Airways International Ltd: Fostering an innovation culture



Sharon Cooke CEO Airways International Ltd



Airways New Zealand



- Airways manages a vast airspace and delivers air traffic management services that are technologically advanced, safe, and reliable.
- Our customers in New Zealand comprise Airlines, Airports, Military, and General Aviation.
- We are committed to achieving socially and environmentally sustainable goals.
- Our subsidiary, Airways International (AIL) provides air traffic management consultancy, airspace design, and training products and services to over 60 countries.
- Our focus is on providing exceptional air traffic management services while maintaining social and environmental sustainability.





Airways International Ltd

International

Commercial arm of Airways New Zealand, supporting global air navigation service providers with cloud based digital solutions.

FL600 Oceanic Area

Aviation Services

FL245 Approach Controlled Upper Airspace services – Simulation piloting services Aviation consultancy

1500FT Uncontrolled

400FT

Low level

Aeropath

Procedure Design Pre-Flight FlightAdvisor

Based in NZ and overseas 69 customers in 33 countries

Products (Digital)

TotalControl – virtual simulation AirShare – UTM solution SureSelect – ATS selection tools

Airways Training

Campus based delivery AKO Virtual Academy AirBooks – self directed learning

Improved positioning with SouthPAN

Aeropath WLG Airspace design, AIM

<u>Airspace management services</u>

Airways CHC Training Products Sim Services ____

Airways AKL Sim Services

Upper Airspace Services

Being intentional about innovation





Recent innovations





INNOVATION IN ACTION: Digital aerodrome flight information solution





Flight information in a digital, interactive display – for use by ANSP flight service officers, pilots and airport operators using off-the-shelf technology

International

Challenges of AFIS at Milford Sound:

The Milford Aerodrome Flight Information Service (AFIS) is a unique service in New Zealand, as the Aerodrome Flight Information Officers (A/FIOs) are not permanently located in the Milford community but are based in Queenstown.

Location:

Popular tourist destination with difficult access and extreme weather means service disruptions on a regular basis – particularly in winter.

People:

Remote location risk to staff wellbeing due to isolation and away from families.

Costs:

Expensive due to remoteness, leading to high user charges or the requirement to subsidise the service.

Adjacent services:

Could the proposed solution also be considered for other aerodromes to improve safety and out of hours services?



PROJECT:

Digital Aerodrome Flight Information Solution

Could we develop a remote aerodrome flight information solution that:

- Improves service delivery to our customers
- Provides a better work-life balance for our staff
- Enhances safety for a lower cost than the existing staff-on-site or more expensive digital tower technology solutions.

Steps

- **Technology:** to provide a suitable Aerodrome Flight Information solution remotely usingoff-the-shelf technology
- **SME Validation:** Subject matter experts (Tech, ATS and Policy and Standards) to confirm technology and proposed solution meet requirements.
- Proof of Concept:- work with users to develop and refine the solution
- **Stakeholders** engagement with users, potential customers and regulators

Current AFIS components





Technology components of a remote D-AFIS















Interfaces

Traffic

Cameras and screens are all scalable to suit aerodrome FIS requirements.

Iterations during the build









The initial build



Third iteration: Enhanced





Alternate/Portable "Suitcase" build

Dual screen/Camera feed

Digital AFIS prototype



<u>Aerodrome</u>



FIS Remote location





Proof of Concept – Remote Aerodrome Flight Information Service



Themes

- 1. Surveillance picture provides better situational awareness than out the window observation (direct or via camera)
- 2. Centralised service has employee benefits: Working alongside peers, being part of a team and cutting-down long commutes
- **3.** Part 171 certification to be navigated for delivering a Part 172 certified AFIS service
- 4. Employees expect us to adopt appropriate technology to enhance the role/service



Use cases

- Remote information service

 (as opposed to providing just the technology)
- Part 139 UNICOM service an easier pathway to adoption.
 Could then be used to support AFIS adoption
- 3. UAV/AAM users see potential for adaptation/adjacent use for vertiports
- 4. A centralised service to extend local services when out of hours, or provider cover when local services are limited



1. Proposed live trial at Wanaka Airport

Starting 2024 to proof the technology and the solution. Service will be provided as a remote Unicom service from Queenstown Airport.

- **2. Investigate certification options** of the Aerodrome vicinity provides better situational awareness than out the window observation (direct or via camera).
- **3. Confirm software /technology/ communications configurations** Wanaka to be test site to optimise the solution that will be rolled out to other locations.
- Discovery / commercialisation test solution options and pricing with potential customers ie:remote - managed service or customer service delivery, onsite - customer service delivery.



Questions

Fostering an innovation culture