

Transformation Through Innovation

A service provider strategy to prosper from digitization

People will have 11.6 billion mobile-ready devices and connections by 2020.

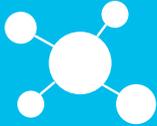
For service providers to thrive today and in the future, they'll need to focus on some specific goals: improving speed and efficiency, defining a growth strategy based on new services, and ensuring security. This white paper dives into what that transformation looks like and how technology is making it possible.

- 

Opportunity Calls


- 

New Criteria for Success


- 

Network Evolution


- 

Your Blueprint


- 

Real-World Proof



Opportunity Calls: Demands, challenges and trends

[Introduction](#)
[Opportunity](#)
[Criteria](#)
[Approach](#)
[Architecture](#)
[Case Studies](#)

Disruption has become the norm, and industries of all kinds have been forced into a quest for survival. As a service provider, you can see it happening. The digital business is redefining and shaking up entire industries: retail, transportation, media, advertising, entertainment, hotels, and professional services. The question is no longer if enterprise-sized businesses will retool to become digital, but when and how.

Your customers today expect more than just basic connectivity. They want to choose from an array of services: WAN, VPN, security, mobile, and IoT. They want them managed, in the cloud, and customizable on demand. And they expect a top-of-the-line experience: streaming video, seamless interaction, and anytime, anywhere access on multiple devices that fit their always-connected lifestyles with plug-and-play ease. Helping businesses go digital is a huge opportunity, but to be competitive requires an equally disruptive transformation of your infrastructures, technologies, and business strategies.

Three key trends, one huge opportunity

1.1 zettabytes

Global IP traffic per
year in 2016*

+

2.3 zettabytes

Global IP traffic per
year by 2020*

+

8x

increase in global mobile
data traffic by 2020*

= \$2 trillion

at stake for service providers
between now and 2024*



How many years would it take one person to watch all the video that will cross global IP networks in just one month of 2020.*

Click one



So how can you prepare to meet both the incoming demand and capitalize on the opportunities?

*Cisco Visual Networking Index™ Forecast and Methodology, 2015–2020

New Criteria for Success: Goals and groundwork

[Introduction](#)[Opportunity](#)[Criteria](#)[Approach](#)[Architecture](#)[Case Studies](#)

Through decades of partnerships with service providers around the world, Cisco has gained valuable insights into the challenges you're facing. We believe your success in coming years will be heavily dependent on strategic decisions in four categories:

So what do you do to transform your business into a fast, nimble organization able to address digital businesses? Start by shaping your strategy and architecture around these four areas:



**Embrace
Virtualization**



Expand and grow your service offerings, and reduce cost, by decoupling network functions from hardware, separating control and user plane functions, and taking advantage of techniques such as network slicing.



**Choose
Automation**



To innovate faster and reduce complexity and human error in configuration and provisioning, use orchestration tools to rapidly create and manage services. Use advanced telemetry and analytics to help you optimize the network and customize the user experience.



Simplify



Hide the complexity of networking; promote new business models by flattening the network; converge technology siloes; and blend mobility, video, and IoT applications and content with programmable infrastructure and security for new virtual managed services.



**Employ
Programmability**



Deliver a contextual, high-quality user experience by extracting real-time and near-real-time data, analyzing the data, applying policy, and programming the network and applications in real time.

This strategy addresses the most pressing priorities of service providers: speed, efficiency, growth, and security. It helps you thrive in a fast-changing environment. Where do you go from here? What does your future-ready network architecture look like?

Network Evolution: The new network architecture

[Introduction](#)[Opportunity](#)[Criteria](#)[Approach](#)[Architecture](#)[Case Studies](#)

Moving forward, network infrastructures must evolve. A network abstraction layer must be established, and the development environment must support a mix of different cloud-based and on-premises options.

SERVICE CREATION



Design



Assurance



Catalog



← Streaming Telemetry →

← Open API's →

Now that the network evolution is in place, discover how you can make it all happen.

