

Department for the Economy Improves Workforce Productivity with Reliable Cellular Coverage



Case Study courtesy of
Crown Industries
UK and Ireland

Decision Drivers

- **Safety:** Ensure staff can make and receive mobile calls during emergencies anywhere in the building.
- **Productivity:** Ensuring a productive work environment where calls can be made without disruption.
- **Privacy:** Enable employees to take personal, HR, and business calls privately within meeting rooms and workspaces.
- **Business Continuity:** Support the Department's role as a critical operational hub during major incidents by providing reliable mobile communications.

"We needed to ensure staff could communicate in emergency situations and have the privacy to make calls within meeting rooms. Reliable mobile coverage was essential for both day-to-day operations and business continuity."

— **Jonathan Knox**, Digital Services,
Department for the Economy

Challenge

While the predominantly brick construction of Adelaide House defines its character, it also limits the ability for mobile network signal to penetrate inside the building, creating persistent mobile coverage challenges throughout the facility.

With no mobile coverage in the building, employees had to leave their desks and go outside the building to make or receive calls. With no mobile service in the meeting rooms, making HR or private business calls was difficult. The connectivity challenges disrupted workflows, reduced productivity throughout the workday and led to HR challenges.

The issue extended beyond business communications as, similar to employees in all businesses, staff within Adelaide House rely on personal mobile phones to stay connected to schools, childcare and healthcare providers, and elderly / vulnerable family members. The inability for staff to make or receive important calls within the building and to make or receive personal calls in a private place drove recurring complaints about the lack of connectivity within the workplace.

While Wi-Fi calling had been enabled, it was unable to consistently meet the demands of several hundred users, leaving coverage challenges unresolved. As complaints increased and concerns around privacy, safety, and business continuity became more apparent, the Department for the Economy recognized the need for a dedicated solution that could deliver reliable cellular coverage throughout the building.

Solution

Through its strategic partnership with BT Northern Ireland, Crown provided a turnkey solution, managing everything from design and installation to commissioning and testing. The resulting system delivers consistent voice and data connectivity, allowing employees to stay connected from anywhere in the building.

Following comprehensive coverage surveys, Crown designed and deployed a Nextivity CEL-FI QUATRA® 4000e solution supporting EE, O2, Three, and Vodafone on a single infrastructure. The system combined QUATRA Network Units, Coverage Units, and omni antennas to deliver reliable cellular coverage throughout the building.

Installation

With growing pressure to resolve staff connectivity issues, the Department for the Economy needed a solution that could be deployed quickly. From the initial request to final commissioning, the entire project was completed within just seven weeks.

Crown conducted cellular coverage surveys across all eight floors of Adelaide House and used the findings to design an in-building mobile signal solution supporting all four major UK mobile network operators.

As a single-source provider, Crown managed the complete deployment - design, installation, commissioning, and testing - while minimizing disruption to daily operations.

"We were very impressed with how minimal the disruption was—expected much more. The engineers were able to work around us, and the deployment was completed within a tight timescale."

— **Jonathan Knox**, Digital Services, Department for the Economy

Results

The impact of deploying the CEL-FI QUATRA system to provide reliable mobile network coverage throughout Adelaide House was immediate.

Staff could now make and receive calls at their desks. Management reported a noticeable decrease in staff leaving the office to search for mobile outside the building, improving productivity and reducing daily workflow disruptions. Employees also gained confidence that they could stay connected for both business communications and important personal calls. Supporting EE, O2, Three, and Vodafone, the CEL-FI QUATRA deployment provides a long-term mobile network infrastructure solution for Adelaide House and serves as a proven model for addressing in-building coverage challenges across the public sector in Northern Ireland.

"A strong strategic and technical alliance with BT enables us to address the ever-complex world of in-building cellular coverage. With a dedicated team of qualified engineering staff, we can offer public and private client's end-to-end solutions from design, through to deployment and on-going maintenance which supports BT mobility growth plans within Northern Ireland and the wider UK market"

—**Simon Murray**, Director of Crown Industries in Northern Ireland

"The units are very discrete out on the floor"

Server antennas throughout the building deliver strong mobile signals

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We are very impressed with the coverage. We're even getting signal in concrete stairwells. It has already been instrumental in an emergency situation where a member of staff took unwell in a meeting room on their own.

— **Jonathan Knox**, Digital Services, Department for the Economy

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