Vocus slashes service activation to seconds and eyes $AUS60 million savings through network automation

Over the past three years, Vocus Group (Vocus), a communications service provider (CSP) in the Australia-New Zealand region specialising in fibre and network solutions, has made 15 acquisitions as part of its aggressive growth plans, rapidly integrating the newly attained fiber and submarine assets to build out its network.

Although this has helped Vocus gain market share as a communications service provider (CSP) in the Australia-New Zealand region, it has also created several business challenges relating to the ability to scale due to needing to maintain six legacy networks and eight legacy BSS stacks.

Vocus Group CTO, Vic McClelland, explained: “For us to provision new services now, we quite often have to use multiple systems across multiple legacy BSS stacks, and we have to put a lot of staff resources behind that. We’ve also got several legacy network providers, all with different legacy equipment for those separate networks — and they’re all nearing end of life. Therefore, it costs us a lot of money to grow capacity in our network and to maintain those separate networks.”

“We just can’t scale,” he summarized, echoing the challenge that many operators globally now face.

To move forward, Vocus formulated its ‘Future State’ strategy, to consolidate the various networks and systems into one, as well as modernizing it, introducing automation to enable customers to dynamically control their network services through real-time bandwidth changes, and to always benefit from the latest technology and products.

The ‘programmable’ network aligns with TM Forum’s vision of the Open Digital Architecture (ODA), using software-defined networking (SDN), network functions virtualization (NFV), artificial intelligence (AI) and big data, underpinned by Open APIs, as a more agile replacement for traditional operational and business support systems (OSS/BSS) architecture.

Results

Aiming to reduce service activation from weeks to seconds; projected OpEx savings of AU$30 million (US$19.85 million) and CapEx savings of AU$30 million by 2023
The Future State strategy has three phases. The first step, which is underway and on track to be complete within the next 12 months, is zero-touch automated provisioning of customer services, to deliver them almost instantaneously.

This will enhance customer experience and gives Vocus the ability to offer on-demand enterprise connectivity services, rather than fixed-term contracts.

Step two is to create a platform for partnering to allow Vocus to expand its customer offerings by pulling in third-party application related to, for example, load balancing, security and SDN.

“Through that ecosystem platform, we can partner with other companies that have got those capabilities and we don’t have to build them ourselves,” McClelland said.

“Those applications will appear in our product catalog so our customers can order them, and we can orchestrate those instantaneously along with the connectivity,” he added.

Stage two is also underway and should be complete next year.

The third phase is closed-loop automation so that system issues can be avoided through predictive action and automatically fixed if they do break. Vocus is targeting 2022 for completion.

McClelland explained: “To re-provision, you need to know everything about all of your inventory, meaning you need to have the whole network complete first.”

**Three-steps to the Future State**

The Future State strategy has three phases.

- **Step 1**: Zero-touch automated provisioning of customer services, to deliver them almost instantaneously.
- **Step 2**: Platform for partnering to allow Vocus to expand its customer offerings by pulling in third-party applications.
- **Step 3**: Closed-loop automation so that system issues can be avoided through predictive action and automatically fixed (targeting 2022 for completion).

**Business challenge**

- **15 acquisitions** over 3 years created business challenges relating to the ability to scale.
- Needed to maintain **6 legacy networks** and **8 legacy BSS stacks**.

**Solution: Future State strategy**

1. **STEP 1**
   - Zero-touch automated provisioning of customer services, to deliver them almost instantaneously.

2. **STEP 2**
   - Platform for partnering to allow Vocus to expand its customer offerings by pulling in third-party applications.

3. **STEP 3**
   - Closed-loop automation so that system issues can be avoided through predictive action and automatically fixed (targeting 2022 for completion).

**Key results**

- Aiming to reduce service activation from weeks to seconds.
- Projected OpEx savings of AU$30 million (US $19.85 million) and CapEx savings of AU$30 million by 2023.

The ‘programmable’ network aligns with TM Forum’s Open Digital Architecture, using SDN/NFV, AI and big data, underpinned by Open APIs.

