Micro Focus helps realise Auckland Transport's vision to make 1.4 million citizens safer on Auckland's roads

Human Interest Story
Predictive Analytics

At a glance

Industry:
Government

Partner:
Auckland Transport

Location:
Auckland, New Zealand

Context:
Making Auckland roads safe for all its users by pinpointing hot spots and trends, and reacting swiftly to issues

Our Response:
Micro Focus IDOL

Impact:
· Proactive traffic problem management to keep people safe
· Promote safety with insights into transport use
· Improved experience for Auckland commuters

Focus Area:
Predictive Analytics

Auckland Transport is a Controlled Organisation of Auckland Council, responsible for all of the region's transport services (excluding state highways), from roads and footpaths, to cycling, parking and public transport. The organisation combines the transport expertise and functions of the eight former local and regional councils and the Auckland Regional Transport Authority (ARTA).

Auckland—a growing city with a transport network under pressure

Transport is a key component of a city's success. Auckland is growing and as more people live and visit there, the number of trips taken on transport networks is increasing. A small team monitored hundreds of older CCTV screens and tracked input on pedestrians, cyclists, and vehicles. "We were missing so much," says Roger Jones, Auckland Transport Executive General Manager. "The cameras were used for reactive investigation rather than active traffic problems, such as congestion within the city center and the arterial roads in and out of Auckland. We knew we could do better."

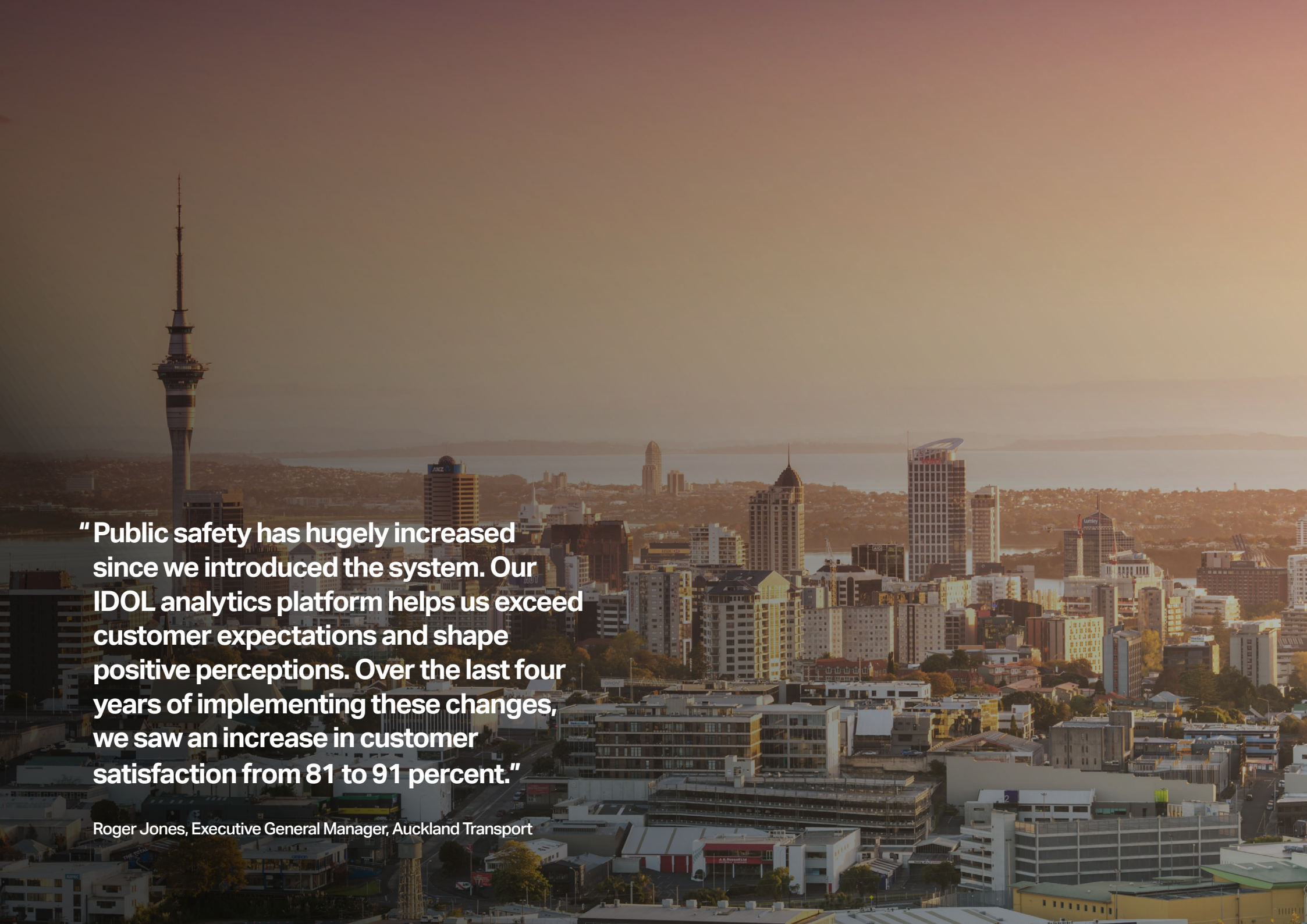
"The space available for transport networks is finite," he continues. "This means that we need as many people as possible to travel using efficient forms of transport; such as walking, cycling and public transport. These alternative transport options take less space and are more environmentally sustainable than private motor vehicles. With less pressure on the road network there is more capacity available for critical vehicles that need the road, including road-based public transport, emergency services, and freight."

