

National Broadband Ireland

CASE STUDY



National Broadband Ireland (NBI) secured the Irish Government contract to design, build and operate the new high-speed fibre broadband network for rural Ireland known as the National Broadband Plan. This is the largest rural infrastructure investment since electrification and will provide modern and reliable broadband access for approximately 540,000 homes and businesses, capable of supporting the communications, information, education and entertainment requirements of current and future generations.

THE CHALLENGE

As a start-up organisation, NBI was challenged with building both the fibre network and the supporting IT environment, while simultaneously growing its own business organisation and partnership ecosystem.

Within the IT domain, the biggest challenge was the **Operating Environment (OE)**, designed to support NBI's wholesale offer of broadband services to the public via Retail Service Providers. The OE therefore enables product order, fulfillment, billing and assurance, and in a telecoms industry context it represents the **Business & Operational Support Systems (BSS/OSS)** for the fibre network. The OE works alongside other IT solution domains including Analytics, Enterprise Resource Planning (ERP) and Project Portfolio Management.

A particularly unique aspect of NBI's OE build-out was the strict KPI commitments within its public contract to achieve full business automation to the highest standards within aggressive delivery timelines. The only way to achieve such a high performance delivery was through a collaborative ecosystem of partners, working to an agile methodology.

THE SOLUTION

Sonalake supported NBI in its analysis of the business requirements, use cases and user journeys of the OE, and the subsequent design and build of the OE architecture.

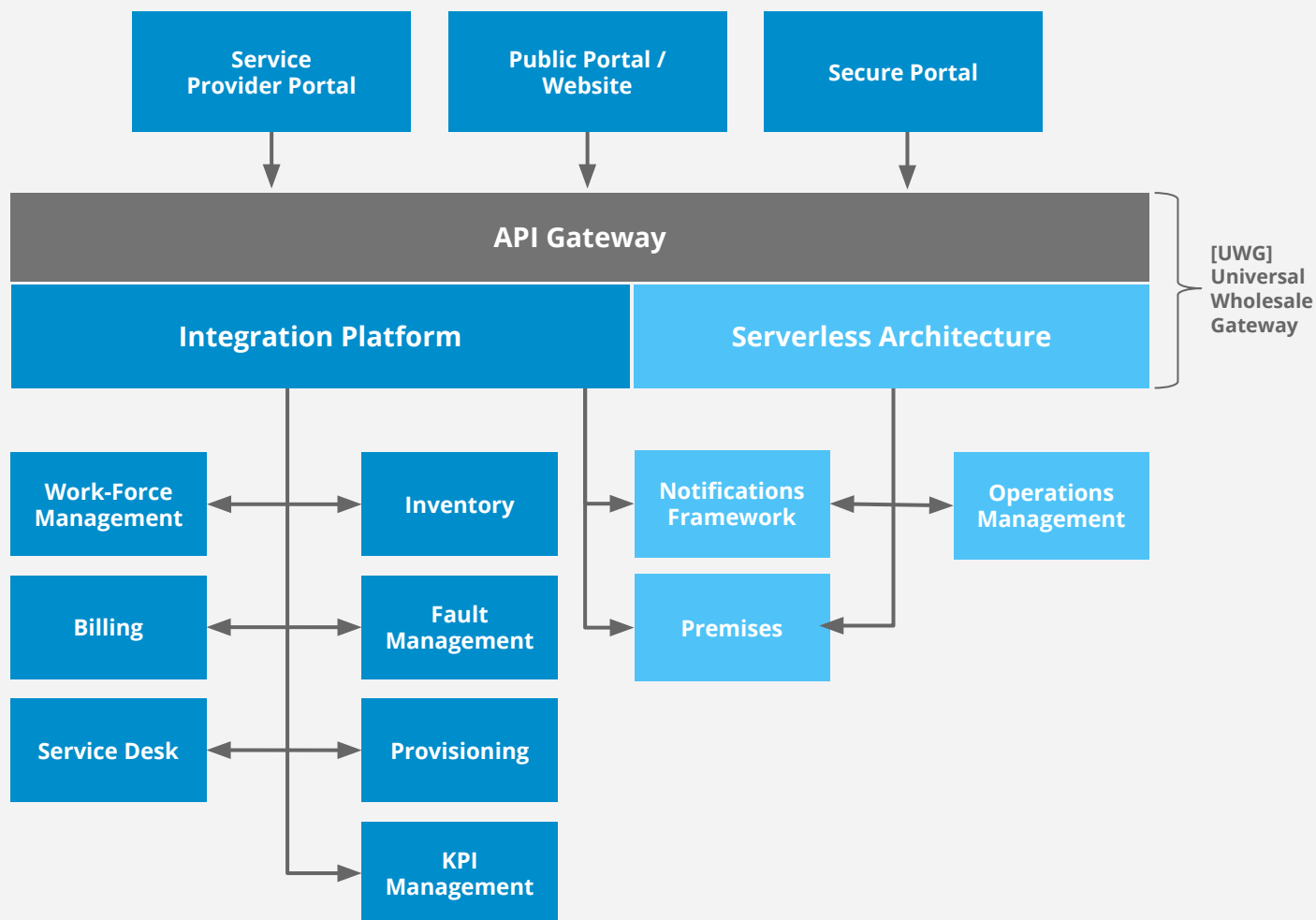
The OE, deployed on AWS, supports NBI's B2B model to provide wholesale services to its Service Provider customers via a Unified Wholesale Gateway (UWG). The UWG acts as a clearly defined interface between the Service Providers and NBI, and includes a set of Web Portals and API's to enable all interactions, supported by downstream systems for Billing & Invoicing, Customer Management, Inventory, Trouble Ticketing, Fault Management, Work-Force Management, Order Management, Product Catalogue and Address Management.



