

GTT BUYER'S GUIDE TO SD-WAN

Software-defined agility, performance and control for the enterprise network



www.gtt.net

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THE COMMERCIAL LANDSCAPE IS CHANGING

Traditional WAN architectures are being overhauled at a rapid pace as they evolve to cope with today's cloud-first strategies across SaaS, IaaS and virtual data centers (VDCs). Businesses need to manage an increasingly dispersed and remote workforce, as well as the digital diversity of more applications and systems in the cloud. They need to anticipate market movements sooner, react faster and operate from multiple locations.



For organizations planning their next strategic information and communication technologies (ICT) move, SD-WAN solves a multitude of problems and delivers business-critical benefits that are beyond the capabilities of traditional network architectures.

THIS GUIDE WILL HELP YOU TO:

- Understand how SD-WAN can transform the way you do business
- Learn the pros and cons of different SD-WAN deployment models
- Assess what your business needs from its SD-WAN service
- Evaluate the top SD-WAN features and benefits

SD-WAN IS DESIGNED FOR THE WAY WE DO BUSINESS TODAY

SD-WAN creates direct and secure connections between users and applications. Using artificial intelligence and machine learning, it combines both private and public connections and steers traffic without compromising the user experience.

SD-WAN enables a flexible, resilient and secure network meeting the business requirements of a cloud-first strategy. Allowing for any connection type, SD-WAN identifies the source and destination of each packet routing the traffic based on defined requirements of the business. Business critical applications are ensured the highest performance without risk to security

If a trusted application is hosted in the cloud, SD-WAN will automatically connect users to it without backhauling traffic through a centralized backbone,

SD-WAN provides the benefits of a low-cost WAN connection combined with simplifying operations across large networks.

THE ADDITIONAL BENEFITS OF SD-WAN INCLUDE:

- Better traffic visibility
- Increased network control
- Improved network resilience
- Centralized policy control across locations
- More bandwidth for less cost
- Improved scalability
- Secure leveraging of public network



FLEXIBLE, CONFIGURABLE AND BUILT AROUND YOUR BUSINESS



SD-WAN will transform your network, improving both information technology (IT) and operational technology (OT) efficiency to the benefit of key areas of your business.



APPLICATION VISIBILITY

Gain visibility into the applications running on your network and how they are being used, to better manage your assets. Prioritize and protect your business-critical applications to ensure reliable availability.



EASE OF USE AND ACCESS

Access detailed reporting and real-time network visibility using a web portal. Enable instant configuration through central policy control and make remote service adjustments, reducing the time and overhead required to manage your network configurations.

03. TRANSFORM YOUR NETWORK



COST EFFECTIVENESS

Choose the right balance of performance, cost and SLA optimization.

Based on the risk tolerance of the site, consider less expensive internet connections like Dedicated Internet Access, Wireline Broadband and Fixed Wireless Access. Connect at a single site and apply usage rules to direct traffic based on desired business outcomes.



APPLICATION OPTIMIZATION

SD-WAN provides the benefit of both WAN optimization and traffic delivery prioritization. Deliver traffic to businesses of all sizes, across a global hybrid environment. The benefit of delivery prioritization is particularly important to widely dispersed enterprises that may suffer latency issues.



RESILIENCY

There are several network designs that allow for even greater resiliency. Businesses look to not only take advantage of multiple network connections but also a high availability architectural design for the highest assured network availability.



BETTER USE OF AVAILABLE ACCESS

Increase bandwidth availability by combining connections into one smart, fully active setup. Both connections share the daily traffic load while still providing a redundant fail-over options in case one connection suffers a brownout or blackout. Optimize usage of all the network types that are available to your site for maximum efficiency.



SIMPLE ROLLOUT AT SCALE

Issue a command to a single box or thousands of boxes simultaneously with centralized policy control. Once implemented, SD-WAN paves the way for operational simplicity at enterprise scale.



