

Conwy Council Gateway Gains Resilience with KeySIM Multi-Network IoT Connectivity

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A critical environmental monitoring gateway overlooking the Great Orme in Llandudno has significantly improved its resilience following the adoption of KeySIM's multi-network IoT connectivity platform, helping ensure vital sensor data continues to flow even during periods of heavy network congestion.

The deployment, managed within Conwy County Borough Council's Innovation and Transformation department, supports the collection of IoT sensor data from the eastern side of the Great Orme — an area requiring consistent and reliable connectivity.

The solar gateway itself, supplied by RAKwireless, has performed reliably from a hardware perspective. However, the previously installed single-network SIM was vulnerable to a challenge increasingly encountered in busy tourist locations: network saturation.

During periods of exceptionally high visitor numbers, particularly around peak holiday periods and bank holiday weekends, mobile networks in the area can become heavily congested, causing interruptions in connectivity and reducing the reliability of data transmission.

Following the implementation KeySIM's unsteered multi-network IoT SIM technology, the gateway can now access multiple UK mobile networks and move between available networks when local conditions change.

Scott Andrews said:

"This gateway, located on a school site in Llandudno, plays a critical role in receiving data from IoT sensors deployed across the eastern side of the Great Orme. Ensuring consistent connectivity is essential to maintaining reliable environmental monitoring capability."

He continued:

"The solar RAKwireless gateway has performed reliably from a hardware perspective. However, the previous single-network SIM solution was susceptible to service degradation during periods of high network demand. This is particularly evident during peak tourist seasons and bank holidays, when mobile network congestion in Llandudno can lead to intermittent loss of connectivity."

Following the deployment, he added:

"The Council has implemented a multi-network IoT connectivity solution, enabling the gateway to dynamically utilise alternative mobile networks when local congestion occurs. This has significantly improved resilience and ensures continuity of data transmission, supporting the ongoing reliability of the Council's IoT infrastructure."

Graham Robinson said:

"Real-world deployments are where connectivity is truly tested. In many cases signal strength alone is not the issue — local congestion can become the problem. Access to multiple networks gives critical infrastructure additional resilience where a single network may struggle during busy periods."

Unlike traditional single-network services, KeySIM's IoT SIM technology provides access across Vodafone, O2, EE and Three on a single SIM, allowing devices to maintain connectivity in challenging environments and enabling businesses and public sector organisations to improve resilience across distributed IoT deployments.

As IoT deployments continue expanding into critical applications, from environmental monitoring and public infrastructure to security and smart city systems, resilient connectivity is becoming increasingly important to ensure services remain available when they are needed most.

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