



SD-WAN Market

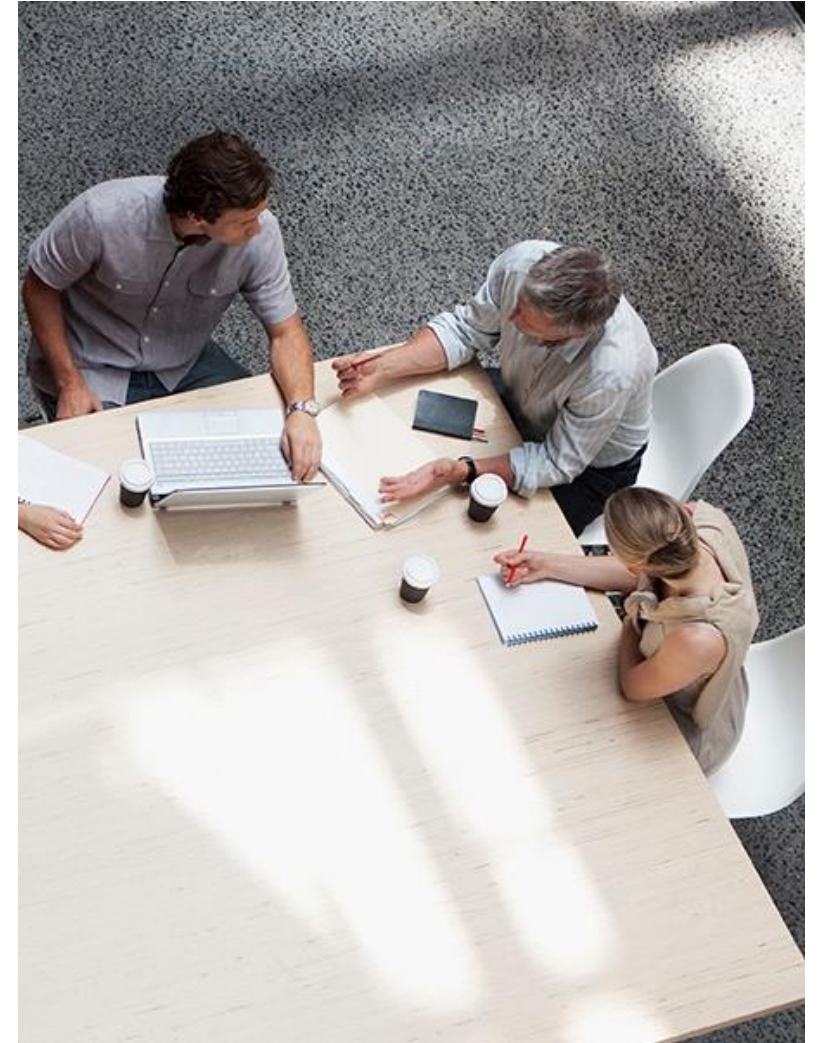
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Connect Cisco SD-WAN

In this presentation, we will cover the following;

