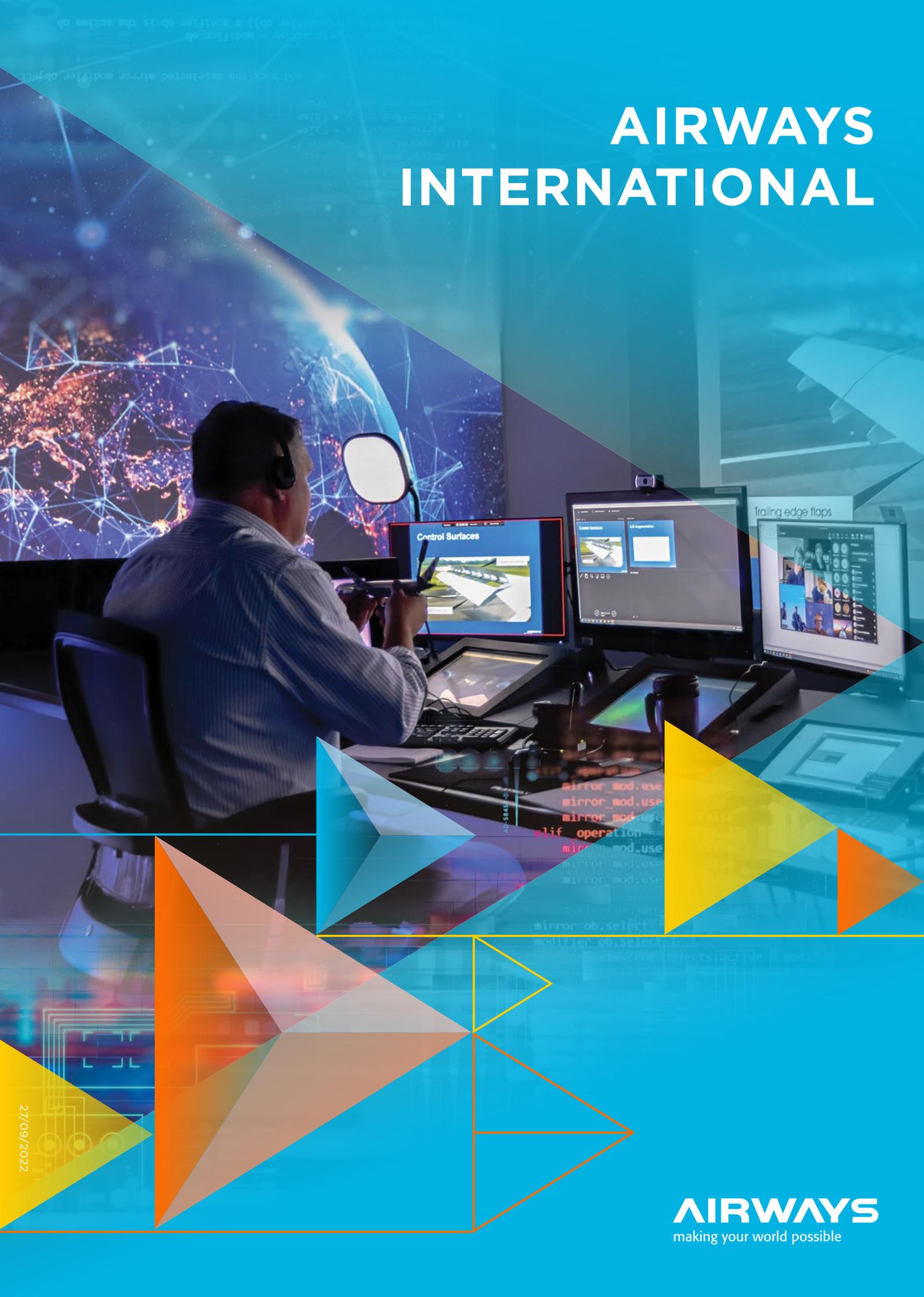


# AIRWAYS INTERNATIONAL



27/09/2022

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**



**20 years** of air traffic services training



**World's first** fully commercialised ANSP, since 1987



**Over 800 employees** across Airways



We provide services at **18 control towers and airports**



**30 million sq km** of airspace in our control

## Airways International

Airways International Ltd is the commercial arm of Airways New Zealand — providing training, digital products, 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



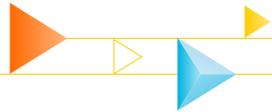
**FlightYield**  
Aviation revenue & billing



**Aeropath**  
Aeronautical information & Flight procedures



**AirShare**  
AN AIRWAYS COMPANY



# 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.

## Australian College of Kuwait



We have established a partnership with the Australian College of Kuwait (ACK) to deliver ab initio ATC training to Kuwaiti students, at a purpose-built ATC training academy in Kuwait complete with Airways TotalControl tower and radar simulators.

