

accenture | Rakuten

Redefining the way the world connects

Building the world's first fully virtualized cloud-native
telecommunications network

Case Study

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Rakuten Mobile: Rewriting the telco rule book

Rakuten began in 1997 as an online marketplace with six staff and thirteen merchants. Fast-forward 23 years, Rakuten now offers services in e-commerce, fintech, digital content and communications to approximately 1.4 billion members worldwide, with operations in 30 countries and regions.

Rakuten Mobile is now set to disrupt the telecommunications industry with a new, cloud-native approach to how a network is built and operates – transforming how the world connects.



CHALLENGE

The telecommunications industry has long been challenged to innovate at speed and scale. Industry disruption and convergence confront operators with the need to find a new approach to meet growing consumer expectations and modern enterprises' demands for agility and innovation.

The explosion of connected devices and data that the move to 5G generates also requires a completely different mode of operation. It's the difference between servicing a customer base of 20 or 30 million users to a network supporting 500 million devices or more.

At the same time, the industry's traditional approach to network deployment and operations has continued to create unrelenting pressure on balance sheets and P&L. This further inhibits innovation and creates real barriers to the rollout of next-generation technologies like 5G.

Rakuten Mobile understood these industry headwinds and wanted to find a new way to sail through them. It wanted to shift the focus from reliability to resilience, going beyond traditional performance measure like "five nines" of availability. And it sought to not only be efficient as an operator, but as agile as a platform player.

How could Rakuten Mobile achieve all this? By building a world-first*: a fully virtualized, cloud-native mobile network that creates a whole new vocabulary for communications networks – and the industry.

People say that our advantage is that we are a greenfield operator, but I believe it is our people and work culture. We are not a telecommunications company – we are an IT company with highly skilled IT engineers, and that is a huge advantage.

TAREQ AMIN,
Rakuten Group Executive VP &
Rakuten Mobile CTO

WHAT ACCENTURE DID

Rakuten is a global innovation company with a heritage of disruption, software development and delivery excellence.

This heritage guided the creation of the Rakuten Mobile network. But to help bring this vision to life, Rakuten Mobile needed a partner that was able to marry technology leadership with proven experience and business insight to operationalize its new virtualized network.

Accenture collaborated with Rakuten Mobile as an operational enablement partner, designing and implementing multiple aspects of an innovative new cloud-native operating model. The aim was clear: enable the organization's speed and agility requirements to completely disrupt the communications industry.

Accenture helped design the new organization and operating model behind the world's first fully virtualized mobile network*, including new roles, responsibilities and KPIs. Supporting the new model required the creation of 50-plus fully virtualized processes, bringing a unique interpretation to traditional processes. We developed virtual network functions (VNF) lifecycle processes, addressed operations with service reliability engineering (SRE) and helped reimagine new ways to deliver change, incident and release management.

Accenture have provided invaluable support in developing our operations and building out our network."

SAGIV DRAZNIN,
VP Operations,
Rakuten Mobile

Accenture also created a new network engineering capability for Rakuten Mobile, defining and deploying engineering solutions to improve observability of the network, network performance, problem management, and architectural integrity – all complex undertakings in a network that combines cloud, software-defined networking and pioneering hardware solutions.

Working together, Rakuten Mobile and Accenture seamlessly merged network and IT, infusing concepts such as DevSecOps and Agile into the organization. We designed and ran training to onboard new recruits to Rakuten Mobile and supported the creation of new digital product development processes to drive smooth and fast rollout of new features.

Reimagining the traditional Network Operations Center (NOC), we set up and operationalized Rakuten Mobile's Service Experience Center (SXC). This next generation concept is entirely focused on customer-experience on the network. Through a unique pod-structure approach, Accenture is helping Rakuten Mobile accelerate network performance and improve stability.

We also helped create a zero-touch network through the Rakuten Network Operating System (RNOS). RNOS enables unparalleled network intelligence and automation and provides a true 360-degree view of the network and customer. The platform is cloud-native, allowing near-real-time monitoring and control of the network, ingesting data and analyzing it with machine learning to enable proactive fault detection and prevention.

We believe that a zero-touch, self-operated approach will allow us to achieve an unparalleled level of stability in our network.

SAGIV DRAZNIN,
VP Operations,
Rakuten Mobile



PEOPLE AND CULTURE

Just like any other successful partnership, it's not just what Rakuten Mobile and Accenture do together, but how they do it. A strong cultural fit is every bit as important as the right technical skills and know-how.

The commitment to stretch our collective imagination and take risks has been present from the start. It had to be: Rakuten Mobile is working in uncharted territory for which there are no prescribed rules or set solutions. The only approach that works in this context is to dive in, experiment, adapt, learn and change.

Accenture's approach to this bold new adventure has been to share and amplify Rakuten Mobile's sense of discovery – being prepared to explore the unknown, and bringing in the people, capabilities and assets from across Accenture's global network to forge the path forward with Rakuten Mobile.



VALUE DELIVERED

Almost as soon as Rakuten Mobile launched its fully-virtualized network, the benefits of the new cloud native operating model were apparent. Operating costs are significantly lower than traditional network operators, and the pace of software delivery is rising exponentially, thanks to Rakuten Mobile's world class automation practices.

Rakuten Mobile's CI/CD platform, powered by Accenture, enables automated build, test, security and deployment functionality for Rakuten Mobile's engineering teams. The platform allows unparalleled speed and quality for the teams it supports, making it possible for Rakuten Mobile to innovate rapidly and consistently. Rakuten Mobile's operational savings are passed directly to customers, so that Rakuten Mobile's pricing is significantly less than normally paid by customers for comparable tariffs in Japan.


It's clearly an offer that customers find attractive. Just a couple of months after its commercial launch, the Rakuten Mobile network saw

significantly increased data traffic compared to a typical operator, with subscriber numbers rising fast. For Rakuten Mobile, this confirms consumers' desire for its services and bolsters its future ambitions to enable affordable and reliable communications on a global basis.

But Rakuten Mobile is not afraid to continue innovating. It aims to be the master of its own destiny, dictating the pace of innovation and teaming up with partners like Accenture to achieve its lofty ambitions.

Looking into the future, Accenture is working with Rakuten Mobile as their partner on the Rakuten Communications Platform (RCP), a telecommunications-as-a-service offering that's leading the industry. RCP is a truly cloud-native 5G platform, drawing on Rakuten Mobile's engineering pedigree and Accenture's architecture and implementation experience to usher in the new era of computing and telecommunications convergence.

* For a large scale commercial mobile network (as of October 1, 2019). Research: Stella Associa



I want to thank the Accenture team for working with us on this courageous journey.

TAREQ AMIN,
Rakuten Group Executive VP &
Rakuten Mobile CTO