DIY VERSUS MANAGED SD-WAN

The success of your SD-WAN project should be measured against the business goals you set at the start of the project.

Think carefully about the levels of skill and support that will be required from your team as you decide on DIY versus delegating to a managed service provider. Those considerations include sourcing and managing the local access providers yourself, or to work with a managed service provider to deliver the complete solution. The option you choose will have different implications for the level of technical resource and skills you'll require within the business.

When pursuing a DIY option, you must take into consideration that all SD-WAN solutions are not created equal and the technology choice may have an adverse effect on business objectives.

DIYers need to factor in managing multiple local access providers, bills and fault-fixing systems in specific and possible diverse geographies if you go down the DIY route. When working with a managed service provider or single network provider to manage all the local access requirements, make sure you pick one that can provide a single customer support organization and web portal as well as single invoice for all the local site connections.

You may also want to look at a solution that includes WAN optimization to enhance application performance and improve employee and customer user experience.

Finally, you'll need to consider how easy it will be for you to plan, build and maintain the SD-WAN yourself versus outsourcing through a partner MSP.

Managed Service Providers address three particular challenges according to IDC:

1. Choosing the best underlying technology to deliver against expectations,
2. Realizing cost savings,
3. Managing multiple technology and access partners.

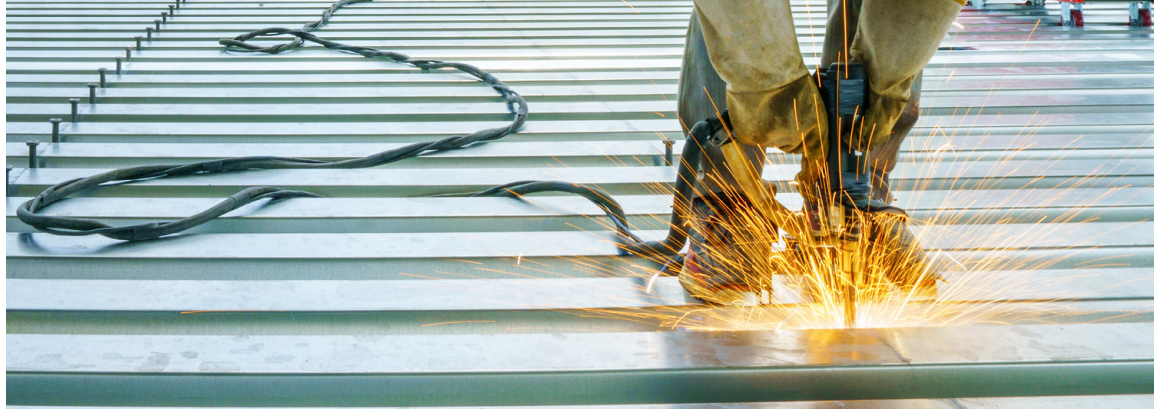
When it comes to evaluating whether to take a do-it-yourself deployment approach or if working with a Managed Service Provider there are many factors to consider., weigh the options completely and carefully.



DIY SOLUTION

A completely DIY SD-WAN solution usually refers to having your internal team procure and maintain everything from the SD-WAN hardware and software deployment through to managing and maintaining the underlying connectivity.

Despite some of the benefits of DIY, IDC identified significant challenges when going the DIY route that may tip the decision in favor of a Managed Service Provider.



BENEFITS

- Full control of your SD-WAN lifecycle
- Direct access to every aspect of your solution and its underlying connectivity
- Avoid outsourcing costs with employees managing your SD-WAN technology
- Flexibility to use in-house team to source local access providers for cheapest possible costs, or take a managed network service from a global provider
- Direct oversight may help meet exceptional compliance requirements
- Selecting the right SD-WAN solution
- Optimizing the expected cost savings
- Managing the many other service providers



CHALLENGES

- Locating and securing network staff with the necessary skills
- Reduced negotiating power vs. Managed Services provider
- Staying current with technical trends, security threats and tools and market developments, continuous retraining
- Converting from a capital expense to an operational expense (CAPEX vs OPEX)
- Retention of IT/network staff/ escalation premium pay rates
- Staffing and maintaining help desk 24/7 in local languages
- Speed of fault recovery or deploying changes

MANAGED SERVICE

If you choose a managed network service provider like GTT, they can provide a fully managed SD-WAN service that best fits with your particular business requirements. For example, understanding the underlying technology to assure it delivers to business expectations improves when working with a MSP.

