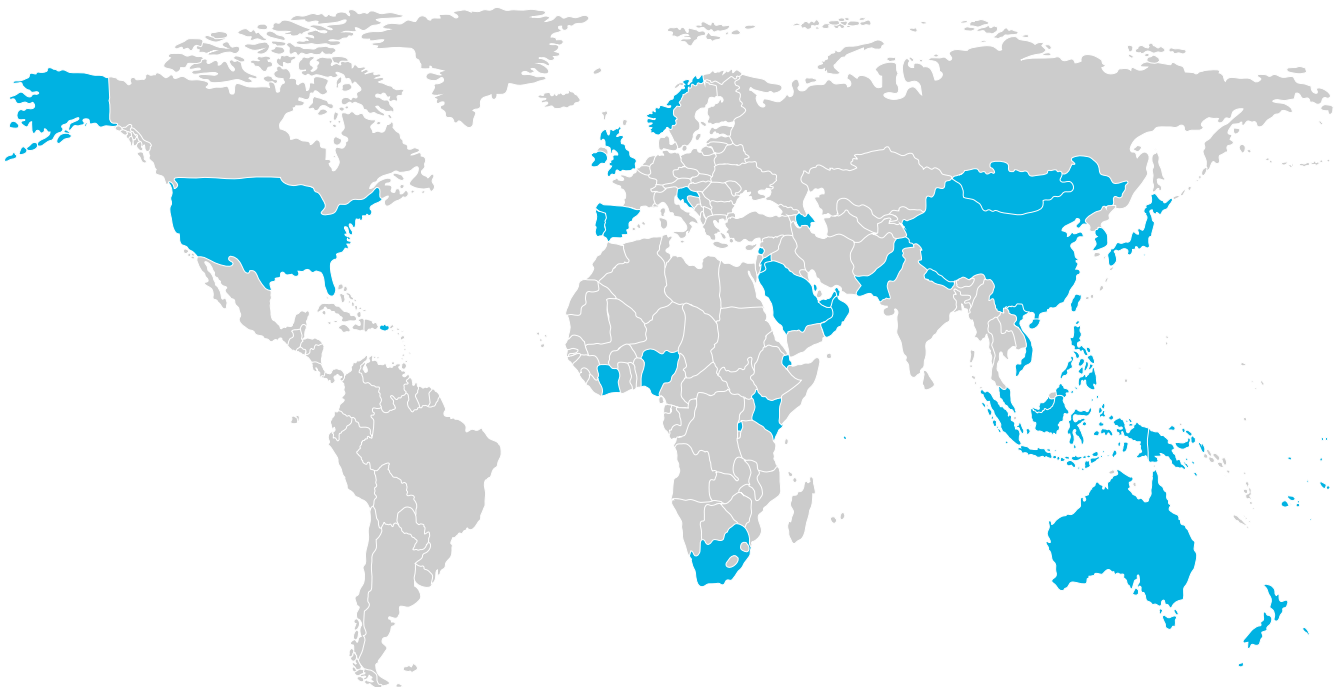


Airways International is collaborating with aviation technology provider Leidos on commercial projects and opportunities to create air traffic management opportunities.

This includes the design and build of the SkyLine-X air traffic management system, a \$58 million system that has replaced Airways' previous ATM platforms.

## Where we work

Airways International's customer reach spans 65 countries across the globe, from the Middle East and Europe to throughout Asia Pacific and Australasia.



# Who we work with

Here we highlight some of the organisations Airways International has worked with to deliver our range of products and services over the past 30 years.



We have been training our own air traffic controllers at Airways since 1950, and have worked with other international ANSPs for over 30 years in the delivery of training and consultancy services.

With customers in the Middle East, Asia, the Pacific, Europe and North America, Airways Training provides the highest quality of training services, courseware, instructors and student support.

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Airways NZ is one of the best ATC training centres in the world.

It has the finest equipment and facilities and we were also astounded by how friendly and supportive Airways instructors and support staff are.

**Vu Quang Huy**  
VATM ATC Trainee

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## World-class training to meet your needs

As air traffic services training experts, Airways achieves some of the highest success rates in the industry. With highly skilled and experienced instructors, leading-edge training and simulation technologies, and internationally recognised programmes, Airways Training will make a real difference to your business. Our advanced digital learning technologies enhance learning for today's generation of students, including highly realistic ATC simulation and interactive e-learning resources with dynamic content.