## VATM Train Abroad programme



We work with the Vietnam Air Traffic Management Corporation (VATM) to offer a programme for selected students to undertake ATC training with Airways in New Zealand.

## 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.

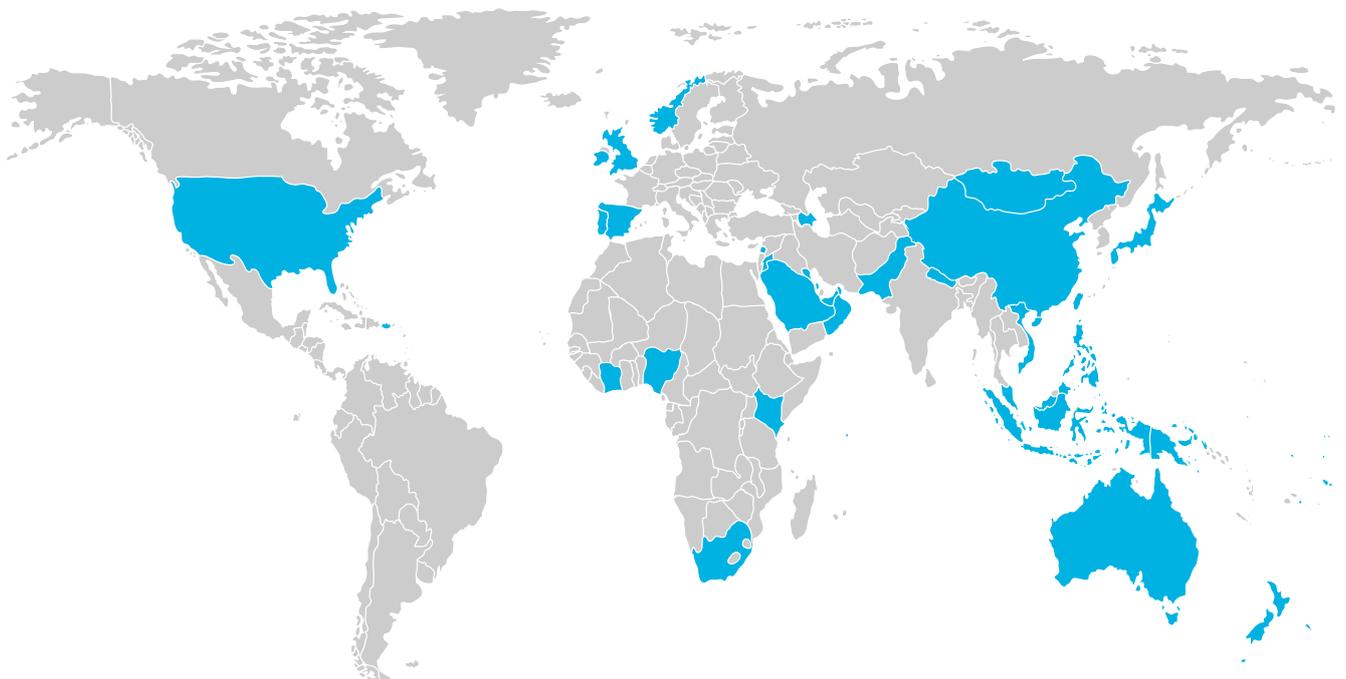
## Leidos



Airways International is collaborating with aviation technology provider Leidos on commercial projects and opportunities to create air traffic management opportunities - including the design and build of the SkyLine-X air traffic management system, a \$58 million system that will replace Airways’ two existing 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.

Airways Training understands the importance of providing quality training that focuses on the needs of air traffic services, our students and partners.

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.



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**  
Vietnam Trainee



### 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, fully equipped campuses and facilities, and internationally recognised programmes, Airways Training will make a real difference to your business.

We have developed a range of leading-edge digital learning technologies to enhance learning for today's generation of students. This includes advanced ATC simulation and interactive e-learning resources with dynamic content.

