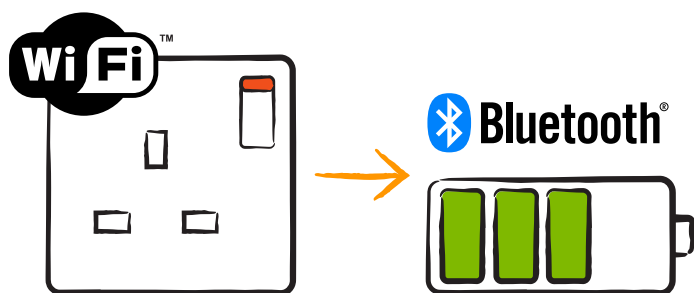


# Replacing Wi-Fi and Mains Power with Blecon's Bluetooth IoT Connectivity

While specifying the third-generation of their product, our customer sought to overcome the challenges of scaling deployment of their connected devices in diverse environments.

Their second-generation fluid monitoring solution is already commercially successful, but the company recognised hurdles with its Wi-Fi-based connectivity and reliance on mains power when it came to scaling installation. For their third-generation product, they turned to Blecon's Bluetooth-based solution to enable battery-powered devices and dramatically simplify installation and deployment.



## Challenges

The company's second-generation product, built on an ESP32 platform, relied on Wi-Fi for connectivity and required power via wall sockets. While functional, scaling the product revealed several key barriers to adoption.

Many of their clients found the Wi-Fi provisioning process technically challenging, complicating installation and relying heavily on the configuration of their networks. Additionally, Wi-Fi access is often restricted or entirely inaccessible to third parties, especially within larger enterprises with strict security

policies. Even when access is granted, changes to network configurations after installation are frequent and lead to service disruptions and ongoing issues for end customers.

Furthermore, the need for wall-socket power increased installation costs and restricted deployment flexibility, particularly in locations without accessible power sources or in setups requiring multiple sensors.

These challenges prompted the company to seek a more efficient, user-friendly, and cost-effective solution to allow them to scale installations.

Using Blecon enables them to transition from the ESP32 to the Nordic nRF54L chipset; allowing them to redesign their product to better meet client needs and streamline their deployment. This shift is facilitating them to build a battery-powered device with seamless Bluetooth connectivity, eliminating reliance on client Wi-Fi networks and wall-socket power, reducing both installation complexity and long-term maintenance burdens.

## The Blecon Solution

By choosing Blecon, our customer is enhancing their product architecture to address core customer needs through three key strategic areas:

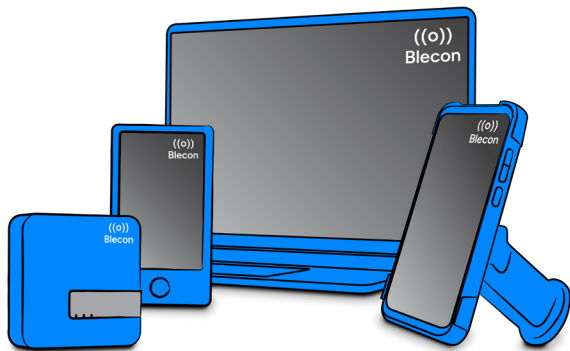
### Deployment and operational simplicity

The new product eliminates the need for wall-socket power by introducing battery-powered sensors that can be installed anywhere. Complex Wi-Fi provisioning, approvals and maintenance

become a thing of the past, replaced by seamless Bluetooth connectivity that removes IT security barriers. The Blecon “no-pairing” architecture enables customers to add sensors instantly using their existing infrastructure, dramatically simplifying the deployment process.

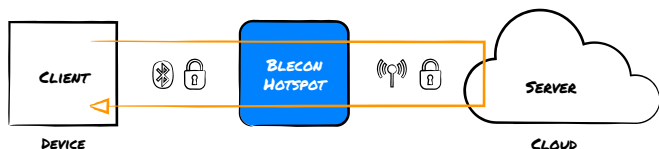
## Cost and time optimisation

The migration from the ESP32 to Nordic’s nRF54L chipset enables superior power efficiency while reducing device costs. By utilising Blecon’s pre-certified LTE Hub and Mobile Apps, our customer eliminates the need for custom gateway and app development, and associated regulatory certification. This streamlined approach will shrink their development timeline from 12 months to under 6 months, providing significant time-to-market advantages.



## Future-ready scalability

Blecon’s infrastructure-light design allows for rapid deployment of additional sensors without complex setup requirements. With Blecon, all sensors, regardless of function, can seamlessly report data back to the cloud using the same “no-pairing” network. This forward-thinking solution architecture supports future sensor types and use cases, protecting the end customer’s investment.



## Strategic Impact

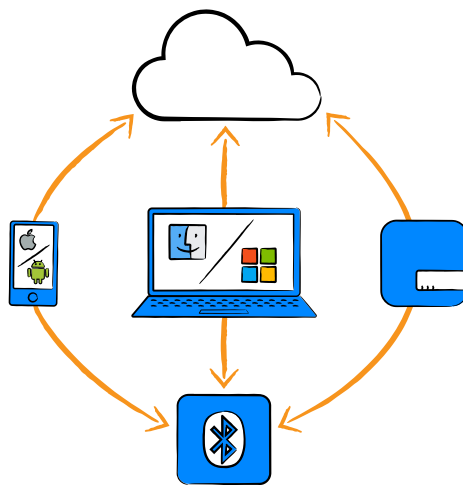
Our customer’s decision to adopt Blecon’s technology positions them to achieve several critical business objectives. In the near term, the implementation will dramatically simplify their installation process. The optimised hardware design reduces manufacturing costs, while pre-certified components accelerate time-to-market.

Looking at long-term value, the scalable architecture supports business growth without requiring infrastructure overhauls. The future-proofed solution enables new use cases as customer needs evolve, strengthening the company’s competitive position in the fluid monitoring market.

## About Blecon

Founded in 2021 and headquartered in Cambridge, UK, Blecon is dedicated to unlocking the potential of Bluetooth Low Energy (LE) for IoT Connectivity. By combining all the benefits of Bluetooth with cellular-like networking and a simpler deployment model, Blecon delivers a seamless way to connect devices to the cloud.

Blecon enables physical products to communicate with cloud applications without the need for traditional pairing. Utilising both dedicated hotspots and mobile applications, Blecon facilitates low-cost, low-power IoT Connectivity, allowing devices to securely and automatically connect to the cloud.



Committed to making Bluetooth LE IoT Connectivity accessible and cost effective, Blecon partners with industry leaders like Nordic Semiconductor to support a wide range of applications. Blecon empowers businesses to deploy and scale IoT devices globally, leveraging existing infrastructure and minimising additional hardware costs.

Contact Blecon today to learn how our Bluetooth-based connectivity solution can simplify your IoT deployment and reduce time-to-market.

**To schedule a consultation and discover how we can help you achieve similar results visit [blecon.com/contact](https://blecon.com/contact)**