Employers can also access validated and objective ATC selection tools, and useful data insights and analytics to track progress and streamline selection and training.

## Campus and facilities

The Airways Training campus is located in Christchurch, New Zealand, with computer suites, aviation libraries, classrooms, a dedicated student crewroom, and state-of-the-art simulators. We also have a campus in Kuwait, and can establish a training facility in your location.

Our TotalControl simulators are used to support course delivery for both surveillance and tower exercises. Staff to student ratios are very low at 1:6 for simulator courses.

Online course resources are available 24/7 via Airways Knowledge Online (AKO), and we also provide pastoral care services to ensure that students are looked after in and out of the classroom.

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 **25+ years**  
of competency based training

 **95%**  
training success rate

 **800+**  
international ATC students trained

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## Virtual training academy

Airways Knowledge Online (AKO) is a world-class virtual online training academy for the aviation sector. Students can access a range of aviation courses as a cohort in a virtual classroom, or on their own at a time and pace that suits them. Interactive dynamic content keeps learners engaged, via an intuitive e-learning platform accessible 24/7.

Utilising the latest online learning technologies and methods, AKO caters for both instructor-led and self-directed, self-paced learning through a range of delivery options - AKO Classroom, AKO Flexi, AKO AirBooks and AKO Gateway.



## AKO Gateway

AKO Gateway is a training platform which enables establishment of your own virtual academy where you can train your way - online, blended or face-to-face, using only what resources you need.

- ▶ Your own branded virtual training academy including images, logos and other unique branding
- ▶ Host your own virtual classroom with either your own or our resources, or a combination
- ▶ Create your own interactive content by utilising our latest online learning technologies and methods
- ▶ Can be created for both instructor-led and self-directed or self-paced learning

## AKO delivery options



### AKO Classroom

AKO Classroom offers instructor-led courses in a virtual classroom environment - students participate in live virtual sessions with an instructor and their classmates, with access to self-directed digital interactive content.



### AKO Flexi

With AKO Flexi, students begin their virtual course at a time that suits them - learning at their own pace, with access to tutor support and digital interactive content including AirBooks.



### AKO AirBooks

AirBooks is our range of cloud-based interactive learning resources allowing students to work self-directed, and learn any time, anywhere and on any device while engaging with digital dynamic content.

# Training programmes

## Short courses

We have a range of short courses delivered either virtually via AKO or face-to-face.

- ▶ Watch Supervisor
- ▶ OJT Instructor
- ▶ OJT instructor Refresher
- ▶ Aviation English for Aviation Professionals
- ▶ Human Factors
- ▶ Incident Investigation
- ▶ Procedure Design - Obstacle Assessment and Management
- ▶ ICAO Language Proficiency Rater Training
- ▶ ATS Assessor
- ▶ ATSEP Basic

## NZQA qualifications

The New Zealand Qualifications Authority (NZQA) qualifications comprise core compulsory standards representing the competencies required by students, and endorsements recognising the specialised application within the sector. Students who enrol in these qualifications can achieve both the ICAO course certificates and NZQA certificate and diplomas.

## Study options: NZQA pathways

Level 5 - Certificate (60 credits)	Level 6 - Diploma (120 credits)
<p><b>New Zealand Certificate in Air Traffic Services (ICAO 051)</b></p> <p>Five unit standards (15 credits each):</p> <ul style="list-style-type: none"><li>▶ Air law and operational procedures</li><li>▶ Aeronautical meteorology</li><li>▶ Air navigation</li><li>▶ Principles of flight and aircraft performance</li><li>▶ Human performance</li></ul>	<p><b>New Zealand Diploma in Air Traffic Services</b></p> <p>Two strands:</p> <ul style="list-style-type: none"><li>▶ Aerodrome Control and Approach Control Procedural (ICAO 052 and ICAO 053)</li><li>▶ Area Control Surveillance and Area Control Procedural (ICAO 054 and ICAO 055)</li></ul>

## ICAO licensed courses

Airways Training offers a full range of International Civil Aviation Organisation (ICAO) compliant courses. Our courses are presented via a combination of interactive training sessions, simulator exercises and blended learning activities. These are enhanced through the use of case studies, discussions and practical application.

### ▶ **051 ATS Licensing Subjects**

A comprehensive introduction to ATS. This theoretical course forms the essential base knowledge for all other ATC courses. This course is offered via AKO Classroom or face-to-face.

