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FREQUENTIS, Qantas and Smart4Aviation win IHS Janes Technology award for innovative route optimising flight planning platform

Annual ATC awards 2019 recognise Frequentis, Qantas and Smart4aviation for enabling flight efficiency and fuel savings

The annual IHS Jane's ATC awards 2019 took place again at World ATM Congress in Madrid to reward companies and projects across six categories for their work over the previous 12 months. Australian airline Qantas developed a flight planning platform jointly with Frequentis, Smart4Aviation and the University of Sydney, to enable efficiency and fuel savings, winning this year's Technology award.

The Qantas flight planning platform (Constellation) can ingest rich data sets from external sources, allowing it to continually assess and adjust its flight paths while en-route, providing for the flexibility to fit with flow constraints, reduce fuel consumption and emissions and increase safety.

"Developing a flight optimisation platform was a vision of Qantas for some time. For Constellation to win this award is a significant achievement that shines a spotlight on what is now an operational reality. Together with Frequentis, Smart4Aviation and University of Sydney we have created a flight planning platform that combines best of breed products and latest data standards with cutting edge algorithmic techniques to enable flight planning optimization benefits across the Qantas network" says Mike Riegler, Manager Innovation and Support, Qantas Flight Operations Systems.

Frequentis provided smartDM, part of the Frequentis integrated smartAIM/CADAS portfolio, which allows Qantas to ingest global aeronautical data including digital NOTAM. The solution also allows Qantas to manage a layer of company navigation data that supports the flight planning engine to optimize within approved company constraints such as company routes and freeflight airspace. Based on this data, flight planning and flight plan optimisation is performed resulting in increased safety through accurate navigation data constraint modelling, better fuel prediction and significant business process improvements.

"We are pleased to be supporting an airline with its goals for route optimisation and fully support Qantas with their next challenge to open direct flights, Sydney to London and Sydney to New York by 2022. Capacity concerns are challenging the industry across the globe. By working together on innovative approaches for collecting dynamic data, and utilising it while en-route, enables Qantas to respond

positively to the capacity challenge.", says Dirk Withake, Frequentis Vice President Aeronautical Information Management.

Smart4Aviation's main contribution to the partnership was comprised of a rich and fully featured flight planning application and user experience, seamlessly integrated with the Qantas' proprietary flight optimisation engine and Frequentis' AIXM 5.1 and ARINC 424 nav data management solution. Experts in integration, Smart4Aviation connected over 30 different operational systems reducing the amount of backend effort required to manage a system of this complexity. Another Smart4Aviation key contribution, was the Airport Suitability module which analyses airports and airspace for operational status permitting the generation of highly accurate and fully compliant automated flight plans.

Additionally, Smart4Aviation integrated its Smart BRIEF, Smart NOTAM MANAGER, Smart MET, Smart COMM, and Smart VIEW+ solutions with other Qantas applications, which feed the engine with large amounts of valuable and timely operational data – creating an unmatched operating experience.

"The development of this system has been a tireless effort engaging teams of more than 100 professionals from Qantas, Frequentis and Smart4Aviation. The success of the project and the achievement of this milestone is a proud moment, not just in the success of the system itself but in the success of our partnership.", says Mike Lewis, Smart4Aviation CEO.

Qantas embarked on a project to replace its aging mainframe-based flight planning system in 2013 by engaging the University of Sydney to research and prototype an innovative path optimiser using Probabilistic Road Map (PRM) techniques. Qantas then engaged leading aviation software providers Frequentis and Smart4Aviation to provide the remaining components of the platform and migrate to a cloud environment. A key requirement was support for automation and future proofing through adoption of standards such as AIXM 5.

The annual IHS Janes ATC awards allow companies the opportunity to nominate innovative, field-proven technologies and projects, which are then reviewed by an experienced panel of industry experts. The technology award reflects significant contributions by equipment and systems suppliers.

Left to right: Ben Vogel – Janes IHS Markit, Mike Riegler – Qantas, Maciej Migacz – Smart4Aviation, Francesco Saraceni and Catalin Roman – Frequentis, Shane Harney – smart4Aviation, Geoff Bell – Qantas, Dirk Whitake – Frequentis. *Photograhy: Patrick Allen – HIS Markit*

About FREQUENTIS

Frequentis is an international supplier of communication and information systems for control centres with safety-critical tasks. These control centre solutions are developed and distributed by Frequentis in the business segments Air Traffic Management (civil and military air traffic control, and air defence) and Public Safety & Transport (police, fire and rescue services, emergency medical services, vessel traffic and railways). Frequentis maintains a worldwide network of subsidiaries and local representatives in more than fifty countries. The company's products and solutions are behind more than 25,000 operator positions in almost 140 countries. With this extensive portfolio, Frequentis is the leading provider of voice communication systems… all making our world a safer place every day!

For more information, please visit www.frequentis.com

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