Employers can access advanced 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.

### Instructors and services

Airways Training instructors are highly experienced, both as teachers and as air traffic controllers.

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.

**20+** years   
of competency  
based training

**95%**   
training  
success rate

## 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 via AKO — studying as a cohort in a virtual classroom — or we can bring our training to you, customised to meet your needs. Check out our scheduled virtual AKO courses below, or contact us to discuss customised courses.

- ▶ [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 (currently approved for delivery in Kuwait and New Zealand) comprise core compulsory standards, and endorsements recognising the specialised application within the sector. Students can achieve both the ICAO course certificates and NZQA certificate and diplomas.

### 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.

#### ▶ [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 online/virtually via AKO, or face-to-face. All other ICAO courses are available face-to-face only, at our campuses or at your premises.

## Study options: NZQA pathways

Level 5 – Certificate (60 credits)	Level 6 – Diploma (120-180 credits)	Level 7 - Further study
<p><b>New Zealand Certificate Air Traffic Services</b></p> <p>Four unit standards:</p> <ul style="list-style-type: none"> <li>▶ Air law and operational procedures</li> <li>▶ Aeronautical meteorology and air navigation</li> <li>▶ Principles of flight and aircraft performance</li> <li>▶ Human performance</li> </ul>	<p><b>New Zealand Diploma Air Traffic Services</b></p> <p>Four endorsements:</p> <ul style="list-style-type: none"> <li>▶ Aerodrome Control and Approach Control Procedural</li> <li>▶ Area &amp; Approach Control Surveillance and Area Control Procedural</li> <li>▶ Oceanic Air-ground</li> <li>▶ Flight Information</li> </ul>	<p><b>New Zealand Diploma Air Traffic Services</b></p> <p>Five endorsements:</p> <ul style="list-style-type: none"> <li>▶ Aerodrome Control</li> <li>▶ Approach Control Procedural</li> <li>▶ Area Control Surveillance</li> <li>▶ Approach Control Surveillance</li> <li>▶ Area Control Procedural</li> </ul> <p><b>Bachelor of Aviation Management (Massey University)</b></p> <p>Credit transfer options available</p>

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:

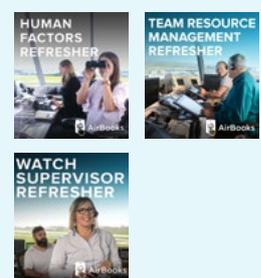
#### Introduction



#### Operations



#### Refreshers



#### ATSEP



#### Emergencies





## FLEXIBLE CONFIGURATIONS

Choose the size and portability of your simulator using off-the-shelf hardware. 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.



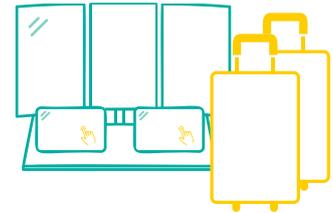
### Large CAB

LCD panel solution well suited for multiple advanced control positions



### Surveillance sim

Flexible configurations and integration options to meet your training needs



### Sim-in-a-suitcase

Modular, mobile desktop solutions that pack the full power of TotalControl

## 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.



### Seamless and secure

- ▶ One click software updates
- ▶ Secure cloud backups and rollback
- ▶ Advance cloud based systems, monitoring and analytics



### Collaborate and sync

- ▶ Work on aerodrome updates remotely with your team
- ▶ Tweak and test locally, deploy globally
- ▶ Keep track of all past changes and data history



### 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



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

SureSelect offers a range of test suites, accessed via an easy-to-use online platform where you can deploy assessments and view results. Our flexible approach allows you to tailor selection to your goals and budget.



### Automate the process

Improve efficiency



### Achieve impartial and fair selection

Validated tools



### Great candidate experience

Gamified tests



### Undertake role-specific assessments

Test ATC-specific skills & attributes



### Flexible

Unsupervised & supervised testing



### Mix & Match

Choose all or some of the test suites

## Toolkit



### ATC skill simulations

ATC-specific gamified tests:

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

Estimated time: 1 hr 30 mins



### ATC cognitive ability

Online assessment of core ATC abilities:

- ▶ Detail accuracy
- ▶ Coded reasoning

Estimated time: 45 mins



### Behavioural traits

Online questionnaire measuring key ATC traits, such as:

