SUMMER PASSENGER OPERATIONS SECURITY READINESS

👤 Birmingham Airport

📍 United Kingdom

📋 Process optimisation, 3D fast-time simulation

📅 2023 / 2024 / 2025

THE NEED:

- Birmingham Airport tasked EBEA with conducting an analysis to assess the expected security performance during the upcoming S'25 season, revisiting the process conducted for S'24 and S'23 seasons.

- Development a quick-reference tool correlating demand levels, capacity levels, and corresponding queue lengths and times.

- Identification of potential mitigation strategies to manage queue lengths and reduce likelihood of overflow area use, ensuring smooth passenger flow and efficient operations.
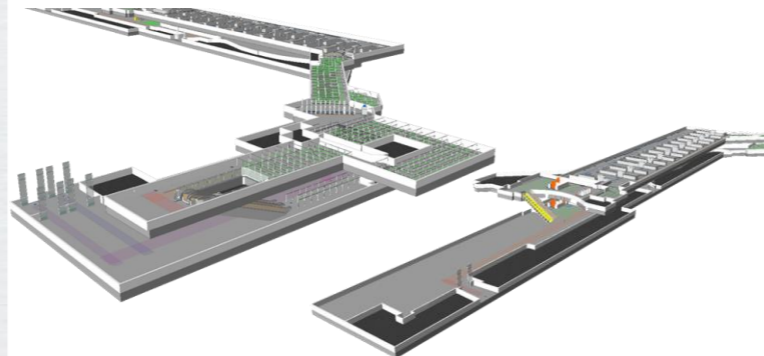
THE APPROACH:

- Developed fast-time simulation models to assess the performance of Birmingham Airport's security areas during the summer peak demand period.

- Identified representative demand levels and assessed pre-security queueing systems' capacity to handle expected demand.

- Assessed the analysis results against industry standards and the airport's business targets and space available to ensure compliance and identify areas for improvement.

THE SOLUTION:

- Estimated passenger queue time and queue length under various demand and capacity scenarios.

- Identified minimum and optimal infrastructure levels to effectively process forecasted demand and meet performance targets.

- RAG tool provided to BHX airport to be able to predict queue lengths and times every day, responding to changes in passenger and capacity forecasts.

KEY OUTCOMES:

- Assessment of security queueing levels

- Identification of queue management strategies

- Definition of optimal resource requirements

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