

Providing Critical Mobile Coverage to the NHS

The Problem

Many NHS facilities have poor or no in-building mobile coverage. Having staff unable to communicate with each other, or to external agencies, causes significant operational and safety issues.

Providing in-building mobile coverage to such facilities has historically been expensive and complex. However, it is now permitted to install in-building mobile signal boosters, as long as such signal boosters conform to the regulations*.

This change has occurred at a prescient time, as NHS facilities will need to provide 4G EE mobile coverage for emergency services personnel when such personnel switch from using Airwave to the new UK 4G-based Emergency Services Network from Airwave. Failing to do so will put patients and staff at risk.

In-building coverage also increases staff morale, assists innovation and provides voice and data resilience when IT and facility failures occur.



* Source: <https://www.ofcom.org.uk/about-ofcom/latest/features-and-news/mobile-phone-repeaters>

The Solution

Spry Fox Networks has combined its innovative QuantumPath mobile survey and assurance product with Nextivity's Ofcom-compliant in-building mobile signal boosters to produce a unique offering.

This combination provides **service-assured** 3G and 4G in-building mobile coverage. With no mobile operator agreement needed, the solution can be deployed within a couple of weeks instead of months or years, and can provide coverage for all the UK mobile operators (EE, Vodafone, O2 and 3 Mobile) and their partners (e.g. BT Mobile, Giffgaff, Sky Mobile, Tesco Mobile, Virgin Mobile, etc.), whilst still providing service to visitors who may be roaming.



We will:

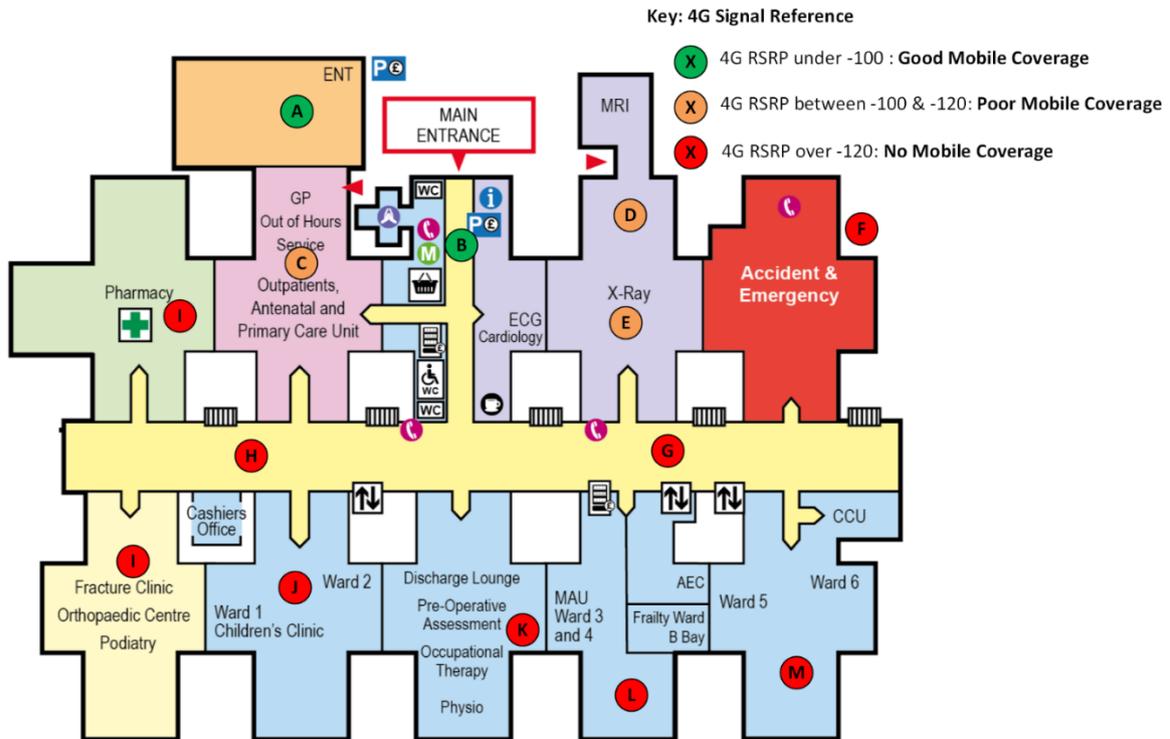
- Survey
- Design
- Install
- Assure
- Support

This provides the NHS with a turn-key solution to fit their specific requirements: location, budget, coverage, and service capacity.

