

Auckland Transport

Auckland Transport, the transportation agency for the city of Auckland, New Zealand, steered a Big Data project to glean video analytics from more than 2,000 closed-circuit television (CCTV) cameras, using Micro Focus® IDOL. As a result, the city is closer to realizing its vision of safer roads and efficient public transportation.



Overview

Five years ago, Auckland Transport was established from six regional councils to oversee roads, traffic networks, and public transportation. The merger yielded five different operational centers with various technologies. A small staff monitored hundreds of older CCTV screens and tracked inputs on pedestrians, cyclists, and vehicles. "We were missing so much," says Roger Jones, Auckland Transport Chief Technology Officer. "The cameras were being used for reactive investigation rather than active problem management."

Challenge

Making the roads safe necessitates pinpointing hot spots and trends, mitigating and reacting

swiftly to issues, and monitoring the performance of the entire transportation network. In addition, multiple stakeholders and partners—from police and emergency responders to third-party application developers—need actionable insight on travel activities.

"Our stakeholders want fast, real-time data about traffic lights, congestion, buses, and trains," Jones notes. "They want to use the analytics to transform their business operations day-to-day. We didn't have that wealth of data."

The agency faced the challenges of launching a new CCTV system, converging the units and their data, and then assimilating and churning out vast data volumes to those who need to know.

Solution

The agency selected video analytics powered by Micro Focus IDOL, a data analytics solution that enables personnel to derive insights and patterns from massive amounts of real-time streaming video data. Housed in the agency's facilities, HPE ProLiant BladeSystem, HPE 3PAR StoreServ Storage, and Micro Focus Critical Watch support the IDOL platform.

The agency uses Micro Focus Intelligent Scene Analysis System and Automatic Number Plate Recognition for surveillance

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Chief Technology Officer
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At a Glance

Industry

Government

Location

Auckland, New Zealand

Challenge

Upgrade the city-wide surveillance camera infrastructure and implement an on-premises big data analytics platform to provide fast, real-time data to stakeholders and transform business operations.

Products and Services

Lorem

Results

- + Auckland City services improved with real-time data channeled to stakeholders and partners
- + Proactive problem management with incident, hot spot, and traffic violation detection
- + New applications developed and user experience improved with real-time, rapid streaming of high volume data
- + End-to-end batch file processing time cut in half

“The public safety is a huge step increase,” Jones admits. “That has financial ROI across the medical and broader community spectrums. As a transport agency, our IDOL analytics platform is helping us exceed customer expectations and shape positive perceptions.”

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Chief Technology Officer
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and to gather accurate details about vehicles and traffic scenes all across the largest city of the country.

Results

Exceeding Customer Expectations

The agency extracts about 1 TB of data monthly from the train CCTVs and at least 8 PBs of data weekly from street cameras mounted at intersections. In addition, the Microsoft SQL Server-based warehouse holds around 3 TBs of data. The IDOL data analytics platform processes CCTV video analytics, integrating that data into the incident management system, also on the IDOL platform.

Approximately 200 video analytic schemes run in real time, enabling staff to respond to issues that make 1.4 million citizens safer on the road. Agency personnel can detect traffic violations, congestion, and parking problems, as well as harness patterns uncovered by the IDOL platform.

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Putting the data to work, the agency has gained an integrated ticketing system with insight on travel times, patterns, trip frequencies, and demographics.

“We can now start to tailor our messaging, especially for transport, to the stops where people are at the right time of day,” Jones says. Instead of conducting ad-hoc surveys, city planners can use the real-time data from license plates to construct heavy transport and trucking options.

“This is very much about the planners having reliable information,” Jones says.

Enabling Strong Analytics

Current statistics and other significant volumes of data—such as the parking system—reside on the Micro Focus Vertica analytics platform, which processes structured data quickly. IDOL accelerates the delivery of relevant knowledge, linking statistics with historic corporate information and financials in the SQL warehouse.

The warehouse data integrates with the Vertica and API Management Solution data stores to provide integrated reports at the front end. The data analytics platform provides faster end-to-end batch file processing. Previously, batch processing took 4.5+ hours. As a result, service, bus, and ferry operators could not leverage needed information when starting their work day. Now, batch processing finishes in 2 hours.

“We have a huge performance increase,” Jones explains. “When the operators come in to work, they have yesterday’s information, and they can make the right business decisions. The API Management Solution platform can manage streaming of high data volumes at high velocities.”

Through its investment in big data technologies from Micro Focus, Auckland Transport is building upon its “Future Cities” vision, one in which developers and officials employ all types of data, sensors, and technologies to improve products and services for their citizenry. Jones sees the agency continuing to enhance resident experiences as more agency stakeholders and partners fully grasp the potential of big data.

“We are looking to enable them to take that data and do something with it, find patterns we don’t have the expertise to find, and deliver value back to us and to everyone else. We’ve provided the platform and enabler. They must pick it up and run with it,” he concludes.