Transforming travel: The AI revolution in airport passenger experiences

Around the world, a growing number of airports are trialling and successfully implementing new technologies to provide seamless journeys for travellers. Artificial intelligence (AI) is one of those innovations, bringing a whole host of exciting opportunities to not only improve experiences for passengers but also optimise and boost productivity for airports' own operations.

Temps de lecture : minute

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With passenger numbers continuing to rise following the pandemic, leveraging technologies such as AI - an industry itself that is predicted to reach a valuation of *$90B by 2025* – can be revolutionary in creating tangible improvements for airports and reducing any potential barriers to a seamless passenger experience.

Let's take a look at the ways AI is already enhancing the airport experience through each stage of a passenger's typical journey.

Virtual queues that reduce wait times at check-in

The integration of AI-powered facial biometrics – a technology that compares the passenger's passport photo with a live facial image - has brought about a remarkable transformation in the efficiency of airport security procedures. This process empowers travellers to streamline their own journeys through remote check-in, enhancing passenger satisfaction

while also moving them swiftly to the concession area.

AI-powered facial biometrics has been particularly ground-breaking for airports in the UK and Europe, whose revenues are greatly reliant on passenger purchases, and so can benefit from an increased amount of time spent by passengers in the likes of duty-free, cafés, shops and bars.

AI technology that enhances bag scanning

Security is a crucial part of every airport experience; however, long queues and extensive bag checks can also lead to understandable frustrations among passengers. For airports, if passengers are spending more time at security this ultimately means they have less time to spend in duty-free – and that has a direct impact on a vital revenue stream. To combat this, numerous European airports, *including Amsterdam's Schiphol*, are beginning to implement AI bag scanning within their security procedures.

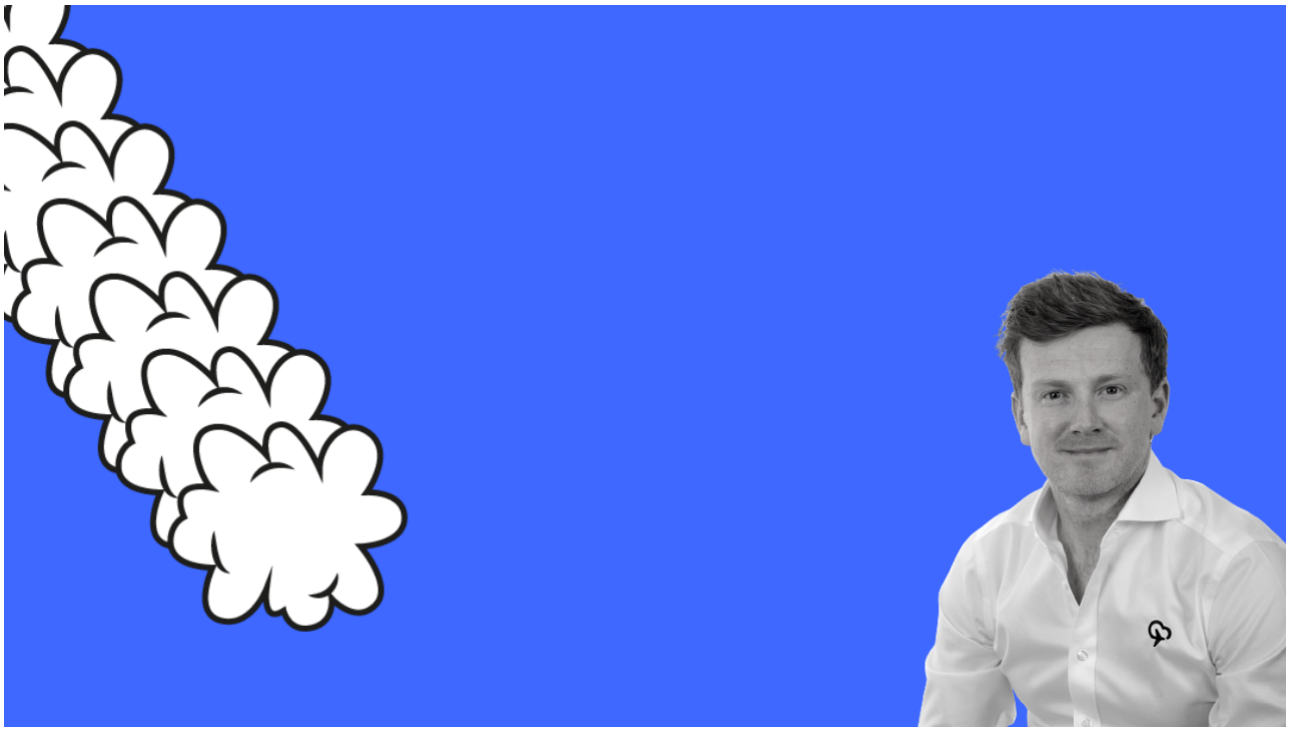
AI bag scanners rapidly and seamlessly sync with existing X-ray and CT systems, enabling swift and precise detection of prohibited items. This technology doesn’t reduce safety or accuracy - it in fact removes errors that can occur through manual security processes - and instead allows passengers to move freely through security without needing to remove items from their bags. Additionally, it lightens the workload for staff members engaged in this resource-intensive task, freeing them up to be assigned to other airport areas where their presence could be needed more.

Biometric technology for speedier boarding

In the past, you would likely have seen airline staff conducting manual boarding pass checks. Now, AI-powered facial biometric technology

is enabling more efficient boarding processes and greater accuracy of passenger identity verification, effectively removing the need for numerous passport and boarding pass checks in the airport.

Currently, many airports collect facial biometrics and scan boarding passes at the security checkpoint, but some are going even further. By leveraging AI-power technology, a number of airports are completely removing the requirement for passengers to show their boarding passes and passports at all. These airports allow passengers to pre-register their biometric information before their flight. And with automated touchpoints, passenger identities can be verified while they travel through the airport, removing the need to continuously present passports and boarding passes.



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Understanding how passengers move through the airport

Any airport that wishes to manage itself efficiently and improve customer satisfaction will first need to effectively manage passenger flow. A recent technological development to aid this has been the birth of computer vision technology. This AI-powered technology allows airports to track individuals throughout their airport journey, even when the airport is busiest. With computer vision, airports can anonymously and accurately track individuals from the moment they step foot in the airport, to their journey through security and duty-free, and up until they board their flight.

This enhanced capability for airport operational teams is empowering them to quickly address arising issues in real-time, as well as identify patterns that could offer opportunities for long-term improvements. Let's look at an example of this in action. Say there is a long queue at check-in or security, computer vision sends instant alerts to the relevant airport team, who can then redistribute resources accordingly. It also means airport operations teams can anticipate trends, by noticing patterns linked to security bottlenecks, and then use these learnings to improve capacity in the future.

The future of AI in Airports

Of course, challenges for airports remain, partly due to an overreliance on manual processes creating issues throughout the airport. Such issues are limiting airports' ability to achieve operational efficiency and recognise patterns that will enable them to enhance the passenger experience in the long term. And so, that is why *airport leaders must think proactively and look to innovative* AI-power technology to address the modern-day challenges they face.

By adopting this technology, airports can – and many already are – enhance their operations drastically. By implementing the likes of AI-powered biometric technology, facial recognition, bag scanning and computer vision, an airport will not only optimise their concessional opportunities but also – and arguably more importantly - revolutionise the overall experience for their passengers during their journey through the airport.

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