Spry Fox Networks takes care of it all

Solution Deployment

QuantumPath is the key to a successful in-building mobile coverage deployment. Utilising its mobile coverage surveying capability, QuantumPath allows us to identify and provide a solution for the coverage issues, as opposed to just confirming the lack of coverage.



Mobile Coverage Survey: QuantumPath in-door mobile network survey results

We also offer Cradlepoint’s 3G/4G router, able to provide both in-building mobile network/data connectivity resilience, and in-vehicle (ESN-approved) data connections.



Additionally, we have the option to provide temporary/emergency-solutions for coverage at incident scenes with full setup and assurance support using QuantumPath. This portable system can be up and providing service within hours.



Solution Assurance

Once in-building mobile coverage is provided, it becomes a necessity. As a result, assurance and support of the solution is essential and with Spry Fox Networks, this goes beyond simply checking there is a signal; assurance of the services is also critical.

QuantumPath allows us, and our clients, to continuously monitor and pro-actively test the internal mobile coverage and services. QuantumPath will measure and report the quality of the mobile signal and services 24 * 7 and raise alarms when that quality degrades, in addition to any failures.



QuantumPath: Real-time mobile signal and service assurance

No other company offers this level of in-building mobile coverage and service assurance

Contact us for more information

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NHS Use Case 1

Location

Scottish National Blood Transfusion Centre's new Jack Copeland Centre.



Challenge

The facility had poor to no mobile coverage. Due to being a PFI-funded building, installing additional internal cabling was not an option and the facility staff needed to understand if coverage could be provided to key areas. Mobile coverage was critical due to the possibility of an IT failure cutting external communications.

Solution

We worked with the client to define their coverage requirements and installation complexities. We used QuantumPath to survey each critical area for coverage to confirm what mobile operators were being received. Once we had the internal data we ascertained if we could repeat their contract mobile operators EE and Vodafone, O2 and 3 Mobile (for future operator/service change). QuantumPath was used to survey the outside signal for all four operators and to test their performance on both voice and data.

Benefit

Once we had completed the survey, we designed a coverage plan using Nextivity Quatra mobile signal boosters to provide both 3G and 4G services and allowed SNBTS to provide coverage for the UK's new 4G-based Emergency Services Network in the future. The design and product met the requirements and allowed SNBTS to move forward with funding for the project. As part of the offering we will provide QuantumPath to assure the mobile network service remains of the required quality in terms of coverage and performance so SNBTS know their backup resiliency is in place 24*7.

Result

Using a combination of QuantumPath and the Nextivity Quatras, we were able to offer a comprehensive solution at a price at least 60% less than a legacy DAS system, whilst adhering to the requirement to not require any additional internal cabling to be installed. This will provide the client with resilient communication in key areas of the facility especially when IT failures occur, and the benefit of work efficiency that mobile communication brings.

NHS Use Case 2

Location

South West Ambulance Service's new ambulance fleet service/repair facility at Milton Park, Oxfordshire.



Challenge

The facility had poor 3G and 4G mobile coverage. It is a primarily metal construction, consequently blocking both 3G and 4G mobile signals from entering the building. Such coverage was required as medical diagnostics systems in the ambulances needed to be tested. The client currently uses Vodafone as their mobile provider but wanted to make sure they could switch to EE to support the forthcoming UK's new 4G-based Emergency Services Network. The solution also needed to be installed before the new facility went live.

Solution

Once the requirements were understood, QuantumPath was used to externally survey the 3G and 4G mobile signals for both Vodafone and EE to confirm we could use the Nextivity mobile signal boosters to provide the in-building coverage. After locating the optimum position to mount the external antenna, we then performed an in-building survey to provide the best mobile coverage.

Benefit

We provided the client with a design to fit their requirements and a complete cost to provide the required in-building mobile coverage using the Nextivity Quatra mobile signal booster.

Result

The Nextivity Quatra provides both 3G and 4G coverage for both the ambulance fleet and employee. We installed the Nextivity Quatra solution prior to the facility becoming operational to ensure normal working operations were unaffected.