- About BT
- SDWAN
- Customer learning



About BT

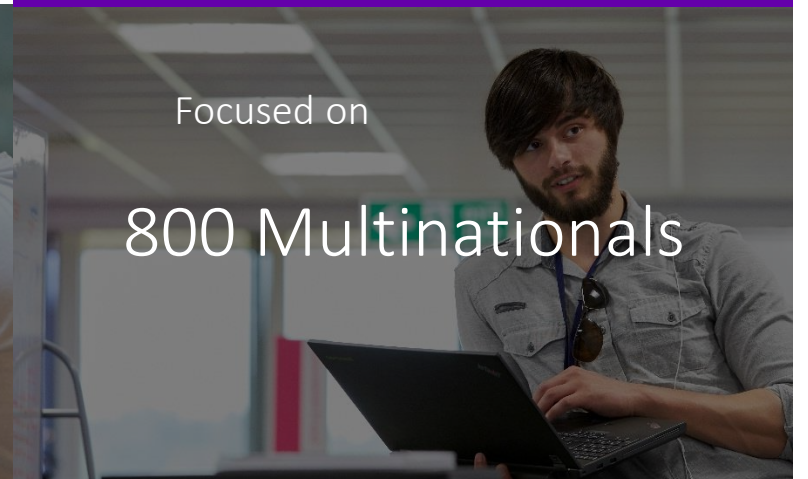
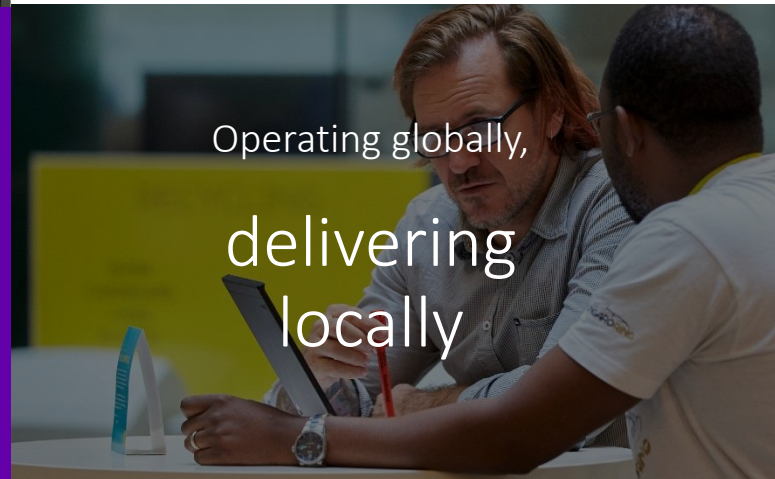
About BT



A leading provider of
communications
solutions

Combining products and
services
with industry-specific
solutions and consulting
expertise

Serving customers
in 180
countries



We have

8

development centres
across the globe

with more than

13,000

scientists
and technologists

and more than

4,700

patents
and applications



“BT has been a longstanding partner of De Beers. It’s one of the only global vendors with the reach to support the business in the many regions in which we operate.”

- James Ross, Head of Information Management,
Canada and the United States, De Beers Group of Companies



We are recognised as a
leader in Gartner's Magic
Quadrant for Network
Service Providers,
Global, 2017

We're able to
deliver network
services to more
than

198

countries and
territories

using over

5,200

PoPs

Our

4

Global service hubs

provide local
support in

25

languages

SDWAN

What is a SD-WAN?

SDN

Software Defined Networks

A network administrator, or a computer, can centrally control which way traffic flows, rather than an individual network appliance.

SD-WAN

Software Defined WAN

A network which uses SDN on a national or global scale to determine the most effective route for traffic to take.

SD-WAN benefits

- Improved network performance
- Support demand for extra bandwidth
- Greater control over the network
- Network impairment, makes intelligent decisions
- Simpler management
- Quick and easy set-up of sites
- Choice of different network connections.

