Chorus is transforming its network operations

Nokia Service Improvement Program

Case study

Before starting any transformation program, communications service providers (CSPs) have a significant choice to make. They can opt for a "big bang" transformation, with quick and dramatic change that can be disruptive in the short term while still taking a couple of years to deliver the full benefits. Or they can opt for an incremental approach, implementing a series of transformation projects over several years, which minimizes risk and allows them to see some gains faster, even if they're smaller.

In New Zealand, wholesale infrastructure provider Chorus chose the incremental approach—and Nokia as its partner. Through a highly collaborative Service Improvement Program, Chorus and Nokia have implemented dozens of transformation initiatives since 2016 to bring greater automation into areas such as customer care and field maintenance that save time, cut costs and deliver a better experience to Chorus' customers.

The benefits

Faster time to restore service following incidents by automating network card resets

Faster and more accurate service impact analysis and notification — from 30 minutes down to five minutes

Cost savings through automated/remote fibre connection testing and card resets — no more sending technicians into the field for routine tasks

More robust data for network design and capacity planning

The vision

Chorus is New Zealand's largest telecomm-unications infrastructure company. As a wholesale provider, it builds and maintains fibre and copper networks — including much of New Zealand's ultra-fast broadband (UFB) fiber network — and leases access to that infrastructure to CSPs across the country.

Chorus was formed from the division of the former monopoly Telecom New Zealand into two separate companies. In 2014, Nokia was brought in to help facilitate that split, leading the intensive two-year transformation effort to separate out systems and processes so Chorus could stand as its own entity. Nokia has also been providing Managed Operations services to Chorus since 2014, handling the day-to-day management of Chorus' network infrastructure. After the major initial transform-ation was completed successfully, Chorus wanted to continue to benefit from Nokia's transformation expertise — to continuously improve all aspects of its network management and operations.

In 2016, Chorus and Nokia launched the first Service Improvement Program (SIP). Through the SIP model, the two sides commit to collaboratively implement 20 to 30 smaller transformation initiatives every year — adding up to a big impact on day-to-day operations. For Chorus, a more reliable and resilient network is key to keeping its CSP customer happy. For the Nokia Managed Operations team, the improvements coming out of SIP would translate into greater opportunities to automate routine tasks so its engineers could engage in more strategic, high-value activities.

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How Nokia helped

Each year, the Nokia Managed Operations team meets with representatives from Chorus to exchange ideas on how to bring continuous improvements to the way the network is run, drawing on Nokia's experience managing hundreds of networks around the world. Once the ideas are approved by Chorus, weekly and monthly reporting helps ensure progress is on track.

2021–22 marks the seventh SIP since they began 2016. In that time, some of the biggest operational transformations have been in the areas of:

- Impact analysis and notification: Identifying affected customers during a service disruption used to be a manual process that could take 30 minutes or longer. With the automation put in place through the SIP, Nokia can give Chorus a highly accurate report on every single customer affected within a given area in as little as five minutes — so Chorus can notify its own CSPs customers faster.
- Network configuration and fulfillment: As it builds out its fiber network, Chorus used to have to send technicians into the field to check the light levels of new connections, who would then have to relay information over the phone to Nokia engineers to ensure everything was done properly. Through the SIP, Nokia developed a smartphone app that technicians can use to verify levels without needing to contact Nokia staff — saving time and costs, while allowing technicians to make more connections each day.
- Remote network card resets: Service restoration has traditionally been a costly and time-intensive process, dependent on field technicians to perform restoration actions on-site, such as resetting line terminator (LT) cards. Thanks to the SIP, Chorus' LT cards can be reset remotely or even automatically based on pre-defined cognitive rules and policies, bringing restoration times down from hours to just minutes while saving the costs and emissions associated with truck rolls.
- Visibility into network diversity: Nokia has developed a custom topology tool that physically maps the Chorus network, providing a clear overview of network diversity and redundancy. A key tool for service optimization, it helps Chorus identify gaps and vulnerabilities in its network to better inform capacity planning and future fiber builds.

While the SIP was initially focused on core operating activity improvements, over the years it has expanded into areas such as customer care and field maintenance — areas that have a noticeable positive impact for Chorus' CSP customers.

“The Nokia Operations team established a focus on continuous operations improvement, influencing the field and customer assurance activities within our scope.”

Brenda Stonestreet
Head of Technology Operations, Chorus

CHORUS

The opportunity

The managed services agreement with Nokia, which includes the SIP, has been renewed by Chorus twice since 2016, with the wholesaler seeing great value in incremental transformation that gets small wins on the board quicker. Several new projects are already being planned for future SIPs, including the integration of legacy Transmission Link Record Database tools with modern network operations technologies. That will give Chorus even more accurate and accessible information about network traffic flow — with the ultimate goal being a tool to fully automate Chorus' future network planning.

Through its partnership with Nokia, Chorus has achieved significant results, including:

- 93% of all service-affecting incidents meet or met restore targets
- Major improvements in the ability of Chorus field maintenance teams to meet incident restore times
- Faster field configurations through automated connection tests and validations
- Faster incident investigation and resolution due to automated ticketing
- Faster incident impact analysis due to automated notifications — from 30 minutes down to five minutes
- Optimized service restoration time due to automated LT card resets
- Faster reset time for LT cards — from four hours to 20 minutes
- Enhanced robustness of network design due to the network planning and diversity reporting tool

For Nokia, operations automation has helped to:

- Eliminate many routine maintenance tasks so engineers can focus on more complex operational activities
- Repurpose the roles of people within the Managed Operations team to focus on projects that bring more value to Chorus and its customers — without any job losses.

“The Service Improvement Program required close collaboration between Chorus and Nokia and evolved into a trusted partnership. We now consider Nokia one of our network guardians”

Brenda Stonestreet
Head of Technology Operations, Chorus

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