

# Lumen<sup>®</sup> SASE Solutions

## Customer presentation

10/6/2023

LUMEN<sup>®</sup>

Services not available everywhere. Lumen may change, cancel or substitute products and services, or vary them by service area at its sole discretion without notice. ©2023 Lumen Technologies. All Rights Reserved.



Services not available everywhere. Business customers only. Lumen may change, cancel or substitute products and services, or vary them by service area at its sole discretion without notice.

# Agenda

## Contents

- [Customer journey](#) – Transformation, common concerns, network and security evolution, Fit-for-purpose
- [Customer use cases](#)
- [Lumen SASE Solutions](#) – Flexible architecture, Global presence, grow-as-you-go adoption, how it works,
- [The Lumen difference](#) – Solution components, bringing it all together, partner comparisons
- [Vertical use cases](#) – Healthcare, Retail, Financial, Hospitality
- [Use case](#)
- [Summary](#)
- [Appendix](#)



# TRANSFORM

## The journey

Navigating today's business environment is like opening a new frontier. Our compass provides direction, but the path to take is often uncertain.

The choice of technology becomes a risk requiring inherent attributes that justify adoption.

- The ability to change course quickly
- Convergence with existing technology
- Continuous control and visibility over users, devices, data, and application journeys
- Data protection and threat prevention
- Gradual adoption based on current needs
- Simplified solution management
- A trusted and known service partner

Organizations can no longer justify one-dimensional technology that is complex to manage, expensive to upgrade, and inflexible to change. They need a partner that understands them to help guide their journey.





COMMON  
**CONCERNS**

## Network and security challenges

- What do I move to the cloud? What do I keep in my data center?
- How can I evolve my private network to improve access to and performance of cloud services?
- How can I centralize and simplify visibility and control over network access and security policy?
- How do I segment user, endpoint, and network access to private data and cloud applications?
- Will my new solution integrate with my existing infrastructure?
- Will my staff be able to maintain and manage new network and security approaches?
- What valuable outcomes will this evolution deliver?

# Network and security evolution

## Work from anywhere

- Convergence of WAN and cloud secure access
- Application traffic shaping across multiple networks
- User permission, device, and network policy control

## Flexible hosting options

- On-premises equipment
- Cloud hosted service gateways
- Remote endpoint access clients



## Holistic solution

- Public and private networks
- Multi-cloud connections
- Internet threat intelligence
- Service partner oversight

## Unified security

- Branch and headquarter locations
- Intellectual property
- Cloud applications
- Compliant data protection

## Centralized control and visibility

- Unified network and security policy management
- Simplified addition of sites and service with automated delivery
- Network and security application performance and user access insights





**CONTINUOUS  
FLEXIBILITY**

# Fit-for-purpose

- **Flexible adoption of cloud-based services** that address specific customer challenges
- **Flexible network access options** that fit location needs including public internet, broadband, wireless, and private network with a unified application and security policy management experience
- **Flexible on-premises and cloud-based** service hosting
- **Flexible best in class partner options** to meet specific customer preferences and familiarity
- **Dedicated internet access (DIA)** provides the capacity your business needs to operate efficiently and scale dynamically with secure data encryption
- **Dedicated professional managed service team** for SASE and network services for simplified adoption without business disruption

# Lumen<sup>®</sup> SASE Solutions



Fully converged. Flexibly managed.



**RADICALLY  
SIMPLIFIED**

# Flexible architecture

Lumen developed our SASE portfolio in response to customer requests for a flexible, easily managed architecture to address today's complex network and security requirements.

- Cloud-based services with fast deployment times
- A converged easy to use management experience
- Increased bandwidth capacity at a lower cost
- Grow-as-you-go service adoption without the need for additional premises equipment or networks
- Unified security policy across remote workers, WAN locations, cloud services, web traffic and data assets to virtually any endpoint
- Top-down solution management including network infrastructure, on-premises equipment, Lumen hosted gateways, and third-party service partners
- Global presence for U.S.-sold businesses across EMEA and Canada.



# Lumen SASE Secure Service Edge (SSE) components

**Software defined application-centric network control** with Next Generation Firewall (NGFW)



SD-WAN



ZTNA

**Zero Trust Network Access (ZTNA)** for work from anywhere security as a substitute for VPN

**Secure Web Gateway (SWG)** to popular browser-based web services



SWG

## SASE

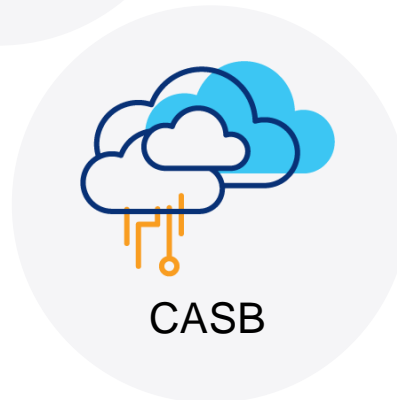
Secure Access Service Edge



DLP

**Data Loss Prevention (DLP)** protects against unsafe sharing, transfer, and use of sensitive data

**Cloud Access Security Broker (CASB)** addresses cloud SaaS, IaaS, and PaaS permissions and use



CASB



FWaaS

Virtualized **Firewall as a Service (FWaaS)** hosted in the cloud

# Incremental points of flexible adoption



## Multiple service partners

Simplified adoption of a consistent service portfolio with best-of-breed performance

**vmware**<sup>®</sup>

**FORTINET**

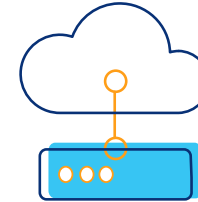
**VERSA**  
NETWORKS



## Lumen managed network

Public and private network options with global connectivity

- MPLS
- Dedicated Internet Access (DIA)
- Lumen broadband and partnerships
- Wireless provider partnerships



## Multiple hosting options

Customer designed location requirements

- Lumen hosted gateways
- Partner hosted gateways
- On-premises hosting
- Both on-premises and cloud gateway hosting



## Consultative direct sales or digital buying experience

- Lumen sales professionals and design architects
- Lumen Marketplace digital buying experience
- Lumen SASE Manager service configuration



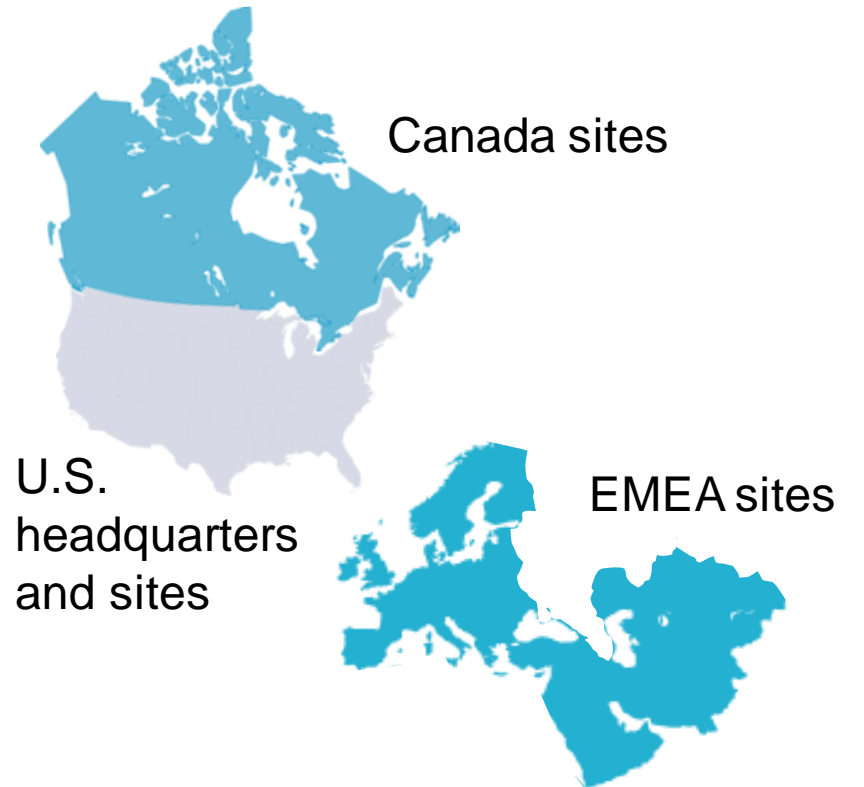
## Managed service options

- Self-managed SASE Solutions
- Pro-managed SASE Solutions
- Professional network and security custom solutions

# U.S. headquartered business **global site availability**

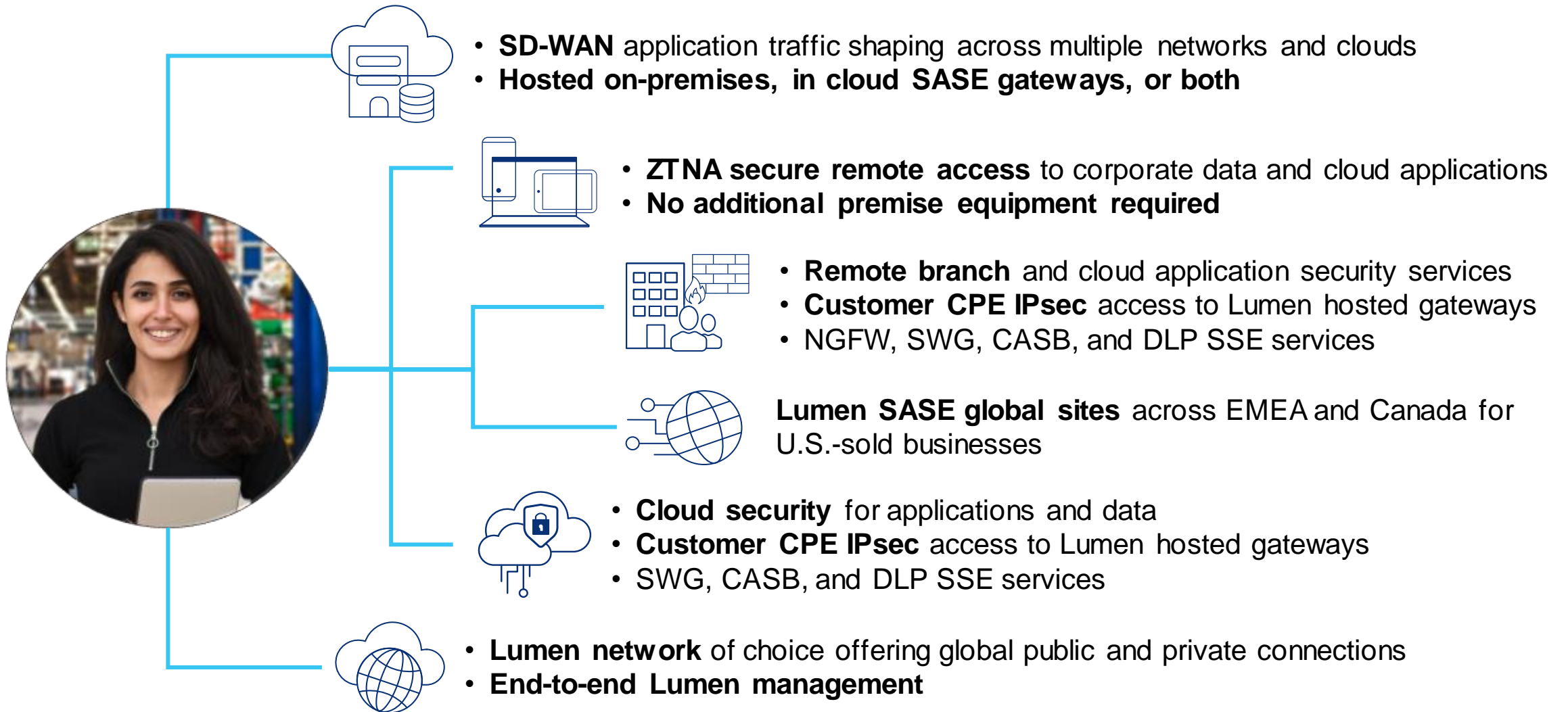
Lumen SASE Solutions extends our service reach to sites located in EMEA and Canada