Choosing to use a managed service provider may help the business to realize total cost of ownership savings and overcome the challenges of managing multiple partners.

An MSP like GTT supplies the expertise, the management of local access and the management of the SD-WAN vendor. They are responsible for the technology, management, maintenance and ongoing support of the complete solution. Using an MSP simplifies the process with a single SD-WAN contract, a single client portal and a single invoice.



BENEFITS

- Access to a team of technical experts to advise, design and deploy a solution designed to meet your business goals
- Ability to adjust in-house resources dependent on whether you opt for a fully managed solution, or a network-only managed service
- Expertly curated monitoring, reporting and change management through online portal access
- Better end-to-end service optimization and control through one MSP or network provider
- Simplicity of one contract, one invoice, one customer portal, one customer service team to manage faults
- Dealing with one provider can give greater cost-control / efficiency
- Liberates in-house resources to focus on strategic projects delivering business advantage, e.g., product roadmap and application development support



CHALLENGES

- Time and resource to evaluate validate and select the right MSP
- Clarity of requirements and responsibilities needed for service negotiation
- Less direct control of the network infrastructure as this is managed by your provider
- Less direct access to the underlying SD-WAN vendor
- Outsourced management costs need to be weighed against business cost of employing and training skilled in-house network team
- Building the best trusted partner relationships requires investment of time and resources dedicated to growing the relationship with the chosen MSP in order to get the most value
- Contracts are typically 3 years or more so development of robust but flexible SLAs is critical to success



SELECTING THE RIGHT PARTNER

SD-WAN is an effective, flexible suite of solutions designed to solve your business problems. It can be tailored, shaped and deployed to serve the unique circumstances of your business, both now and for the future.

If opting for a DIY solution where you'll be working directly with the SD-WAN vendor, you'll need to be clear on the declared business outcomes to source the right capabilities to match. It is important to have the IT/networking staff with the necessary skills to find and secure the proper solution to meet your business requirements.

If working with a managed service provider, you'll need to check whether your chosen MSP offers a range of SD-WAN solutions and has the requisite technical and operational experience.

It's worth selecting a provider that can offer a comprehensive range of network management and security services.

Also check they can address your specific requirements with a solution that accelerates productivity and builds maximum revenue, while avoiding the costs of infrastructure ownership.

A CHECKLIST FOR SUCCESS

Before you begin your SD-WAN journey, use this 8-point checklist to help achieve your goals



EASE OF PROVISIONING

How easily can devices be delivered to your sites?

Are there any customs, shipping or installation implications and what local skills will be needed to get your solution up and running?



PATH PERFORMANCE

How portable is the solution?

Will it work across multiple access networks simultaneously?

Are paths optimized for performance or to achieve the lowest cost for the underlying network provider?



TOTAL COST OF OWNERSHIP

Is the solution cost-effective?

Does it allow you to right-size your network and make more efficient use of your IT budget?

Can you outsource resource-intensive network management tasks?

Do you have the internal resources to deploy the solution that optimizes your expected cost savings?



GEOGRAPHIC REACH AND ECOSYSTEM

How much can the provider help with the underlying network transport services, such as private networking or broadband internet access?

Does their reach match your footprint and how are the services supported?

What SLAs are in place?



05. BEFORE YOU BEGIN YOUR JOURNEY



A PROVEN TRACK RECORD

If you are using a managed service provider verify competency and depth of experience managing complex WAN, SD-WAN and hybrid networks and look for case studies that cover a range of industries and hardware vendors.

