Retail Industry Turns to SD-WAN for Enhanced Customer Shopping Experience

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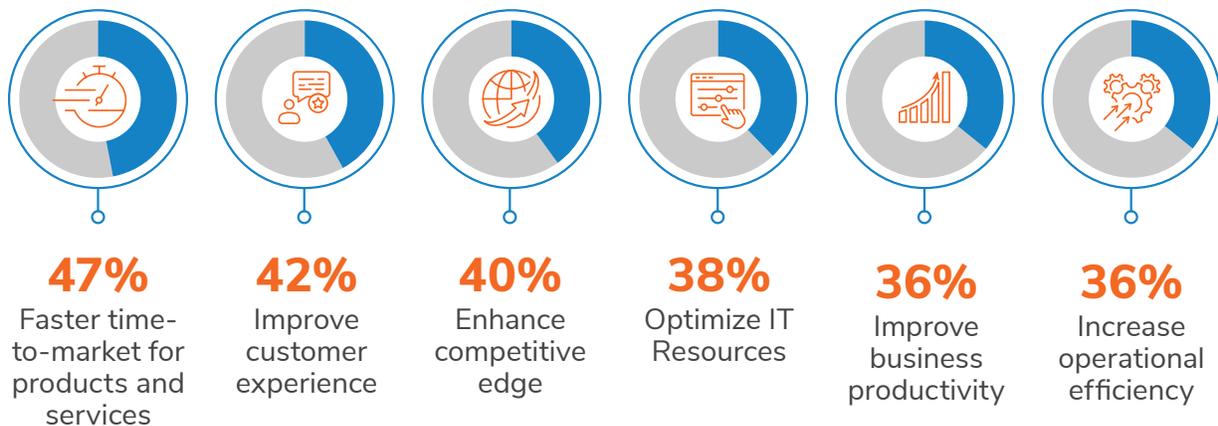
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Introduction

Retail companies rely heavily on a solid digital strategy to compete effectively in the market, be it at brick-and-mortar stores, online, or a combination of both. Key areas where technology plays a key role in retail operations include: point-of-sale (PoS) systems, eCommerce, inventory management, and enhanced customer in-store experience using augmented reality (AR) and virtual reality (VR).

The COVID-19 pandemic has exacerbated the need for a superior eCommerce platform, as retailers have adapted to support a huge surge in online ordering, curbside pickup, and same-day delivery requirements. Hence, retail companies are investing heavily in delivering an omnichannel experience that seamlessly integrates in-store purchases with online shopping and social commerce.

In Frost & Sullivan's 2021 Global WAN virtualization trends survey (see Exhibit 1), 47% of the retail industry respondents indicate "faster time-to-market" as the #1 driver for digital transformation initiatives, followed by "improve customer experience" and "enhance competitive edge."

EXHIBIT 1: Top Business Drivers for Retail Companies'
Digital Transformation Initiatives

