

Navigating the Uncertain World Facing Service Providers—Juniper’s Perspective

The Value of Immediacy in Service Delivery

Service providers that own networks are facing intense pressures in today’s market. As the cloud—along with the information-oriented and connected world—has evolved, customer expectations have grown more immediate. Value measured against time is a decisive metric (Figure 1), and savvy service providers are using SDN and Network Functions Virtualization (NFV) to fundamentally change the economics of their business.

Over-the-top (OTT) players, as well as more nimble service providers, are leading the way with new cloud and virtualization technologies. These technologies allow them to rapidly roll out new services and capabilities almost instantaneously to address anticipated—or in some cases, unanticipated—customer needs. If the new service doesn’t take off, these providers can “fail fast,” rapidly scaling down and redeploying assets without missing a beat. Conversely, if the new service is a success, they can “scale fast” to quickly capture maximum value. As a result, “value” is migrating toward rapid innovation, while conventional network connectivity is increasingly becoming a commodity. Service providers must adapt to this new mindset.

While quickly harnessing these capabilities to capitalize on innovative ideas is the future, successfully implementing them is another story. Service providers are burdened by costly planning and development cycles that don’t match the pace of today’s escalating requirements. Most service and network infrastructures are designed and deployed in a rigid, manual, step-change fashion that can take from 12 to 18 months to roll out, requires large upfront investments, and is difficult to modify midcourse or after completion. It’s no surprise, then, that service providers take a risk averse approach to service development—these large investments of time and money aren’t recoverable if the market changes or demand does not materialize.

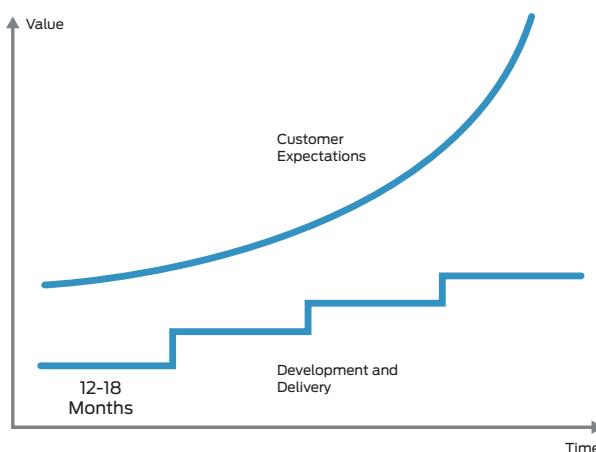


Figure 1: Customer expectations vs. development and delivery

The Challenges Service Providers Face

These trends have created an innovation gap between customer expectations and what network providers can realistically deliver. Many application vendors have eagerly filled this void, ironically by using existing service provider networks for connectivity to deploy their services.

There are a few systemic reasons behind this innovation gap (Figure 2). First, legacy environments are based on complex manual workflows, limiting speed and increasing cost. Second, a fixed physical infrastructure that requires stringent testing and time-consuming modifications further contributes to higher costs and lengthy deployments. Finally, service providers have limited network intelligence and visibility, precluding them from using analytics for innovation.

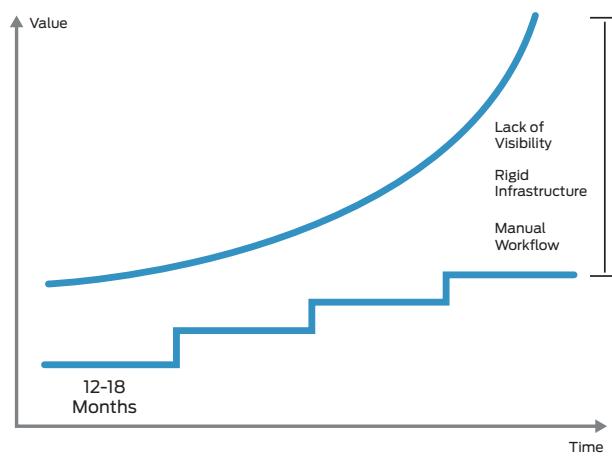


Figure 2: Attributes that create the innovation gap

More nimble competitors are automating and virtualizing their environments not just to reduce operational expenses but to rapidly iterate and test new services; then, depending on the success of the service, these providers decide whether to scale or “fast-fail.” The contrast is striking. While network providers—constrained by a lack of experience with new technologies, as well as an operational structure and culture that evolved for a different marketplace—take months or years to identify a new service and source the technology to address it, companies that grew up on the Web embrace DevOps environments, resulting in more agile service creation.

