aryaka

The Cloud-First WAN Company

5TH ANNUAL

Global State Of The WAN Report

Insights for SD-WAN and SASE Success

aryaka SOTW 2021

Global State Of The WAN

Letter from the CMO

aryaka
The Cloud-First WAN Company

Dear WAN Enthusiast

We are very excited to put the 5th edition of the Global State Of The WAN (SOTW) report in your hands. We build this publication using a global survey of over 1350 enterprises, making it one of the most comprehensive independent reference reports in the industry! Responses have come from CIOs and several heads of infrastructure, network and security across medium to large enterprises.

As 2020 brought with it the greatest workforce migration in human history due to the pandemic, corporations are leaning towards hybrid workplaces and collaborative experiences. CIOs will be challenged to deliver flexibility and manage rapid changes gracefully. The wide area network (WAN) has therefore become even more strategically important and the lifeblood of the connected organization. We expect architectural shifts to accelerate, resulting in greater adoption of Cloud-First approaches and growth of the Secure Access Service Edge (SASE) category.

Not surprisingly, complexity rears its head yet again as the #1 issue for IT teams. Simplicity in all forms is the need of the hour. Hence, the focus is increasingly on “SD-WAN as-a-service” consumption models, convergence of network and network security (via SASE), and ease of use. The shift from a Do-it-Myself (DIM) approach to a consumption-based managed services model is also very real.

We hope you enjoy the visual insights presented in this report and find it useful as you plan your WAN for 2021 and beyond. It is truly a labor of love. I would like to sincerely thank the dedicated Aryaka team whose tireless efforts have created this valuable resource. Your feedback is always welcome!

Best regards,

Shashi Kiran

Chief Marketing Officer (CMO)
Aryaka Networks

Aryaka 5th Annual Global State Of The WAN - Top Report Findings for Success Across SD-WAN and SASE

This fifth edition of Aryaka's leading State of the WAN report surveys over 1350 enterprises from every vertical and geography to understand their priorities, plans and challenges today and into the future. This is the most comprehensive report in the industry in reach and depth.

Common themes are the fusion of networking and security based on SD-WAN and SASE architectures, continued work-from-home plans, as well as the common concerns surrounding complexity and application performance.

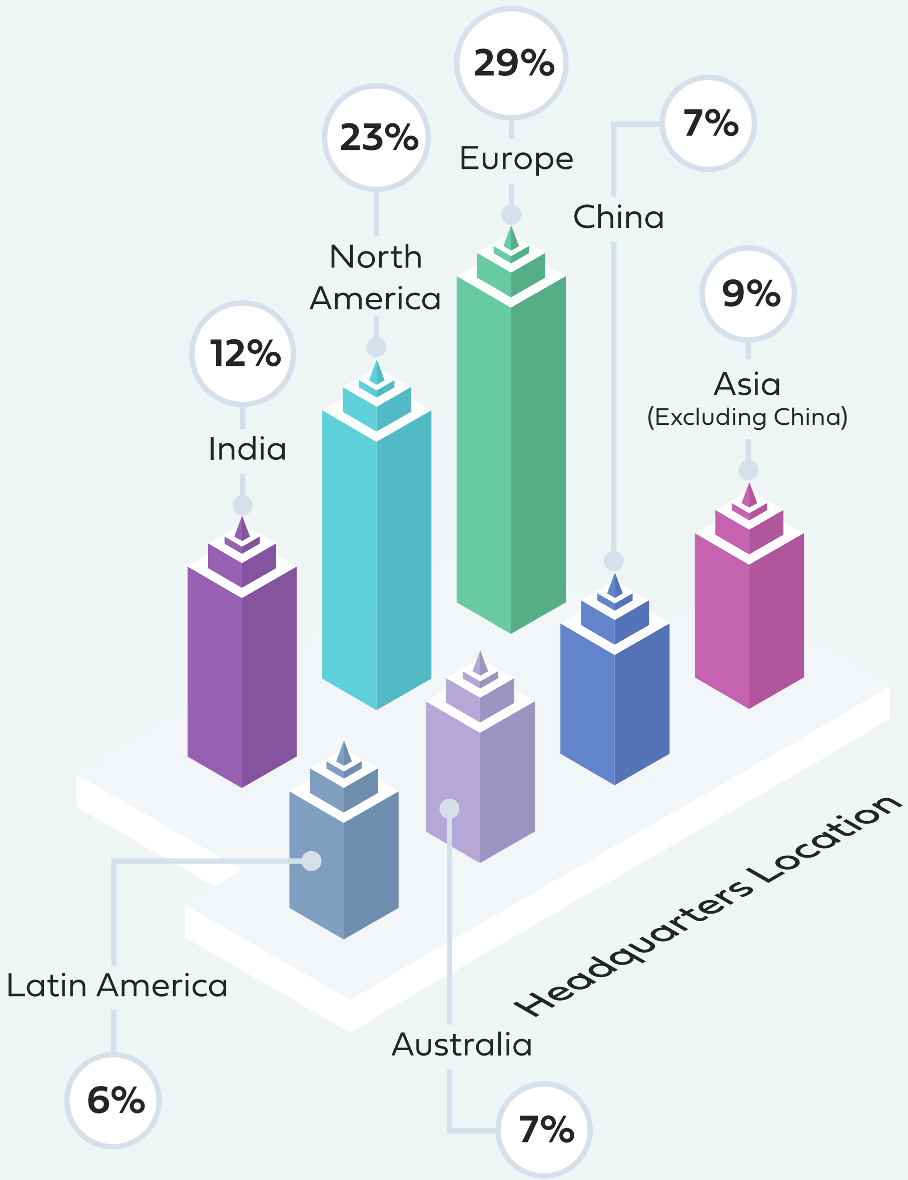
The report is structured as follows:

