



## CASE STUDY

# SMARTER SYSTEM MONITORING TRANSFORMS PASSENGER TRANSIT AT A MAJOR UK AIRPORT

Serving tens of millions of passengers each year, one of the UK's busiest airports relies on an automated people mover system to transport passengers between terminals. Actemium delivered an independent condition monitoring solution, providing real-time insight into switch performance and supporting more proactive maintenance of these vital assets.

**Sector:** Airports  
**Location:** United Kingdom

**Expertise:** Automation  
**Scope:** Design, Build, Install, Maintain

# 01

## CLIENT & REQUIREMENTS

One of the UK's busiest airports, serving tens of millions of passengers each year, relies on an automated people mover system to connect its terminal buildings. Central to this system are a number of electro mechanical track switches (also known as guide switches), responsible for routing vehicles along different tracks. As operational patterns changed, these switches needed to operate more frequently and with greater reliability.

To support this shift, the airport required a modern, independent condition monitoring solution that would give maintenance teams better visibility of switch performance.

The client's priorities included:

- Real time insight
- Improved understanding of mechanical and electrical health; and
- A system that could be installed without impacting existing safety critical controls.

# 02

## CHALLENGES

The guideway switches were originally designed for lower usage and had limited ability to report meaningful health or performance data. Maintenance teams had no access to long term trends or automated alerts, and no way of identifying issues before they escalated into operational disruption.

The existing infrastructure also added complexity: motors, limit switches, drives, and control panels varied across different locations, and the core system provided operational control only - not condition monitoring. Any new solution therefore needed to be carefully integrated, remain completely independent of existing controls, and ensure there was no risk of interference with safety critical systems.

Scalability was another key requirement. The airport wanted a solution that could eventually be extended across all guideway switches, creating a consistent monitoring approach across the entire network.

# 03

## THE SOLUTION

Actemium delivered a set of independent condition monitoring panels, each installed alongside existing control equipment. These panels provided maintenance teams with real time visibility of switch status, mechanical movement, electrical performance and usage patterns.

The solution included:

- Local operator screens showing live switch health, alarms, and performance information;
- Long term data capture, enabling teams to track performance trends and spot changes over time;
- A completely standalone design, ensuring no interference with operational control systems; and
- A scalable architecture, ready for future rollout across all switches in the network

By focusing on non intrusive data collection, the system provided the airport the insights it needed without requiring major changes to existing infrastructure.

# 04

## BENEFITS

The new monitoring system has delivered several clear benefits:

### Improved visibility of key assets

Maintenance teams can now see the real time condition of each switch at a glance, helping them understand how equipment is performing between service intervals.

### Predictive maintenance capability

Trend data and performance history allow early identification of developing issues such as increased loading, slower movement, or component fatigue - reducing the risk of unexpected failures.

### No impact on airport operations

Because the system is fully independent, there is no interruption to the existing people mover control systems or the safety critical functions they perform.

### Future ready architecture

The design supports straightforward expansion, giving the airport a clear pathway to extend monitoring across all guideway switches as part of its wider asset management strategy.

## TECHNOLOGY PARTNERS

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