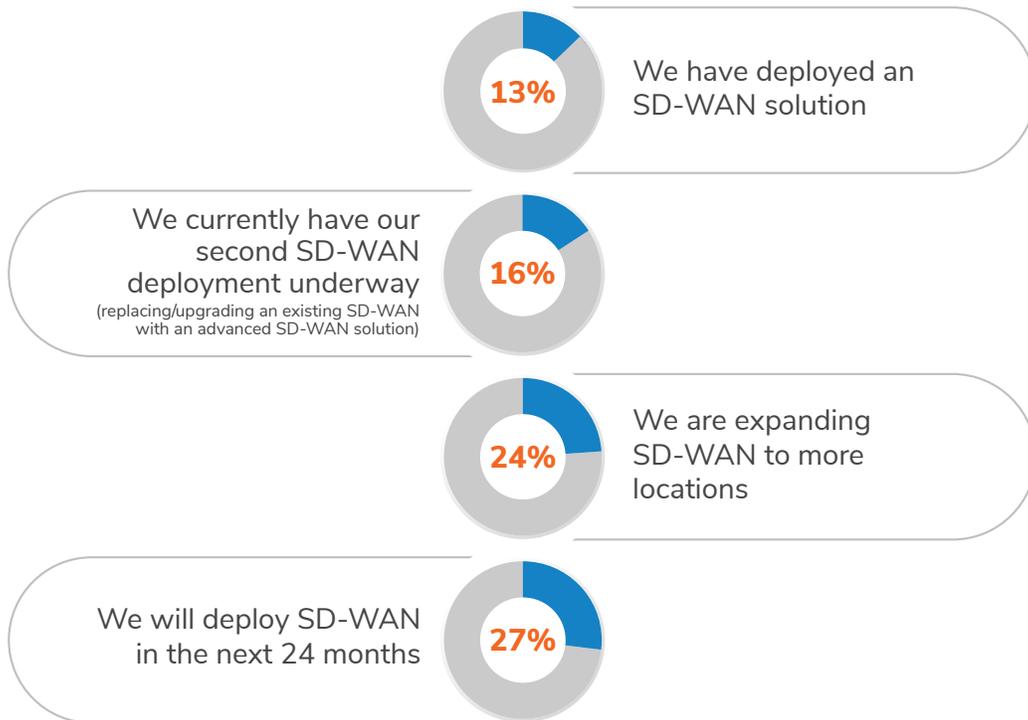| **47%**	**42%**	**40%**	**38%**	**36%**	**36%**
Faster time-to-market for products and services	Improve customer experience	Enhance competitive edge	Optimize IT Resources	Improve business productivity	Increase operational efficiency

Source: Frost & Sullivan

SD-WAN technology, with its ease of deployment and management, greatly simplifies WAN management for the geographically distributed sites retail companies have: brick-and-mortar storefronts, warehouses, remote offices, suppliers' sites, and distribution hubs. SD-WAN enables fast deployment of WAN services to all sites with minimal disruption to business operations while enabling centralized configuration, management, and security.

Cloud and Big Data Technology Trends Driving SD-WAN Adoption in Retail Industry

A combined 53% of the respondents stated they have deployed (and/or are expanding to new location and/or are upgrading) an SD-WAN solution at their branch locations (see Exhibit 2). The highly distributed nature of retail locations makes them an ideal fit for deploying SD-WAN as branch site connectivity and management is time-consuming and complex for large distributed enterprises. An SD-WAN solution dramatically reduces the time required to add new branch sites, as the customer premises equipment (CPE) is a plug-and-play device that can self-configure, and branches can start with readily available wireless LTE service while waiting for a network service provider to provision wired services (Internet or MPLS).

EXHIBIT 2: SD-WAN Deployment Trends in Retail Industry

13% — We have deployed an SD-WAN solution

16% — We currently have our second SD-WAN deployment underway (replacing/upgrading an existing SD-WAN with an advanced SD-WAN solution)

24% — We are expanding SD-WAN to more locations

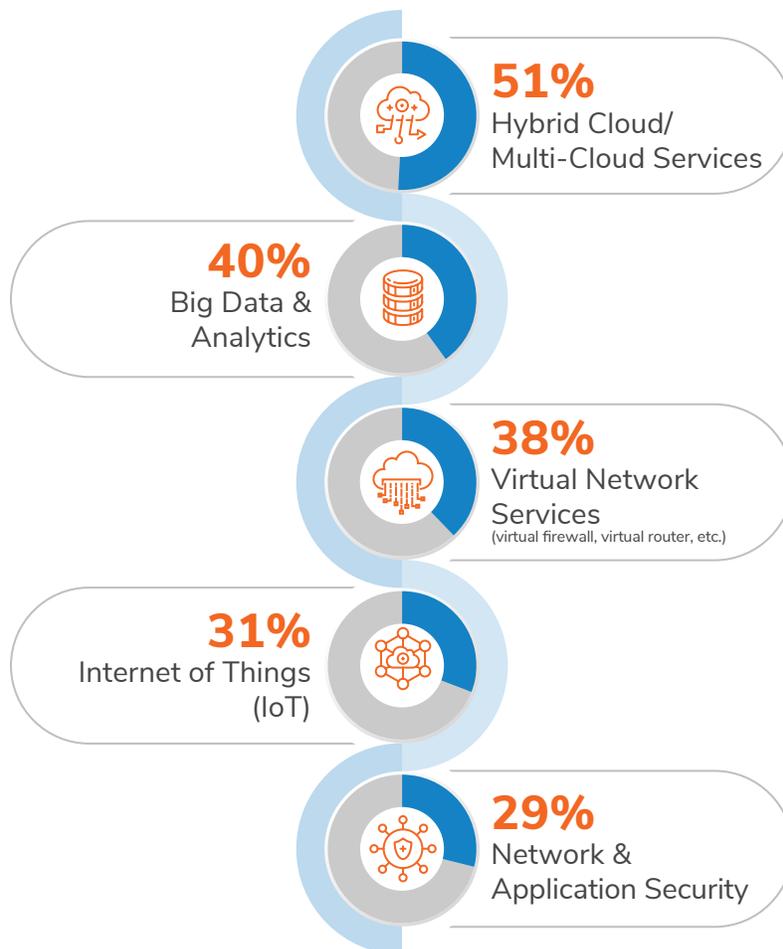**27%** — We will deploy SD-WAN in the next 24 months