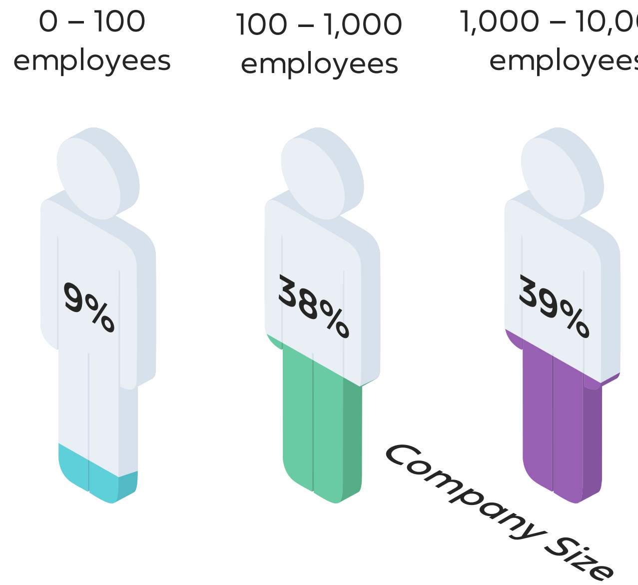
- **Where** enterprise are today, facing complexity and challenges due to WAN and application growth, as well as the pandemic
- What enterprises plan to do for change, including investment planning
- How enterprises plan to implement change, their WAN transformation approach and managed service adoption

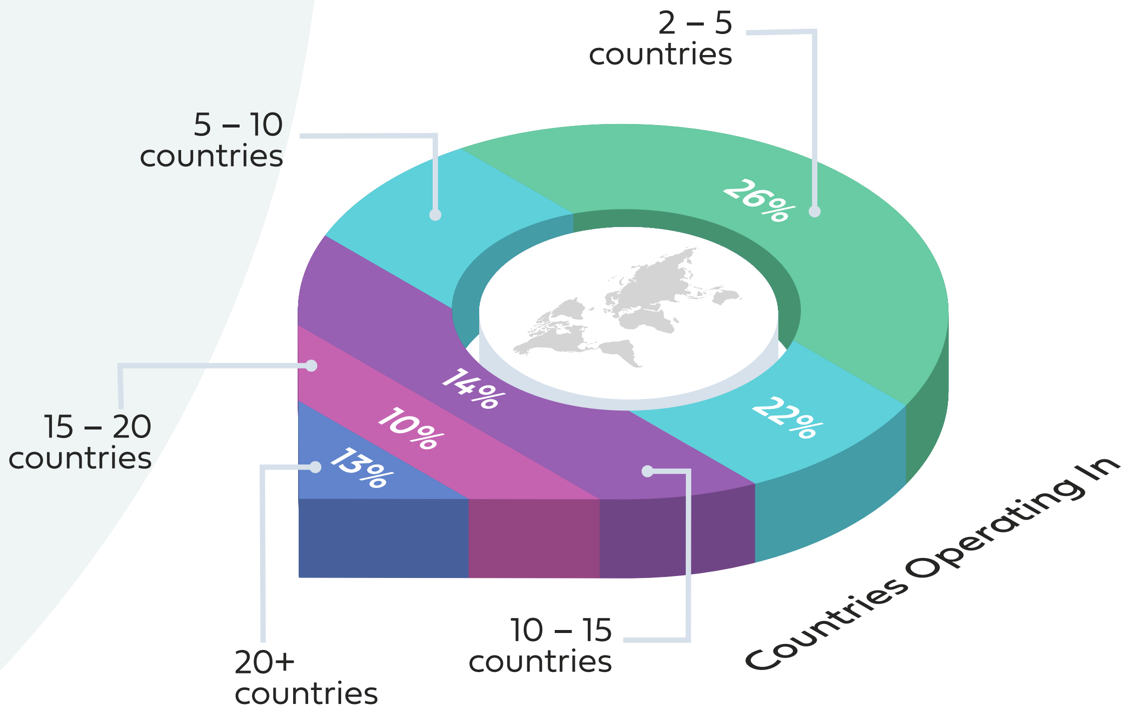
We hope you find the analysis useful!

