



Operator strategies to cloud native networking

This blog post is a short-form version of an in-depth report investigating the different operator strategies to cloud native networking which can be found [here](#). This report was written after a series of interviews with senior telco leadership.

Matt Bamforth, Consultant

Defining Cloud Native

Cloud native applications have associated architectures, technologies and practices originating from Big Tech and widely adopted by enterprise IT to run infrastructure-agnostic applications. The Cloud Native Computing Foundation (as good as any authority) defines Cloud Native as follows:

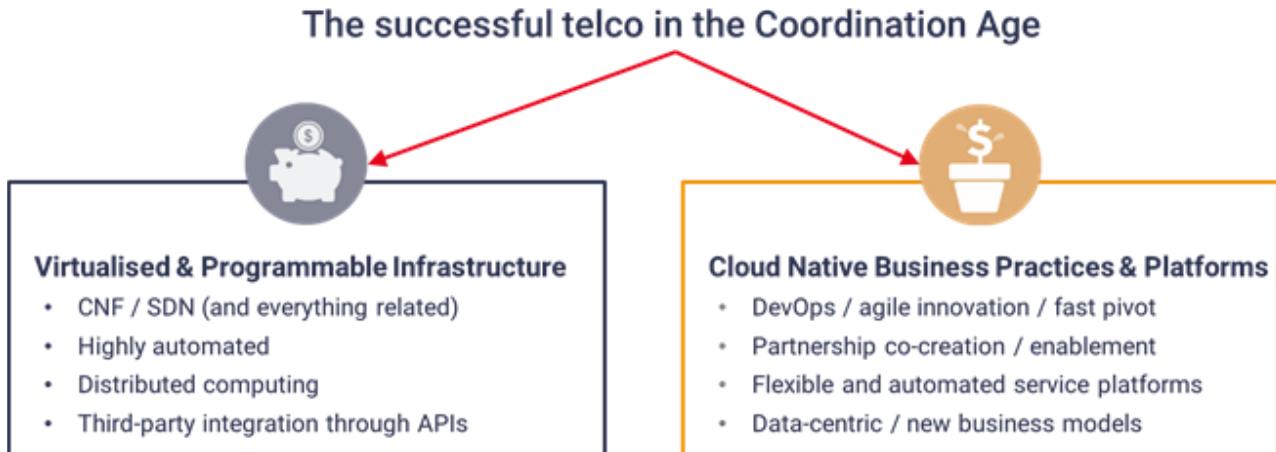
“Cloud native technologies empower organizations to build and run scalable applications in modern, dynamic environments such as public, private, and hybrid clouds. Containers, service meshes, microservices, immutable infrastructure, and declarative APIs exemplify this approach.

These techniques enable loosely coupled systems that are resilient, manageable, and observable. Combined with robust automation, they allow engineers to make high-impact changes frequently and predictably with minimal toil.”

The Coordination Age

The current telecoms operating model is not sustainable. Commoditisation of core connectivity services means that revenues are stagnating while traffic volumes (and costs) continue to grow. Operators must adapt to achieve greater innovation through automation, at scale: in particular, they need to provide new, differentiated network services that work hand-in-glove with telcos’ own and others’ applications that meet the demands of customers and needs of society. We call this the Coordination Age. The operators that succeed, will do so with an operating model supported by technology intended to deliver innovation at scale: fast, low cost, reliable, highly automated. In two words, cloud native.

Figure 1: Telcos’ route to growth is through innovation at scale



Source: STL Partners

Different operator strategies

Most operators share common definitions of cloud native and agree that it is both relevant and inevitable for telecoms networks. However, they have different perspectives on how cloud native code will be applied to their networks.