### ▶ **052 Aerodrome Control\***

Students learn to integrate and apply the necessary knowledge, skills and competencies to operate in an aerodrome simulated environment.

### ▶ **053 Approach Control Procedural or 055 Area Control Procedural\***

Students are trained to manage traffic in accordance with operational rules and procedures to operate in a simulated procedural approach or procedural area environment.

### ▶ **054 Area or Approach Control Surveillance\***

Surveillance students will demonstrate and apply the provision of an area or approach control surveillance service to operate in a simulated surveillance environment.

\* This course is available face-to-face only.

Our range of AirBooks interactive learning resources allow students to work and learn at their own pace while engaging with digital, dynamic content.



## Fast

Increase the reach and availability of your training — speed up training rollouts and completion timeframes.



## On-demand

Subscribe to the AirBooks Library to access ready-to-use cloud-based resources.



## Interactive

Break free from static text and images. Engage with interactive content, 3D animations and games, as well as assessments and quizzes that provide rapid feedback on progress.



## Flexible

Choose the right mode for your learning. AirBooks supports self-study, blended, and classroom based training.



## Mobile

From a smartphone to a PC screen, AirBooks responsive design will look great on any device. Download your content for offline use and take it with you wherever you go.



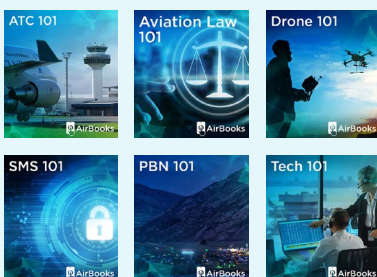
Without AirBooks  
I could never have achieved  
my dream of being a FIO  
as quickly as I did.

**Aleisha Hanson**

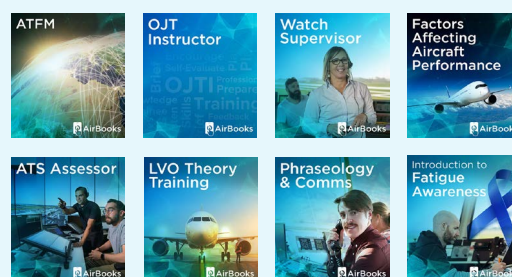
AFTN Supervisor, Airways NZ

There are more than 40 AirBooks available in the AKO AirBooks library, across the following areas:

### Introduction



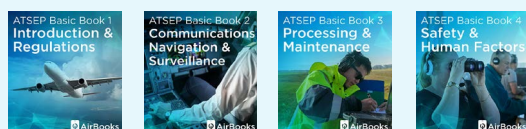
### Operations



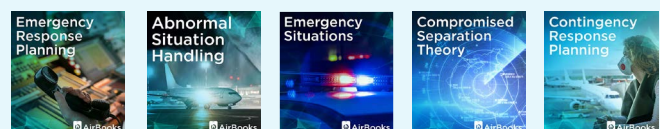
### Refreshers



### ATSEP



### Emergencies





As uncrewed aircraft (UA) continues to rapidly increase in both numbers and capability, with advanced air mobility nearing take-off, the need to ensure the safe integration of UA into our global airspace requires careful planning and strong cooperation.

With the ever-growing changes in airspace, ANSPs and regulators need to ensure they have the right tools to support safe, controlled skies. AirShare can provide an ecosystem ready solution, underpinned by our CIS/FIMS solution providing a single source of the truth via APIs to all stakeholders. The outcome is improved management of uncrewed traffic, greater situational awareness and reduced risk.

## Flight information management system

The Airspace Manager module provides real-time display and management of nationwide UA activity.

- ▶ Manage flight requests from a single operational console
- ▶ Provide geo-awareness, flight authorisation, traffic information and remote ID services
- ▶ Communications with pilots to ensure flight operations are adhered to
- ▶ Dashboards for airspace managers

With AirShare on board, ANSPs and regulators can:

- ▶ Manage UA flight requests
- ▶ Build UTM ecosystem
- ▶ Reduce ATC workload
- ▶ Reduce risk and increase compliance.

## Ecosystem ready

AirShare aggregates data from various sources to provide an operational picture to reduce risk from drones.

