

Liverpool City Council



Customer

- Liverpool City Council

Sector

- Local Government

Challenges

- Creating a safe and technically advanced city environment
- Multi-purpose, multi-function system for single cost

Solution

- CCTV and free WiFi network with channels for corporate data and ISP overlay
- Quality, reliable and value-for-money system

Equipment

- High capacity NEC iPasolink EX Microwave radios

Results

- Improved safety and amenity of CBD
- Reducing rates of crime, vandalism and graffiti for lower security and maintenance costs
- Contained OpEx costs with e-band microwave frequency licence

The Customer

Liverpool, in Sydney's south west, is the fastest growing city in NSW. Its current population of nearly 200,000 is expected to grow by 30,000 over the next 10 years. Safety and amenity are crucial elements to Liverpool City Council's 'Creating Our Future Together' brand for the people, businesses and organisations of the area.

The Challenges

For the Council to achieve its aspirations, it needed to promote a more vibrant city centre; one that is active, safer – particularly at night – and better connected.

As Liverpool City Council (LCC) acted on its branding, it secured Federal funding for a CCTV and free WiFi network to support redevelopment and reurbanisation initiatives in the CBD.

Liverpool Police Commander Peter Gillam said the City's new CCTV network would help police monitor public safety hotspots within the CBD: "It will provide 24 hour recording of local streets, retail precincts and parks across central Liverpool and act as a valuable deterrent against all types of anti-social behaviour."

Ned Mannoun, Liverpool City Council Mayor, explained: "It was important that we commissioned a quality, reliable and value-for-money system. With this in mind, Council undertook an extensive tender process, evaluating ten submissions."

The Solution

The high profile Liverpool Public Safety CCTV and WiFi System project was awarded to NEC's systems integration partner, SAT Pty Ltd, to design, supply, install and service.

NEC and Liverpool City Council Creating a Safe, Tech Savvy Future

SAT proposed a turnkey solution, described by its Director, Dale Stacey, as being: “Futuristic and robust, as its innovative ringed topology delivers a highly resilient network.

“Where it stands out is that its design and extremely high bandwidth have resulted in much broader benefits than just safety. Within the budget, it will meet the future requirements of Council – it’s about forward thinking, flexibility and scalability.”

The network comprises five 1Gbs microwave radio rings – based on 25 of NEC’s latest high capacity, e-band iPasolink EX Microwave units – that link 30 cameras, the police station, Council chambers and more than 60 WiFi access points.

“What made this quite a complex architecture was the number of elements and sub systems that had to integrate with the NEC common platform” Stacey said.

This project is based on the new IEEE-802.11ac standards which deliver, at 300 Mbps, the latest mobility and mapping features required to meet the growing connectivity expectations of users. The radio platform is scalable to 2Gbs enabling Council to double its capacity without changing hardware.

Until now, it has been the ongoing OpEx rather than the upfront CapEx that has constrained the uptake of networks such as LCC’s. The NEC e-band solution operates in a specific, self-regulated frequency which attracts only a low recurring cost ACMA licence of a mere \$20 per month, per link.

Stacey endorsed the NEC microwave units as: “Coming from a very reliable pedigree and, combined with the support of NEC’s knowledgeable technical people, they provide the perfect backbone for this application.”

The Results

The project has delivered three channels of simultaneous customer traffic – CCTV, WiFi and Council corporate data – over the same private backhaul network. This ‘three for the price of one’ solution has succeeded in driving down the per-unit lifecycle cost.

“We have multiple channels all within the cost of a single piece of infrastructure. The project meets all the criteria for responsible investment by Council and our aim to build a tech savvy city for the future.”

Luis Catarino

Acting Coordinator IT Operations at Liverpool City Council

This is one of the first integrated WiFi and CCTV solutions in Australia and certainly one of the most advanced. As a state-of-the-art crime fighting tool, it allows easy monitoring by police and other authorities. Its surveillance capacity is also expected to reduce vandalism with the flow-on effect of cutting Council’s security and maintenance costs.

The adaptive modulation of the NEC radio equipment results in smaller dish and antennae size. This provides not only infrastructure cost savings but also reduces wind load and thereby the force on rooftops and poles for better safety; and the highly sensitive issue of visual impact.

This standard, repeatable configuration makes it a low risk solution that is extremely strong from both a management and maintenance perspective. “Collectively, between LCC, SAT and NEC, we’ve created an all-in-one solution to take to other councils and enhance the amenity of communities around Australia,” Stacey said.

Connecting with Local Partners

SAT Pty Ltd (SAT) is a leading Australian owned and operated radio communications consultancy and engineering specialist.

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