Some operators are more cautious. They are concerned about their ability to deploy cloud native network code given existing workforce and skillsets. They see themselves primarily as operators of others’ technology, which they implement as a guaranteed package - much how legacy networks have traditionally been deployed and managed. They are not ready to take on additional engineering accountability implicit in cloud native

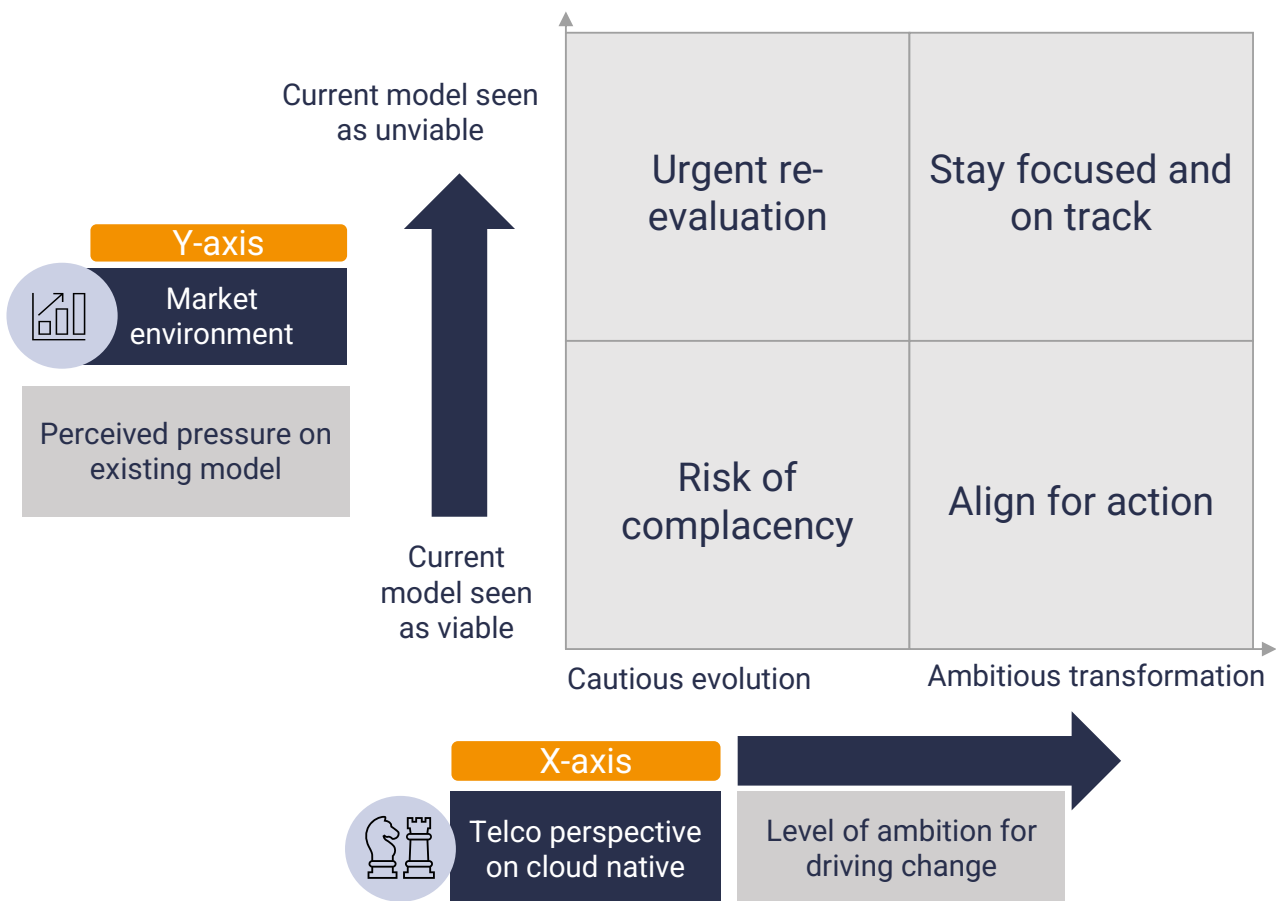
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practices (e.g. CI/CD pipeline management) and requiring a more detailed understanding of their networks' underlying components' internal workings. Furthermore, some of these operators do not see an immediate need to pursue dramatic transformation as they do not perceive that their business model is failing.