Options include:

- ▶ USSPs, PSUs, pilot and drone registries
- ▶ UA detection systems
- ▶ Remote ID and UA flight positional data
- ▶ Digitised airspace charts and NOTAMs.



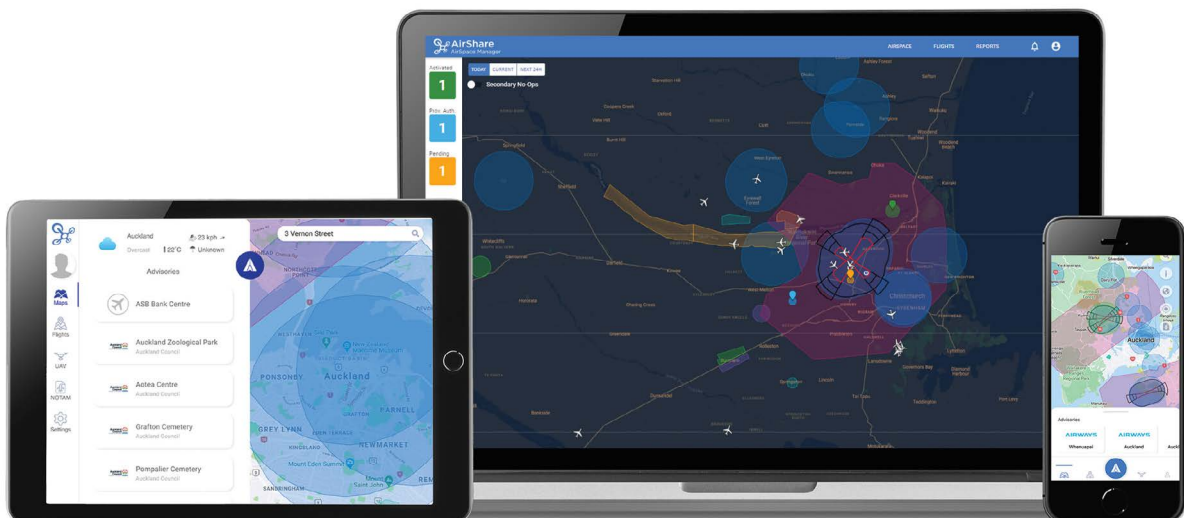
**10 years**  
operating in live airspace



**330,000**  
flights logged



**Enhanced**  
situation awareness



Airways' TotalControl advanced simulation combines unparalleled photo-real graphics with an easy-to-use, intuitive interface – bringing you one of the most realistic digital simulation platforms on the global market.



### Your entire FIR simulated

Full country/FIR simulation provides the best experience for multi-position and multi-aerodrome training (e.g. remote towers).



### Flexible graphics options

Build your own 3D rendered environment with Airport Builder or upgrade your tower experience with TrueView.



### Powerful 3D applications

Build worlds and create rich exercises faster with a suite of 3D tools that are accurate and easy to use.



### Cloud based simulation

Break down barriers with cloud-based simulation and real-time system monitoring. Train anywhere, any time with remote piloting and TotalControl Sim-in-a-suitcase.



### Training ready environment and exercises

Ready-to-use generic training environment and exercises developed by practicing ATC instructors included.

## TotalControl cloud

Do more with your data. TotalControl's cloud platform is designed to get you training right now, whatever your training needs and budget.



### Monitor and assess

- ▶ Advanced, web-based sim monitoring portal
- ▶ Centrally monitor a dispersed sim fleet
- ▶ Dynamic training assessment and grading



### Seamless and secure

- ▶ One click software updates
- ▶ Secure cloud backups and rollback
- ▶ Work on aerodrome updates remotely with your team



### Train anywhere

- ▶ Setup any PC anywhere to run simulations in minutes
- ▶ Deploy multi-trainee simulations across the country
- ▶ Access new types of sim training and self-study opportunities



**65+**

TotalControl simulators delivered



**18 countries**

using TotalControl simulation

## Flexible configurations

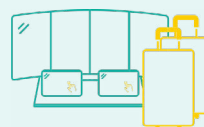
TotalControl is available in multiple configurations – from large multi-position tower CABs to portable 'sim in a suitcase' options, there's a TotalControl simulation solution to meet your specific needs.



Large CAB






Surveillance sim




Sim-in-a-suitcase

SureSelect is a validated, objective and automated solution that helps you to improve efficiency, speed up selection results, make impartial decisions, and test ATC-specific competencies.