SDWAN market

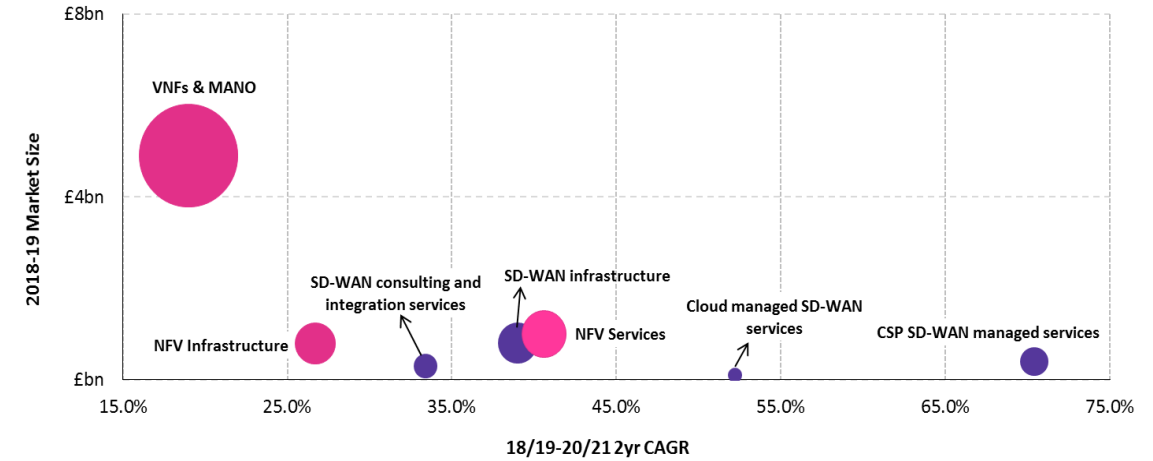
SD-WAN is taking center stage in enterprises' network strategy: "By 2020, 80% of enterprises will have implemented SD-WAN at some sites underpinned by secure and virtualized edge architectures" – IDC, Oct'18

SD-WAN adoption has been growing rapidly over the last two years, and that has driven a number of companies to create competing SD-WAN solutions – Gartner 2018

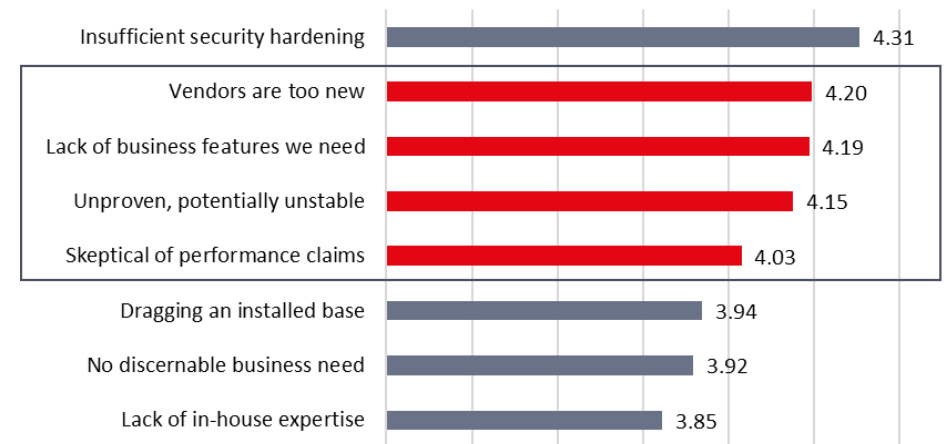
SD-WAN has increased reliability in enterprise connectivity and improvements in network agility, security, business continuity and productivity of various enterprise applications – Gartner 2018

Despite optimism around SD-WAN market, the mainstream adoption of SD-WAN and allied services is yet to take off.

- SD-WAN not always results in WAN expenses reduction
- Security is a perennial concern with all new technologies