- Lumen SASE customers must be sold within the U.S.
- Lumen SASE with Versa and Fortinet on-premises at EMEA and Canada locations
- Lumen SASE with VMware services can be hosted in the global VMware SASE gateways or on-premises at EMEA locations





# Grow-as-you-go WAN transformation



# SASE is an archetype for **business transformation**

## Secure branch

- **SD-WAN**  
application-aware routing
- **Next Gen Firewall (NGFW)**  
Unified Threat Management (UTM)
- **Lumen® Edge Universal Customer Premises Equipment (uCPE)**
- **Lumen Edge and Public Cloud**  
SASE hosted gateways
- **Lumen® SASE Manager**  
for simplified monitoring and management



- **Grow-as-you-go**
- **Multi-vendor**
- **Fully-managed**

## Work from anywhere

**Zero Trust Network Access (ZTNA) Client**  
user authentication and authorization

## SASE gateway SSE

- **Secure Web Gateway (SWG)** web service protection
- **Cloud Access Service Broker (CASB)** apps and data permissions
- **Data Loss Prevention (DLP)** of threats to data in motion

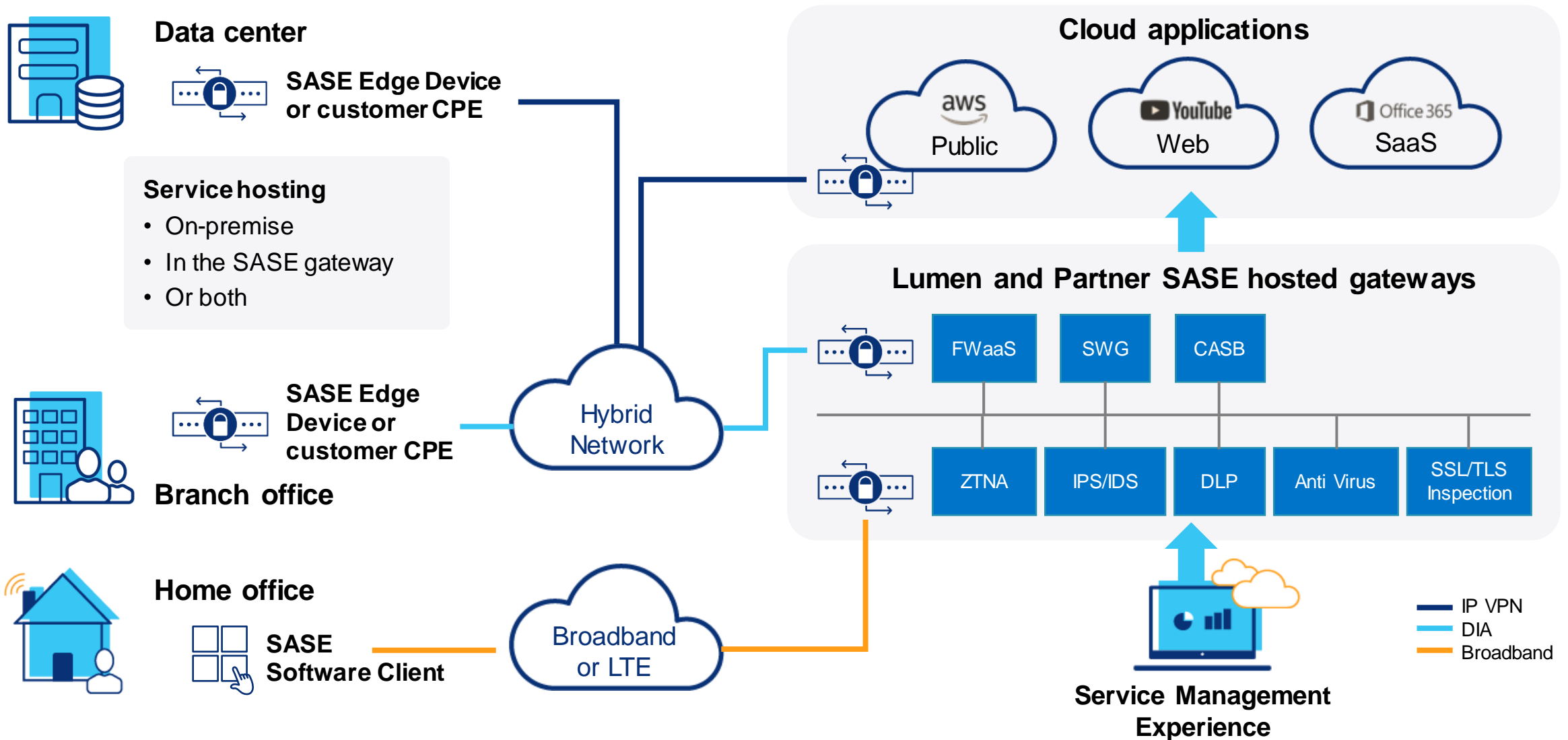
## Threat visibility and response

- Rapid Threat Defense
- Managed SIEM | vSOC

**BLACK LOTUS LABS™**

**Built on our Foundation:** Fiber | Global IP network | Edge presence | Cloud partnership

# Lumen SASE Solutions – How it works







# Dynamic scalability

Businesses need to **simplify and centralize networking and security**. They need the agility to endlessly scale and centrally control application experiences. They desire flexible management and simplified service delivery. They want the option to leave routine service management of infrastructure, maintenance, and monitoring to partners.

The Lumen SASE approach is focused on radically simplifying our solution to deliver superior customer outcomes.

“If Lumen became a value-added reseller (VAR) and could provide me all of the different layers I use today so I don’t have to deal with 10 VARs, that would be terrific.”\*

- “Enterprise CISO”

**FIT FOR PURPOSE**

**USE CASES**

**LUMEN®**



**MEET HARDY**

# IT Director

## Challenge

- Embracing a hybrid workforce model
- Understanding and planning the network migration needed to support such a transition.

## Responsibility - Assessing networking needs

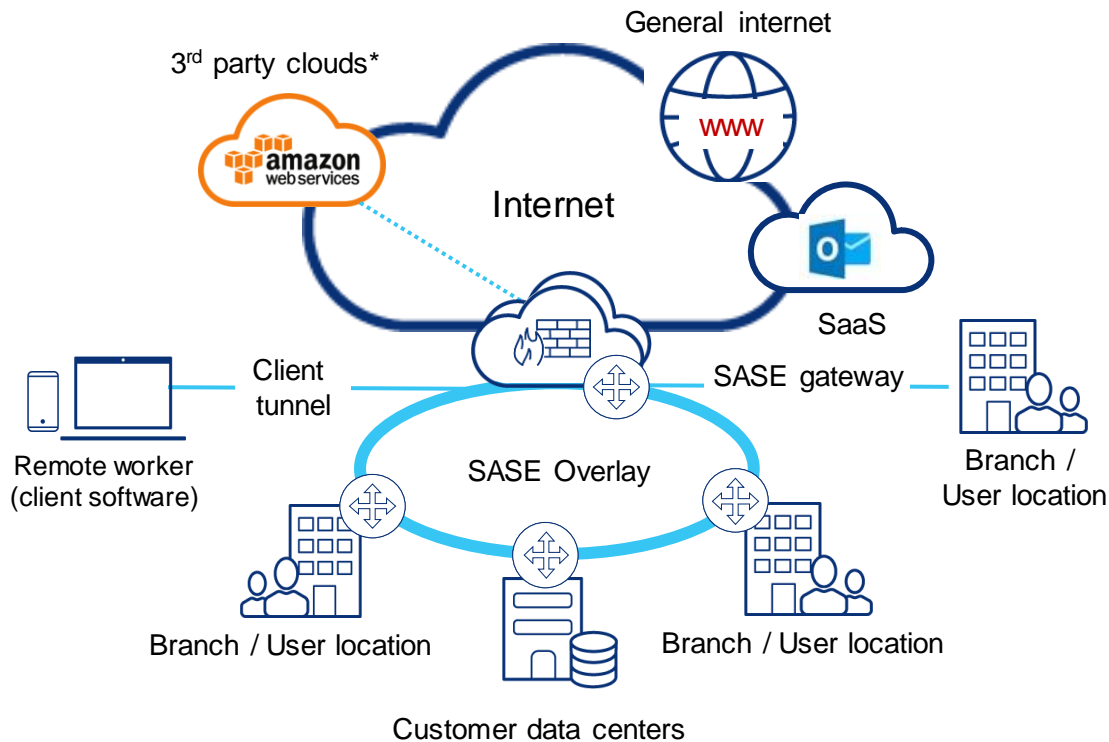
- Researching security solutions
- Collaboration with IT and Security team
- Vendor evaluation
- Future-proofing the network
- Budget management

## Solution

Dedicated internet, centralized data center, and WAN solution across branch locations.

# Hardy needs an **application centric network**

## Hardy's ideal state



## Components

- **Centralized simplified network and security** visibility and policy control
- **Cloud Access Security Broker (CASB)** application access permissions
- **Secure Web Gateway (SWG)** defense against internet viruses and malware
- **Data Loss Prevention (DLP)** against unsafe data access and sharing
- **Zero Trust Network Access (ZTNA)** secure access for remote workers
- **Firewall as a Service (FWaaS)** managed in the cloud
- **SD-WAN** centralized application traffic shaping policies

**This is too much all at once, but Lumen can add these services individually**



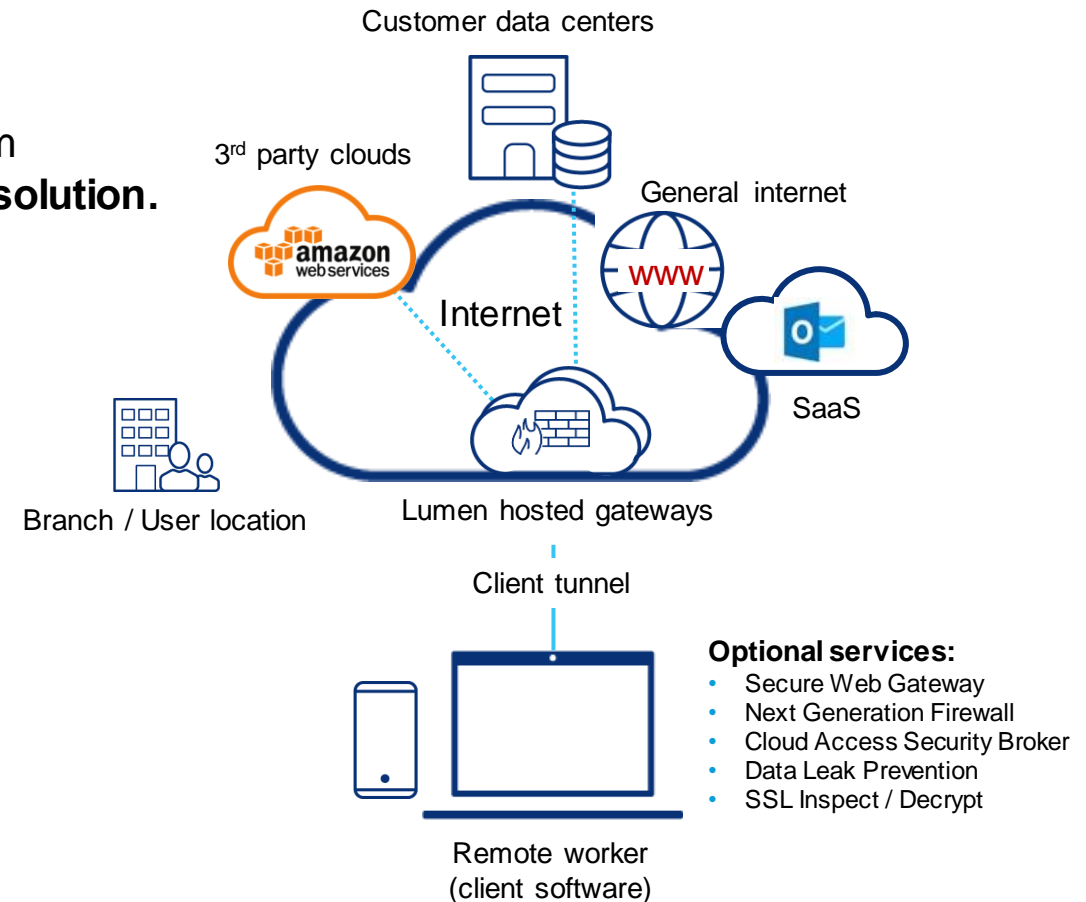
# Journey begins - remote work anywhere

## Hardy's problem

I need secure access to compliant data and cloud applications from anywhere, for remote workers. **I don't need another standalone solution.**