You can access a range of test suites, deploy tests and view results via an easy-to-use online platform. Our flexible approach allows you to tailor selection to your goals and budget.

-  **Automate the process**  
Improve efficiency
-  **Great candidate experience**  
Gamified tests
-  **Flexible**  
Unsupervised & supervised testing

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 **43,000+**  
ATC candidates tested through SureSelect

 **3 test suites**  
assessing ATC-specific competencies

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 **Achieve impartial and fair selection**  
Validated tools

 **Undertake role-specific assessments**  
Test ATC-specific skills & attributes

 **Mix & match**  
Choose all or some of the test suites

### Test suites and support



#### ATC Skill Simulations

ATC-specific gamified tests:

- ▶ Short term memory
- ▶ Spatial awareness
- ▶ Remembering relationships
- ▶ Radar simulation (safety, efficiency and multi-tasking)

Estimated time: **1 hr 30 mins**



#### ATC Cognitive Ability Suite

Online assessment of core ATC abilities:

- ▶ Detail accuracy (15 mins)
- ▶ Coded reasoning (30 mins)

Estimated time: **45 mins**



#### Behavioural Traits

Online questionnaire measuring key ATC traits, e.g.:

- ▶ Decisiveness
- ▶ Emotional control
- ▶ Organised
- ▶ Take charge
- ▶ Learning focus

Estimated time: **20 mins**



#### Assessment Centre support

Run your own using Airways' expertise and model:

- ▶ Competency based approach
- ▶ Individual and group activities
- ▶ ATC-specific assessments
- ▶ Scenario based interview

Estimated time: **8 hours**

### SureSelect your way - Use SureSelect your way, to meet your needs:

- ▶ Choose which test suites you want to use
- ▶ Choose your approach - stage-gate, or undertake all assessments at once
- ▶ Choose how to complete - unsupervised or supervised, or a mix of both

Airways International provides leading-edge aeronautical information and procedure design tailored to meet the unique needs of our clients through Aeropath, our specialist Aeronautical Information Management (AIM) and navigation procedure design service.

Aeropath clients are based all over the world and include commercial airlines, air traffic control, airports, helicopters, general aviation, unmanned aerial vehicle (UAV) operators and state regulators.

We specialise in Performance Based Navigation (PBN), procedure design training and the AIS-AIM transition, and we have created innovative solutions for the integration and visualisation of digital aero data using cloud hosted solutions.



Have worked closely with Aeropath and they have been very professional and customer focused. A very well run unit.

**Customer Satisfaction Survey 2019**

Staff have excellent technical knowledge and provide timely, useful advice.

