

EasyJet to deploy inspection drones for aircrafts

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A demonstration of an aircraft inspection by a drone. Credit: easyJet

EasyJet, the UK's largest airline, has today announced it is working with the Bristol Robotics Laboratory, a partnership between the University of Bristol and the University of the West of England, to modify existing technology so that drones can be employed to inspect its fleet of 220 Airbus aircraft. The innovative technology will help the airline to operate even more efficiently, reducing delays while maintaining its industry leading punctuality and safety records.

The drones will be programmed to scan and assess EasyJet's planes, reporting back to engineers on any damage which may require further inspection or maintenance work. They are currently in development with a view to trialling them in the coming months and introducing them into

operation as early as next year.

Ian Davies, Head of Engineering for EasyJet, explained: "We have examined and assessed cutting edge [technology](#) across many different industries and are now applying a range of new technologies to the aviation sector for the first time to help us run our fleet of aircraft more effectively, efficiently and safely.

"The advantage of these emerging technologies is threefold - freeing up our engineering team to undertake more skilled tasks, keeping our costs down which in turn keeps our fares low and helping to minimise delays so maintaining our industry leading punctuality for our passengers.

"Safety is our number one priority and so all of these new technologies will be applied by our experienced engineering and flight crew to ensure our leading safety record is maintained."

Dr Arthur Richards, Head of Aerial Robotics at Bristol Robotics Laboratory, commented: "Aircraft inspection is a great application for drones. Coupled with smart navigation and computer vision, they can get accurate data from really awkward places.

"We look forward to working with EasyJet to develop safe, effective and efficient drone systems for this challenge."

Stephen Williams, MP for Bristol West, commented on the technology: "This is an impressive combination of Bristol's renowned expertise in both robotics and aviation. Our universities and long established aviation companies are world beaters in their fields and I welcome the exciting work that EasyJet is doing with the Bristol Robotics Laboratory."

EasyJet has also announced the development of a number of other innovative technologies, including 3D augmented reality systems,

bespoke apps, and electronic tablets that will be especially useful in some of the airline's more remote airports across its network.

3D augmented reality technology

Alongside the drone technology, EasyJet is looking at employing 3D Virtual Reality and Augmented Reality technology which enables a remote engineering team to see exactly what a pilot or engineer is seeing using virtual reality glasses. The glasses use the world's first high definition see through display system, providing augmented reality helping EasyJet to remotely diagnose a technical issue.

This technology will be especially useful in some of the airline's more remote airports across its network - the airline currently flies to 138 airports with some as far away as Sharm El Sheikh and Tel Aviv.

Currently engineers and pilots have to email pictures and call EasyJet's Operations Control Centre to try and resolve the issue over the phone. EasyJet is also currently trialling similar video technology, equipping engineers with technology that allow live streaming between the engineer on the ramp and EasyJet's OCC.

Ian Davies continued: "3D augmented reality technology is key to EasyJet reducing longer delays when an aircraft is down route. This will help us get greater clarity on any technical issues which occur hundreds of miles away. By wearing the [augmented reality](#) glasses, pilots or engineers down route can transmit live pictures and data to the EasyJet Operations Control Centre at Luton giving them direct access to visual information making it easier for them to resolve any technical issue."

Apps

EasyJet's engineering department has also developed their own bespoke apps for a wide-range of devices. These will allow our engineers to perform certain day-to-day issues more efficiently.

The apps are in different stages of development and we expect to be trialling a range of them over the course of the summer.

Paperless aircraft

EasyJet will complete the fitting of Panasonic Toughpads, in place of laptops and printed navigational charts, in all of its cockpits by the end of this month. This means that the airline is already nearing a completely paperless plane. These tablets will also make EasyJet one of the first airlines to use this type of device in all phases of flight and on the ground.

In addition, new 'e-paper' technology created by Sony could see EasyJet completely eradicate printed forms in the cabin; this would mean an entirely paperless plane. This new Digital Paper is the latest lightweight design from Sony which makes it feel like the user is writing on paper. Completed forms can be quickly saved into a central database enabling the airline's operational team quick and easy access to information on all of the aircraft.

EasyJet's fleet

EasyJet operates its fleet of aircraft in strict compliance with all manufacturers' regulations, often exceeding them. The airline employs a highly skilled workforce of 237 engineering staff as well as outsourcing to external suppliers in many bases across its network.

EasyJet's engineering department has a track record in innovation, last

year working alongside Airbus and Nicarnica Aviation to prove its ash detection technology which is expected to be fitted onto an EasyJet aircraft within the coming months.

EasyJet recently placed an order to acquire 35 Current Generation A320 Aircraft for delivery between 2015 and 2017 under its existing agreement and 100 New Generation A320neo Aircraft for delivery from 2017 until 2022.

Provided by University of Bristol

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