Can the technology vendor or managed services provider produce customer testimonials or independent studies demonstrating their success?



SOLUTION FEATURES

Does the proposed solution provide you with multi-path control, path conditioning, virtual overlay and shaping?

What visibility and reporting will be available?

Do you need WAN optimization or advanced security?

Are you looking to manage in-house, co-manage or deploy a fully managed option?



OPTIMUM ROUTING FOR CLOUD APPS

Which cloud applications does your business prioritize?

Are they hosted domestically (low latency) or on other continents (high latency)?

How does the proposed solution help or hinder your traffic as it crosses global networks to and from those solutions?



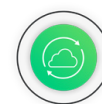
APPLIANCE FLEXIBILITY

Does the solution allow you to rationalize local firewall appliances and future-proof virtual network function capability?

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GROWING, ADAPTING AND CHANGING WITH YOUR BUSINESS

SD-WAN helps your business prepare for a constantly changing future. It is designed to make access to applications in the cloud easy. The flexibility and resilience of SD-WAN provides a network foundation for your business that allows you to be ready for whatever digital business requirements the future may bring. Designed for a cloud-first approach to business, SD-WAN has the capability to ensure you can integrate the applications you need to meet your evolving business needs.



PREDICTABLE CLOUD CONNECTIONS

With cloud adoption continuing to grow and remote working on the rise, your business requires predictable performance and secure connectivity in public, private and hybrid cloud environments. SD-WAN helps you to prioritize and manage applications to meet your business objectives. That means more predictable application performance, reduced cost of cloud provider networking, and local cloud connectivity with local compliance and better performance.



SECURE, RELIABLE VOICE SERVICES

To improve productivity and collaboration, your enterprise relies on a combination of voice, video and chat. It also needs seamless interoperability between legacy systems and the latest unified communications platforms. SIP trunking can be added to your SD-WAN environment to help your business move to cost-effective IP telephony.





MANAGED SECURITY SERVICES

Remote working is here to stay, presenting significant challenges to the security of corporate assets and critical business information as well as applying pressure to compliance requirements. When teams are widely dispersed, the risk of a security breach is greatly increased as cyber criminals seek new ways to gain network access.

SD-WAN offers security features, like built-in firewall protection so local offices on the public Internet don't compromise the corporate networks. However, it is important to note that standard SD-WAN solutions do not include enhanced security services like Security Service Edge (SSE) for a Secure Access Service Edge (SASE) framework or DDoS protection.

SD-WAN is inherently secure and the standard offering includes encryption but with businesses pursuing initiatives such as work from anywhere, branch transformation and hybrid cloud, companies require additional integrated managed security services. Deploying a suite of security solutions such as cloud security to enable a Secure Access Service Edge (SASE) framework to on-premise based firewalls, companies can protect their valuable assets. Layer on DDoS Protection and Managed Detection & Response (MDR) and companies are protecting east-west, north-south traffic and executing a detection and response strategy to mitigate potential losses. This defense-in-depth strategy ensures on-and off-site data is protected and your employees both in-office and mobile are secure.