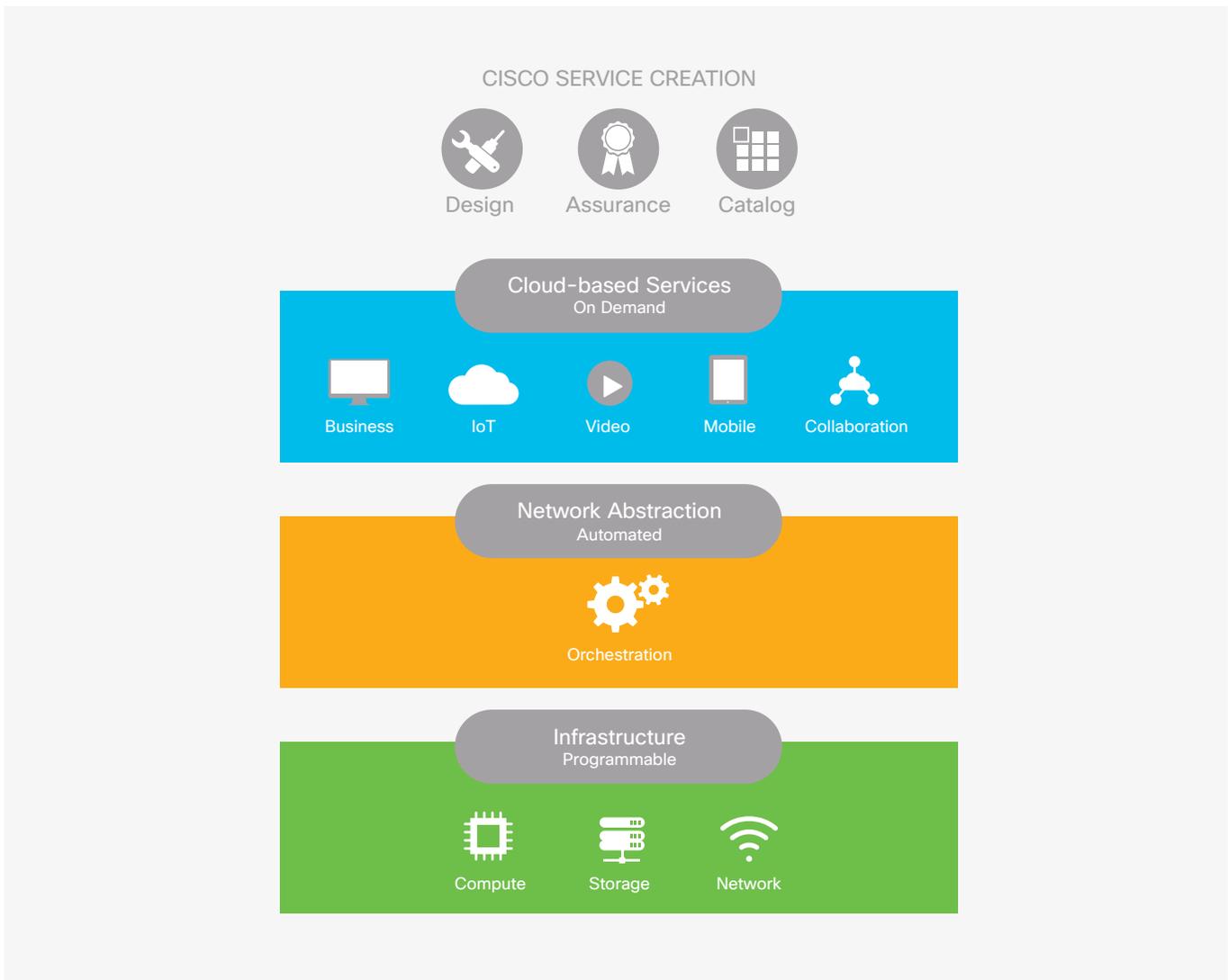
Connect



Your Blueprint: Cisco Open Network Architecture

[Introduction](#)
[Opportunity](#)
[Criteria](#)
[Approach](#)
[Architecture](#)
[Case Studies](#)

The previous capabilities were the blueprint for the Cisco Open Network Architecture, which includes everything you need to address the requirements of the digital business.



This architecture is

Open

Works in a multi-vendor environment and uses open-source technology

Extensible

Doesn't limit you to one particular technology

Modular

Mix and match components of different types and from different vendors

Five wins with the Cisco Open Network Architecture

1

Move beyond a siloed infrastructure to a flexible, interconnected, programmable one where security, policies, and analytics are pervasive throughout.

2

Design, deploy, change, and remove resources in real time.

3

Scale up or down immediately with ease.

4

Automate and orchestrate the entire services lifecycle using different combinations of private cloud, public cloud, hybrid cloud, and on-premises offerings.

5

Manage more effectively with improved visibility between application and infrastructure layers using a feedback loop based on application awareness of the network state and performance data abstracted from the network.

Real-world proof: Snapshots of service provider transformation

[Introduction](#)[Opportunity](#)[Criteria](#)[Approach](#)[Architecture](#)[Case Studies](#)

Service providers transforming their infrastructure with Open Network Architecture are experiencing incredible results. Check out not only the benefits but also the diversity of providers Open Network Architecture works for.

