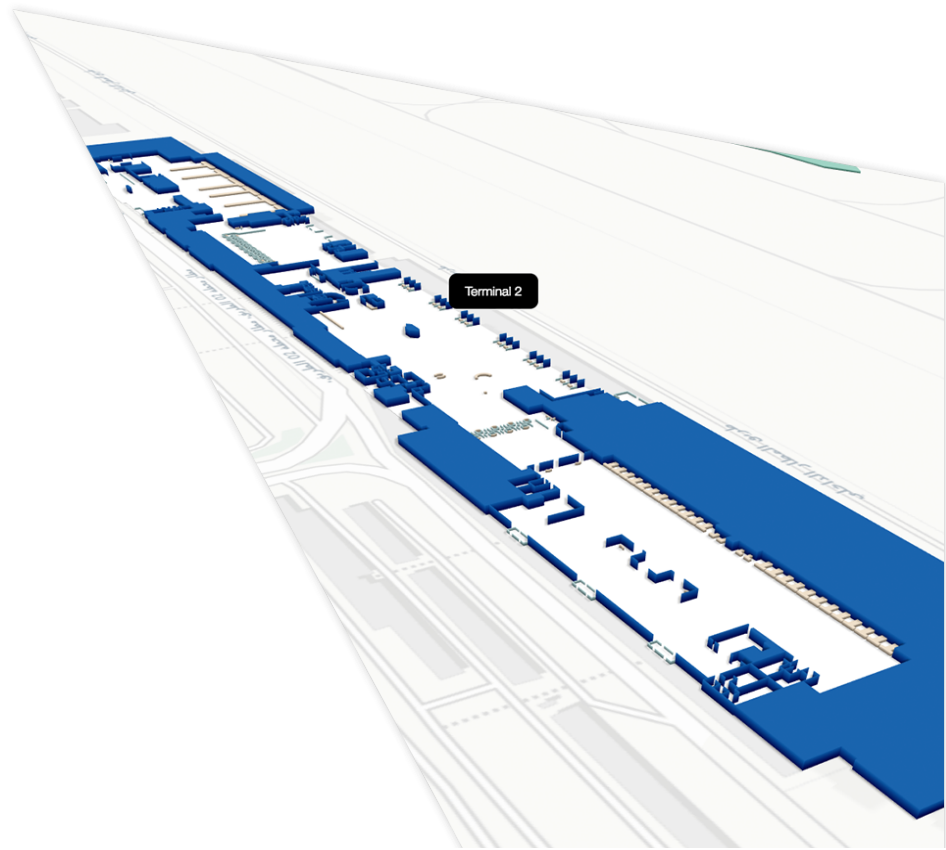


CASE STUDY

A Better Passenger Experience at

YOUR LONDON AIRPORT
Gatwick





Challenge

Complex indoor environments such as airports and shopping malls are notoriously challenging to navigate and this can cause travellers anxiety and confusion. The main challenge is that GPS systems – like Google Maps – are unreliable indoors due to a lack of signal and coverage. As a result, the most desired mobile feature at airports is navigation, with 55% of passengers finding it critical and 25% finding it very important.

The UK's second busiest airport, London Gatwick Airport, was looking for a way to simplify the passenger experience and optimise operations as part of their innovation program. The airport has two terminals, South and North. Both have shops and restaurants landside and airside, handling 43.1 million passengers.

As part of Gatwick's £2.5 billion transformation programme, Pointr was selected to provide procurement, delivery and maintenance of a fully functional indoor location system covering large portions of the airport. The goal was to improve passenger experience and to provide new insights into how to serve them better.





Solution

We were able to tackle this challenge by enabling our Deep Location technology at Gatwick Airport, using a combination of beacons and software tools.

Within just 2 months, we deployed 1,800 of small, battery-powered beacons throughout Gatwick Airport, covering all public areas in two terminals, including hotel access and car parks. By communicating with mobile apps, the beacons help locate where a passenger is in the airport. The positioning accuracy of the beacons is then enhanced by our Deep Location technology, using machine-learning algorithms and sensor fusion techniques. From day one we've focused on the technology so that the indoor navigation system doesn't use too much battery, is multi-platform, and is highly accurate throughout all publicly accessible areas of the airport.