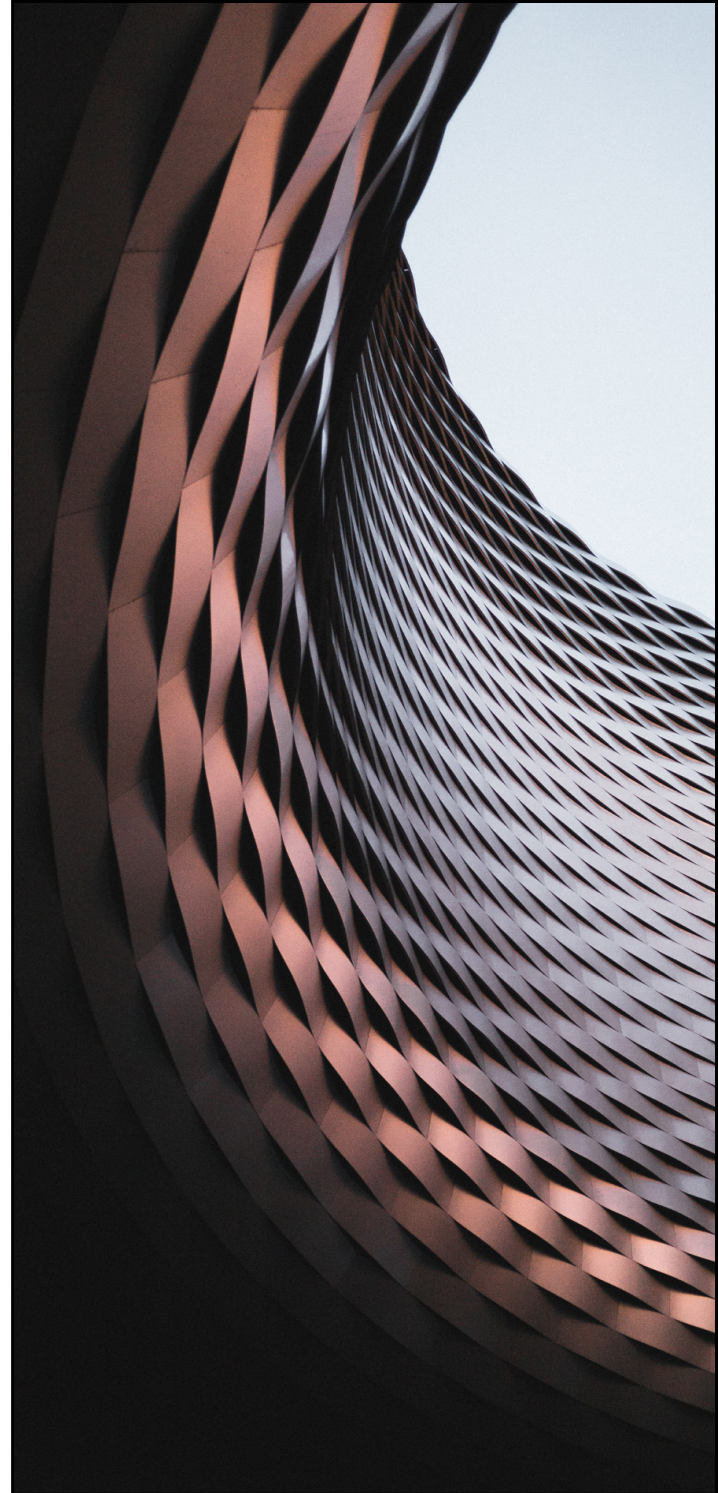
You have the option of selecting, deploying and managing individual security applications yourself or looking for a managed service provider that can offer a comprehensive, multi-layered approach to security-ideally the MSP deploying Managed SD-WAN. Deployed from the cloud, on-premises or via a hybrid model, managed security services eliminate or reduce the risks associated with blended attacks, combining security alerts, logging, reporting, compliance and response.

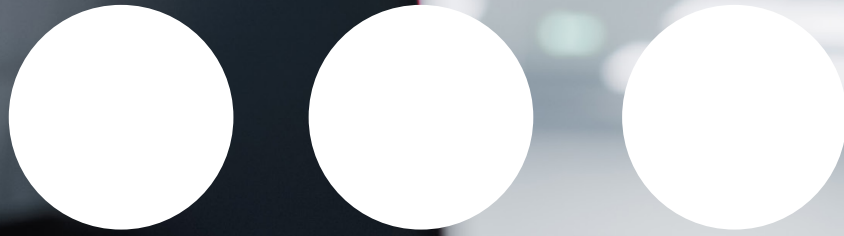
DDOS SOLUTIONS

DDoS Protection is a fully managed service providing systems, processes, and expertise to stop DDoS (Distributed Denial of Service) attacks. DDoS Protection is deployed on the edge of the GTT Tier 1 IP backbone, so as traffic enters from the internet, scrubbing centers immediately analyze and block DDoS traffic from entering your network without impeding the flow of clean traffic.

