

## Discover How a National Healthcare Provider Modernised Contact Centre Routing and Strengthened Service Continuity

### Overview

A national public healthcare organisation operating 86 hospital sites across New Zealand, faced increasing operational risk from ageing telephony infrastructure and fragmented routing logic. Multiple PBX vendors, inconsistent extension numbering, and decentralised call flows had created a complex environment that was difficult to maintain, scale, and govern.

Driven by the need for improved patient outcomes and operational efficiency, they couldn't rely on legacy systems. In addition, the nationwide retirement of ISDN services introduced a fixed deadline for change. Black Box helped them modernise and centralise contact centre routing without replacing the full platform and maintaining continuity for critical healthcare services.

### Challenges

As demand across the healthcare network increased, the limitations of the existing contact centre environment became more pronounced. End-of-life telephony and IVR systems delivered inconsistent routing accuracy, resulting in frequent misrouting and heavy reliance on live operators. This increased caller wait times, raised operator workload, and placed additional pressure on frontline staff.

The speech recognition directory was unreliable following hardware damage caused by adverse weather. The organisation needed to support New Zealand's linguistic diversity, including Māori and multicultural names. The solution also needed integration with existing infrastructure without disrupting operations.

### AT A GLANCE

#### CHALLENGES

- End-of-life telephony and IVR infrastructure alongside nationwide ISDN retirement
- Multi-vendor PBX environment spanning 86 hospital sites
- Poor speech recognition accuracy increased operator dependency and caller wait times
- Linguistic diversity impacted routing effectiveness

#### SOLUTIONS

- Centralised routing architecture using Oracle SBCs integrated with existing PBX platforms
- Genesys Cloud CX speech recognition directory with configurable routing logic
- 2,000 contacts integrated with Active Directory
- Alternative pronunciation modelling supported linguistic diversity

#### RESULTS

- Improved first-contact routing accuracy across a national healthcare network
- Reduced operator dependency and improved operational efficiency
- Future-ready telephony aligned with the transition away from ISDN
- Stronger resilience for business-critical healthcare communications

#### BENEFITS

- Improves routing accuracy to direct callers to the right destination
- Reduces avoidable operator transfers through better self-service flows
- Supports lower operator call volumes by resolving more calls upfront
- Supports better resource utilisation for operator and support teams
- Designed to scale with ease across additional regions as required



## Solutions

To deliver on this vision, Black Box implemented a centralised routing architecture using Oracle SBCs and supporting physical devices. This approach replaced ISDN connections, integrated PBX environments, and established a scalable foundation. Migration to a new carrier reduced telephony costs, improving flexibility and resilience.

The speech recognition system was replaced with Genesys Cloud CX and a unified directory of 2,000+ healthcare professionals, administrators, wards, clinics, and departments, was integrated with a subset of the organisation's Active Directory. Configurable business rules enabled accurate routing based on date, time, availability, and call type. Thousands of names were enriched with alternative pronunciations to reflect real-world speech patterns and improve recognition accuracy.

## Why Black Box?

This engagement demonstrates why healthcare organisations choose Black Box as a strategic trusted partner. By modernising complex, business-critical environments, Black Box enables rapid innovation, scalability, and operational stability. With their deep expertise, Black Box delivered a future-ready solution aligned with national infrastructure change and the realities of modern healthcare service delivery.

Black Box is a global leader in digital infrastructure solutions, delivering network and system integration, managed services, and technology products to Fortune 100 and top global enterprises. With a presence across the United States, Europe, India, Asia Pacific, the Middle East, and Latin America, Black Box serves businesses across financial services, technology, healthcare, retail, public services, and manufacturing.

## Result

The modernised contact centre environment delivered immediate improvements in routing accuracy. Callers reached the correct destination with reduced wait times. This lowered reliance on operators, and improved call handling efficiency. Now the staff could redirect effort toward higher-value and patient-critical activities.

The cloud-based architecture future-proofed the organisation's communications platform, enabling rapid integration of new systems and scalability. Solid continuity capabilities strengthened resilience across a geographically distributed healthcare network. Leadership gained confidence that the organisation now had a robust digital strategy and a clear roadmap for patient-facing communications.