



Client Success Story

Major UK Airport Uses Brightly Software's Predictor Tool to Future-Proof Asset Maintenance in a Legacy Terminal

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Challenge

A major global airport in London, UK, needed to determine how to maintain operations within a legacy terminal until 2040, the earliest point at which major interventions or closure could occur. This requirement was driven by capacity constraints and ongoing development programmes across the wider airport estate. The airport sought to optimise expenditure, maintain customer and airline satisfaction, and provide a safe operating environment, while avoiding over-investment in the terminal.

The solution

The airport partnered with Jacobs, who utilised Predictor, a digital tool from Brightly Software, a Siemens company. Predictor was used to model and analyse the condition of more than 95,000 assets over the terminal's estimated remaining lifetime. These assets ranged from passenger-facing facilities and airside infrastructure to operational and support assets. Brightly's Predictor tool allowed a probabilistic lifecycle analysis, generating a model that forecasts maintenance demands and replacement costs across the terminal. The bottom-up approach that Predictor enabled delivered visibility at the portfolio, asset, functional, and strategic-location levels.

Predictor enabled the airport to:

- Understand the current condition of assets within the terminal.
- Predict future maintenance requirements and asset deterioration timeframes.
- Identify and schedule required projects, estimate costs, and minimise operational disruption.



The outcome

Predictor was selected due to its ability to manage large volumes of asset data, perform detailed bottom-up, asset-by-asset analysis, and provide flexibility in complexity depending on user needs. Jacobs also recommended Predictor as its preferred tool for this type of analysis.

By utilising Predictor, the airport was able to leverage existing asset data to better understand future development needs within the terminal and identify the optimal timing for investment across specific asset classes.

The digital solution incorporated potential closure dates and assessed the impact of major capital investments on terminal operations. The modelling horizon was extended to 2050 to account for an expanded operational window for the terminal.

The Predictor analysis supported the evaluation of a range of prospective tactical investments and associated timeframes, while also helping to substantiate ongoing works.

The collaboration between Jacobs, with its advisory and infrastructure engineering expertise, and Brightly, with its smart asset management solutions, proved highly effective. Together, they facilitated a seamless and efficient analysis and modelling process that was completed in approximately one year.

Chris Newson, Business Development and SME: Strategic Asset Management, Brightly Software, comments: “Predictive asset management and maintenance of critical infrastructure is key to safe, reliable, and cost-effective operations. Through utilising Predictor from Brightly, this major airport has gained the knowledge needed to minimise the whole-life cost of maintaining the terminal’s asset stock over the next 25 years. By having a detailed understanding of what, where, and when to maintain, the airport can ensure that it can deliver effectively and cost efficiently to minimise operational disruption.”

Learn more [about Predictor](#).



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Business Development and SME: Strategic Asset Management, Brightly Software