Executive Summary

Organizational Demographics







The survey also included:

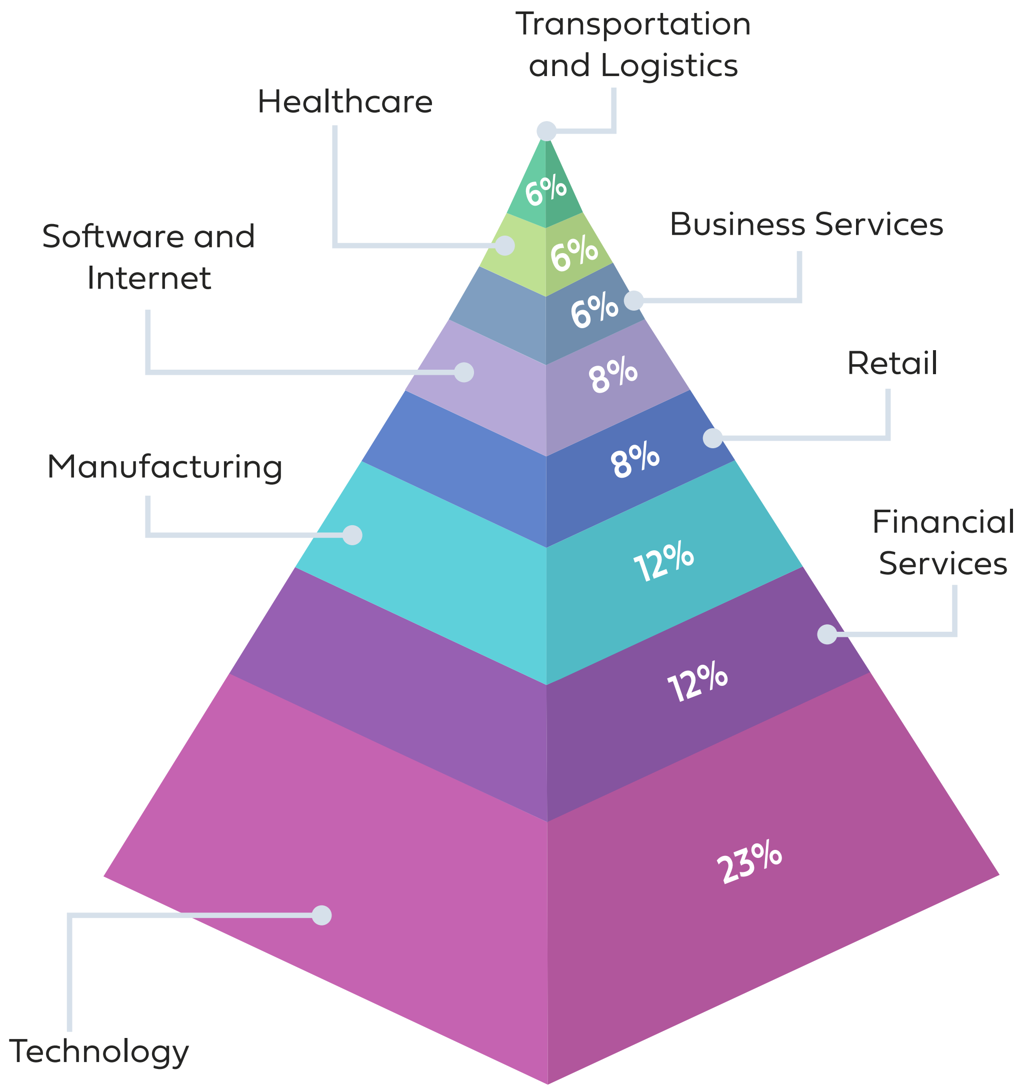
Eastern Europe / Russia (5%), Africa (1%), Middle East (1%)

Industry

Which industry does your company operate in?