Source: Frost & Sullivan

53% of the respondents stated they have deployed an SD-WAN solution at their branch locations.

4

Retail companies have long leveraged hybrid and multi-cloud solutions to store and process the vast amount of data related to inventory management, supply chain, and customer information, to list a few sources. In our global WAN virtualization trends survey, hybrid and multi-cloud services ranked #1 in terms of priority, followed by big data & analytics, and virtual network services (see Exhibit 3).

EXHIBIT 3: Technology Trends in Order of Priority for Retail Companies in the Next 24 Months

51%
Hybrid Cloud/
Multi-Cloud Services

40%
Big Data &
Analytics

38%
Virtual Network
Services
(virtual firewall, virtual router, etc.)

31%
Internet of Things
(IoT)
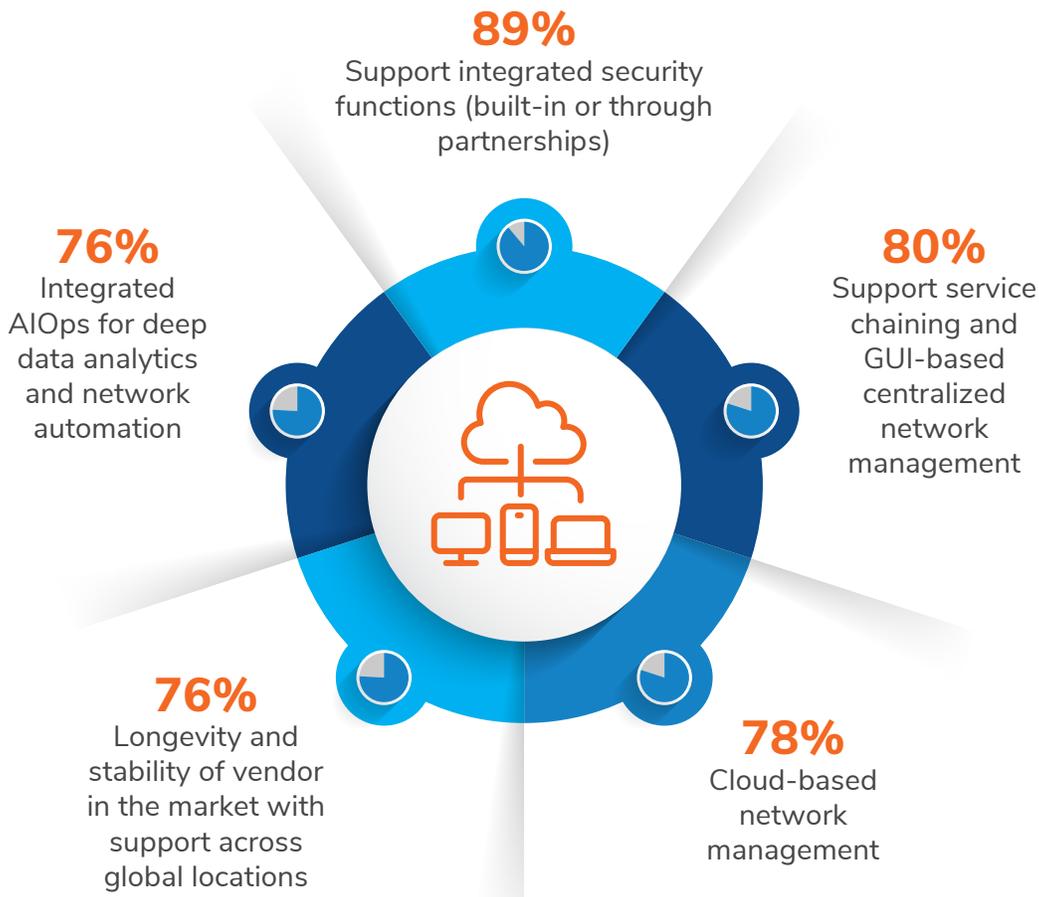
29%
Network &
Application Security

