

Case Study

AVANTI WEST COAST: ENHANCING STATION SAFETY WITH AI VIDEO ANALYTICS



Avanti West Coast partnered with SECOM to explore how Eagle Eye Networks' AI server could enhance health, safety, and security across its stations. The AI technology was deployed to identify potential safety and security risks, such as falls, overcrowding, left baggage, and trespassing, in real time. Automated alerts were then sent to relevant staff members for immediate action, helping to improve response efficiency and passenger safety.

AIMS & OBJECTIVES

Avanti West Coast sought to leverage smart technology to create safer and more secure environments for passengers and staff.

Key objectives included:

- Implementing AI-driven monitoring to detect safety incidents such as falls, overcrowding, and left baggage.
- Enhancing security by identifying and escalating trespassing incidents directly to the appropriate department.
- Reducing response times through automated alerts sent to designated staff.
- Using system-generated reports to inform long-term safety and process improvements.

Two trial sites were selected, each with five cameras configured to test the AI's ability to identify and classify incidents as either important or critical, prompting the correct response chain.

CONTEXT & CHALLENGES

Avanti West Coast stations had been experiencing recurring safety and security concerns, including:

- Increased occurrences of left baggage.
- Passenger slips, trips, and falls.
- Unauthorised trespassing on railway lines.

These challenges not only affected passenger safety but also impacted overall customer experience. The company aimed to use AI technology to proactively identify these risks and enable faster, more informed interventions.

AT A GLANCE

COMPANY

Avanti West Coast

INDUSTRY

Rail Transport Industry

SOLUTION

AI CCTV & Video Analytics

“The initial findings have been an interesting read and offer valuable insight into how we can make improvements to our focus areas.

The alerts require further development to ensure messages remain actionable and effective, but the results so far are very promising.”

SANDI SIDHU

Performance Project Manager,
Avanti West Coast

WHY SECOM?

SECOM was already Avanti West Coast's trusted provider of the Eagle Eye Networks platform. Leveraging this existing partnership, SECOM proposed deploying an AI server with advanced learning capabilities. This approach allowed Avanti West Coast to build on its current infrastructure while gaining access to a scalable and intelligent safety monitoring system.

RESULTS

The AI server was successfully implemented across two trial sites. Key outcomes included:

- Improved incident detection: The system reliably identified critical safety and security issues in real time.
- Data-driven insights: Automated reports provided valuable information to support continuous improvement.
- Positive stakeholder feedback: The success of the trials was documented and presented to Avanti West Coast's board, demonstrating measurable improvements in operational safety.

While initial results were strong, the team identified the need to continue refining the AI's accuracy to minimise false alerts. Despite this, the rate of incorrect notifications remained low and manageable. Encouraged by these results, Avanti West Coast is now exploring deployment at three additional sites, with full rollout anticipated by Q4, 2025.

CLIENT TESTIMONIAL

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– Sandi Sidhu, Performance Project Manager, Avanti West Coast

INTERNAL PERCEPTION

Early feedback from Avanti West Coast teams has been positive. Staff found the system intuitive and appreciated the actionable insights it provided. The initiative has highlighted opportunities to further align alert responses with operational priorities, fostering a proactive culture of safety and continuous improvement.



SECOM PERSPECTIVE

"Working with Avanti West Coast on this project has been a great example of how AI can bring tangible safety benefits to transport environments. By combining advanced analytics with existing CCTV infrastructure, we've helped create a proactive solution that supports staff and protects passengers. It's exciting to see how this technology is already driving measurable improvements and setting the stage for future innovation."

– Matthew Bradley, Regional Security Consultant, SECOM PLC

FUTURE DEVELOPMENT

The next phase of the project will focus on:

- Expanding AI implementation to additional stations.
- Enhancing algorithm accuracy to reduce false positives.
- Integrating incident data with broader safety management systems.

Through this continued collaboration, Avanti West Coast and SECOM are setting a new benchmark for rail industry safety, through innovation and AI technology.

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