**Customer Satisfaction Survey 2018**



**ICAO compliant**

Annex 15 and AIM Roadmap



**ICAO recognition**

Design of PBN flight procedures



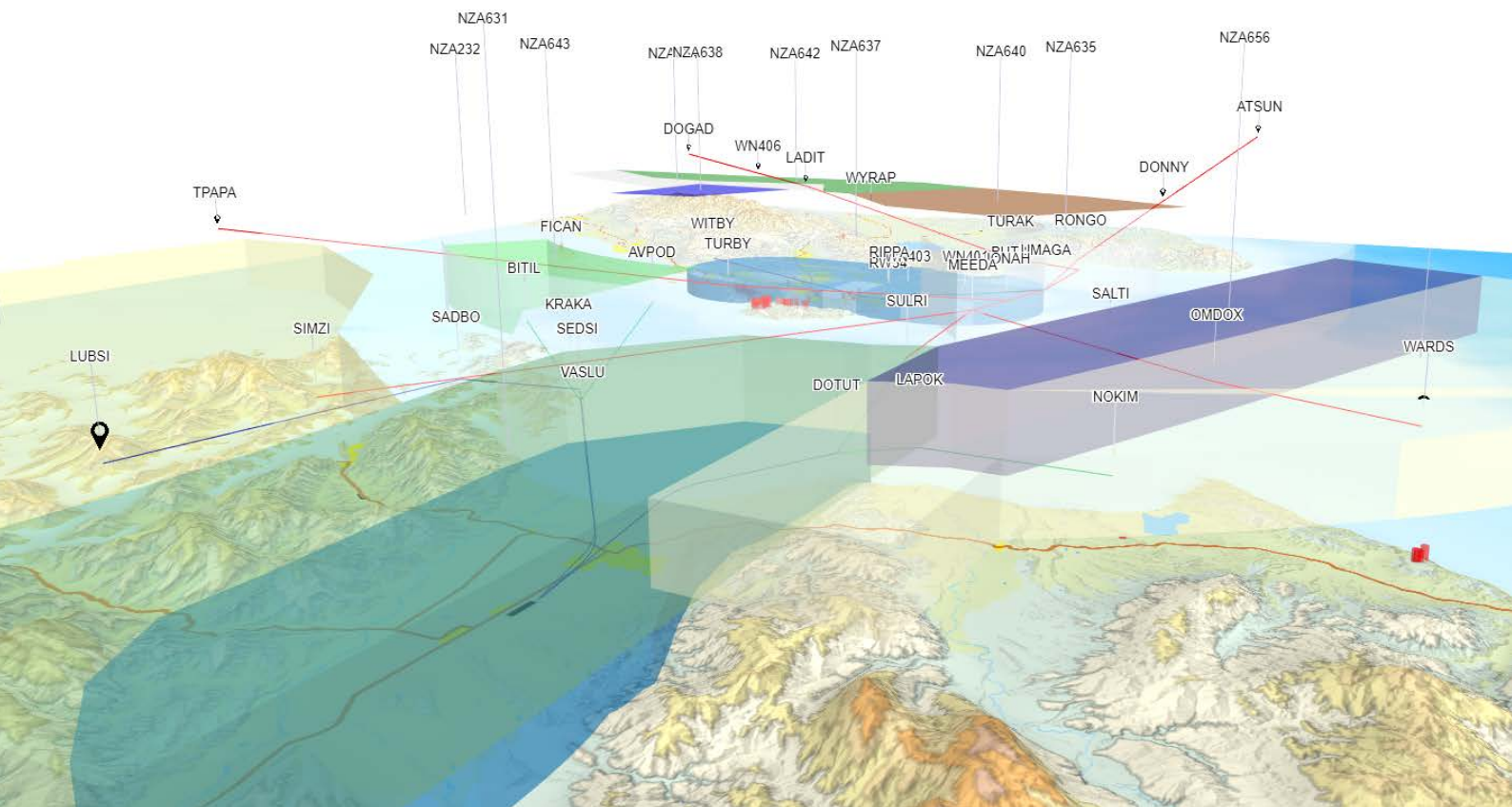
**ICAO compliant**

PBN training organisation



**Multiple data sources**

Chart data from many sources



## AIM services

Our team has in-depth experience in all aspects of Aeronautical Information Management (AIM).

### ► AIP production

Aeropath manages the end-to-end production of the AIP for New Zealand and a number of Pacific States. Our team has the specialised tools, expertise and experience to make this management of your AIP production seamless.

### ► Aeronautical charting

Visual navigation, instrument navigation, aerodrome surveys, digital terrain — from the upper airspace to the runway threshold, Aeropath has the experience and knowledge to chart it all.

### ► Aeronautical data

We have world-class expertise in the specialised fields of aeronautical data and database systems. Data is at the core of what we do and provides the substance from which all other AIM products are generated. Aeropath is certified under New Zealand Civil Aviation Part 175 to provide the AIM service for New Zealand.

## Dynamic mapping tools

With its aeronautical data integration and visualisation capabilities, Aeropath has developed two dynamic mapping solutions for use by pilots operating in New Zealand airspace.

### FlightAdvisor

Flight Advisor is an interactive web-based mapping tool developed by Aeropath in collaboration with the Royal New Zealand Air Force, that improves situational awareness and enhances safety for military and civilian pilots operating at low levels in uncontrolled airspace.

### PreFlight

PreFlight enables commercial and recreational pilots to access safety-critical weather and aeronautical information on one easy-to-use platform, via their mobile device – a one-stop platform developed by Aeropath and MetService.

## Procedure design services

Our highly experienced procedure designers work with state regulators, ANSPs, airlines and airport authorities to design, verify and maintain reliable, state-of-the-art flight procedures and solutions.

Aeropath is the largest commercial procedure design organisation in Asia Pacific, with decades of design experience throughout the region. Aeropath's New Zealand certification to design flight procedures is recognised in multiple jurisdictions and we are a contributing member of the ICAO Instrument Flight Procedures Panel (IFPP).

