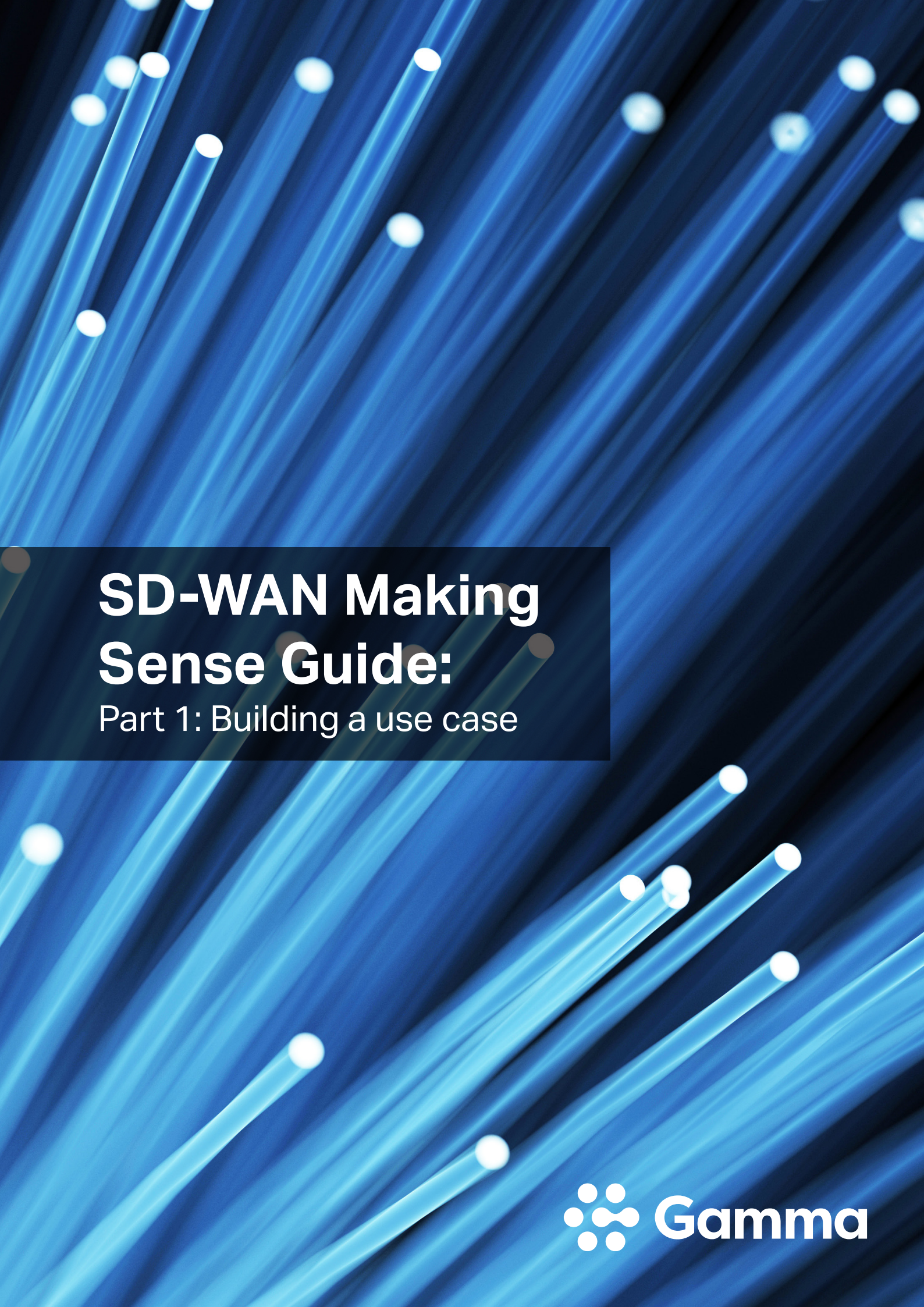