- ▶ Decisiveness
- ▶ Emotional Control
- ▶ Team
- ▶ Take Charge
- ▶ Learning Focus



### Interview training

AirBooks training to assess ATC competencies:

- ▶ Digital Interviewer training
- ▶ Sample ATC interview guides

## 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 (e.g. complete online) or supervised (e.g. at a testing centre), or a mix of both



As commercial and recreational drone use continues to grow at an exponential pace, the need to ensure the safe integration of drones into our global airspace requires careful planning and strong cooperation. With the ever-growing changes in airspace, ANSPs need to ensure they have the right tools to support safe, controlled skies. AirShare offers airspace intelligence & management for unmanned traffic through automated information flows and improved situational airspace awareness.

With AirShare on board, ANSPs can:

- ▶ Manage UAV flight requests
- ▶ Increase ATC situational awareness
- ▶ Reduce ATC workload
- ▶ Reduce risk and increase compliance.

### Flight information management

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

- ▶ Manage flight requests from a single operational console
- ▶ Integration options for Remote ID and live display of UAVs with automated alerts
- ▶ Communications with pilots to ensure flight operations are adhered to
- ▶ Dashboards for airspace managers

### Integration with multiple data sources

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

Options include:

- ▶ UAV detection systems,
- ▶ Pilot and drone registry systems
- ▶ UAV flight positional data
- ▶ Digitised airspace charts