## Lumen value

- Cloud hosted Zero Trust Network Access (ZTNA) solution. No additional on-premises equipment or SD-WAN service required.
- Flexibly scales to changing workforce and access device demand.
- Segmentation of compliant data housed in your corporate data center and cloud productivity apps based on user permissions and profiles, device, and location.



**This is a great start, but Hardy needs his branches connected as well**

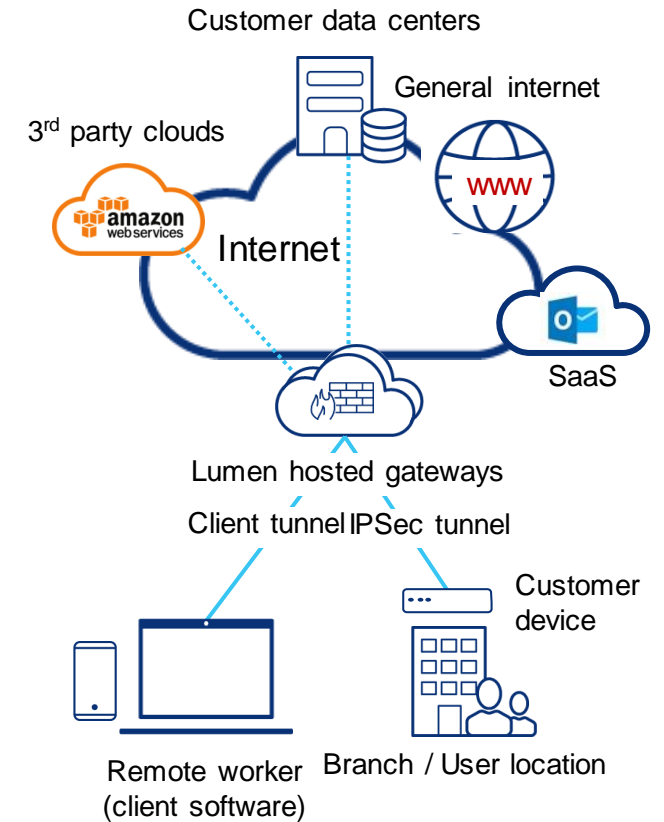
# Journey continues - branch gateway (No SD-WAN)

## Hardy's problem

- Most of the workforce remains on the corporate WAN with a few off-network branch locations
- Applications in multiple clouds requiring an expanded security perimeter
- Disjointed and complex network and security policy management solution
- Unsure how to secure cloud-based websites and applications for off-network locations
- Concerned about being single-threaded to Lumen

## Lumen value

- A complete cloud application security portfolio including Cloud Access Security Broker (CASB) application management, Secure Web Gateway (SWG) browser-based web filtering, and Data Loss Prevention (DLP)
- Lumen hosted gateways and VMware SASE gateways
- **No additional premises equipment at your locations.** Lumen provides service updates and will periodically add additional services that are easily consumed.



**Hardy needs to integrate this new solution across cloud infrastructure**

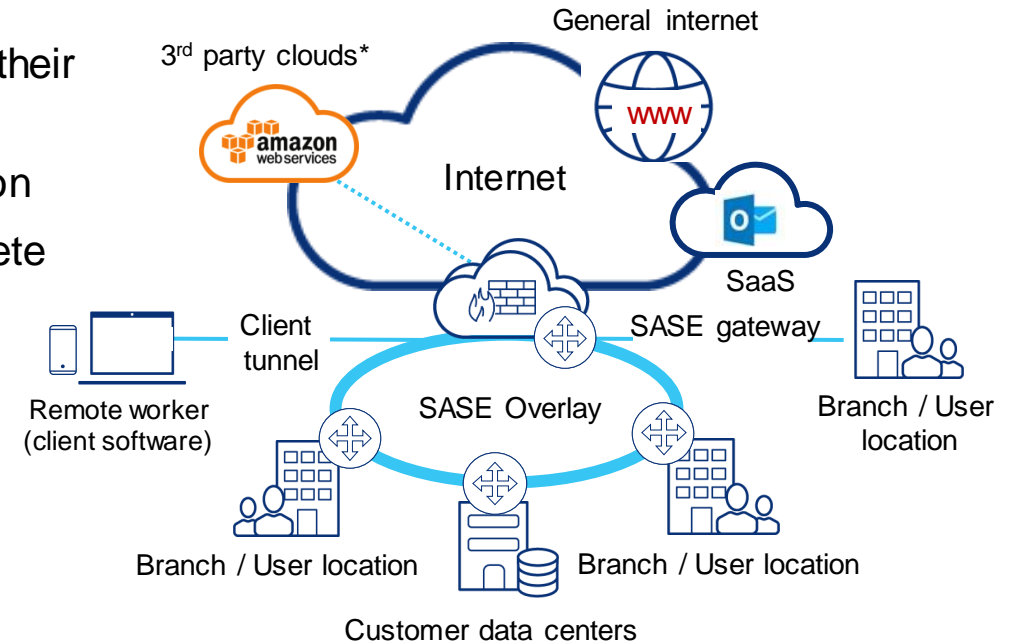
# Ideal state: integrated SASE

## Hardy's problem

- I want to integrate my solution across my legacy network, data center assets, cloud infrastructure, and applications
- On-board remote workers and devices securely while segmenting their access between networks.
- I need help choosing, implementing, and managing the right solution
- Fear of a single-threaded approach that will quickly become obsolete
- Uncertainty about the ability to design and manage the solution.

## Lumen value

- Cloud hosted secure network access and security services that can be added individually as your needs change.
- Quickly add services and users to dynamically evolve your business.
- **Add a fully managed underlying network infrastructure and managed security services** including Managed Security Incident and Event Management (SIEM) and Managed Virtual Security Operations Center (vSOC) .





**TRUSTED**

# The Lumen difference

Lumen is focused on radically simplifying the process with flexible options that meet your needs today with the ability to quickly scale with ease tomorrow.

**Our best-in-class service partners** support on-premises and cloud-based service designed to meet the diverse needs of your locations and remote users.

**Embracing new technology in favor of the legacy platforms** of the past requires trust and partnership. Lumen introduces multiple layers of fully managed support throughout the entire lifecycle of our services.

We are prepared to invest in your business journey today and for years to come.



# Lumen SASE Solutions **summary**



## Service partners

- SD-WAN, NGFW, ZTNA, SWG, CASB, DLP
- Individually purchased



## Purchase

- Lumen Marketplace
- Lumen direct sales
- Indirect partner sales
- Online order progress visibility
- SSE on demand



## Availability

Global across the U.S., EMEA and Canada



## Service hosting

- Lumen hosted gateways
- VMware global SASE gateways
- Public cloud



## Management

- Self-managed
- Pro-managed



## Professional service offerings

- Pre-sale assessment
- Network underlay design and implementation
- Network and Security consultation and solutions

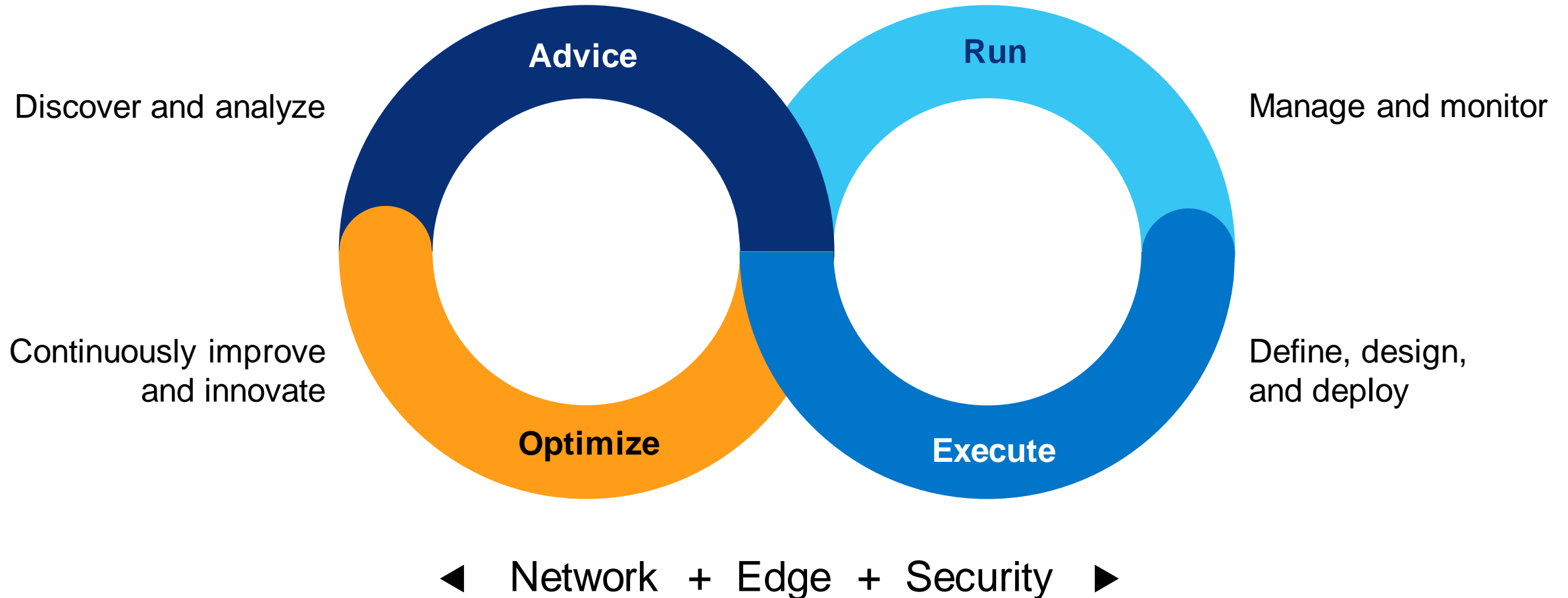


# **Lumen<sup>®</sup> managed services**

# Lumen SASE Solutions **service wrapper detail**

	Overview	Elements	Self-managed extras
Cumulative elements	<b>Professionally managed</b> Outsourced elements that allow IT to focus on business value creation	<b>Full solution management</b> <ul style="list-style-type: none"> <li>• Project management</li> <li>• Security policy</li> <li>• Implementation</li> <li>• Solution design</li> <li>• Service health monitoring</li> <li>• Service turn-up</li> <li>• Incident management</li> <li>• Network management</li> <li>• Reporting</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation project management</li> <li>• Design consultation</li> <li>• SOC as a Service</li> <li>• Vulnerability assessment</li> <li>• Professional Install</li> <li>• Day 2 Break/Fix support</li> <li>• On-site maintenance</li> <li>• Change, Configuration, Patch</li> </ul>
	<b>Self-managed</b> A high level of control over service design to meet specific needs	<ul style="list-style-type: none"> <li>• CPE</li> <li>• Licensing</li> <li>• Network connectivity</li> <li>• SASE design</li> <li>• Self-configured</li> </ul>	