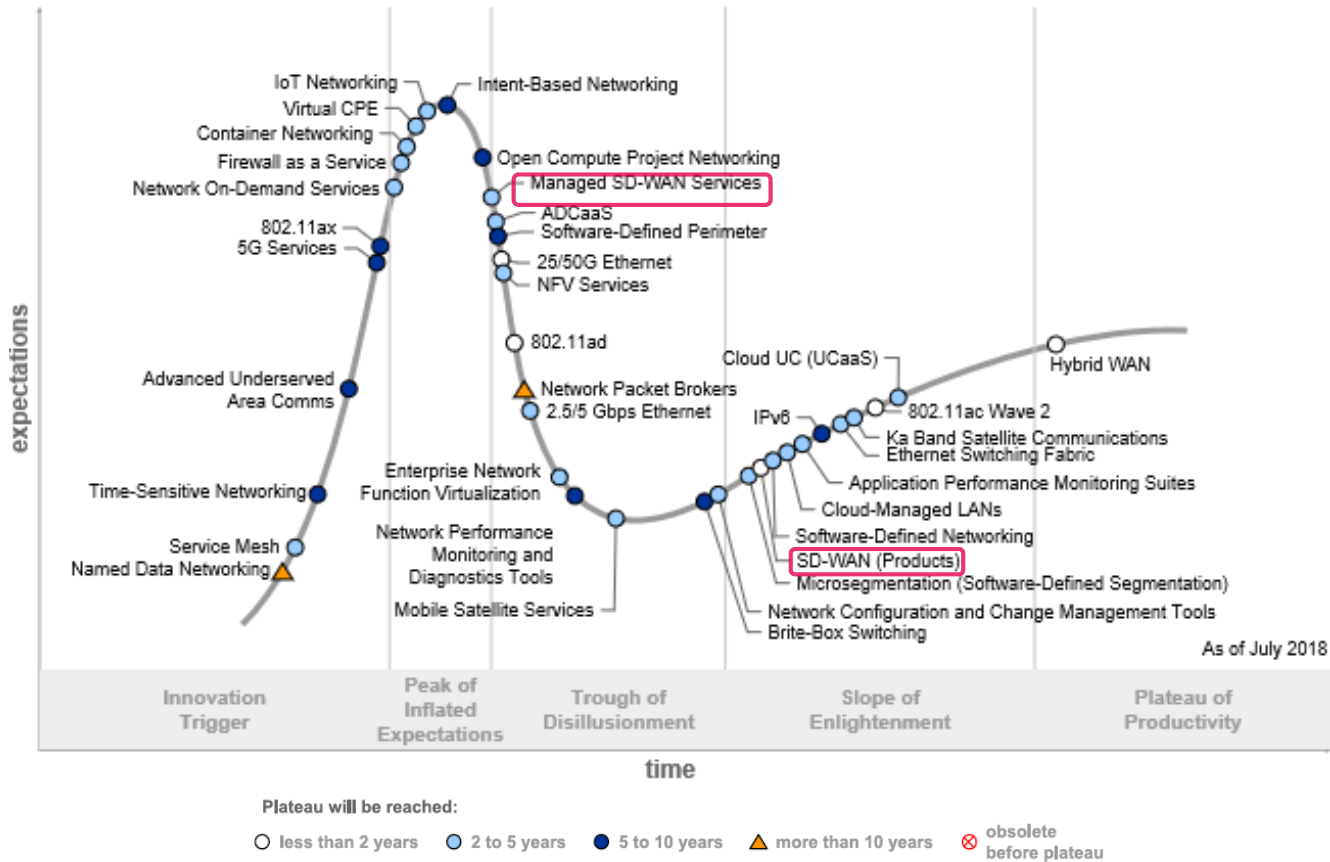
Primary enterprise SD-WAN concerns



Source: Ovum Enterprise Network Services Survey, 2017 (N=89)

SDWAN on the Gartner Hype Cycle

Hype Cycle for Enterprise Networking and Communications, 2018



Gartner Hype Cycles provide a **graphic representation of the maturity and adoption of technologies and applications**, and how they are potentially relevant to solving real business problems and exploiting new opportunities.