---

**Website**: www.tmforum.org  
**Phone**: +1 973 944 5100  
**Address**: 4 Century Drive Suite 100 Parsippany, NJ07054 USA
Vocus has chosen three strategic partners to implement the underlying technical capabilities to make its Future State strategy a reality. Blue Planet, a division of Ciena, provides the service orchestration and intelligent automation platform: DGIT Systems orchestrates customer and partner interactions through digital channels for quote-order-bill, and Arista supplies the Layer 2 and 3 network equipment.

Vocus is committed to open standards and open source capabilities and this is, in part, the reason the vendors have been selected, giving Vocus the modularity and flexibility it requires.

Vocus’ architecture includes TM Forum Open APIs for service activation and configuration; service ordering management; service catalog; inventory management; service qualification; product ordering; product catalog management; product offering qualification; and product inventory management.

This enables zero-touch provisioning for new services and change requests that can be automated in minutes rather than weeks.

The network architecture uses repeatable orchestrations which serve as component “building blocks” within the catalog, rather than bespoke custom product development through coding, enabling offer creation in days rather than months. Further, catalog-driven configuration means no IT development and more effective lifecycle management.

Introducing partner “plug and play” capabilities extends Vocus’ network coverage -- providing access to rich new B2B services and increasing revenues from customers and new partners.

The NaaS Catalyst also demonstrated how TM Forum Open APIs can interact with Metro Ethernet Forum (MEF) standards for the automated orchestration of services across multiple providers and over diverse network technology domains, which is important for realizing Vocus’ Future State vision.

In the future, the network will use big data and AI to automate activation and operations and support autonomous, closed-loop networking with proactive self-healing and self-optimising capabilities to reduce complexity and costs.

“Making it happen”

Vocus’ architecture includes TM Forum Open APIs for service activation and configuration; service ordering management; service catalog; inventory management; service qualification; product ordering; product catalog management; product offering qualification; and product inventory management.

This enables zero-touch provisioning for new services and change requests that can be automated in minutes rather than weeks.

The network architecture uses repeatable orchestrations which serve as component “building blocks” within the catalog, rather than bespoke custom product development through coding, enabling offer creation in days rather than months. Further, catalog-driven configuration means no IT development and more effective lifecycle management.

Introducing partner “plug and play” capabilities extends Vocus’ network coverage -- providing access to rich new B2B services and increasing revenues from customers and new partners.

The NaaS Catalyst also demonstrated how TM Forum Open APIs can interact with Metro Ethernet Forum (MEF) standards for the automated orchestration of services across multiple providers and over diverse network technology domains, which is important for realizing Vocus’ Future State vision.

In the future, the network will use big data and AI to automate activation and operations and support autonomous, closed-loop networking with proactive self-healing and self-optimising capabilities to reduce complexity and costs.

Next steps

The foundational platform is now in place, with approximately 33 Arista sites built and connected to the orchestration and intelligent automation platform, and the product catalog and billing platforms, installed and running.

“We’ve implemented the APIs between those platforms and demonstrated a basic end-to-end service activation, proving we can activate services within as little as six seconds,” McClelland said. “That’s compared to the typical scenario where that activation can take weeks.”

The next steps are to implement the products in the payloads more completely and implement other systems capabilities, such as interfaces with the CRM system, ticketing and workflow management systems and inventory management systems, etc.
By consolidating the legacy networks and BSS stacks, Vocus has calculated expected savings of almost AUD$60 million, including OpEx savings of AUS$30 million (US$19.85 million) and CapEx savings of AUS$30 million by 2023, compared to proceeding with things the way they are done now.

This proves the business case but is only the tip of the iceberg as far as benefits go.

“For customers, the experience will improve dramatically because they will be able to do a service qualification order in real-time, with no wait period or manual contract-signing,” McClelland said, adding: “As well as increasing our ability to scale we will also be able to add new products and features much more quickly and seamlessly, because we will be doing it once instead of six times.”

To deliver these benefits, Vocus will work closely with its three foundational partners, including moving towards more outcome-focused contracts which are new for both CSPs and vendors.

“As we’re a Tier 2 operator, we can’t afford to build these capabilities ourselves,” McClelland said. “Part of my vision is that will work with our suppliers co create those capabilities. We can take the benefit of that for Vocus, they can also include the capabilities into their platforms for the industry to take advantage of as well.”

This example of partnering and co-creation approach between CSPs and suppliers will also help drive forward the ecosystem approach envisioned within TM Forum’s ODA for the benefit of the wider membership.