# Management at every stage of adoption







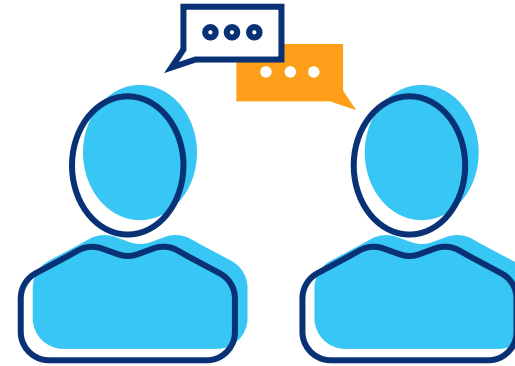
# **Lumen digital buying and service management experience**

# Lumen SASE Solutions **purchasing paths**



## **Lumen Marketplace**

- Online design and purchase
- Multiple partner options



## **Lumen Direct Sales**

- Traditional consultative sales experience
- Opportunities to cross-sell Lumen platform elements (network, cloud, edge)

# Lumen SASE Solutions **digital experience**



## **Lumen<sup>®</sup> Marketplace**

- Lumen SASE Solution design and purchase
- Add Lumen network and security services including DIA, Fiber+ Internet, and DDoS mitigation
- Contact direct sales option

## **Lumen<sup>®</sup> SASE Manager**

- Configure your SASE Solution by location and users
- Add new sites, users and services
- Receive alerts and manage tickets

## **Service partner portal**

- Create and manage SD-WAN and security policies
- Monitor performance
- Learn about your service details

# Lumen SASE Solutions marketplace

Design and purchase in a few easy steps

The screenshot displays the Lumen SASE Solutions marketplace configuration interface. At the top, there is a search bar and navigation links for 'Register' and 'Sign In'. Below the navigation bar, the page is titled 'Configure' and includes a progress indicator with four steps: 1. Configure, 2. Checkout, 3. Site Configuration, and 4. Service Package. The first step, '1. Technology Provider', is currently active and shows two options: VMware and Fortinet. The VMware option is selected. To the right, an 'Order Summary' sidebar provides a breakdown of costs, including 'Total Recurring', 'Total One Time', and a detailed list of 'Lumen SASE Services' with a 'SAVE QUOTE' button. A 'HELP ME DECIDE' button is also visible at the top of the configuration area.

1. Choose your Lumen SASE Solutions provider
2. Choose the available services from the provider
3. Choose the total number and device sizes for each of your service locations
4. Identify the number of remote user clients needed
5. Select a Lumen managed service package
6. Review your order, checkout and accept terms



# Lumen® SASE Manager

Configure, update, and manage your entire Lumen SASE Solution from one place

## Lumen SASE Manager

The screenshot displays the Lumen SASE Manager interface with several key sections:

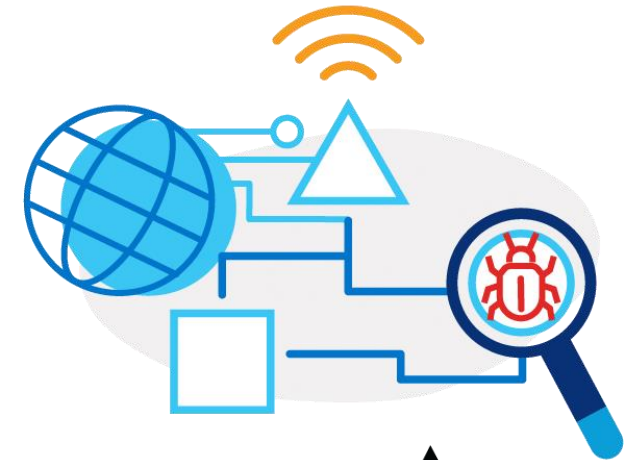
- SASE Services Summary (1):** Shows technology provider (VMWare), purchased services (SD-WAN, Next Gen Firewall, ZTNA Remote Access), and service package (Self-Managed).
- Configured On Premises Sites (3):** A list of sites with columns for Site Name / Address, Hardware, High Availability?, Status, and Dev Note. Sites include: 23454 Mountain View Boulevard; Denver... (Provisioning), 6734 Peach Street; Atlanta, GA 30301 (Action Required), 7635 7th Street NW; Washington, DC 20001 (Shipped), Southwest Headquarters (Activated), St. Louis Office (Installed), Dallas Site (Out of Service), Site 1 (Installed), Site 2 (Installed), and Site 3 (Installed).
- Ticketing & Support (4):** Displays 14 Active Tickets and 3 Scheduled Appointments, with buttons for 'Create New Ticket' and 'Schedule Appointment'.
- Alerts and Notifications (5):** Lists 3 Actions Required, including 'Provide Order Details' (Overdue 04 Apr 2021), 'Provide Technical Details' (Overdue 04 Apr 2021), and 'Payment Failure - 193839488' (Due 12 Apr 2021).
- User Management (7):** Shows a list of users: Super Admin (1), Admin (3), Network Policy Manager (4), Security Policy Manager (6), and Operator (14).
- Learn (8):** Includes a 'Chat with an Expert' button and a 'Lumen Knowledge Base' section with Fortinet links.


1. Existing service upgrades and additions
2. Add new sites and users
3. Lumen SASE Solutions site configuration
4. Ticket and support generation and current status
5. Lumen alerts and notifications
6. New and existing service status
7. SASE Manager users
8. Chat with an expert
9. Knowledge base content

# **Expanded internet threat insight and remediation**

# Lumen SASE Solutions with **Rapid Threat Defense**

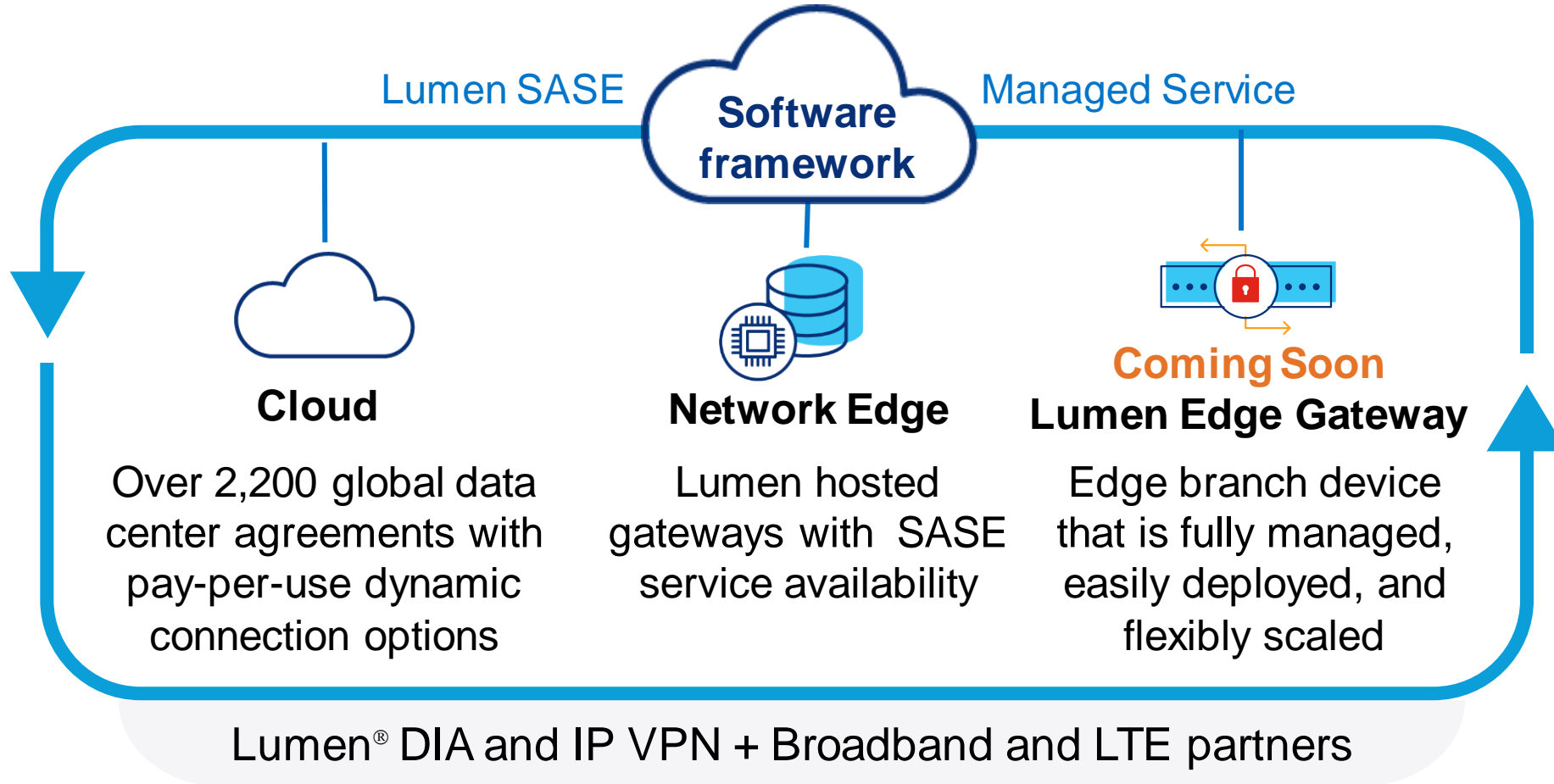
- **Proactively defend against unique and emerging threats.** Unmatched visibility of Black Lotus Labs powered by data from one of the largest and most deeply peered networks and third-party threat feeds.
- **Seamless experience for our customers.** Threat intelligence feeds are automated and continuously updated for customers within service partner logs.
- **Enables customers to make better decisions and worry less about security.** A value-add to the customer at no additional cost.