Other operators are more ambitious. They see themselves as needing to combine and operate technology from multiple different suppliers, more akin to how cloud native applications are managed in IT domains. They expect to combine and adapt different suppliers' network components and to have a sufficient understanding of those components' internal workings to do so. They believe that this better places them to take advantages of the promised benefits of cloud native networking: flexibility, scalability, automation, and the elusive combination of reliability and fast time to market of new services and rapid evolution of existing services. They thus hope to build and sustain competitive advantage over other operators and application providers.

With the aim of drawing insights and wider recommendations for all operators, we mapped operators into four broad groups across two dimensions.

Figure 2: Telco cloud native operator matrix



Source: STL Partners

Telco leadership recommendations by segment

We address our recommendations to these four quadrants.

Quadrant 1: Cautious evolution, current model seen as viable - Risk of complacency

- **Cloud native strategy:** plan for the change to come: the eventual adoption of cloud native practices, processes, organisation, and skills. Understand the risks of deferring this, identify and monitor market trigger points, set internal development thresholds, prepare responses.
- **Skills, organisation, and culture:** Build capabilities for a more software-first organisation. Re-organise operations to reflect a well-defined future mode of operation. Create opportunities and incentives for teams to build confidence in running cloud native applications. Cultivate a learning culture where failing fast is shared openly.
- **Partnerships:** Choose partners with deep IT and cloud experience who can further accelerate your operators' own learnings. Select ecosystem partners that are committed to the realisation of an open, cloud native and standards-based approach with a deep understanding of service reliability and security. Operators should seek ecosystem partners that have demonstrated a success track in cloud technologies.

Quadrant 2: Ambitious transformation, current model seen as viable - Align for action

- **Cloud native strategy:** understand where you want to build your own IP and focus on this. When allocating budgets make sure you understand the circumstances under which cloud native should be chosen over alternatives. Manage stakeholder expectations. Prioritise and focus.
- **Skills, organisation, and culture:** when you pursue a transformation strategy, commit properly. Re-organise, re-skill, recruit, and reward. Create opportunities and incentives for teams to build confidence in running cloud native applications.
- **Partnerships:** Mitigate risks and challenges of moving to cloud native by choosing ecosystem partners that can bring discipline, structure, operational blueprints, and guidance. These partners should be experienced in implementing cloud native and standards approach.

Quadrant 3: Cautious evolution, current model seen as unviable - Urgent re-evaluation

- **Cloud native strategy:** Do not defer decisions. Act decisively and with clarity, one way or the other and avoid drifting down a business-as-usual trajectory out of inertia. Manage stakeholder expectations.
- **Skills, organisation, and culture:** bring clarity of purpose and make sure that this is translated in a meaningful way to employees and other stakeholders. Define the future mode of operation in detail. Offer a clear route for employees to learn new skills and adopt new practices.
- **Partnerships:** select partners that can inspire confidence and drive change. Those that can demonstrate having 'lived' through the cloud's evolution from a definition of basic characteristics to something that is now an entire landscape of technology with an accompanying operational philosophy. Above all pick ecosystem partners that have demonstrated a success track in cloud technologies.

Quadrant 4: Ambitious transformation, current model seen as unviable - Stay focused on track

- **Cloud native strategy:** Maintain momentum by identifying and communicating early success stories across all stakeholders: customers, investors, employees, and partners. Do not pursue cloud native networking as an end in itself. Ensure that the networking transformation is closely coupled with new service and ecosystem development. Stay rigid on de-coupled architecture. Don't compromise
- **Skills, organisation, and culture:** Ensure clarity of purpose on the overall vision is shared by all. Start with customers and partners, follow with culture, skills, organisation and operating model. Technology adoption will follow. If you have not done so already, consider creating a strong C-level product role to bridge technology and customers.

- **Partnerships:** Select ecosystem partners that are committed to the realisation of an open, cloud native and standards approach with a demonstrated success track in cloud technologies. Avoid CNF partners that seek to impose specific hardware, containerisation, Linux release or orchestration.

Matt Bamforth is a Consultant at STL Partners, specialising in edge computing, telco cloud, and 5G.

Get in touch with the author to learn more

matt.bamforth@stlpartners.com

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