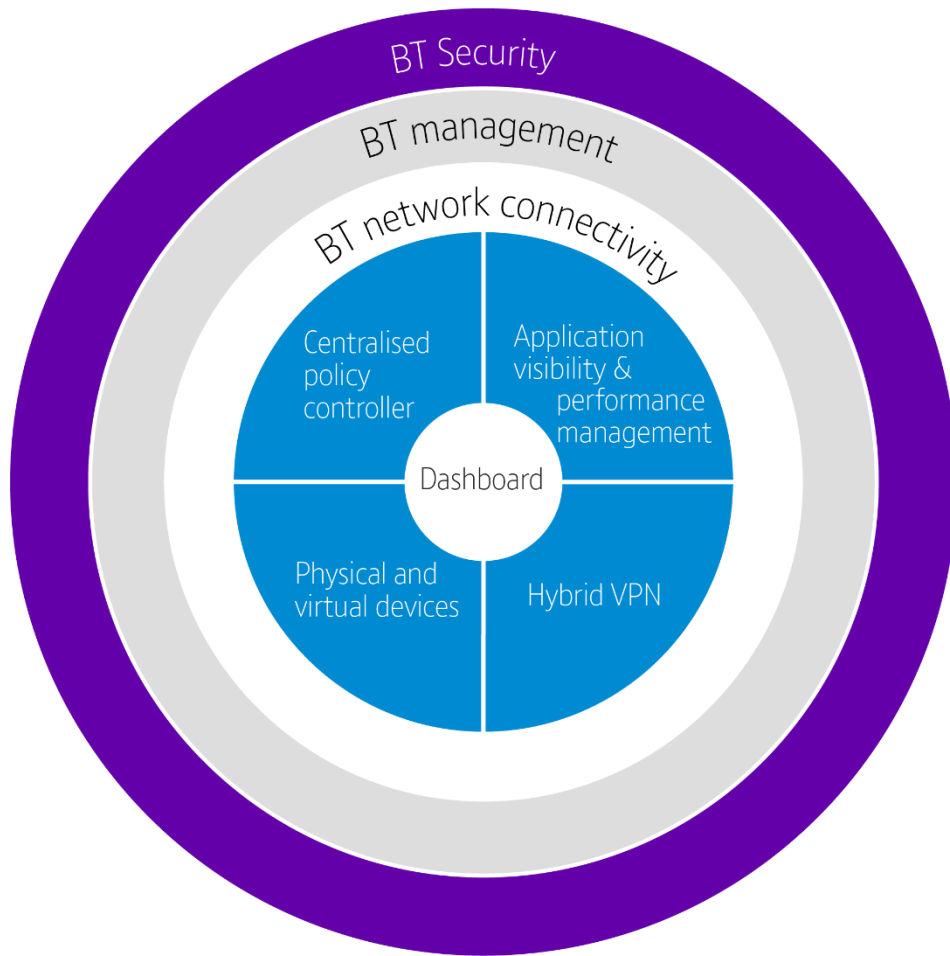
Technology	Benefit Rating ¹	Market Penetration (% of target audience)	Maturity ¹	Years to mainstream adoption
Managed SD-WAN Services	Moderate	5% to 20%	Adolescent	2 to 5 years
SD-WAN Products	High	5% to 20%	Early mainstream	Less than 2 years

- SD-WAN products market will continue to show rapid growth and forecast vendor revenue growth at over 50% CAGR for the next three years



Connect Cisco SDWAN

meeting the needs of our customers' digital business requirements now and in the future



First to market with a cisco SD-WAN solution to meet demand at volume

Connect Cisco SDWAN:

- A centrally managed, Cloud hosted and software defined network overlay solution.
- Available with a range of BT or 3rd party Internet and Network services.
- Based on Cisco vEdge and cEdge hardware and licences
- A fully BT managed service from installation to configuration through to monitoring of service
- Full customer visibility on service management
- Integrated “best of breed” reporting capability
- Available in 65+ countries globally