**BLACK LOTUS**  **LABS™**  
+  
**FORTINET®**

# Bringing it all together – The Lumen difference

Lumen delivers a high-performance, deeply managed service experience



## Lumen Experience

- Centralized design
- Online purchase
- Automated deployment
- Flexible management

**FORTINET**

**vmware**

**VERSA NETWORKS**

## Lumen platform

including internet threat intel and remediation from **BLACK LOTUS LABS**



# Lumen SASE Solutions service partner comparison



## Services

Services	VERSA NETWORKS	FORTINET	vmware
<b>Network</b>			
SD-WAN	✓	✓	✓
High availability	✓	✓	✓
<b>Security Service Edge (SSE)</b>			
NGFW	✓	✓	
SWG	✓	✓	✓
ZTNA	✓	✓	
CASB	✓		✓
DLP	✓		✓
Event Logging	Customer SIEM via Syslog	Forti Analyzer Customer SIEM via Syslog	Customer SIEM via Syslog Customer SIEM via API
EMEA and Canada sites	✓	✓	✓
Single pane of glass	✓		✓
SASE Gateway options	<ul style="list-style-type: none"> <li>Lumen hosted gateways</li> <li>On-premises</li> </ul>	<ul style="list-style-type: none"> <li>Lumen hosted gateways</li> <li>On-premises</li> </ul>	<ul style="list-style-type: none"> <li>VMware global gateways</li> <li>On-premises</li> </ul>
Lumen Marketplace	✓	✓	✓
Rapid Threat Defense insights		✓	

# **Lumen SASE Solution vertical use cases**

# Lumen SASE Solutions use cases



**Securing remote workforces** for better managed access to sensitive data or resources



**Centralized integration of SD-WAN and security** for efficient delivery and secure access to business applications and data



**Instituting a Zero Trust security framework** providing secure access to the corporate data center and cloud applications from any endpoint



**Hybrid workforce access** through VPN augmentation or replacement to provide better scalability, management, and security



**Managing a cloud transition** and replacing existing on-premises security services and appliances



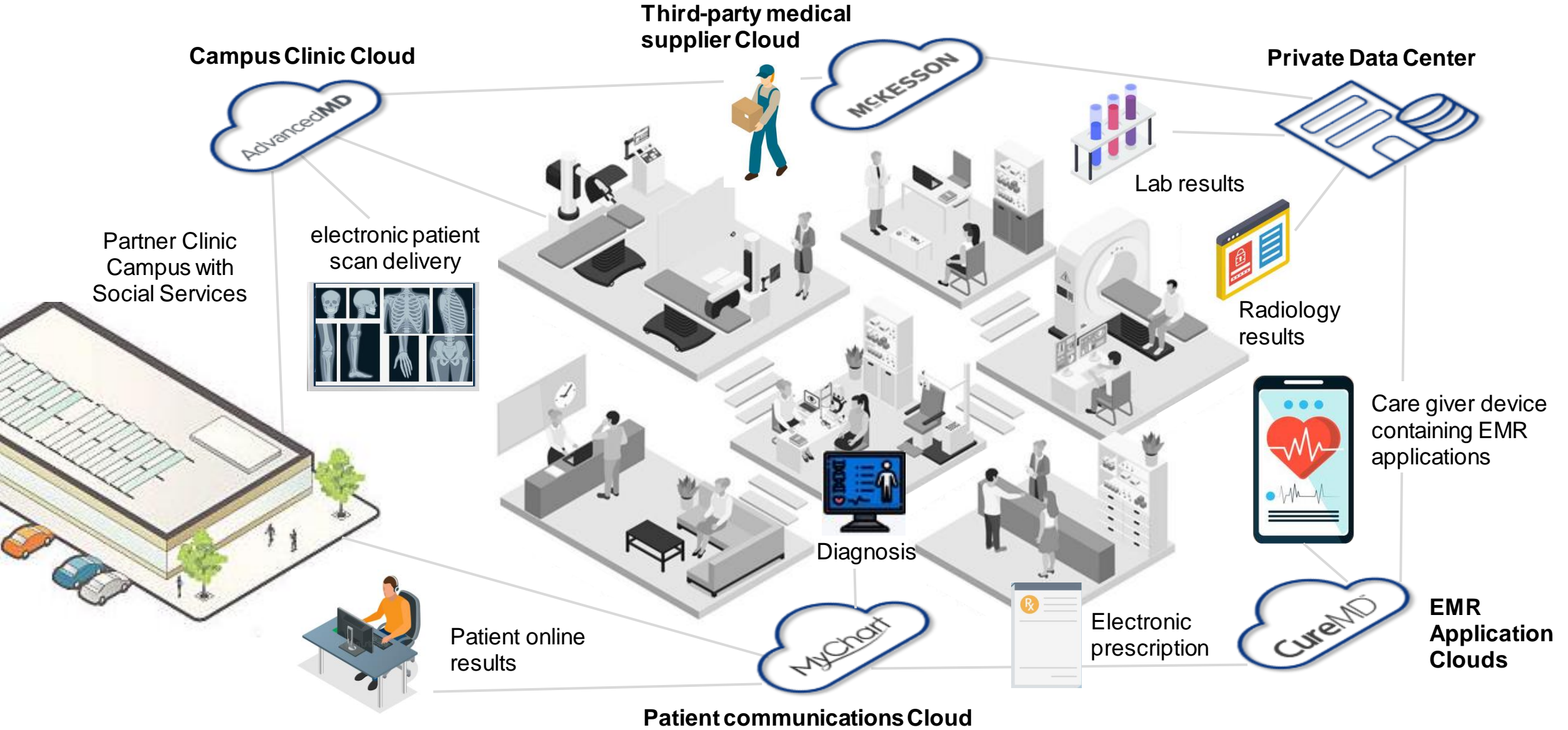
**Grow-as-you-go managed services** offering low latency and scalability using a “single pass” architecture that runs multiple policy engines



## Lumen SASE Solutions **healthcare**

- Centralized data center sharing Protected Health Information (PHI) across multiple cloud-based applications
- Significantly increased remote Electronic Medical Records (EMR) access to minimize patient impact on hospitals while maintaining optimal care
- Required improved application performance across service providers and partner clinics
- Securely share compliant patient information while ensuring up-to-date accuracy

# A day in the life of **Electronic Medical Records (EMR)**

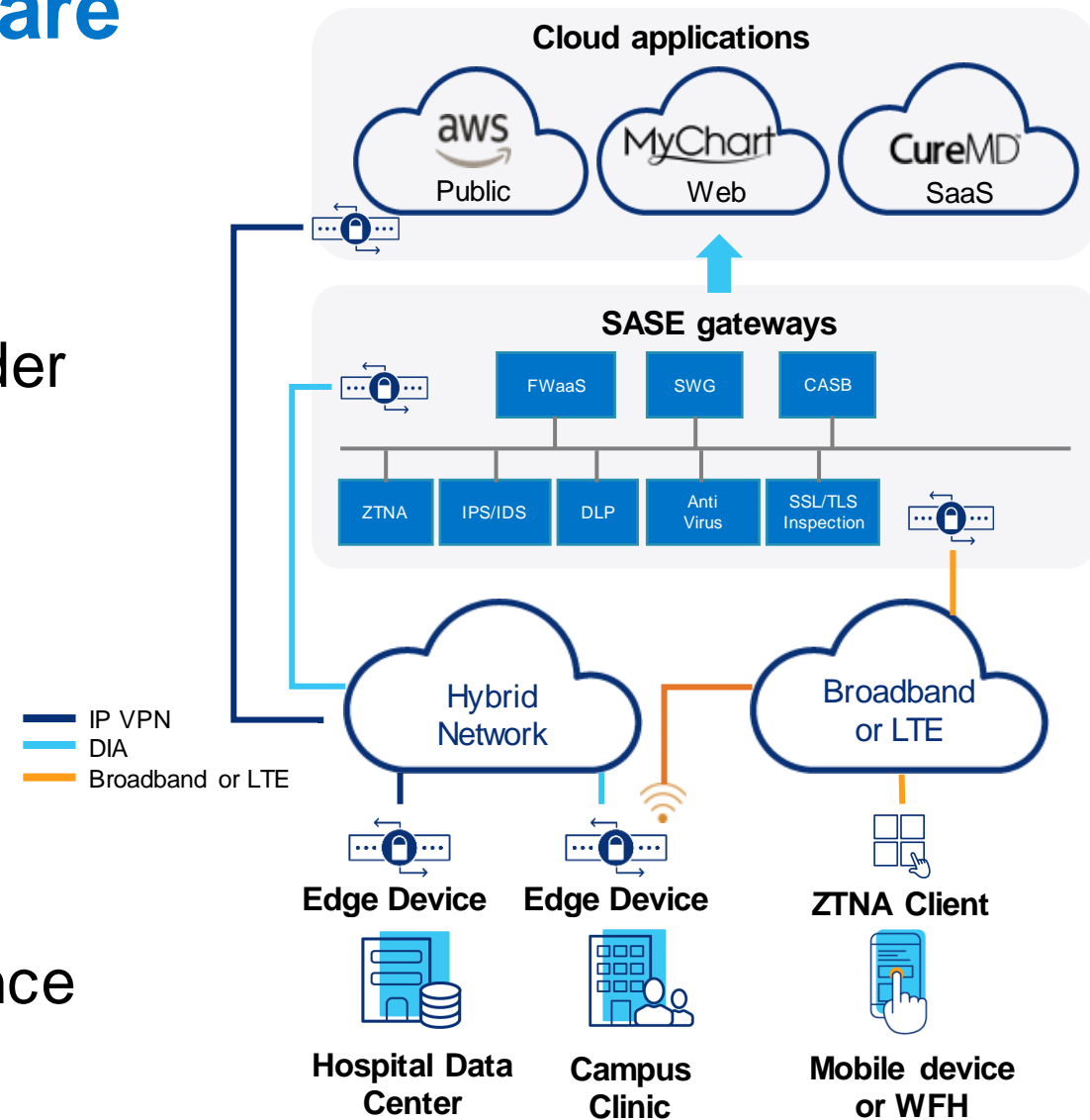




# Lumen SASE Solutions **healthcare**

## Expected outcomes

- High-performing application access
- Lower infrastructure costs with single provider management
- Faster response to patient needs
- Secure sharing of patient data between patient services and partner networks
- Cloud-native approach to centralized policy management.
- Lumen managed monitoring and maintenance of the entire solution