Context

‘Future Cities’ vision to improve public safety

Building on its ‘Future Cities’ vision, the city of Auckland had a major refocus on public safety, and introduced a dedicated in-house team of video analytics specialists. They were very clear that to make the roads safer they needed to pinpoint hot spots and trends, mitigate and react swiftly to any issues, and monitor the performance of the whole transportation network. The team needed to react to red light running at intersections, and near misses at railway level crossings, among other priorities. Swift detection of wrong way drivers was also vital.

“Police and emergency responders want fast, real-time information about traffic lights, congestion, buses, and trains,” Jones notes. “They want to respond faster to emergencies, but we just didn’t have the data intelligence to help them.”



"Public safety has hugely increased since we introduced the system. Our IDOL analytics platform helps us exceed customer expectations and shape positive perceptions. Over the last four years of implementing these changes, we saw an increase in customer satisfaction from 81 to 91 percent."

Roger Jones, Executive General Manager, Auckland Transport

Compliance encourages positive road user behaviour

> **"CCTV data analytics through IDOL has helped us provide a safe and efficient transport network. We've introduced 20 percent more buses to operate at peak times, reducing waiting times, and getting commuters around the city faster."**
>
> **Roger Jones, Executive General Manager, Auckland Transport**

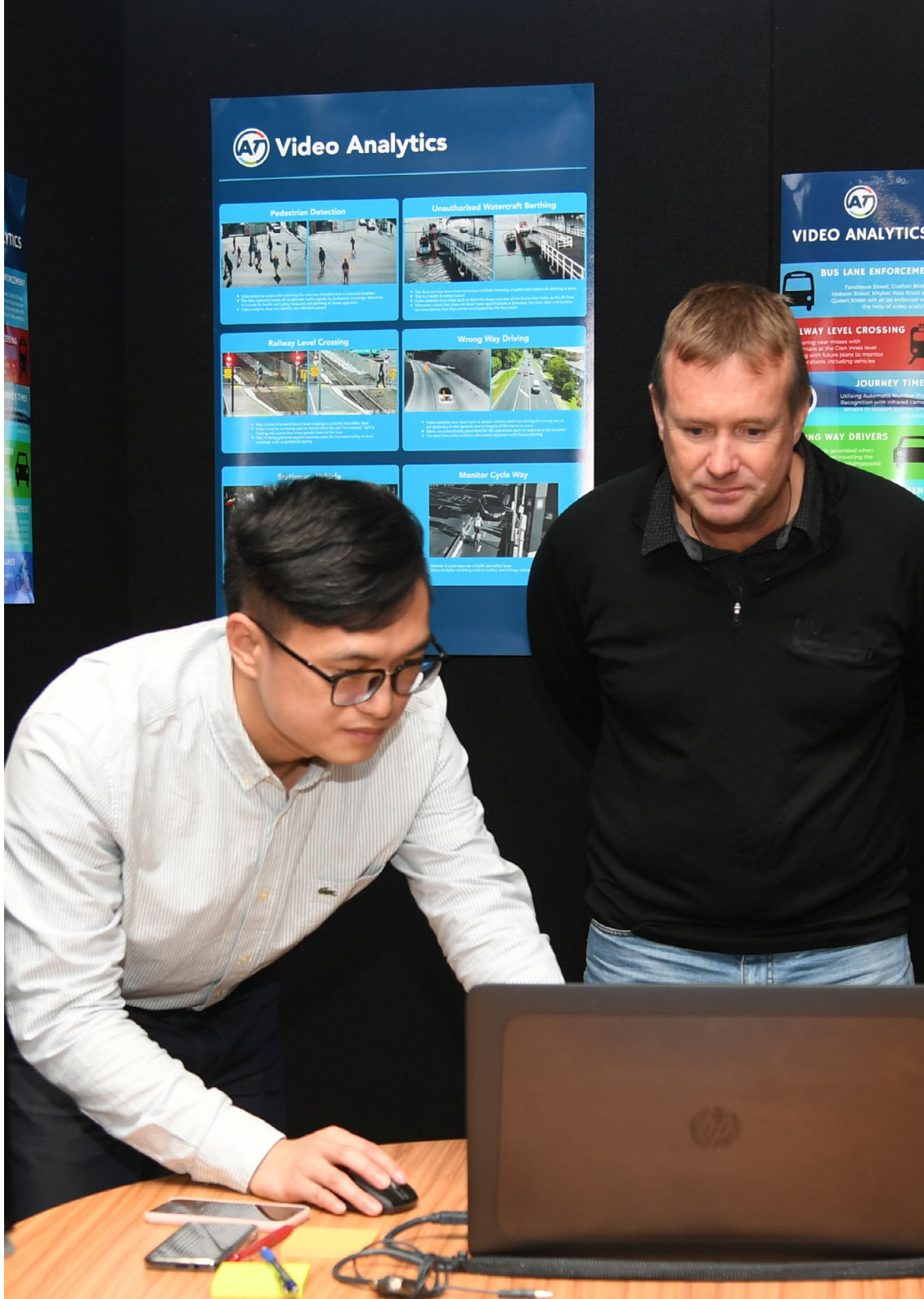
Harnessing emerging technology is a great way to improve customer insights and data, and undertaking more thorough analytics of travel data leads directly to service improvements. The agency selected a video recording and analytics solution powered by Micro Focus IDOL. This data analytics solution produces insights and patterns from the massive amounts of real-time streaming video data, captured from over 200 CCTV cameras across the city. IDOL helps the team with scene analysis, automatic number plate recognition, and object classification. This builds analytics-driven scenarios for surveillance, and gathers evidence and accurate statistics about pedestrian safety and traffic flow.

