

ESCALATOR

LIVE MONITORING

PROBLEM

A number of London Underground stations are designated 'gold' status during significant public events and requires maintenance actions to be implemented that would mitigate any potential escalator failure points.

The ability to currently monitor failure points and maintain escalator reliability is virtually impossible given that range and age of escalators installed across the transport network in the UK.

CHALLENGE

The challenge was to create a communication system that could collect data direct from escalators in real time, with an analytical platform to detect variation in the escalator normal running signature and raise pre-set alarms prior to escalator failure.

As the communication system would take direct feed from the escalator controller, the solution must protect the escalators from cyber threats an unauthorised access.



LAST DATA RECEIVED: 19/06/2025 13:04:02 BST	
Software Version	V01.32
Job Number	E0344
5V I/O Healthy	☒
5V Comms Healthy	☒
24V Healthy	☒
Brake Mon Fail	☐
Safety Chain Latch	☐
Speed Mon Fault	☐
Handrail Fault	☐
Missing Step Fault	☐
Drive Fault	☐
Broken Chain Switch	☐
Trap Door Switch	☐
Direction	Stationary
Speed	1140 RPM
Speed Monitoring Timer	2.98 s
Left Handrail Timer	2.98 s
Right Handrail Timer	2.94 s
Top Missing Step Timer	1.38 s
Bottom Missing Step Timer	1.38 s

SOLUTION

Our data harvester connects into the escalator controller, taking constant inputs/outputs, alarm status and health condition, which is fed to our secure cloud-based servers. After the data is processed, the escalator display, together with real-time current status and graphs showing historic trends is available on any web enabled device, with username and password protection.

Data is transferred through a tightly controlled, one way communication channel that prevents any access back to the escalator unit being monitored.

BENEFITS

- Regulatory compliance, with evidence-based logs and reports.
- Ensure adherence to operational and safety standards.
- Reduces labour costs for continual manual checking of employee attendance.

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