MANAGED DETECTION AND RESPONSE (MDR)

MDR service provides customers with remotely delivered modern Security Operations Center (SOC) capabilities to rapidly detect, analyze, investigate and respond to threats that have bypassed traditional security controls.





EMERGING TRENDS, FASTER DATA AND A FRAMEWORK FOR STABILITY

Information access is changing and remote working is moving mainstream. Edge computing, 5G and the internet of things (IoT) are beginning to alter the data consumption model.

As businesses explore the landscape of the future, SD-WAN will act as the data enabler, transforming network operations and playing a major role in harnessing these emerging technologies.

5G is poised to deliver fundamental business change. It has the potential to transform your operations, boost employee engagement, empower your teams and enrich the ways that you communicate with customers. Yet without the foundation provided by SD-WAN, the benefits of 5G cannot be fully realized.

5G is currently a measured service, making it prohibitively expensive as a primary circuit, but as it evolves into a flat-rate service, its utility in corporate networks will rise significantly.

As bandwidth demands increase and network connectivity grows, SD-WAN can continuously optimize your network in real time, ensuring 5G delivers with faster connections, shorter delays and heightened user connectivity. When legacy systems fail due to the increased network traffic, SD-WAN will continue to perform.

IoT, 5G and SD-WAN go hand-in-hand. While IoT will improve engagement, communication and monitoring, sending huge amounts of data through 5G connections, SD-WAN will allow you to prioritize and securely deliver it.

Your business will be able to plan, scope and react to any eventuality that occurs over the network. Crucially, SD-WAN will set you free to focus on core operations and stay in control.

CONNECTING PEOPLE, PLACES AND APPLICATIONS

At GTT we do far more than simply deliver an offering built on scale. We understand how to shape and deploy the optimal solution, achieving the best possible result from all the network options available.



We are exclusively focused on serving enterprise clients and have local operations across the world and client service and engineering teams across the globe who speak your language. This means we can listen as well as act.

GTT's secure networking solutions include Secure Connect, SD-WAN, Cloud-based Security, Managed Firewall, DDoS Protection, Managed Detection & Response and Secure Remote Access. These services are underpinned by our suite of managed network services.

We were one of the first service providers to offer managed SD-WAN with a choice of different vendor options. We are experts in all the fully validated and tested vendor options we offer, but we are not tied to any of them.

We offer impartial advice and work with you to find the right technology for your business. We have extensive experience with many different deployment scenarios, across vertical industries and every kind of global location.

GTT recognizes that deploying a new Wide Area Network is complex and may require additional resources. GTT can augment your team with Professional Services including Program Management, Project Management, Technical Management, Service Management and Incident Management supporting all phases of customer engagement.

WORKING TOGETHER TO BUILD YOUR STRATEGIC NETWORK ADVANTAGE



“GTT’s managed SD-WAN service allows enterprises to focus critical IT personnel on core business operational activity and provides substantial value-add in the management of complex network integrations, as well as helping conserve scarce capital resources.”

GHASSAN ABDO
RESEARCH VICE PRESIDENT, WORLDWIDE TELECOM AT IDC

GTT Secure Connect, the ideal SASE framework, offers improved enterprise network performance and visibility with GTT SD-WAN, as well as enhanced data security integrated for a secure networking solution.

Our partnership with leading security companies augment this footprint for global, cloud-based security. GTT’s access to more than 100 security gateways across the globe and support secure application delivery to enterprise branch locations.