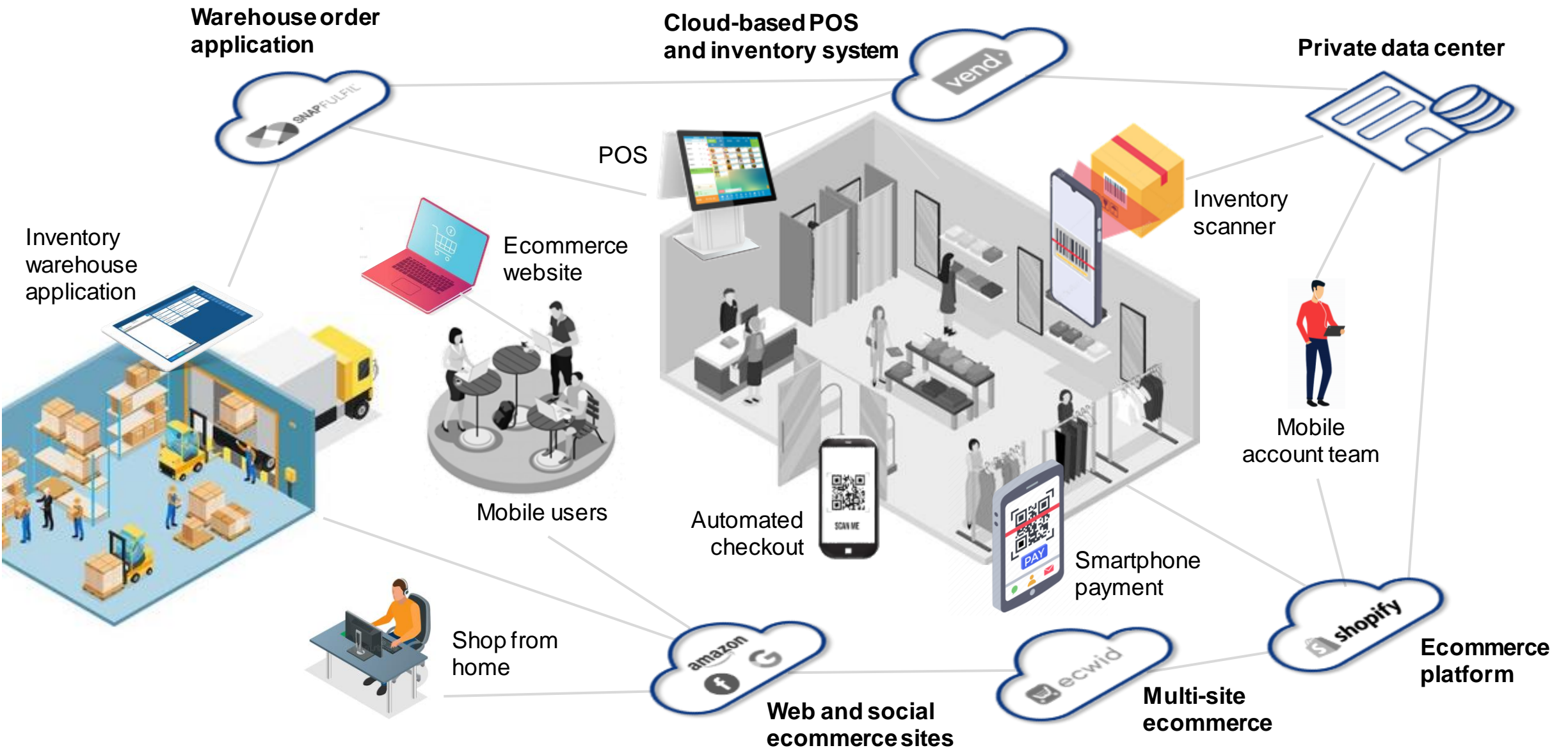




## Lumen SASE Solutions **retail**

- Growing consumer goods company expanded sales to branded retail locations, large ecommerce, and social venues
- Integrated in-store and online shopping experience supporting customer discounts and automated checkout
- Secure access to customer data and site updates for highly mobile account team
- Maintaining application performance, segmenting users, and managing highly distributed secure access became a daunting challenge for a limited IT staff.

# A day in the life of omnichannel retail

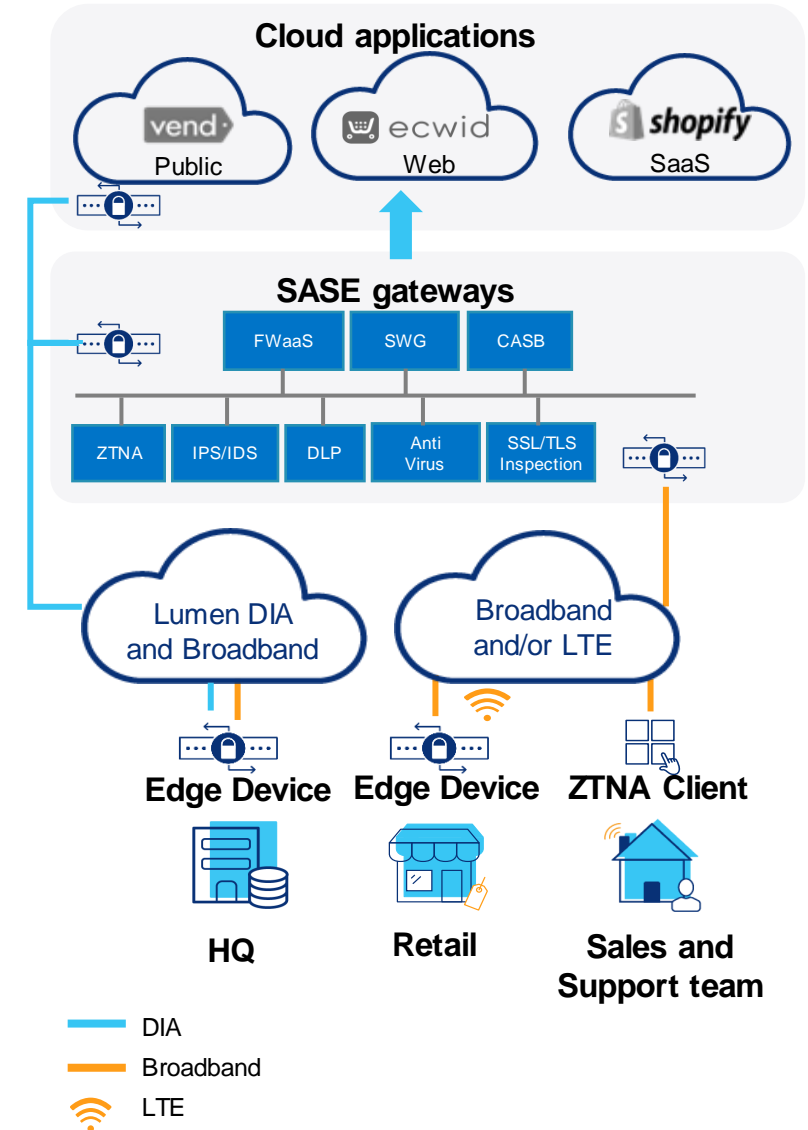




# Lumen SASE Solutions retail

## Expected outcomes

- Maintained productivity for highly distributed sales and retail staff
- Secure application access from any device for select users
- Centralized network and security policies for simplified management
- Segmentation of customer and internal application experiences
- Pro-managed monitoring and maintenance of entire solution relieving strain on IT resources



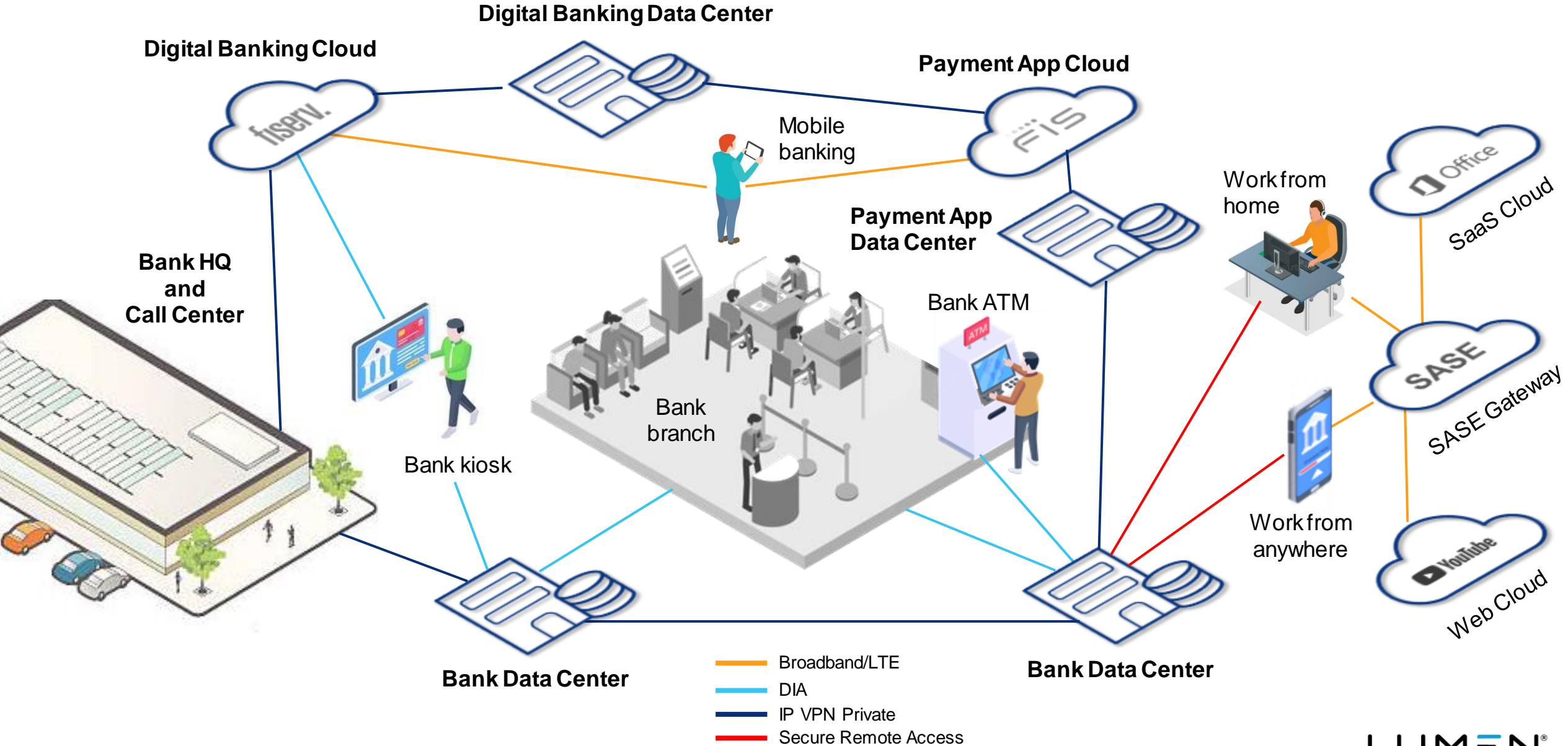


## Lumen SASE Solutions **financial**

- Customers no longer drive to a local bank branch preferring to use a variety of devices and network connectivity to access banking applications and websites
- Cloud-based bank applications must be available 100% of the time and include the highest level of security
- Bank must support a distributed workforce with secure access to highly compliant information, while maintaining a high level of productivity from anywhere



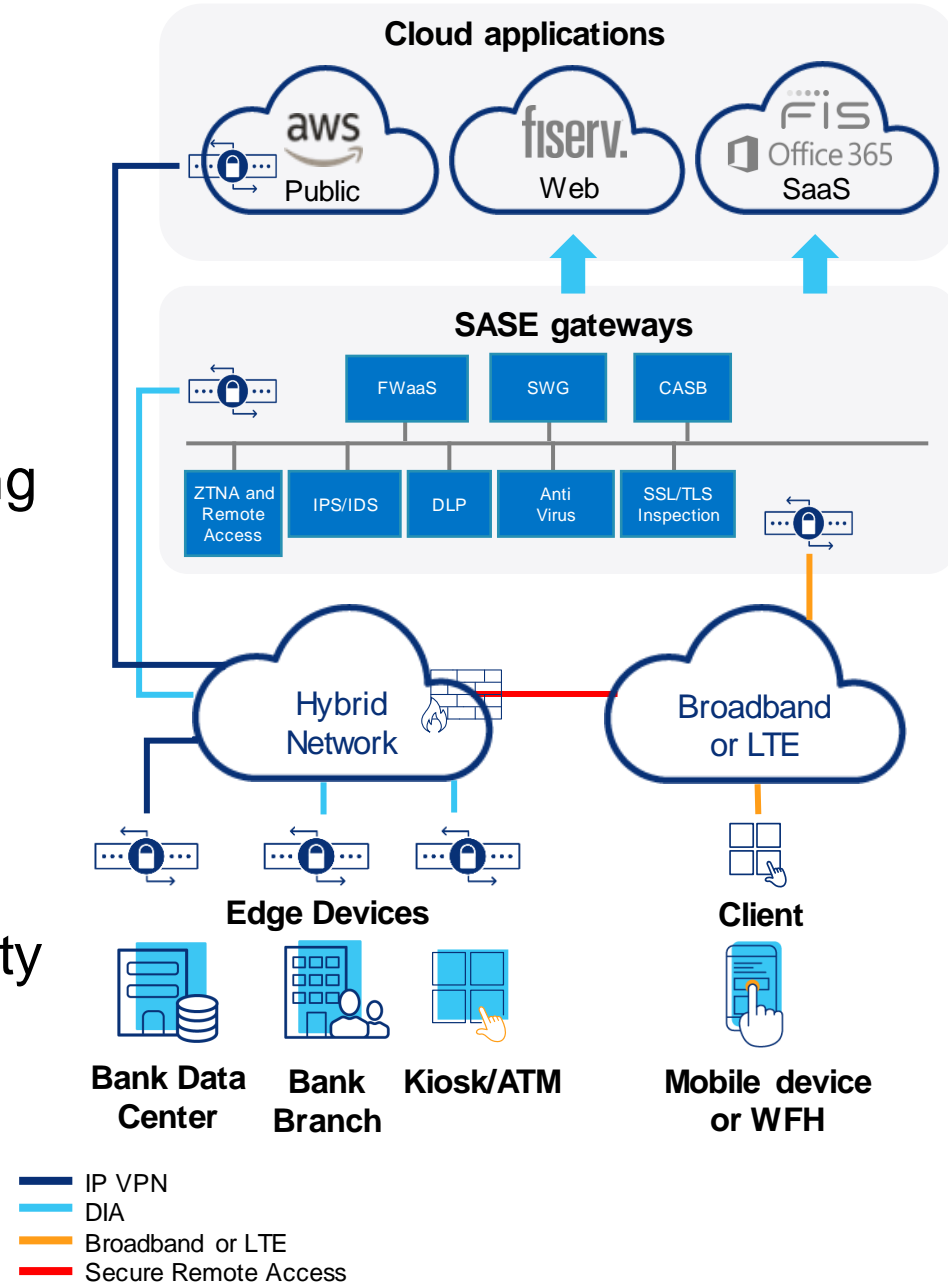
# A day in the life of omnichannel banking



