

TURN FOR THE BETTER

A futuristic fusion of artificial intelligence and video footage is paving the way for smoother aircraft turnarounds at Heathrow's T5. **Paul Sillers** reports

A turnaround – the meticulously choreographed flurry of convergence around an aircraft upon its arrival at the terminal gate that ensures passengers are safely deplaned, their luggage is unloaded, the cabin cleaned, the fuel tanks topped up, galleys replenished, and the plane boarded with the next cohort of travellers and baggage – is a feat of split-second synchronisation. Every participant in the process is up against the clock, a bit like a pit stop in Formula 1, to enable the next flight to depart on time. At present, as British Airways' customers disembark, ground crew manually monitor and verify 18 different activities that must be completed before the plane pushes back from the gate and heads off towards the runway for its next trip.

In the future, that process could be getting an upgrade, thanks to a trial at BA involving a fusion of artificial intelligence (AI) and live video feeds. Technology startup Assaia, an alumnus of BA's parent company IAG's Hangar 51 startup accelerator, has been collaborating with BA on an airside operations proof of concept, part of BA's £6.5bn investment in tech-based enhancements for its customers.

In the first phase of the trial, using an array of cameras set up around three stands at Heathrow T5, live video feed of the turnaround activity is funnelled through artificial intelligence technology, which observes, learns and contrasts what actually happens with the intended sequencing and timing of events. If any deviation from what is planned that could delay the aircraft's departure is detected, an alert is transmitted to the manager in charge via smartwatch, enabling them to intervene to get the turnaround back on track.

"British Airways operates up to 800 flights a day to and from Heathrow," says BA's director of airports, Raghbir S Pattar. "We run a highly complex operation, so efficient turnarounds are critical to ensure all 145,000 customers travelling through our home hub every day enjoy a punctual departure."

AI is fast becoming the secret sauce underpinning airside operational efficiencies in the airports of tomorrow. In a separate initiative, for example, BA has been trialling the use of AI in conjunction with

LiDAR (like radar, but using light instead of radio waves) to accelerate the flow of suitcases from the check-in and bag drop areas at Heathrow T5 using LiDAR-enabled autonomous baggage vehicles (aka dollies). It's part of a collaboration between BA, Heathrow Airport and vehicle specialist Aurigo, to assess emission-free airside tech that streamlines aircraft loading processes and – like BA's AI-powered aircraft turnaround trials – prepares the groundwork for future improvements in flight departure punctuality.

"Artificial intelligence is a rapidly evolving area of technology and I'm thrilled that we're the first airline in the world to harness it to further improve our customers' journeys through the airport," says Pattar. "We're the most punctual of the major short-haul airlines flying out of London and we're excited to introduce even more smart, tech-based solutions in 2020." ■

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All systems go! British Airways is using AI to improve punctuality

