

CEL-FI Covers Leading Food Retailers Distribution Centre

Nextivity develops the CEL-FI Smart Coverage Solutions for 5G and public safety communication.

Nextivity's CEL-FI products are built with the revolutionary IntelliBoost processor and WAVE software.

Nextivity solutions deliver industry-leading signal gain with 3x the coverage footprint for voice and data. The systems are unconditionally network safe with a no noise guarantee. CEL-FI products are installer friendly, provide optimal coverage, and automatically adjust to changing network conditions. Solutions range from DAS to Smart Signal Boosters, all providing the industry's highest Max Gain.

The Challenge

One of the fastest growing supermarket brands in the UK was building a new 70,000m² Regional Distribution Centre in Peterborough. **Like other modern warehouse structures the metal clad building acts as a Faraday Cage to mobile signals.** The building itself has a single level office on the 3rd floor of the building, consisting of administrative areas, meeting rooms, training rooms and a canteen.



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The goods out area protrudes from the main building and comprises an office space and driver check-in desks on the ground floor.

All existing cable tray was located at high level above suspended ceiling throughout, making cable installation challenging in many areas. There were also a number of fire-stopped partitions that needed penetrating, which posed another challenge.

The Challenge

Due to the Grenfell disaster aftermath and new regulations, it was important that all of these penetrations were identified so that they could be re fire- stopped by an accredited company to ensure they complied with the new regulations.

It was crucial that continuous, stable, mobile connectivity was present prior to the site becoming operational in August 2020 as many of the tasks undertaken by staff rely on voice and data services due to a limited number of desk phones. Staff often take calls on their work mobiles in the main offices and move into meeting rooms to continue the calls. **Unreliable services can be disruptive as it results in staff having to leave their work areas to find signal near a window** as well as numerous dropped calls, which reduce productivity.

The Solution

Pan RF visited the site and conducted a Live Coverage Test (LCT) survey to establish the current level of EE mobile coverage internally and externally at the site. **The outcome of the survey confirmed that there was limited useable EE mobile coverage penetrating the building in the 3rd Floor Offices and Goods Out areas,** which were the areas highlighted as being within scope by the customer.



The Solution

Following the survey, a full report was produced where a Nextivity CEL-FI Quatra Solution was proposed to provide voice and data services on the EE network. The benefit of deploying a Nextivity CEL-FI Quatra Solution is that there is no need for the customer to seek approval from EE as it is licence-exempt. The other benefit of this solution is that it is very cost effective and can be deployed in a very short timescale.



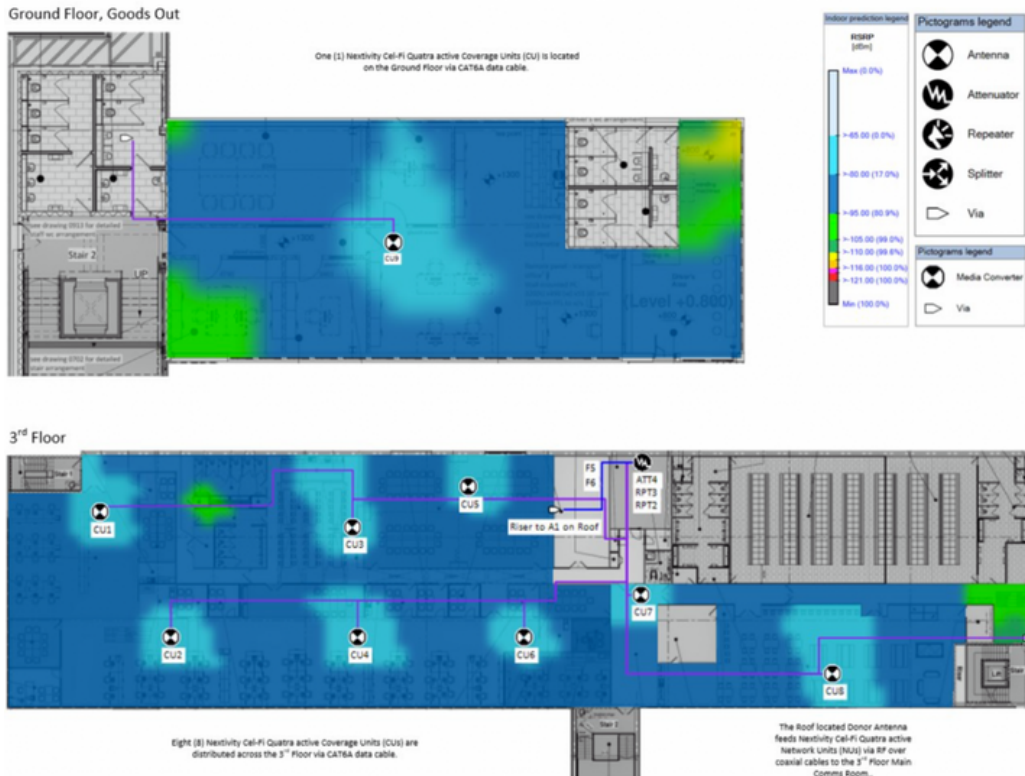
Following approval of the proposal, an RF design was carried out using the iBwave Radio Propagation planning tool. Coverage predictions defined the number and location of the active antenna Coverage Units (CUs) and how many Network Units (NUs) would be required. External EE coverage is to be picked up on the MIMO donor antenna mounted at the highest point of the roof, ensuring clear line of site to the nearest EE macro site. Coaxial cabling then feeds the Cel- Fi Quatra NUs which amplify the signal before distributing the coverage via CAT- 6A cabling to the CEL-FI Quatra CUs.

Following installation of the system, the CEL-FI Quatra Solution was commissioned using the CEL-FI Wave Portal. Speed tests and walk tests were carried out using TEMs pocket software to provide further evidence of the improvement of coverage levels within the 3rd Floor Office and Ground Floor Goods Out areas.

The Results

Before the CEL-FI QUATRA solution was deployed very poor user experience was reported, with calls not connecting or often dropped, once connected There was also a very poor data service with both download and upload speeds particularly bad.

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The Results

After the **CEL-FI QUATRA** solution was deployed excellent user experience was reported. **Calls were received and initiated without any issues** and data performance significantly outperformed the existing Wi-Fi and other Carrier/MNOs, improving day to day productivity.



CEL-FI
QUATRA

**BEYOND
BETTER
COVERAGE**

- High-quality solution for the middleprise.
- Supports multi-carrier 3G/4G/LTE voice and data.
- Carrier-approved and unconditionally network safe.
- Can be monitored and managed using CEL-FI WAVE.