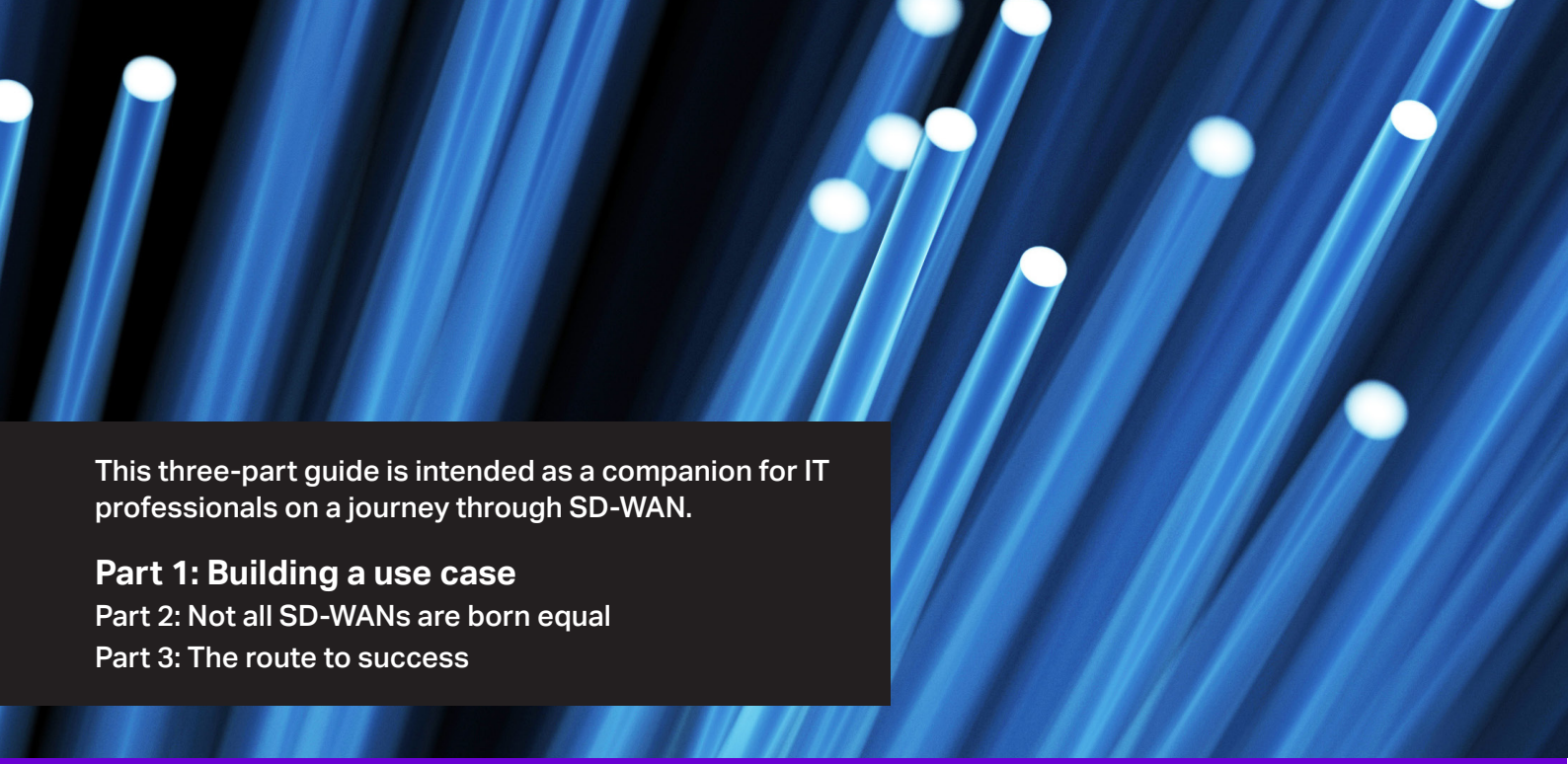