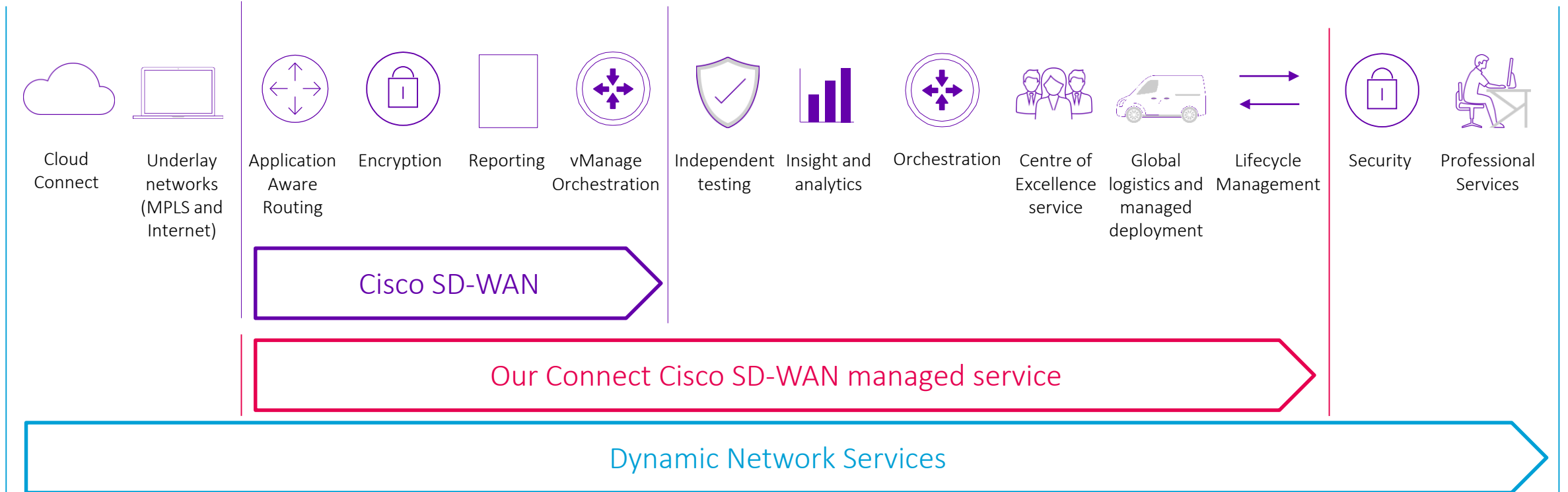
BT Service Wrap:

- A market leading SDWAN solution delivered by a global service provider experienced in large scale deployment and application management
- BT has set up and manages the entire logistic of CPE distribution and maintenance on behalf of the customer
- Specialist team for configuring and maintaining the SDWAN service in life
- Wide range of underlay network and Security services available to ensure the right level of performance and Security is achieved for each application and each site.

Future developments:

- Virtual SDWAN instances in the Cloud and on Cisco ENCS

Our service is designed to maximise the benefits to your business



Customer learning

What we see in the market

- Almost all customer RFPs have requirements that are either best solved using SD WAN or request specifically about for a SD WAN proposal.
- Most customers asking for SD WAN look for hybrid network implementations with traditional MPLS connectivity and Internet and only have internet only for some of their smallest sites.
- None of our customers want a full over the top service with only internet connectivity everywhere but some come close.
- The migration path is key and most customers under estimate the transformation.
- API interfaces and co-management options are key features.
- Some customers decide to renew on traditional WAN services for now.

Steps for a successful evolution

- Network transformation projects do NOT start with technology but with the **definition of business objectives**
- Understanding the **existing** infrastructure and application location is key to achieve those business objectives
- Evaluation of the **available internal resources** will help customer define the appropriate management model
- Only at this stage can technology choices be made



1 Business case
long term
objectives

2 Audit of current
infrastructure

3 Define Business
outcomes

4 Define
Management
model

5 Identify technical
outcomes of
projects

6 Select technical
Solutions for
evaluation

Our lessons learned from global SD-WAN implementations

- Not all SD-WAN's are created equal.
- Don't believe the hype – watch for trade offs between cheap, fast and good.
- Pilots and trials help deliver the business benefit.
- An SD- WAN is only as strong as its underlay network.
- Architecting a global hybrid network requires a detailed plan.
- Consider what you really know about the applications on your network.
- Defining the service around supply and support is critical in a global deployment.
- SD-WAN overlay can provide a holistic service across different network providers.
- Additional benefits can be gained from using a single provider for underlay network.