Top Eight Responses	%
Technology	23%
Financial Services	12%
Manufacturing	12%
Software and Internet	8%
Retail	8%
Business Services	6%
Healthcare	6%
Transportation and Logistics	6%

Total Responses	1338



The survey also included:

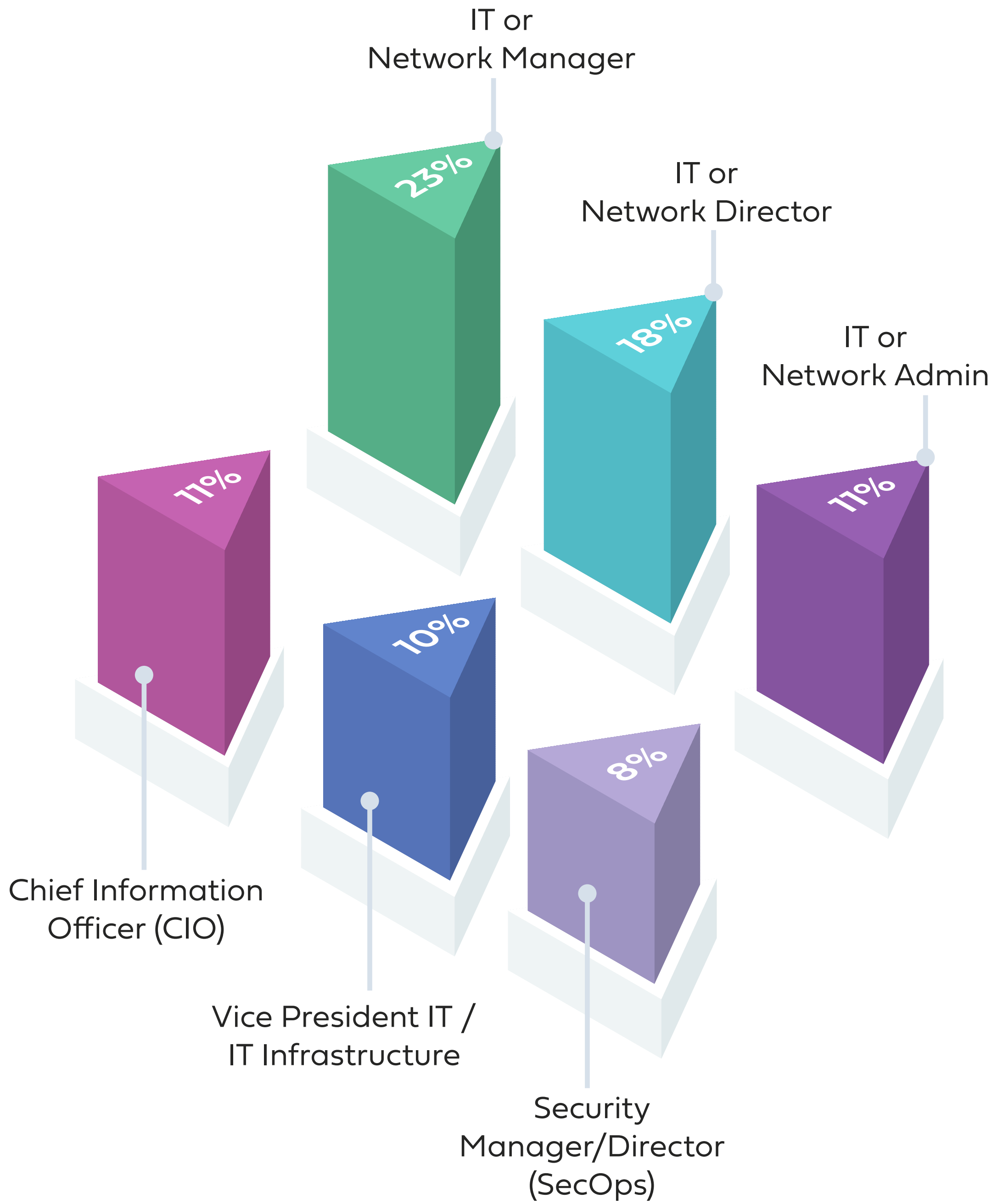
Telecommunications (4%), Pharmaceutical (3%), Energy and Utilities (2%), Travel and Leisure (2%), Real Estate and Construction (2%), Media and Advertising (2%), Education (1%), Non-Profit (1%), Food and Beverage (1%), Other (1%)

Respondent's Role

What is your role at your company?