SD-WAN Making Sense Guide:

Part 1: Building a use case

Gamma



This three-part guide is intended as a companion for IT professionals on a journey through SD-WAN.

Part 1: Building a use case
Part 2: Not all SD-WANs are born equal
Part 3: The route to success

SD-WAN - A MATURING TECHNOLOGY

The promised benefits of SD-WAN are compelling. But SD-WAN use-cases remain sensitive. In many enterprises it may not deliver as fully hyped - it could be simply the wrong technological answer to the business questions they face…at the moment.

In some organisations though, a strong and immediate case can be made for SD-WAN. IT departments that pride themselves on leading the curve rather than following it will already be actively exploring, trialling or perhaps even in full deployment. Some see an investment in the underlying bandwidth as a more beneficial approach as is seen with the march to full fibre Ethernet based networks.

If you are at an early stage of evaluation or pressure testing your solution before getting approval, this guide and its following parts will be of help.

BUILDING A USE CASE

The adoption of a cloud-based infrastructure, for both storage and applications, means that demand for bandwidth grows in line with usage of these services, especially if these applications live in the public cloud.

Moreover, key enterprise applications such as Unified Communications (UC) are becoming richer and more sophisticated, placing greater demand on the network in terms of latency and bandwidth.

Video is arguably the biggest driver. The multi device, multi application trend pervasive in business today means that users are consuming more rich media in both a personal and business capacity, sucking up the bandwidth on their smartphones and tablets; placing additional demands on the underlying infrastructure that wasn't necessarily designed for this new rich mix of competing application types and styles.

But it's not just consumer applications that are to blame. More and more enterprises have adopted video for conference calling and remote working, and a sudden burst of simultaneous usage can have a knock-on effect on latency-sensitive applications and result in a negative experience all round.

Enterprises can evaluate whether they have a use-case for SD-WAN deployment by considering if any of the following are true:

- You are aggressively moving apps to the cloud - O365, G Suite
- You are moving to hybrid and deploying Internet to the branch
- You are seeking to reduce traditional business-class carrier budgets
- You want to reduce complexity of WAN configuration
- You have a large number of branches, typically 25+
- You are aggressively deploying video or other public high bandwidth apps
- You are maintaining limited or no IT staff at the branch

THE **BUILDING** BLOCKS

An SD-WAN solution if properly designed, implemented and managed, should be capable of delivering:

- Agility for rapid deployments and change
- Improved network performance for critical applications
- Cost efficiencies

To achieve these headline gains an SD-WAN solution needs four key features:

HARDWARE **REPLACEMENT**

SD-WAN hardware should make dedicated routers redundant by allowing direct termination of incoming wide area services. It should be noted that at the moment very few manufacturers offer direct DSL termination, so the minimum expectation should be for Ethernet and 4G/LTE capability.

A key consideration here, is understand if by removing the hardware you also find carrier service levels are reduced. Note most carriers use edge termination devices to proactively monitor the connection. Removing this may leave them reactive only to service issues.

TRAFFIC **CONTROL** AND **VISIBILITY**

The central orchestration platform should allow dynamic distribution of traffic across multiple WAN connections based on the needs of applications as well as on rules using IP addresses and specific circuits. It must also be circuit-agnostic allowing Internet, MPLS and other flavours of circuit to be used.

NETWORK **SEGMENTATION**

It should automate the creation of wide area segments, allowing the easy separation of business units or different application traffic types for increasing security, performance and compliance. Don't assume all services are equal in this area - understand the use and application beyond the vendors feature name.

INTEGRATION OF ADDITIONAL **NETWORK** SERVICES

It should support service chaining by integrating with WAN optimisation controllers, firewalls, web gateways, cloud providers and security devices and solutions.

WHAT SHOULD YOU **EXPECT FROM** AN **SD-WAN?**

Leading SD-WAN services should give you the folllowing when architected and deployed correctly:

- Orchestration layer preferably delivered "as a service"
- Efficient, dynamic, intelligent and policy-based load sharing across multiple links
- Simplified WAN configuration and management for "zero touch provisioning"
- Easily create VPNs and service chain additional services - firewalls, cloud proxies, WAN optimisation, etc
- Secure, localised Internet breakout, optimised path to IaaS/SaaS, O365, etc

FURTHER **READING**

Need more detail? The following Gamma resources may be of further interest:

SD-WAN - BEHIND THE **SMOKE AND MIRRORS**

An early evaluation of the hype around marketing messaging from a pop-up market

https://www.gamma.co.uk/unify/issue4-sd-wan-rise-software-defined-networking/

IS **SD-WAN OVERHYPED?**

On demand webinar from Gamma's network solution experts with a summary of thoughts and insights

https://globalmeet.webcasts.com/viewer/landing.jsp?ei=1222721&tp_key=b0620af07c

FINDING **A PERFECT STORM** FOR A **USE CASE**

Before you build a use case for SD-WAN, assess what sort of service your business actually needs:

https://www.gamma.co.uk/blog/direct/sd-wan-finding-a-perfect-storm-for-a-use-case/

Gamma