

TTC carries out **phased digital transformation** to modernize its network

Alepo partnered with Blue Arcus for phased deployment of its Digital BSS to deliver a unified convergent platform for all TTC services, reducing OPEX and overall TCO.

Operator Requirements

TTC wanted to offer its customers high-speed data and consistent network experience irrespective of the phones they use. To accomplish this, they wanted Blue Arcus and Alepo to:

- Upgrade legacy ADSL to LTE and WiFi networks using Alepo Digital BSS in the first phase
- Deploy convergent billing and charging to support all its telecom offerings in the second phase
- Support Circuit Switched Fallback (CSFB), 3G, LTE, PSTN, SMS, and MMS for feature phones; enable seamless upgrade to support newer handsets as the market evolves
- Help launch Tuvalu's first VoLTE service to deliver superior voice and video calling experience to subscribers
- Deliver a single web interface and enable subscribers to use the same credentials for all services – fixedline, WiFi, and mobile
- Enable quick launch of innovative voice, broadband, and WiFi plans, delivering an advanced customer experience

Project Background

Tuvalu Telecommunications Corporation (TTC) provides fixed-line telephone and internet services to subscribers on islands across Tuvalu and mobile services on Funafuti, Vaitupu, Nukulaelae, Nanumea, and Niutao. The state-owned operator wanted to offer faster speeds and improved connectivity to its subscribers and decided to upgrade from its legacy ADSL network to LTE and WiFi.

TTC's legacy BSS was unable to support the new network offerings and was in need of an upgrade. The operator brought onboard mobile network solutions specialist Blue Arcus and software provider Alepo to complete the transformation. Alepo's Digital BSS offered the unique ability to deploy in phases, first for TTC being LTE and WiFi, with the option to migrate all other services on to the platform in the future. Keen to first validate key use cases, TTC chose to take this approach.

Successful delivery of the first LTE and WiFi phase of the project bolstered TTC's confidence in the Alepo-Blue Arcus partnership. TTC then decided to migrate all its services (fixed-line, GSM, LTE, and WiFi) to Alepo's convergent platform.

With the second phase, TTC was looking to reduce TCO and operational expenses, though its main objective was to

resolve the challenges it faced due to the widespread use of previous-generation phones in the region. It wanted the network to support Voice over LTE (VoLTE), as well as Circuit Switched Fallback (CSFB), 3G, LTE, PSTN, SMS, and MMS – all capabilities that Alepo's Digital BSS could provide.

Alepo's Solution

Using a phased approach to digitalization, TTC first validated the strengths of Blue Arcus and Alepo's offering, then seamlessly migrated its fixed-line, GSM, LTE, and WiFi services to Alepo's converged billing and charging platform. Key modules delivered include:

- Digital BSS, including OCS, Policy Control and Rules Function (PCRF), Product Catalog, Voucher Management Server, Mediation, and Reporting
- AAA and Enterprise Management System (AAA EMS)
- WiFi Service Management Platform (SMP)
- CRM, web self-care, and mobile app for customers to self-manage all of their services
- Convergent billing supporting prorated plans for fixed-line, mobile, and WiFi services
- Trouble ticketing
- Integration of CRM with third-party HSS for provisioning
- Integration with Blue Arcus's IP-based Multimedia Services (IMS) for VoLTE calls
- Integration with online payment gateway PayPal

Solution Highlights

Alepo and Blue Arcus delivered the project ahead of schedule, helping TTC derive return on investment much sooner than anticipated. Other highlights include:

Convergent Platform

A single billing and charging platform for fixed-line, GSM, LTE, VoLTE, and WiFi, making it easier for TTC to manage its services efficiently and reduce TTM for the rollout of new plans and targeted promotions.

Unified Self-Care

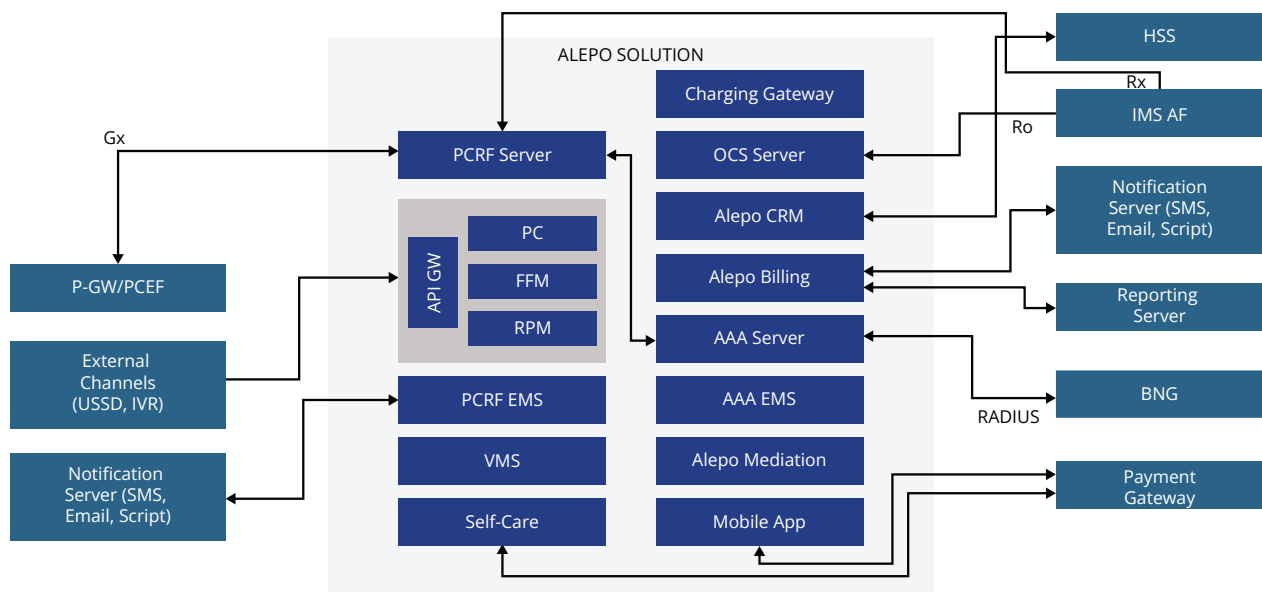
The web self-care and mobile app for Android and iOS made TTC's customers self-reliant, allowing them to use the same login credentials to perform basic tasks such as recharge, plan changes, and so on for all network.

VoLTE Deployment

TTC gained recognition and acclaim after launching commercial VoLTE services in Tuvalu. Subscribers now enjoy a sophisticated VoLTE and video calling experience on the islands.

Secure Payments

Integration of Alepo web selfcare and mobile app with online payment gateway PayPal helped TTC deliver a secure and easy payment experience to its subscribers.



Network Architecture

Project Outcomes

Alepo and Blue Arcus seamlessly migrated all of TTC's telecommunications offerings to the converged platform with zero downtime and no customer complaints. Other key benefits include:

Improved Network Experience

TTC now delivers a faster and always-connected data experience to its subscribers. Further, with improved capabilities to launch new services, TTC expanded its offerings from mobile voice and SMS to LTE and VoLTE. Within three months of deployment, the total revenue increased significantly.

Enhanced Customer Experience

TTC introduced a range of plans – including prepaid offerings; unique service bundles for voice, SMS, and data; and personalized promotions for LTE, VoLTE, and WiFi subscribers – which enhanced the customer experience and improved brand following. Within three months, the churn rate was lower.

Lowered OPEX and TCO

A unified convergent billing platform for all services decreased operational expenses and overall total cost of ownership significantly.