Top Six Responses	%
IT or Network Manager	23%
IT or Network Director	18%
IT or Network Admin	11%
Chief Information Officer (CIO)	11%
Vice President IT / IT Infrastructure	10%
Security Manager/Director (SecOps)	8%

Total Responses	1335



The survey also included:

Cloud Architect (4%), CISO/CSO (4%), DevOps (3%),Enterprise Architect (2%), Other (4%)

Table of Contents

Table of Contents

Year-to-Year Observations

1 Application Growth Accelerating

- In the last year, the number of enterprises with over 500 known applications has grown by almost 50%, from 32% to 47% of respondents
- In parallel, those reporting greater than 20 SaaS applications grew by 37%, from 24% to 33%

2 UCaaS and Collaboration Gain Steam

- UCaaS in particular experienced especially strong uptake due to the pandemic, and unsurprisingly Zoom experienced major growth of 44%, from 25% to 36%, at the expense of other collaboration platforms
- Other up-and-coming applications include Microsoft Teams, SAP/HANA, and Slack

3 Growth Creates Complexity and Concerns

- With this growth comes increased complexity, which is still the #1 issue for IT on par with last year at 37%, followed by slow application access (33%) and performance (32%)
- One area that stood out this year was cost, identified by 20% in 2021 vs 16% in 2020, a 25% rise

4 The Pandemic's Long-Term Impact

- The pandemic resulted in changing priorities that also influenced overall purchasing plans
- This includes support for the hybrid workplace at 44%, an increased focus on digital transformation at 53%, remote worker enablement at 38%, and remote worker security at 36%

Year-to-Year Observations

5 Enterprise Priorities

- Enterprises are looking to invest in SD-WAN (17%), the cloud (29%), security (17%), and a new entry-remote access upgrades and enhancements (22%)
- This combination of SD-WAN and remote access equates to 39%
- Big data (29%), automation (37%), IoT (24%), and AI/ML (23%) also figure into their plans

7 The Hybrid Workplace

- Over half (59%) of the respondees stated that they expect 25-50% of their workers to remain remote at the end of 2021, and a further 21% with more than 50% remaining remote
- To support this, 63% consider the ability to quickly move resources between on-premise and remote to be very important

6 Shifting IT Investment Priorities

- IT reported a slight slowdown in investment, with 21% planning a WAN refresh, compared to 15% in 2019 and 26% in 2020. The same trend applies to the cloud, at 34% vs 42% last year. SD-WAN is 18%, vs 21% in 2019 and 25% in 2020
- However, if adding SASE, a new entrant at 16%, the SD-WAN/SASE total is 34%
- Two areas experiencing continued growth are LTE/5G at 31% vs 9% in 2019 and 24% in 2020, and VPNs at 31% vs 18% in 2019 and 27% in 2020

8 Enter SASE

- On the security front, 29% state that they are already deploying what they consider to be a SASE architecture, with another 56% planning to deploy across the next 12-24 months
- What capabilities do they require? The top responses are SD-WAN at 34%, a Cloud SWG at 30%, and FWaaS at 17%

Year-to-Year Observations

9 Drivers for Transformation

- Drivers for WAN investment include application performance at #1 with 43%, but also MPLS augmentation (39%) and contract expiration (27%)
- In fact, over 50% plan to terminate some or all of their MPLS contracts

11 Mixed Approaches to Security

- Drilling down into security, over half prefer a solution that includes both their WAN vendor and security specialists (51%), vs 25% looking to leverage a single vendor for both. Only 12% plan to rely on their security vendor to provide all WAN components

10 Managed Services On The Upswing

- Enterprises are then looking ahead to managed offerings, with top asks including application optimization (45%), security (43%), connectivity (39%), and multi-cloud access (37%)
- For deployment, a managed service still reigns supreme, at 71% vs 18% looking to DIY

12 Deployment Timing

- How close are they to deploying? More are evaluating this year than last (26%) vs 2%) in 2020 and have developed a business case (14%) vs 11% in 2020 vs just information gathering (36%) down from 44%
- Identified barriers are dropping, including less anxiety regarding increased spending (28%) vs 35% in 2020, complexity (29%) vs 34% in 2020, application performance (36%) vs 43% in 2020, lack of SLAs 22% vs (26%) in 2020, the newness of the technology (30%) vs 34% in 2020, and lack of skills (33%) vs 40% in 2020

https://sommita.net / info@sommita.net / 206-783-4742

1

Where They Are Today: Complexity and Challenges

- The WAN environment grows more complex, with continued site and application growth
- This is coupled with increasing challenges that result in sub-optimal use of IT resources
- The growing importance of collaboration applications and expectations for performance, coupled by the impact of the pandemic, only adds to this

Application Growth

Continued Application Growth:

In the last year, the number of enterprises with over 500 known applications has grown by almost 50%, from 32% to 47%.