TELECOM

Telecom brings efficiencies and cost savings to new customers.

[View Case Study >](#)

TELUS

TELUS becomes the first provider in Canada to offer a hybrid cloud solution through the Microsoft Cloud OS Network.

[View Case Study >](#)

TELSTRA

Telstra helps domestic and global customers gain competition-busting agility.

[View Case Study >](#)

The Cisco Open Network Architecture isn't standing still, either. It's built using the industry's most comprehensive virtualization and orchestration software platform. New services will be rapidly deployed through a single self-service portal, allowing customers to connect private and public clouds and managed network services in ways that have not previously been possible.

It's transforming network services so they become instantaneous, purchased and provisioned in the same manner as cloud. And it's reducing operational complexity; rigid processes; lengthy delays; and long provisioning, installation, and repair cycles for customers.

The Cisco Open Network Architecture helps you transform and retool to take greater advantage of digital opportunities today.

[Discover next steps for digital transformation >](#)



TELECOM

Challenge

It wasn't economically feasible for small and medium-sized businesses to have the critical IT technologies that larger companies were enjoying. Telekom wanted to offer new services that were easy to deploy, highly secure, and compliant—and most of all, affordable.

Solution

In collaboration with Cisco, Telekom launched a self-service, cloud-based VPN for small and medium-sized businesses. The online portal lets customers select and activate highly secure and scalable Internet services. All are cloud-managed IT solutions available on a monthly subscription basis.

A management dashboard lets customers monitor the status and performance of their services, and they can upgrade the number of users or the bandwidth with a click of a mouse. Provisioning is automatic and done in real time from the provider's data center. The service was built on Cisco virtual security appliances, OpenStack solutions, and the Cisco Network Service Orchestrator. It's based on the Netconf/YANG standards for virtual services utilizing SDN and NFV, multivendor orchestration, and automated provisioning.

Results

Telekom's small business customers can now take advantage of vital services.

Decrease from months to 48 hours for deployment of new managed services.

Estimated savings in operational costs will equal 78 percent of current OpEx costs.

200 percent return on investment from the new services architecture is expected within five years

[BACK](#)[View TELUS](#)[View Telstra](#)



TELUS

Challenge

As a leading Canadian provider of advanced telecommunications, TELUS was seeing huge demand for cloud services from its customers. Its customers were facing growing complexity in their IT environments, plus unprecedented data demands driven by new mobile, social, Internet of Things, and big data applications. But while they saw cloud as a key tool, these customers were facing tough compromises when it came to their cloud solutions. Public cloud put limitations on customization and localized control, while on-premise solutions were complex, expensive, and resource-intensive. TELUS wanted to offer better options.

Solution

TELUS now offers Canadian businesses a full suite of managed infrastructure-as-a-service (IaaS) solutions, including public and private cloud options and Canada's first hybrid cloud built on Cisco and Microsoft solutions.

The public cloud service offers cost-effective shared compute and storage infrastructure for elastic, noncritical workloads. The private cloud service offers dedicated infrastructure for mission-critical applications with heightened security or compliance requirements. The hybrid cloud service combines public and private cloud delivered from the company's Canadian data centers and Microsoft Azure into one integrated solution with a single management portal. That gives IT departments quick access to on-demand compute capacity and the ability to seamlessly provision or move workloads between their cloud deployments.

| Results |
|---|
| Cost-effective shared compute and storage |
| Dedicated infrastructure for mission-critical applications |
| Quick access to on-demand compute capacity |
| Seamless provisioning or moving workloads between cloud deployments |

[BACK](#)[View Telstra](#)[View Telecom](#)



TELSTRA

Challenge

Telstra, a leading Australian mobile operator, had both its domestic and global customers looking to adapt quickly to the new digital, app-driven world. In order to help both small and large businesses capture new opportunities, Telstra had to be able to scale IT resources quickly and securely. Yet that speed, agility, and security was proving difficult to achieve.

Solution

Telstra partnered with Cisco and deployed a unified, on-demand suite of cloud and managed network services based on Cisco's advanced SDN and NFV solutions. The services allow Telstra to rapidly launch new services and transform customer experiences.

[BACK](#)[View TELUS](#)[View Telecom](#)

Results

Unifies the customer and product experience across cloud, network, and services

Speeds up product development and time to market

Helps customers dynamically provision services in near-real time on premises and in the cloud

Improves operational efficiency and simplification