# Lumen SASE Solutions financial

## Expected outcomes

- Lumen Hybrid networking and SASE Solutions unite to deliver secure access to high-performing applications from anywhere
- Secure remote worker access to productivity apps using ZTNA client connection to SASE cloud gateways
- Access to sensitive data is provided using Secure Remote Access to the corporate data center
- Secure financial transactions across multiple devices, users, and locations
- Centralized policy management with end-to-end visibility and control over the flow of applications and data
- Lumen managed monitoring and maintenance of the entire solution



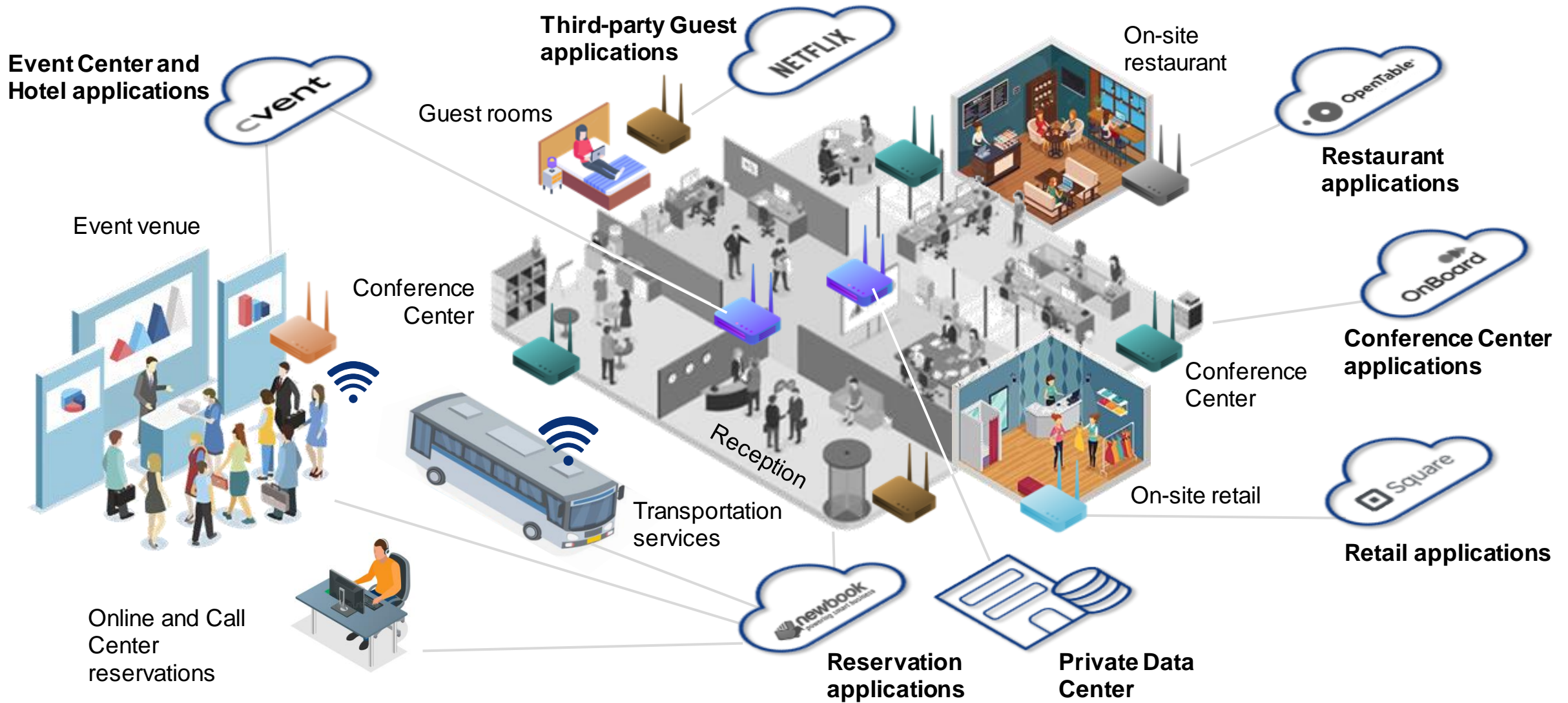


## Lumen SASE Solutions **hospitality**

- Guests and businesses alike expect consistent access to cloud-based experiences they enjoy at home, and at work
- Secure access to a wide variety of application types, from new product demos and private customer information – to at-home entertainment accounts, requires multi-faceted network segmentation
- Address unique and dynamic bandwidth and security requirements for short-term guests, hosted events, and permanent on-site service partners



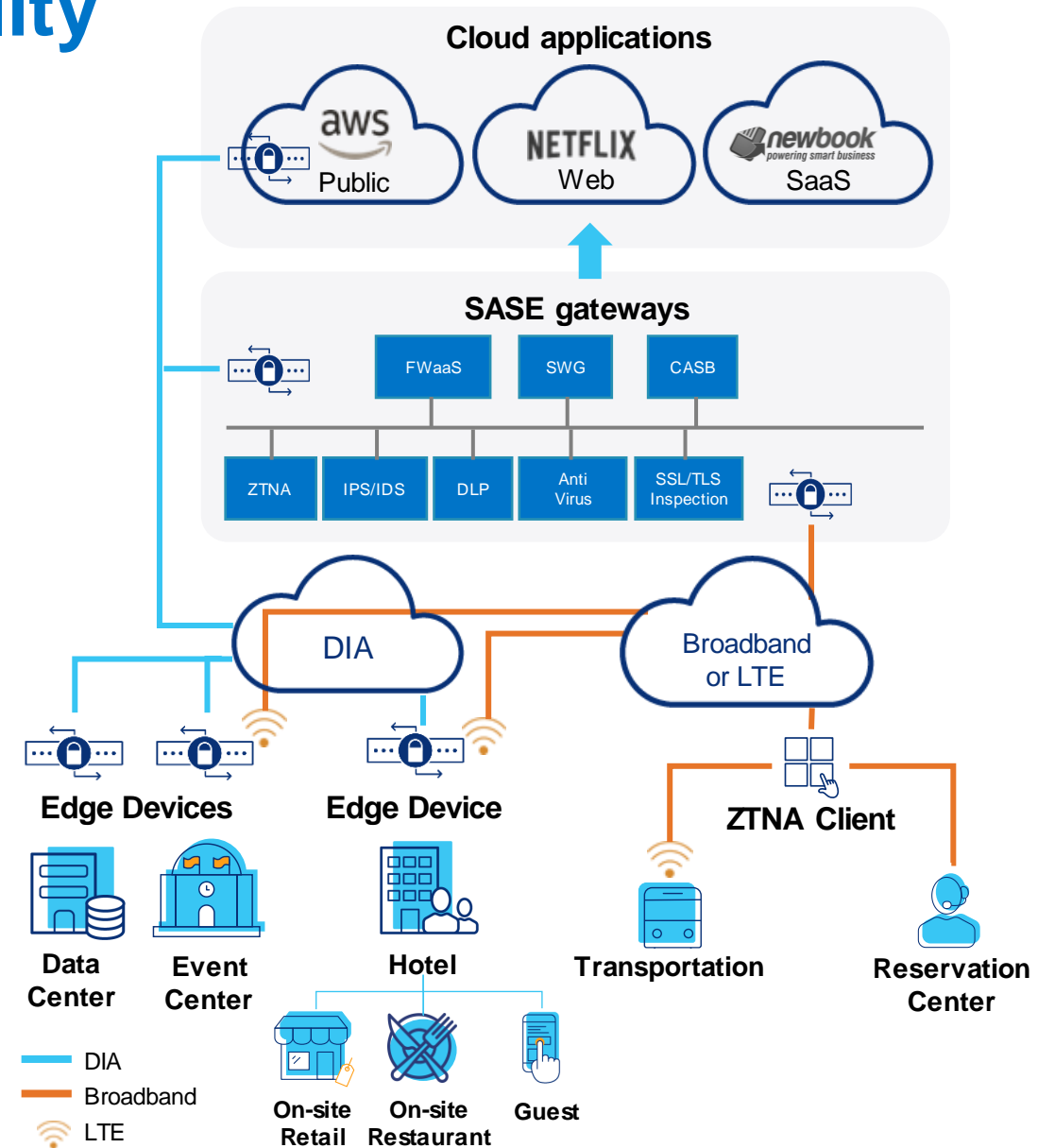
# The multi-segmented SASE hospitality experience



# Lumen SASE Solutions **hospitality**

## Expected outcomes

- Broadband and LTE traffic secured with ZTNA access to SASE secure cloud gateway
- Guest Wi-Fi is segmented and authenticated with metered access to a segregated open network supporting secure white-listed applications
- Conferences, events, and retail tenants received dedicated access to a secure, high-performing application experience
- Centralized policy management for the entire solution
- Lumen managed monitoring and maintenance
- Simplified, flexible, and fast response to constantly changing application demands







# **Lumen SASE Solution use case study**

# Construction engineering and architecture

Simplified operations with SASE enhanced analytics supporting a busy IT organization



## Overview

- Headquartered in Dallas, TX
- 20 nationwide offices

## Problem

- Required government compliant secure transmission of data
- Loss of MPLS provider accelerated network transformation
- Future-proof network and security

## Solution

- New customer - Lumen SASE with Fortinet – SD-WAN, Next Generation Firewall (NGFW), Zero Trust Network Access (ZTNA)
- DIA to replace MPLS
- Enterprise broadband access
- 21 sites
- 475 remote users
- 36-month contract

Lumen SASE Solutions provided fully a compliant future-ready network and security solution that is fully managed.



