Tokoroa Public Wi-Fi:
A Network for the Greater Good

Overview

TOKOROA IS A SMALL, MULTICULTURAL TOWN IN NEW Zealand's South Waikato District. While still primarily a logging town, Tokoroa's economy is shifting to include engineering, rural provision, retail, and hospitality commerce that supports tourism in the naturally beautiful area. With the help and expertise of innovative ISP Wireless Nation, the South Waikato District Council invested in Cambium Networks solutions to design and connect the network Tokoroa needed.

Tokoroa required a wireless backhaul network for both a street closed circuit television (CCTV) system for public safety, crime prevention, and law enforcement, and access to public Wi-Fi services for residents and visitors.

Requirement

THEY SOUGHT A SOLUTION THAT COULD PROVIDE ENOUGH BANDWIDTH TO SUPPORT not only numerous high definition cameras, but also multiple simultaneous connections from Wi-Fi users in the central business district. Information Services Manager for SWDC Duncan Blair explains, "The project had a limited budget, but we still needed a wireless backhaul system that the local police could rely on to transmit CCTV footage for crime prevention and detection purposes."

Solution

"CAMBIUM'S END-TO-END MONITORING AND EASY ONBOARDING MAKES IT REALLY EASY to manage and monitor networks, and LINKPlanner is an excellent tool to design and configure them," says Zariff Ali, Premium Services Manager for Wireless Nation.

Cambium's LINKPlanner software was used to plan the point-to-point (PTP) links and generate installation and radio commissioning configurations, including specifications such as the approximate receive power levels on each access point (AP) and subscriber module – critical information for network components that must ensure reliable delivery of CCTV footage and Public Wi-fi traffic.

Once the network was designed and approved by the Council, equipment was ordered and onboarded with the network controller cnMaestro™, which made it easy to visualize the locations and manage the inventory's high number of devices. cnMaestro played a crucial role in managing and monitoring of the network, composed of 5 PTP links for backhaul created using ePMP Force 180s, and cnPilot™ e500 access points for Wi-Fi distribution.

The whole network was built in the testing lab at Wireless Nation HQ in Takapuna, Auckland. Actual network setup was simulated and traffic was pushed to thoroughly test the network to its limits.

Results

"THE OBVIOUS PRESENCE OF CCTV NOW WILL REDUCE THE AMOUNT OF CRIME being committed. The access provided by Public Wi-Fi has made the small town more attractive to visitors and tourists," says Ali.

Tokoroa's Cambium Networks solution has delivered a quality result that was within budget, and exceeded the expectations of both SWDC and Wireless Nation. It's reliable, consistent, and low maintenance, with software that updates easily and automatically from the cloud with cnMaestro. The CCTV system has provided evidence in solving crimes in the Tokoroa business district, and the public Wi-Fi access has made the small town more attractive to tourists.

The success of the public Wi-Fi system has been noticed by other organisations that have contacted South Waikato DC to find out more about the Cambium solution and Wireless Nation, who are currently considering options to extend the public Wi-Fi network within Council-owned buildings, and also into other nearby towns in the South Waikato District.