Source: Frost & Sullivan

For an omnichannel strategy to work in the retail industry, all the various channels must be interconnected. Hybrid cloud and big data & analytics play a big role in helping retailers understand customer shopping patterns across their omnichannel network. For example, a customer might browse a social media site and then be directed to the company's webpage to make the purchase, and, eventually, opt for in-store or curbside pickup. The network connecting the hybrid cloud deployments and retail branch sites are critical for all of the technologies to work cohesively. As retail companies move away from static hybrid WANs, they are increasingly deploying SD-WAN for its other benefits, such as agility and centralized network management.

Integrated Security as Top Parameter for Retail Companies While Selecting an SD-WAN Solution

While network and application security is a top priority across industries, the retail industry is especially vulnerable to security risks and breaches due to the huge number of PoS transactions retailers process, the amount of customer information they store, and of course their heavy dependence on a web presence. The COVID-19 pandemic has highlighted the importance of offering an online shopping experience that is not only always available but also secure. A simple distributed denial of services (DDoS) attack can bring down a retailer's website, resulting in lost business opportunity. Security breaches in terms of sensitive customer information results in loss of trust in the retailer. Hence, it is no surprise that retail companies are looking for integrated security functions in their SD-WAN deployments (see Exhibit 4). SD-WAN 2.0 provides a platform-centric solution that integrates enhanced security and advanced routing functions, and centralized, software-defined network orchestration to enable retail companies to secure the highly distributed WAN network, end-to-end.

EXHIBIT 4: Importance of Parameters While Selecting an SD-WAN Solution for Retail Companies

89%
Support integrated security functions (built-in or through partnerships)

76%
Integrated AIOps for deep data analytics and network automation

80%
Support service chaining and GUI-based centralized network management

76%
Longevity and stability of vendor in the market with support across global locations