## Lumen SASE story

- Lumen DIA was chosen as a cost-effective network alternative to MPLS providing increased bandwidth at a lower cost
- Lumen SASE Solutions on top of DIA provides SD-WAN centralized application visibility and routing control
- A host of data and application security features were added
- Customer experienced data compliance with a fully managed approach and simplified IT operations with enhanced analytics



# Summary

LUMEN®



# Lumen is well-positioned to deliver secure, high-performing applications, **virtually anywhere**

Next-gen distributed applications need to be closer to customers and assets

**Highly distributed compute**

6M+

**US intercity fiber miles**

~ 60% more capacity than market competitors

**High performance networking**

6300+

**Global connected internet**

#1 peered IP network in the world\*

**Multi-cloud orchestration and connectivity**

2200+

**Public and private data centers on-net globally**

Dynamic connections to cloud providers

**Embedded security**

60+

**Lumen hosted gateways**

Designed to cover > 97% of U.S. enterprise demand within 5ms of latency

**Cloud-native digital experience**

\*CAIDA, AS Rank, December 2022

© 2023 Lumen Technologies. All Rights Reserved.



# Lumen SASE Solutions fulfill business outcomes

## Desired customer outcomes

## Lumen SASE Solutions

### Improved customer experience

Leading partners integrate with Lumen to provide secure application access to approved users on any device, virtually anywhere they need it

### Network simplicity

Design, purchase, and configure, your service using a centralized Lumen experience

### Improved control and visibility

Quickly add applications, new sites, and users with automated service delivery from Lumen

### Continuous upgrades to new features and patches

Flexibly choose the way you want to manage your solution and upgrade to additional support at any time

### Improved business productivity

Combine the Lumen platform network, edge, and cloud capabilities to deliver a consistently secure, high-performing application experience

# The Lumen SASE Solutions difference

A network and security experience that is centrally controlled, fully converged, and flexibly managed



## Lumen Platform

Connectivity, compute, and orchestration



## Security expertise

Our deep bench of security capabilities enables a more complete Security solution



# SASE



## Service wrapper

Options sized to level of support that meets customer needs



## Partner ecosystem

Diverse ecosystem of partners meets specific business needs



## Digital experience

Design, price, purchase, configure, and manage your entire solution using a centralized experience

# Next steps

## Discovery meeting

- Identify stakeholders in your organization who are developing the SASE strategy.
- Understand your objectives and goals to improve your digital business performance and digital operations.
- **Key outcome:** Setup meeting with your decision makers to have Lumen provide an SASE Solution overview.

## Lumen SASE Solution overview

- Lumen offers a SASE assessment to help businesses prepare for implementation.
- Jointly identify key priorities and areas Lumen can help.
- **Key outcomes:** Setup a SASE Assessment **or** identify a SASE Proof of Concept to partner on.

# Appendix

# Lumen SASE Solutions – Fortinet service devices

Size	Model	Description	Performance
X-Small	40F	<ul style="list-style-type: none"> <li>• Desktop model</li> <li>• 5 – GigE RJ45 ports</li> <li>• Optional Wi-Fi and 3G/4G LTE modem</li> <li>• Rack or wall mount option</li> </ul>	200Mbps bandwidth
Small	60F	<ul style="list-style-type: none"> <li>• Desktop model</li> <li>• 10 – GigE RJ45 ports</li> <li>• Rack or wall mount options</li> </ul>	750Mbps bandwidth
Medium	100F	<ul style="list-style-type: none"> <li>• Rack mount</li> <li>• 22 – GigE RJ45 ports</li> <li>• 4 – SFP ports</li> <li>• 2x – 10Gig SFP slots</li> <li>• Dual power supply</li> </ul>	1Gbps bandwidth
Large	200F	<ul style="list-style-type: none"> <li>• Rack mount</li> <li>• 18 – GigE RJ45 ports</li> <li>• 8 – GigE SFP slots</li> <li>• 4 – 10GigE SFP slots</li> </ul>	2Gbps bandwidth
X-Large	1800F	<ul style="list-style-type: none"> <li>• Rack mount</li> <li>• 4 – 40GigE QSFP+ slots</li> <li>• 12 – 25GigE SFP28/10GigE SFP+ HA slots</li> <li>• 8 – GigE SFP slots,</li> <li>• 18 – GigE RJ45 ports</li> <li>• SPU NP7 and CP9 accelerated</li> <li>• Dual AC power supplies</li> </ul>	5Gbps bandwidth





# Lumen SASE Solutions – VMware service devices

Size	Model	Description	Performance
X-Small	610N	<ul style="list-style-type: none"> <li>• Desktop model</li> <li>• 6 – 1GigE RJ45 ports, 2 – 1Gbps SFP ports</li> <li>• Integrated Wi-Fi</li> <li>• Rack and wall mount options</li> </ul>	200Mbps bandwidth
Small	620N	<ul style="list-style-type: none"> <li>• Desktop model</li> <li>• 6 – 1GigE RJ45 ports, 2 – 1Gbps SFP ports</li> <li>• Integrated Wi-Fi</li> <li>• Rack or wall mount options</li> </ul>	750Mbps bandwidth
Medium	640N	<ul style="list-style-type: none"> <li>• Desktop model</li> <li>• 6 – 1GigE RJ45 ports, 2 – 1/10Gbps SFP+ ports</li> <li>• Integrated Wi-Fi</li> <li>• Rack or wall mount options</li> </ul>	1Gbps bandwidth
Large	3400	<ul style="list-style-type: none"> <li>• Rack mount</li> <li>• 6 – 1GigE RJ45 ports</li> <li>• 4 – 1/10Gbps SFP+ ports</li> <li>• Dual power supply</li> </ul>	2Gbps bandwidth
X-Large	3800	<ul style="list-style-type: none"> <li>• Rack mount</li> <li>• 6 – 1GigE RJ45 ports</li> <li>• 4 – 1/10Gbps SFP+ ports</li> <li>• Dual power supply</li> </ul>	5Gbps bandwidth



# Lumen SASE Solutions with Versa service devices

Size	Model	Description	Performance
<b>X-Small</b>	Advantech FWA1012	<ul style="list-style-type: none"> <li>• Desktop model</li> <li>• 4 – GigE RJ45 ports, 2 - 1G SFP, 8GB memory, Atom C3558 processor</li> <li>• Rack mount available</li> </ul>	Up to 100Mbps bandwidth
<b>Small</b>	Lanner 1515B	<ul style="list-style-type: none"> <li>• Desktop model</li> <li>• 5 – GigE RJ45 ports, 2 – 1G SPF, 8GB RAM, 64GB SSD, 4-core Atom C3558 processor</li> <li>• Rack mount available</li> </ul>	Up to 500Mbps bandwidth
<b>Medium</b>	Lanner 1515A	<ul style="list-style-type: none"> <li>• Desktop model</li> <li>• 5 – GigE RJ45 ports, 2 – 1G SFP, 16GB RAM, 64GB SSD, 8-core Atom C3558 processor</li> <li>• Rack mount available</li> </ul>	Up to 1Gbps bandwidth
<b>Large</b>	Advantech FWA 3260A	<ul style="list-style-type: none"> <li>• Rack mount</li> <li>• 5 – GigE RJ45 ports, 4 – 1/10G SFP, 2 – 10G SFP+, 64GB RAM, 256GB SSD, 8-core Xeon D-1548 processor</li> <li>• Dual power supply</li> </ul>	Up to 2Gbps bandwidth
<b>X-Large</b>	Advantech FWA 5020U1701-T	<ul style="list-style-type: none"> <li>• Rack mount</li> <li>• 5 – GigE RJ45 ports, 2 – 10G SPF+ ports, 64GB RAM, 256GB SSD, 14-core Xeon E5-2697 v3 processor</li> <li>• Dual power supply</li> </ul>	Up to 6Gbps bandwidth



## [Device details](#)

# Lumen managed service wrapper details

	Pro-managed	Self-managed
<b>CPE, License Rental</b>	✓	✓
<b>Consult design and lifecycle advisory support</b>		
Consult discover network support	✓	Add-on \$\$
Default design config, policy templates	✓	✓
Custom design network configuration template	✓	✓
Custom design security policy template	✓	✓
Custom design site profile	✓	✓
<b>Implementation support</b>		
Project manager	✓	Add-on \$\$
Build config in vendor orchestration portal support	✓	Add-on \$\$
Automated zero touch provisioning (ZTP)	✓	Add-on \$\$
On-site installation support	✓	Add-on \$\$
Configuration and policy conversion implementation support	✓	Add-on \$\$
Test, turn-up, activation per site	✓	Add-on \$\$
High availability configuration validation per site	✓	Add-on \$\$
Documentation knowledge transfer	✓	Add-on \$\$

# Lumen managed service wrapper details

	Pro-managed	Self-managed
<b>Managed service</b>		
Monitoring - device, WAN, LAN interface only, SASE Service	✓	✓
Availability management via Lumen or vendor platform	✓	✓
Notification – Self-service on vendor or Lumen platform	✓	✓
Notification - Auto ticket	✓	✗
Portal reporting - Access to vendor portal tools and reports	✓	✓
Event Management - Standard logs and reports	✓	✓
Security signature updates - from vendor	✓	✓
Incident management - Tier 1-2 troubleshooting and service repair	✓	Add-on \$\$
On-site maintenance support	Add-on \$\$	Add-on \$\$
Problem management - Root cause analysis	✓	✗
Change management - Self-service changes	Self-Service	✓
Change management - Co-managed changes, test/validate	✓	Add-on \$\$
Configuration management - backup, restore/reset, log stream	✓	Add-on \$\$
Patch management	✓	Add-on \$\$
Capacity management - utilization, thresholds, optimize guidance	✓	Add-on \$\$
Performance reporting - detect escalating errors	Self-Service	✓
Performance management - support escalating errors	✓	✗
Vendor maintenance/repair/dispatch	✓	✓
Lumen and 3rd party network management/dispatch per site	✓	✗
Knowledgebase - access to platform help and tutorials	✓	✓
Customer handbook - standard guidance working with Lumen	✓	✓
Access management to vendor and Lumen platform	✓	✓
Life-cycle management - notify end sale, end support	✓	✓
Service performance reviews	✓	✗



# Self-managed service design and implementation add-ons

- Discover customer network/assets through TDG/ slider schedules
- Customize network profiles
- Customize security policy
- Custom design site profile
- Configuration and policy conversion
- Standard project plan template
- Build config in vendor orchestration portal support event
- Test, turn-up, activation per site
- High availability configuration validation per site
- Documentation and knowledge transfer

# Self-managed service single event support add-ons

Add-on product name	Description
<b>Change management</b>	<ul style="list-style-type: none"><li>• Five changes/per month.</li><li>• Change requests will be made in the SASE Manager.</li></ul>
<b>Patch management</b>	<ul style="list-style-type: none"><li>• Lumen guided assistance for upgrade/downgrade for system patches.</li></ul>
<b>Configuration backup and log streaming configuration</b>	<ul style="list-style-type: none"><li>• Automated weekly backup per site or service instance for one backup event.</li><li>• Lumen Back-up/ Restore Reset.</li><li>• Log stream set up with 2-week back-up.</li></ul>
<b>Break fix incident management</b>	<ul style="list-style-type: none"><li>• An unplanned service interruption or a reduction in the quality.</li><li>• Failure of a configuration item that has not yet impacted a service.</li><li>• Tier 1, Tier 2 support defined in vendor partner agreement for problem troubleshooting, diagnosis, resolve inquiries related to advanced networking, integration, configuration issues, interoperability and product clarification basic issues.</li></ul>
<b>Self-managed to Pro-managed upgrade</b>	<ul style="list-style-type: none"><li>• All the above are covered with Lumen SASE Pro-managed solution. Customers can upgrade at anytime within the Lumen SASE Manager experience.</li></ul>