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**4,000+**



Instrument flight procedures designed

**80,000+**



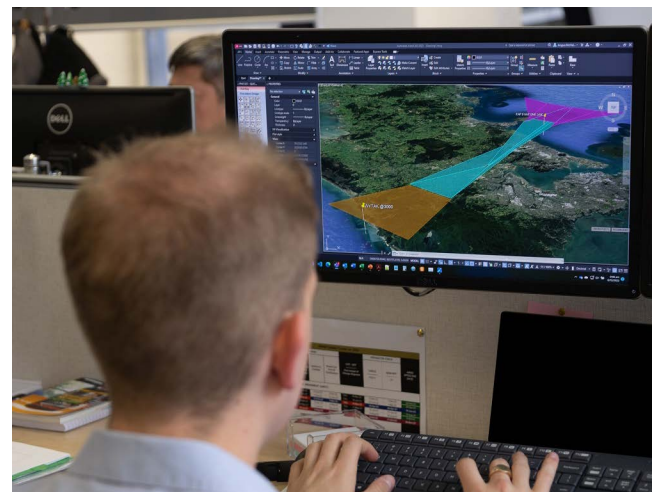
Nautical miles of flight routes managed

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## Performance Based Navigation

Performance Based Navigation (PBN) helps the global aviation community reduce aviation congestion, conserve fuel, protect the environment, reduce the impact of aircraft noise and maintain reliable, all-weather operations, even at the most challenging airports. It provides operators with greater flexibility and better operating returns while increasing the safety of regional and national airspace systems.

Aeropath has introduced PBN procedures into some of the most challenging airspace environments in the world improving safety and enabling jet operations to continue in a range of weather conditions.



# Aviation Services

Airways International provides equipment infrastructure and maintenance, flight inspection, data provision, upper airspace management and aviation consultancy services to airport and ANSP customers in New Zealand, the Pacific and around the world.



## Airfield infrastructure and navigation aids

Airways can provide the expertise you need for airfield infrastructure and air navigation service equipment. We have over 20 years' experience in navigation and communication systems, from project management through to onsite commissioning, and we've earned a reputation for quality planning and design.

Whether we are installing ground-based navigational aids in remote corners of the Pacific, or new surveillance equipment in a city-based radar centre, our engineers ensure the end result is a safe and efficient operation.

## Data provision

Quality information is crucial in this demanding world of real-time modelling, systems and statistics. Airways International can provide you with aircraft movement and other aviation data.

## Aviation consultancy services

Airways International has the experience and expertise to consult on ATM system engineering projects around the globe. Our experienced staff have worked extensively throughout the Middle East and Asia Pacific on significant aviation infrastructure projects.

## Supporting the growth of Pacific aviation

We are committed to working closely and collaboratively with our state partners across the South Pacific to support the development and improvement of air navigation services in the region.

Airways manages the upper airspace across the Auckland Oceanic Flight Information Region, which includes Tonga, Samoa, Niue and the Cook Islands, using our Oceanic Control System.

We provide ICAO compliant, independent flight inspection services to our customers in the Pacific. Our specialists are experts in calibrating radio and visual navigation aids and radar systems, and in validating instrument flight procedures. Our inspection engineers are also navigation aid experts, meaning they can add plenty of value to your business.

Airways has a long history and depth of experience working with South Pacific aviation regulators and operators to improve aviation infrastructure in the region. We also work closely with funding and industry bodies such as the New Zealand Ministry of Foreign Affairs and Trade (MFAT), the World Bank, the Pacific Aviation Safety Office (PASO) and the Association of South Pacific Airlines (ASPA) to assist the development of aviation across the South Pacific.





```

print('Select + str(modifier)) # modifier of 1 is the active ob
bpy.context.scene.objects.active = modifier.ob
modifier.object =
modifier.object =
rotation at the end add back the deselected mirror modifier object
mirror.mod.grip.x = True
mirror.mod.grip.y = False
mirror.mod.grip.z = False
mirror.mod.grip.x = False
mirror.operation = 'MIRROR'
mirror.mod.grip.y = False
mirror.mod.grip.z = False

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# Mirror modifier
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SELECTIVE

OBJECTS ACTIVE MODIFIER ON



**Talk to us today**

[international@airways.co.nz](mailto:international@airways.co.nz)  
[www.airwaysinternational.com](http://www.airwaysinternational.com)

**AIRWAYS**  
International