London Heathrow Airport

Achieving a unified view across large-scale airport operations

Name
London Heathrow Airport

Industries
Transportation

Location
London, UK

Products
Genetec Security Center, Genetec RSA Surveillance, Genetec Mission Control, Genetec AutoVu, Genetec Clearance

Heathrow

London Heathrow Airport drives increased value from investment in Genetec solutions to meet new business requirements

With four passenger terminals and one cargo terminal, London Heathrow is the UK's busiest airport. Every year, nearly 80 million passengers and 14 million tonnes of goods pass through the airport. With so much on the go, operational efficiency is paramount. Over 76,000 employees work around the clock to manage 1,300 daily take-offs and landings, support 89 airlines that fly to 239 destinations across 89 countries, and secure the expansive 1,227-hectare site.

"We're essentially running a small city operation that happens to be called Heathrow," explained Danny Long, IT Product Owner at Heathrow for physical security products. "Alongside the traditional airport security functions, we're responsible for the monitoring of roads, retail space, three train stations, a bus terminal, offices, a church, fuel stores, a high voltage electrical network and all the other associated infrastructure that maintains passenger flow."

Having these various locations requires constant and real-time video monitoring. However, Heathrow Airport also needed a flexible solution that could support a wide range of applications and provide reliable visibility across all airport operations.

The security team at Heathrow understands that the value of a 360-degree operational view can extend well beyond security. For this reason, they engaged with Genetec™ to design a system that could keep pace with the full scope of their ambitions.

Optimising Security Center for various use groups

The proposed solution was built on a robust and flexible foundation— Genetec Security Center. This unified security platform ensures that the Heathrow team can manage all cameras, sensors, and other security technologies through a single interface. This leads to significant efficiencies as all users have just one software platform to master and maintain.

Since Security Center is highly granular, the Heathrow team is able to customise the platform to meet the needs of various user groups. Now, different teams and users only have access to the systems and applications they require to do their job. This helps them stay focused on their tasks, while also strengthening data privacy and cybersecurity compliance.

"We have to cater for about 90 different stakeholder groups working across 110 distinct control rooms, all of whom have very different access rights and requirements of the system," explained Long ."Beyond those directly employed by Heathrow, we also had to consider the many third parties who require some form of system access. For example, law enforcement, government agencies, airlines, and retailers."

The innate flexibility of Genetec Security Center helped Heathrow achieve these goals. The team can choose from an ecosystem of over 900 compatible security solutions and

integrate other airport systems with Security Center using the Genetec Software Development Kit (SDK).

Custom dashboards can also be created for different users and applications. For example, operators monitoring baggage belts can receive automated alerts if a bag falls off the carousel. Operational staff can be informed when security queues are growing too long. IT staff get access to system health monitoring dashboards, alerting them to cameras that fall offline or require a software update.

Expanding Security Center to meet new airport needs

The collaboration between Heathrow Airport and Genetec began in 2016, with the deployment of 2,000 cameras across the site. Today, the companies continue to work together on scaling and evolving the Security Center platform at Heathrow. Every year since the start, the Heathrow team has added over 500 cameras and upgraded an average of 1,500 cameras. Currently, there are 9,000 cameras deployed with plans to ultimately reach 10,000.

Genetec Security Center now provides airport security teams and third parties across its 90 stakeholder groups with unified visibility. This helps streamline passenger flow and enhance the overall traveller experience across the airport. For instance, operators now monitor over 150km of baggage belts to ensure that there are no process disruptions. They also use Security Center AutoVu™, the automated number plate recognition (ANPR) system, to keep track of over 150,000 vehicles entering and exiting Heathrow each day.

All video and data comes back into one platform, providing personnel with real-time insights that can enhance decision-making. Having a single unified platform also prevents vendor complexities that can occur when many solutions from different providers are combined.

"I'd say our usage of Genetec is 50% for security and 50% for operational efficiency," said Long. "My job is to translate business requirements and business challenges into workable solutions and Genetec provides me with valuable tools with which to achieve that. Our experience with Genetec has been very positive. We're only looking to expand in terms of the size and usage of the system."

Growing airport security without limitations

The close partnership between Genetec and Heathrow has helped the airport maximise all technology investments. The Heathrow team has been able to combine various business and security systems into one platform, all whilst ensuring various users can benefit from the data and video they're collecting to achieve different objectives. This has led to increased operational efficiency, stronger security, and a smoother experience for passengers and personnel across the airport.

Moving forward, Heathrow plans to keep expanding the Security Center deployment. With the flexibility to choose from an ever-growing list of compatible technologies, the Heathrow team knows they can keep up with continuously evolving requirements.

"We've got cameras 80 metres in the air on top of our control tower that must withstand extreme weather conditions. We've huge numbers of regular cameras operating throughout the terminals and we've low-light cameras in baggage areas that are in darkness 99% of the time. Bringing all of these together inside one platform is transformational to our operations," concluded Long.

Infrastructure at a Glance

Genetec Security Center: a unified security platform that blends IP-security systems in one platform to combine video monitoring, access control, licence plate recognition, intrusion, and more.

RSA: uses radar, LiDAR, fence intrusion detection and video analytics to detect potential intruders and drones to strengthen security across the varied airport landscape.

Genetec Mission Control™: a decision management system that simplifies response coordination between stakeholders and speeds up incident resolution.

AutoVu: automatic number plate recognition (ANPR) that vastly simplifies parking management, monitors traffic flow and brings added security.

Genetec Clearance™: a digital evidence management system that simplifies compliance, enabling authorised personnel to securely share evidence with third parties in a controlled fashion.

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