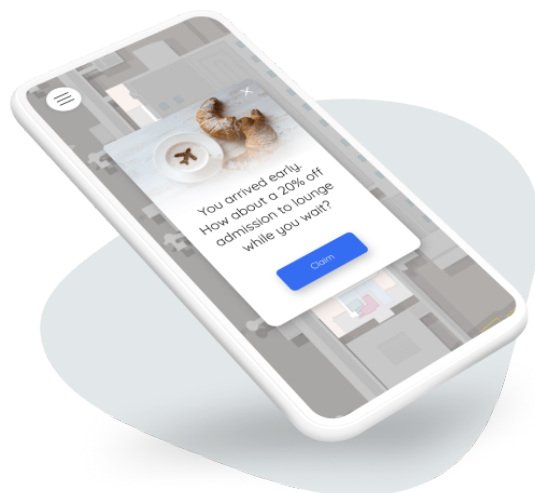
This work made Gatwick the first airport in the world to have a fully functioning indoor navigation system, with incredible accuracy both in terms of blue-dot location and orientation. By integrating Deep Location into the Gatwick apps on iOS/Android, LGW was able to offer:

- [Location-Based Services](#), providing indoor navigation with Augmented Reality navigation, voice activated control, Point of Interest search, and interactive digital maps across multiple levels. These applications feedback on the user's location and create opportunities to provide a service/information that is relevant to the user at that location. This could be directions to their gate or finding somewhere to eat or shop.
- [Location-Based Analytics](#), including heatmaps, engagement statistics and crowd simulation. Location-based analytics help airports make data-driven



decisions. They are able to identify footfall, high dwell areas, bottlenecks, and even queue lengths to optimise airport operations and the passenger experience in real-time.

- **Location-Based Engagement** powered by geofencing. This means that when an app user enters the designated geofenced area within the airport, they may receive a push notification from an app, a text message, or see location-based content and advertising. Airlines, retailers and other third parties may use the beacon system at Gatwick to detect proximity and send relevant offers or promotional messages, if the passenger has chosen to receive them.



There are many benefits of using this system, both for the customer, and the airport operator. The battery powered beacons are simple to install and manage, keeping roll-out and implementation as straight-forward as possible and costs low. In this project the total deployment time was just three weeks, followed by two months of testing and calibration.

Once in place the positioning system is now able to position visitors with $\pm 3m$ accuracy, and the navigation technology can recognise areas currently under



construction, or multi floor navigation (for example when taking lifts or relative proximity to retailers). App developers that would like to integrate the beacons' capacity into their tools have to just use the beacon registry or Pointr's SDK to enable these features.





Results

Within just 2 months, Pointr installed a network of beacons across the North and South terminals and calibrated its Deep Location technology to accurately locate where a passenger is in the airport and provide them with blue dot indoor navigation.

The result is a multi-level indoor map with great accuracy and dynamic navigation that takes into account the ongoing construction works within the terminals. This is supported by an augmented reality (AR) wayfinding tool, which allows passengers to use the camera function on their device to view AR directions to wherever they need to go within the terminal.



While Gatwick has integrated indoor positioning into its apps, indoor positioning is also useful for airlines, who are now able to send push notifications to warn



passengers if they're running late. Retailers and other third parties are also able to use the system for proximity detection of potential shoppers and push marketing messages and offers to those who have opted in to receive them.

The system is also used to help improve airport operations with generic information on people densities in different zones, such as queue measurement, streamlining passenger flows and reducing congestion.

We're proud of the work completed with Gatwick Airport, and the awards and recognition this project has received. Pointr is a member of the Airports Council International (ACI) and of the British Aviation Group. We've also contributed to the ACI Beacon task force, developing best practice on how to adequately deploy and control beacons at an airport.



Meet Pointr

The Deep Location™ company for smart airports

We digitise venues, enabling them to create immersive location experiences and to improve their operations. We work with major international customers in aviation, retail, hospitality and smart workplace.

Location-Based Services

Provide the finest location experience for your visitors.

- Digital Mapping & CMS
- Real-Time Positioning
- Turn-by-Turn Navigation
- Intuitive Search
- Asset Tracking
- Augmenting Reality

Location-Based Marketing

Engage with users based on their real-time location.

- Contextual Notifications & Geofencing
- Location Sharing
- Omnichannel Messaging (SMS, Email or Social Media)
- Instant Customer Surveys & Feedbacks
- Plug & Play; Easy Integration with CRM

Location-Based Analytics

Real-time analytics to make data-driven decisions.

- Heatmaps
- Crowd Simulation
- Zonal Analytics
- User Behaviour (Customer Flow, Footfall, Dwell Time)
- Predictive Analytics

Let's Talk

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