Thanks to our Tier 1 global IP network, customers rely on a reliable, low-latency connectivity to any location in the world and any application in the cloud. We work with and manage 3,500 access network partners to connect client locations across the world so you can enjoy diversity of local access choice at substantial cost competitiveness.

For SD-WAN, this capability enables us to ensure dual-diverse access connectivity options at every one of your sites. What’s more, reliable, high-quality traffic delivery is assured, even if a fiber route is compromised, thanks to our resilient network of 600+ PoPs (points of presence) across the world.

SD-WAN and Secure Connect is the evolution of the network and cloud-based security providing an integrated solution of Wide Area Networking and enhanced security like Firewall-as-a-service (FWaaS), Zero Trust Network Access (ZTNA,) Secure Web Gateway (SWG) and the use of a Cloud Sccess Security Broker (CASB).

CUSTOMER STORY:

09. AN EXCEPTIONAL INFRASTRUCTURE TO HELP PROTECT LIVES, PROPERTY AND REPUTATION

When Jensen Hughes needed to improve its worldwide network performance, the global leader in safety, security and risk-based engineering turned to GTT.

THE CHALLENGE

With more than 90 offices worldwide, a workforce of 1,250 and a growing dependence on software applications, Jensen Hughes relies heavily on its distributed network to ensure operations run smoothly.

Faced with a legacy network that was causing poor systems performance and infrastructure issues, the company appointed GTT to develop and deploy a framework for success.