**8 years**  
operating in live airspace



**200,000**  
flights logged



**Enhanced**  
situation awareness





# Aeropath

Aeronautical information & Flight procedures



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



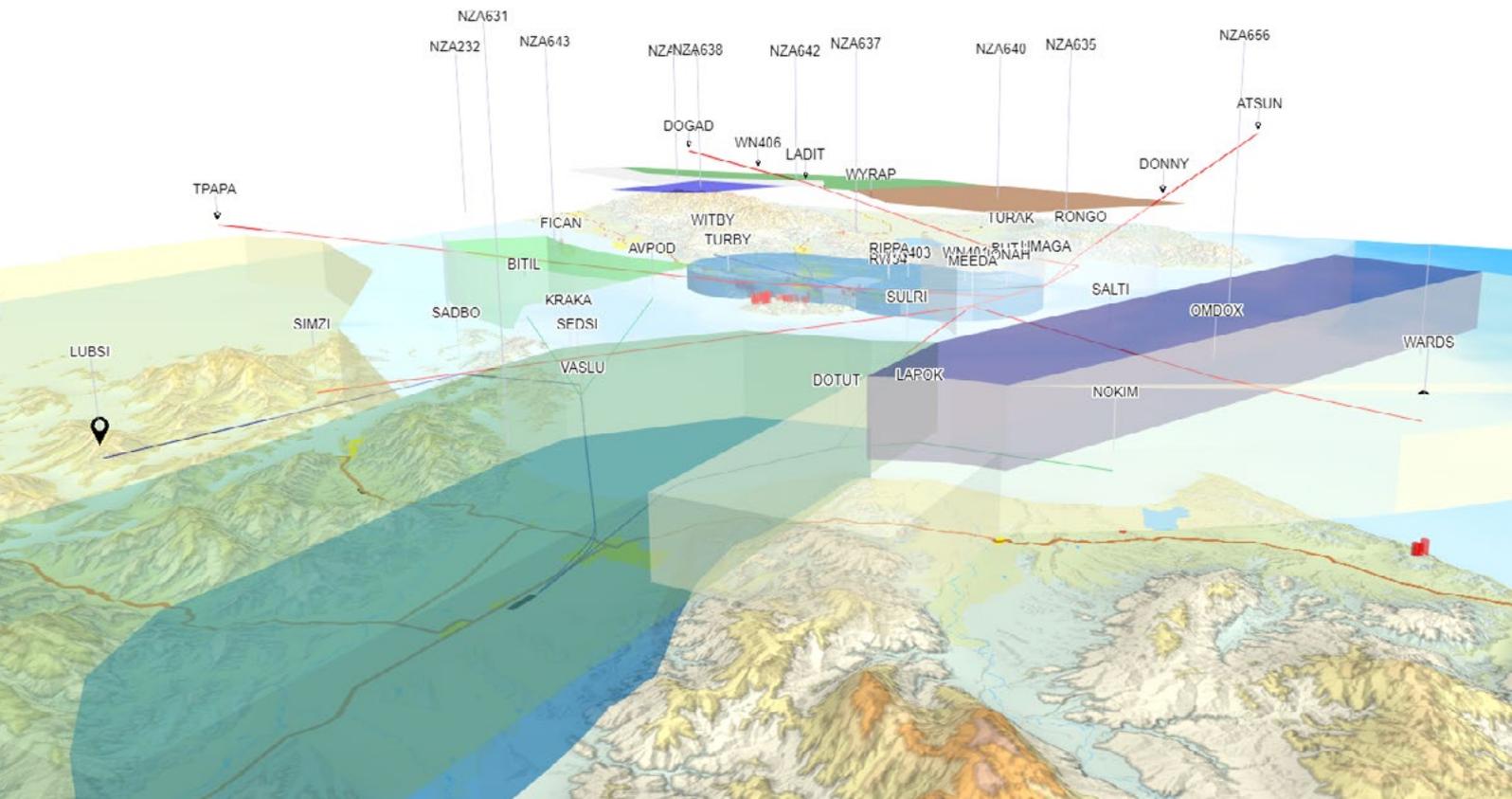
#### ICAO compliant

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.

## 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).

**3000+** 

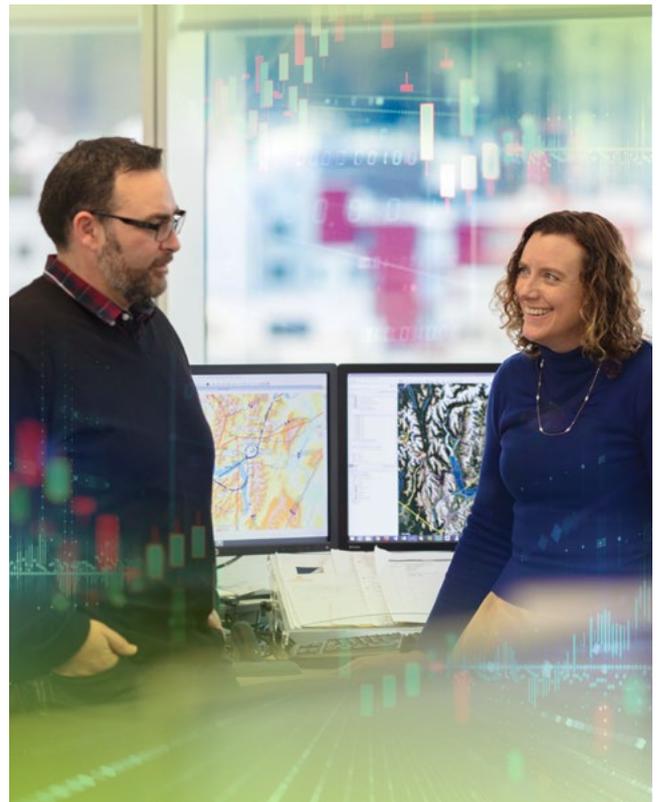
Instrument flight  
procedures designed

## 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. Across the mountainous terrain of New Zealand and islands of the South Pacific, PBN implementation has improved safety and enabled jet operations to continue in a range of weather conditions.

Aeropath has equipped aircraft to fly very precise paths with a high level of accuracy — increasing the number of flight movements into challenging airports, and bringing significant economic and financial benefits to airlines and the wider region.



## 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("Selected" + str(modifier_ob)) # modifier ob is the active ob  
bpy.context.scene.objects.active = modifier_ob  
modifier_ob.select  
mirror_ob.select  
#selection at the end - add back the deselected mirror modifier object  
mirror_ob.select = True  
mirror_mod.use_x = False  
mirror_mod.use_y = True  
mirror_mod.use_z = False  
elif operation == "MIRROR_Z":  
mirror_mod.use_x = False  
mirror_mod.use_y = False  
mirror_mod.use_z = True
```

```
mirror_mod.use_x = False  
mirror_mod.use_y = True  
mirror_mod.use_z = False  
elif operation == "MIRROR_Z":  
mirror_mod.use_x = False  
mirror_mod.use_y = False  
mirror_mod.use_z = True
```

```
add back the deselected mirror  
modifier_ob.select  
bpy.context.scene.objects.active = modifier_ob  
print("Selected" + str(modifier_ob)) # modifier ob is the
```