"Sonalake's BSS solution is pivotal in enabling our customer journeys, from address search through to customer order management, billing and assurance. Their agile and collaborative approach as our software partner has been excellent"

— John Power Director of IT, NBI

Sonalake has been responsible for delivering the majority of the OE software components including the **Service Provider and Public Portals, our CCB solution (product catalogue, customer and order management, billing and invoicing) as well as a series of microservices for premises/address management and notification services**. Sonalake's software works together with a configurable third party integration framework (Snaplogic) as well as inventory, ticketing and workforce management products and the downstream network component interfaces from Nokia to enable **network provisioning**.



In addition to the above OE components, Sonalake delivered a Secure Portal for Government access to search and download KPI data and network infrastructure documents and maps. This relates to the strict governance, auditing and data providence requirements of this publicly funded project and is supported by a major Data Analytics and Reporting Platform designed by NBI and collaboratively developed with Sonalake.

THE PROJECT

The 'greenfield' project to design and develop the OE to the performance specifications described above represented a unique challenge of speed and scale. As well as the OE technology platform itself, NBI was charged with the parallel design and build-out of its business processes and operations.

Rather than employing one of the major Systems Integrators, NBI made an early decision to undertake the Prime Integrator responsibility itself in collaboration with a number of domain-specialist partners, including Sonalake as the primary telecom software provider. This decision was based upon leveraging the advantage of [smaller company] agility and was enabled by creating a **collaborative ecosystem and open culture between the OE partners**.



"Sonalake's domain expertise and software delivery quality have been central to the success of NBI's rapid build of our cloud-native Operating Environment, underlining our commitment to delivering high speed broadband services throughout the country"

— **Geoff Shakespeare COO, NBI**

The project was planned according to a set number of major releases in accordance with the public contract, each representing an incremental scope of business automation. An **agile software methodology** was employed across the OE partners in order to achieve the tight timescales, with the **first 'go-live' release delivered as originally contracted in early 2021**.

This enabled NBI's B2B customers to commence service towards the geographic areas covered by the ongoing rollout of the fibre network. In parallel with the build and go-live release of the OE, a 24x7 IT support and service management operation was established within NBI supported by its OE partners. In this domain, Sonalake designed and delivered an **Observability Platform** [based upon Grafana open source software] to provide live visibility of the OE production environment. Through high-level dashboards, NBI's Service Desk Team and OE Partners are able to quickly determine the health status of the applications, systems and APIs that comprise the OE, enabling fault localisation and root cause analysis for any issues arising.

THE RESULTS

The **timely commercial launch** of NBI's Operating Environment (OE) represented a significant achievement in software and business systems project delivery at scale and at speed. This was acknowledged by NBI's Service Provider customers as an important enabler to the rollout and adoption of the National Broadband Plan, **emphasised by the COVID 19-induced dependency on high-speed connectivity and the opportunity for businesses and remote workers across rural Ireland.**

Sonalake's cloud-native solutions integrated into the API-centric, AWS based OE microservices architecture, facilitating the prioritisation of the most urgent use cases and enabling flexible evolution and scalability. The collaboration of the partner ecosystem enabled by NBI's prime integrator approach, together with the adoption of appropriate agile methodologies and a shared open culture enabled the successful achievement of this large scale project.

Sonalake has deep domain expertise in telecom software. We have developed and deployed large scale solutions globally with clients including Vodafone, TeliaSonera, eir, enet and Three. Areas of particular focus include BSS/OSS and Network Service Analytics.

Contact us today to discover how our B/OSS platform could result in increased efficiency, customer satisfaction and new revenue opportunities.

Learn more at sonalake.com