Auckland Transport can leverage the video analytics to remotely enforce traffic rules on special vehicle lanes. For the first time ever, a practical and automated process identifies and generates evidence so that cars illegally using special vehicle lanes, such as bus lanes, are automatically fined. This reduces operational costs, and increases compliance with bus lane regulations. Jones comments: "Three months after introduction of the CCTV analytics solutions we noticed a marked reduction in illegal usage of the special vehicle lanes. Compliance encourages positive road user behaviour, which is exactly what we hoped to achieve."

Manage incidents proactively with IDOL to ensure smooth traffic flow

Auckland Transport has also been able to introduce targeted awareness campaigns to improve safety. CCTV analytics data collected through IDOL enables intervention at high risk intersections, while measuring the effectiveness. Safety gates have been installed at railway level crossing that were at high risk of near misses, and the automatic and timely detection of wrong way drivers has helped reduce incidents.

CCTV analytics with IDOL gives Auckland Transport a proactive way to manage road network incidents. Through analysing journey time data in real-time, it can change the behaviour of road users



and influence travel time and travel mode. Traffic operators use the real-time analysis to adjust traffic light phasing at an intersection when unusual congestion is detected. This ensures a smooth flow of traffic throughout the city, with people safely getting to where they need to be.

Safer transportation network leads to higher customer satisfaction

Whether monitoring pedestrian safety at an inner-city railway crossing, quantifying the problem of cars running red lights at major junctions, detecting cars illegally stopping in cycle lanes, or measuring speed at key points, IDOL CCTV analytics provides a richer picture of how the Auckland transport network is really used. This directly improves safety in all areas of transportation in the city, as Jones comments: "Public safety has hugely increased since we introduced the system. We can attribute this to the highest level of public transportation adoption since the 1950s, with an increase in public transportation customers from 69 million to 92 million journeys per year in just a five-year period. Reducing traffic incidents has financial impact across the medical and broader community spectrums. Our IDOL analytics platform helps us exceed customer expectations and shape positive perceptions. Over the last four years of implementing these changes, we saw an increase in customer satisfaction from 81 to 91 percent."

Putting the data to work has given insight in travel times, patters, trip frequencies, and demographics. "CCTV data analytics through IDOL has helped us provide a safe and efficient transport network. City planners can now optimize our public transportation routes, to the stops where people are at the right time of the day. We've introduced 20 percent more buses to operate at peak times, reducing waiting times, and getting commuters around the city faster," Jones concludes.