```
print("Selected" + str(modifier_ob))
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```
OPERATOR_CLASS
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```
Tool
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```
print("Selected" + str(modifier_ob))
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```
OPERATOR_CLASS
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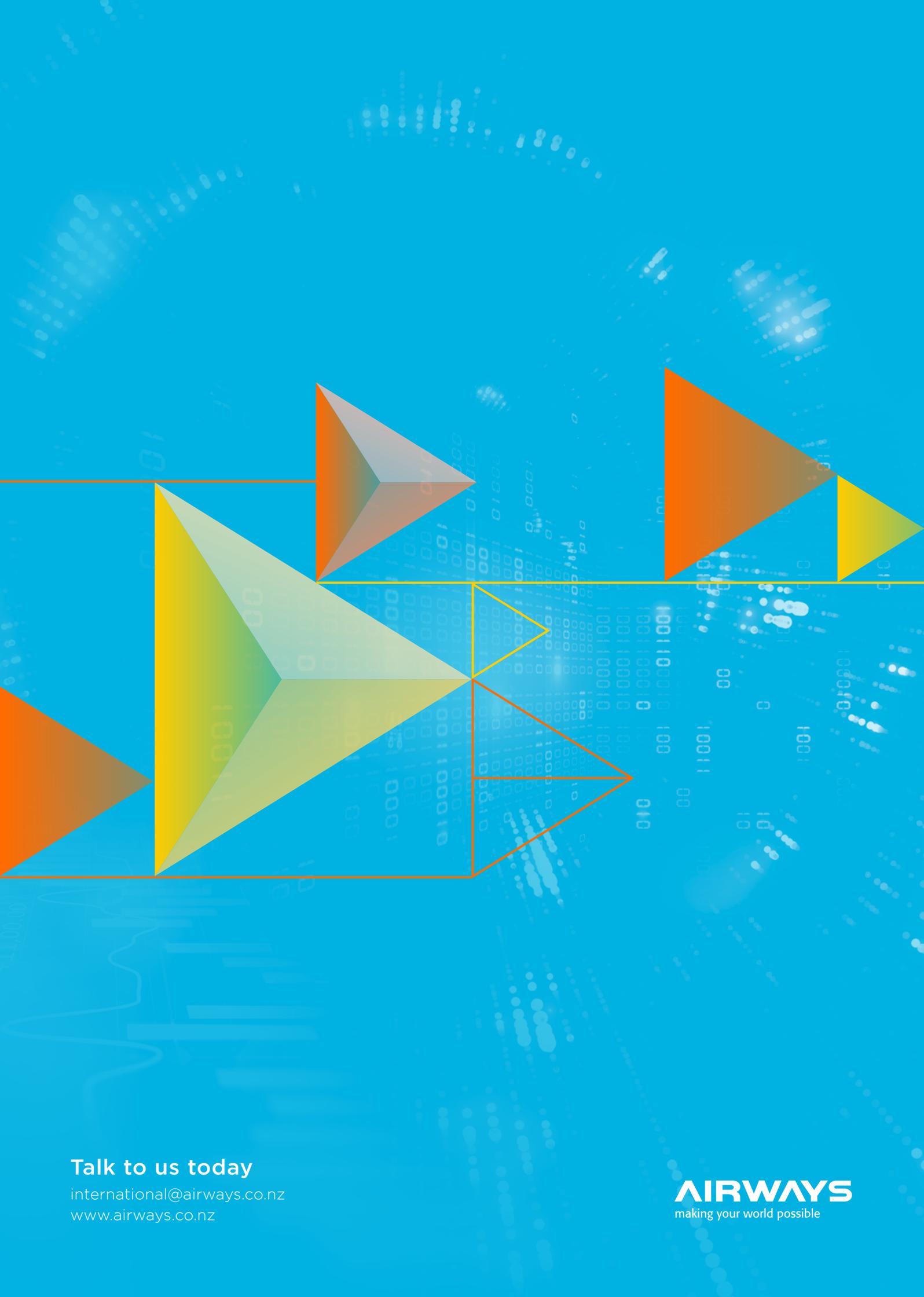
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Tool
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```
print("Selected" + str(modifier_ob))
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```
OPERATOR_CLASS
```

```
Tool
```

```
print("Selected" + str(modifier_ob))
```



**Talk to us today**

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

**AIRWAYS**  
making your world possible