For service providers that remain mired in this old approach, the gap will only widen; they will be further marginalized and, as pricing pressures intensify, their already dwindling profits will continue to erode. At the same time, they must continue to invest in connectivity to deliver existing services or risk getting blamed for poor customer experience. It is truly a quandary.

A New Approach

Network providers need to take a different approach. The current network investment cycle is slow, with investments made in advance of demand; the new network model, on the other hand, is responsive to demand and keeps its options open. In order to advance with agility in today’s market, network providers need to adopt a carrier-grade, open network platform—one that accelerates delivery cycles and reduces operational and upfront expenses while minimizing risk.

This evolution requires software-driven workflow automation that strengthens and streamlines service delivery. Workflow and systems automation not only reduces operational expenses, it allows customized services to iterate quickly—moving from concept to testing in a matter of days rather than months, and with a smaller cost footprint designed to match expected revenue.

Such an approach requires a mix of physical and virtual infrastructure that optimizes investments while dynamically changing the network to meet service needs. Virtualization enables variable cost business models, which means lower up-front costs and lower risk. While dedicated boxes can offer better performance and higher potential margins, they also come at a premium; the higher fixed-cost model means higher risk—especially when demand is uncertain and customer needs are dynamic. Smart providers follow a simple rule of thumb: virtual for flexibility and options; physical for efficient scalability.

Network visibility and intelligence is also critical for gathering, harvesting, and applying insights from the network in order to develop new services, implement greater efficiencies, and reduce risk. Ultimately, network analytics can be used to predict where the market is going and anticipate what your customers need before they even know it themselves. This unique and direct connection to customers is a distinct competitive advantage that allows innovative providers to eclipse what their competitors are delivering.

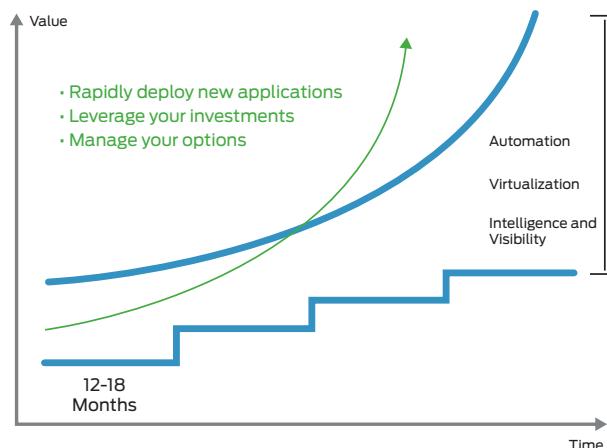


Figure 3: Exceed expectations with a new approach

With these advanced capabilities built into the Telco cloud, service providers have the ability to rapidly roll out new, customized, revenue-generating applications and optimize their current assets while growing in the direction they choose: physical or virtual.

Closing the Gap to Create Value for Your Network

As networks become more automated and programmable for innovation, service providers can take advantage of these capabilities and the agility they afford for adapting to changes in the market. It's a unique opportunity to elevate the game and close the customer expectations gap.

Providers who adopt this new approach will also reduce operational costs, meet the needs of their existing customers quickly and efficiently, and even anticipate their emerging requirements. It's an opportunity for providers to distinguish themselves from their rivals by rapidly delivering differentiated services, all with a lower risk that aligns network investments with actual demand.

Closing this innovation gap is why network providers trust Juniper Networks to help them navigate the journey toward SDN and NFV. Visit www.juniper.net/us/en/solutions/nfv/ to learn more.

About Juniper Networks

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