

# Wembley Park

Bringing smart city technology to next generation living

“We are privileged to be deploying infrastructure on behalf of Quintain in the largest urban regeneration project in the UK, if not Western Europe, and we treat the responsibility that comes with that very seriously. Alcatel-Lucent Enterprise has been an excellent fit for us in helping Quintain deliver on the Wembley Park vision.”

*James Canty, CTO, Velocity1*

The 85 acre site development involved 1 million square metres of mixed-use residential, commercial, and retail unit space and included Europe’s largest smart build to rent (BtR) complex with more than 7,000 BtR apartments.

## CHALLENGES

Quintain was challenged to create a smart city environment with next-generation fibre-to-premises technology. To do this they needed to build a resilient service provider network to provide high-speed internet services with up to gigabit speeds, to the 7000 new homes, retail, and office buildings. In addition, an outdoor transmission network was necessary to provide connectivity for Wi-Fi access points, digital signage, CCTV, and public announcement systems.

## ACTION

Working together with Quintain, Velocity1 was responsible for the design, build and deployment of a fibre optic network across the 85 acre site. Before choosing any technology vendor, Velocity1 undertook three broad considerations - technical, operational and commercial.

- Technically it had to meet Velocity1 requirements and allow for easy service enablement, with easy upgrade paths and proven scalability
- Operationally it had to be robust. Given the critical importance of the in-building systems, broadband networks and public realm services this infrastructure supports, the product must perform in this demanding environment from a hardware and software perspective. It must fit into the OSS ecosystem so that issues are easily diagnosed and resolved.
- Commercially it had to deliver value for money, as well as deliver the right technical and operational features.

Additionally, our common partner Xantaro, was critical in integrating the components into an end-to-end optimized customer solution. Xantaro integrated a Nokia Optical LAN solution, based on the proven 7360 FX ISAM OLT and outdoor ONT technology, with the ALE switching products, to create high-performing network solution for large scale smart city deployment.

This project provides an example of how the ALE switch solution and Nokia Optical LAN solution are fully complementary and together offer a powerful networking solution for smart city deployments, combining indoor and outdoor deployment cases.

## PRODUCTS AND SERVICES

[Alcatel-Lucent OmniSwitch® 6900 Stackable LAN Switch](#)

[Alcatel-Lucent OmniSwitch 6450 Stackable Gigabit Ethernet LAN Switch](#)

[Alcatel-Lucent OmniSwitch 6465 Compact Hardened Ethernet Switches](#)

## RESULTS

### Technical Benefits

The Optical LAN network offers benefits for large campus network deployments like Wembley Park, for example:

- A simplified network topology with long fibre rings served from two central data centers provides geo-redundancy. Based on GPON technology and passive fibre splitters, distances of up to 20 km can be reached without any active intermediate node, and with a limited amount of fibre.
- Omniswitches were connected to the GPON using Nokia GPON SFPs and deployed on light poles, providing Ethernet connectivity for Wi-Fi, CCTV, screens, audio and other services
- The network is centrally managed from a single Optical LAN management platform (POL Command Center) making it easy to add new services and deploy across the area
- A future-proof solution provides an Optical LAN solution that can be upgraded to 10G without having to replace the existing network

### Financial Benefits

- A passive network yielding savings in space, power consumption, air conditioning and maintenance
- Supports green building initiatives Seamless same shelf upgradeability to NG-PON
- Fewer active conditioned equipment racks means lower CAPEX/OPEX, and less floor space

### User Experience Benefits

- Comprehensive management and provisioning
- No maintenance and is easy to troubleshoot
- High throughput and low latency on fibre provides high QoS with rich end-user services
- Redundant fibre loops provide high service availability
- Flexible topology to define and easily add customer services on the network

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## Customer Story

MARKET: **GOVERNMENT**  
DEAL IMPLEMENTED: **2019**

COUNTRY: **UNITED KINGDOM**  
NUMBER OF USERS: **20,000**

COMPANY:  
**WEMBLEY PARK**