78%
Cloud-based network management
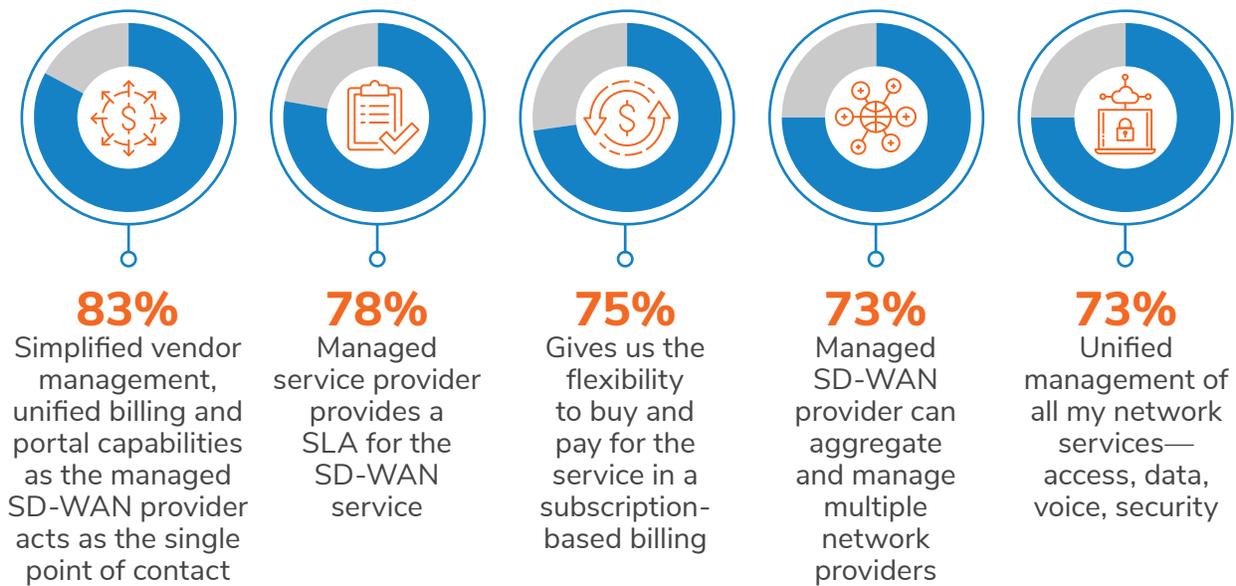
Source: Frost & Sullivan

Managed SD-WAN: a Top Choice Among Retail Companies

Asked about their preferences for purchasing and managing their SD-WAN, a whopping 69% of survey respondents from the retail industry indicate they would prefer a fully-managed SD-WAN solution. In managed SD-WAN, the service provider acts as a single point of contact for the complete SD-WAN solution, including the SD-WAN appliance, software license, WAN services, and managed services.

WAN management is a complex process and requires expertise on the enterprise end for network managers to run and operate a global WAN. The process can be daunting when it involves multiple transport and access providers from across the globe. Since many organizations are reducing their network/IT staff to control costs while placing pressure on existing staff to achieve operational efficiency, SD-WAN management can add to the burden. Partnering with the right technology provider and the right service provider can considerably diminish the challenges of deploying SD-WAN.

In our survey, retail industry respondents indicate simplified vendor management as the top parameter when selecting a fully managed SD-WAN solution, followed by SLAs provided by a managed service provider and flexibility to buy the service in a subscription-based model (see Exhibit 5).

EXHIBIT 5: Importance of Parameters While Selecting a Fully Managed SD-WAN Solution for Retail Companies

83%	78%	75%	73%	73%
Simplified vendor management, unified billing and portal capabilities as the managed SD-WAN provider acts as the single point of contact	Managed service provider provides a SLA for the SD-WAN service	Gives us the flexibility to buy and pay for the service in a subscription-based billing	Managed SD-WAN provider can aggregate and manage multiple network providers	Unified management of all my network services— access, data, voice, security

Source: Frost & Sullivan

The Last Word

Retail companies are under tremendous pressure to deliver a superior omnichannel shopping experience to ensure improved sales and drive repeat business through customer satisfaction. Be it an intuitive website for online shopping or an enhanced in-store experience using AR/VR, the retail industry relies on technology to drive business growth. While WAN technology is evolving to support distributed users and applications, security has remained largely centralized. Connecting distributed users to cloud-based applications in a secure and optimized manner remains a challenge today, as traditional infrastructure-based security concentrated in company headquarters is not sufficient when business applications are deployed across multiple clouds and branches. Using SD-WAN technology, companies can deploy sites faster, connect sites to hybrid cloud deployments in an optimal and secure manner, and define and manage network policies centrally, thus greatly improving operation efficiency.

To realize optimal benefits from their SD-WAN investment, retail companies must look for advanced SD-WAN solutions that integrate next-generation firewall, advanced routing, and zero trust network access (ZTNA) proxy into one operating system and management platform. A robust SD-WAN solution builds a foundation for Zero Trust Edge that forms a new perimeter to deliver the convergence of security and networking everywhere, in addition to providing explicit access to applications based on context and continuous validation of user and device identity.

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