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Solving campus connectivity

How to successfully boost all four major mobile network operators at your campus by
Gary Exall, Managing Director, Simpi-Fi

The problem with mobile coverage within campus buildings

The expectation for schools, colleges and universities to provide faultless connectivity in the form of super fast, reliable, accessible and safe WiFi, along with glitch-free mobile signals across campus have never been greater. Students, staff and visitors alike expect these services to be a given, putting pressure on IT professionals within the sector to

make sure that the solutions they procure are fit for purpose.

In addition, as we move towards greener, smarter commercial buildings in and around our campuses, the building materials used in new construction processes are interfering with RF (radio frequency) blocking mobile signals, and the extent of the problem is often not identified until the building is completed and launched. This is a

common problem across university campuses and an even greater hindrance to commercial buildings within campuses, such as offices, hotels and research facilities.

The impact of poor mobile signal coverage within a university campus is extensive

Mobile phones and WiFi are crucial within a university campus. They enable constant communication

amongst students, faculty, and staff and are essential for research facilities and for attracting commercial business and investment. A strong, reliable and stable multi-operator mobile signal is essential for many reasons, including safety, access to campus navigation and information, research and learning, campus services, such as food delivery apps and campus shuttle services, not to mention recruitment and reputation.

New buildings, including a 185-bedroom conference hotel at The University of Birmingham campus, were experiencing poor mobile coverage

The Edgbaston Park Hotel, part of The University of Birmingham's Edgbaston campus, opened in 2018. It features a contemporary building housing 185 bedrooms, 3 serviced apartments, a restaurant, a bar, and various conference facilities.

The hotel has always suffered from a poor mobile signal and the team has been unable to find a solution. When the team approached Simpli-Fi, they were not confident that there was a technology that would solve the issue. Our team at Simpli-Fi, however, were certain that a solution using the Nextivity CEL-FI system would give them the results they were looking for, and when we recommended a proof of concept to demonstrate the results, this was met with renewed enthusiasm.

"We were confident that by installing the Nextivity CEL-FI solution as a PoC, we would be able to demonstrate a considerable improvement in the mobile signal throughout the building, where other solutions had failed." Graham Williams, Head of Mobile Solutions, Simpli-Fi.

Working with the in-house IT teams, Simpli-Fi installed a PoC to demonstrate how well the system works

We agreed with the Head of Core Infrastructure for the University and the hotel SLT team that we would deploy our In-Building Mobile Solution to the ground floor events space, restaurant, bar and work area as an initial PoC.

Simpli-Fi worked with Nextivity to provide a multi-carrier solution

providing 3G/4G/5G voice and data for all four major mobile networks: Vodafone, EE, O2 and Three. A combination of LPDA and panel antennas were installed on the hotel roof roughly 3m above the roof height, pointing to the cell towers that provided the best signal for each network.

The PoC was divided into multiple phases, starting with extensive site surveys and reviewing the building plans and layout. Collecting external mobile measurements for analysis to determine the strength of the existing signal in the area plays a massive part in the antenna design. As part of the survey and reporting stage, we provided a complete design with cabling schematics, predicted coverage and hardware locations.

Once the design and project deliverables were signed off, the next stage was to procure the equipment and installation of the system. Once the building was completed, we

commissioned and tested the system to ensure it met the requirements and specifications outlined in the project plan. Finally, a post-installation and quality report was provided, detailing the process and the quality of the work completed.

Simpli-Fi successfully boosts all four major network operators with a Nextivity CEL-FI solution

Following the success of the PoC within the Edgbaston Park Hotel, Professor Gino Martini, Chief Executive of the university's most recent research facility, PHTA, approached Simpli-Fi to ensure that the new building would have reliable and stable mobile coverage from launch.

The Precision Health Technologies Accelerator (PHTA) is a business innovation facility that will soon occupy the top three floors of No.1 BHIC – the flagship building of the ambitious Birmingham





Health Innovation Campus, which is being delivered in partnership with Bruntwood SciTech. Providing approximately 70,000 square feet of state-of-the-art incubation and collaboration space, PHTA is a catalyst for health and life science businesses to succeed.

Professor Gino Martini, Chief Executive of PHTA, stated, "PHTA is designed to accommodate researchers at the proof-of-concept stage through to spin-out companies

and beyond – providing small health innovation businesses with much-needed grow-on space. Excellent connectivity including multi-operator mobile coverage, is therefore essential and expected by our clients. Following the success of the proof of concept Mobile Signal Boosting Solution for the campus hotel, we approached Simpli-Fi to consult, design and deliver a system to ensure we have excellent, future-proof connectivity throughout the PHTA facility."

with key suppliers and partners can have immense long-term benefits for organisations.

Simpli-Fi is a technology-agnostic business, and have been working with trusted vendors for decades. These valued partnerships allow us to exchange views and support innovation, ensuring we stay ahead of the game with new technology coming to market. This means our clients always receive the right solution at the best price.

Our relationships with suppliers like Nextivity enable us to supply our clients with complete solutions from the ground up, providing us with all the technical knowledge we need to recommend, design and implement our solutions.

The University of Birmingham has seen stage one of the project provide game-changing results for the team and its communities.

If you would like to learn how Simpli-Fi can help your campus improve your connectivity, from wireless systems to mobile signal solutions, then please visit www.simpli-fi.co.uk/contact/



Gary Exall, MD, Simpli-Fi

So, with more suppliers entering the market, claiming they can solve your problem of poor mobile coverage, how do you ensure you are investing in a solution that will really make a difference to your communities?

A consultative approach with suppliers that can demonstrate the benefit of recommended solutions is key.

If you ask any business owner what their top priorities are, client retention is usually top of the list, and so it should be. However, supplier and partner relationships should also be nurtured. In fact, your supplier management is so crucial that adopting a more strategic approach