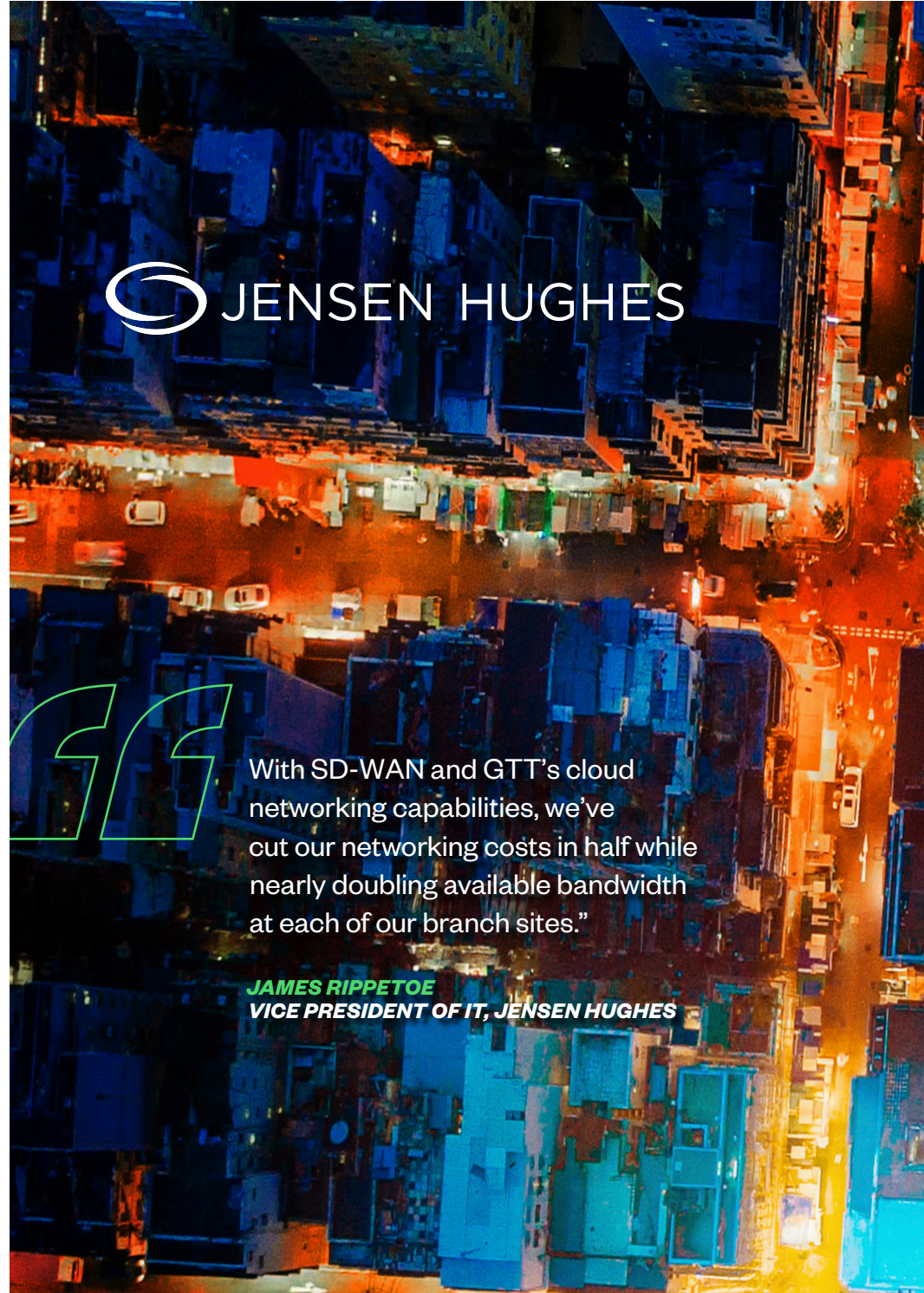
THE SOLUTION

Taking a proactive, consultative approach, GTT implemented a managed SD-WAN solution, allowing Jensen Hughes to monitor and track real-time statistics and network performance.

Providing a site-by-site solution that delivered access options best suited for each location, DIA, broadband and wireless were integrated with on-premises Fortinet security with WAN and LAN compliance.

THE RESULT

GTT successfully cut Jensen Hughes' networking costs in half while nearly doubling available bandwidth at every one of the company's branch sites.



With SD-WAN and GTT's cloud networking capabilities, we've cut our networking costs in half while nearly doubling available bandwidth at each of our branch sites."

JAMES RIPPETOE
VICE PRESIDENT OF IT, JENSEN HUGHES

CUSTOMER STORY:

09. AN EXCEPTIONAL INFRASTRUCTURE TO HELP PROTECT LIVES, PROPERTY AND REPUTATION

Etex is driving a digital transformation initiative to become a more customer-centric organization. Its goal is to harmonize and improve processes, activities, and collaboration across its business. GTT provides Etex with Managed SD-WAN across more than 91 sites around the world. The solution is integrated with GTT's global Tier 1 internet backbone for an enhanced user experience.

THE CHALLENGE

Etex, a global building materials specialist with approximately 14,000 employees at more than 90 offices and manufacturing sites around the world.

Etex is driving a digital transformation initiative to become a more customer-centric organization. Its goal is to harmonize and improve processes, activities, and collaboration across its business. As it moved to more application-aware networking and greater cloud adoption, bandwidth for many of the company's locations needed to be increased in a secure and agile way, without increasing costs.

THE SOLUTION

GTT provides Etex with Managed SD-WAN across more than 91 sites around the world. The solution is integrated with GTT's global Tier 1 internet backbone for an enhanced user experience. Together with GTT Cloud Connect – providing private and direct cloud connectivity – and combined with WAN optimization, the solution accelerates the performance of Etex's business-critical applications, such as those residing in the Microsoft Azure cloud.

THE RESULT

A highly stable Managed SD-WAN solution that provides increased uptime, higher bandwidth, application prioritization and lower total cost of ownership.



Together with GTT, we have built a strategy to transform and future-proof our global network, which accommodates our IT security and global telephony needs, as well as delivering all the benefits of an agile and resilient managed SD-WAN solution."

RICHARD PYM
HEAD OF TECHNOLOGY,
ETEX

See the video testimonial
from Dirk Altgassen, CIO ETEX



***FIND OUT HOW GTT CAN
SUPPORT YOUR BUSINESS***



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