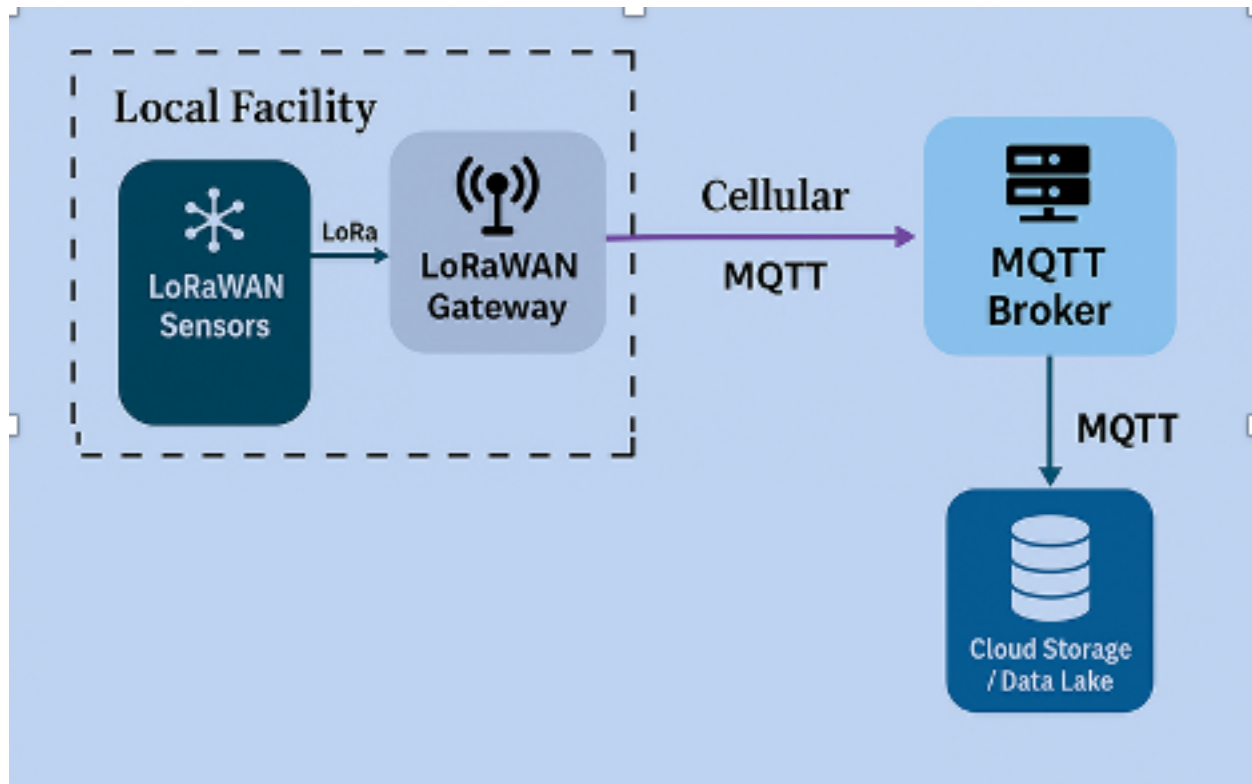**They Asked for Air Quality Sensors. We Gave Them a Global Strategy.**
How we used one small request to build a foundation for enterprise-wide intelligence

By Randy Storch | Ideon Consulting

Simplified diagram of LoRaWAN architecture

A global CPG company came to their JLL account team with a simple ask: deploy indoor air quality (IAQ) sensors across their global real estate portfolio—more than 100 sites worldwide. But we saw an opportunity to go much further.

Rather than treat this as a one-off request, we proposed a smarter, longer-term approach: a global LoRaWAN-based sensor infrastructure that could support not just IAQ, but a wide range of operational use cases—energy monitoring, leak detection, predictive maintenance, and more.

The Vision

We knew from experience: the real value of sensors isn't in isolated data streams—it's in what happens when that data connects across systems. Our strategy was to build a **unified operational data layer**, combining sensor inputs (air quality, occupancy,

temperature, vibration, leaks, and energy use) with existing workflows like work orders, analytics platforms, and AI engines.

Building the Foundation

We led the full technology evaluation—reviewing a dozen gateway providers for technical flexibility, international standards compliance, and enterprise support. After narrowing to three vendors, we ran a formal POC and selected the winner based on performance and collaboration. We then navigated InfoSec, procurement, and global deployment planning.

To simplify rollout, we packaged the solution into a repeatable deployment kit. This allowed local facility teams—not engineers—to install and activate sensors without requiring specialized expertise.

We also accounted for international complexity. Through real world experience, we discovered key variations in LoRaWAN protocols across regions, particularly in Asia. We worked directly with the manufacturer to adapt the hardware and obtain the necessary certifications—ensuring global readiness from day one.

From Field Data to Enterprise Intelligence

Once deployed, sensors sent data over LoRaWAN to our selected gateways, which transmitted it through a global cellular network to our data aggregation platform. There, we normalized the data and integrated it with downstream systems—including CMMS, BI dashboards, and AI engines—enabling real-time visibility, pattern detection, and predictive analytics.

This was never about deploying gadgets. It was about building infrastructure for connected intelligence—a strategy that could scale from one use case to many, and from a handful of sites to a global real estate portfolio.

Bottom Line

What began as a request for air quality sensors became the foundation for a smarter, more connected built environment.

We didn't just meet the moment—we built for what comes next.