Continued SaaS Growth:

In parallel, those with greater than 20 SaaS applications grew by 37%, from 24% to 33%.

Continued Inter-Region Office Growth:

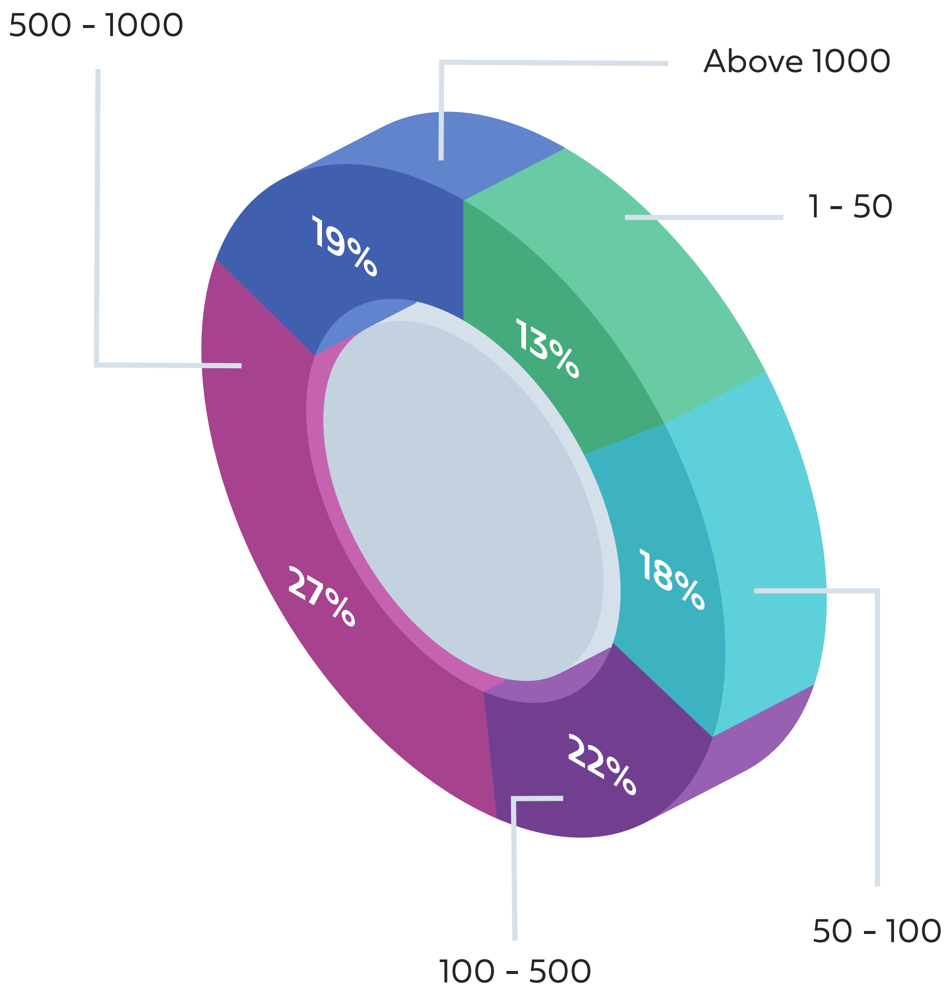
WAN reach followed the same trajectory, with companies reporting over 100 inter-region sites growing by 50%, from 19% to 28%.

Continued Application Growth

How many corporate IT applications are deployed across your organization today?

Top Responses	%
1 – 50	13%
50 – 100	18%
100 – 500	22%
500 – 1,000	27%
Above 1,000	19%

Total Responses	1386



Year-to-Year

- Application diversity continues to increase, with those reporting use of over 500 increasing from 23% in 2019 to 33% in 2020 and now to 47% in 2021

Legend

1 – 50 | 50 - 100 | 100 - 500 | 500 - 1000 | Above 1000

Geographic Breakdown 2021

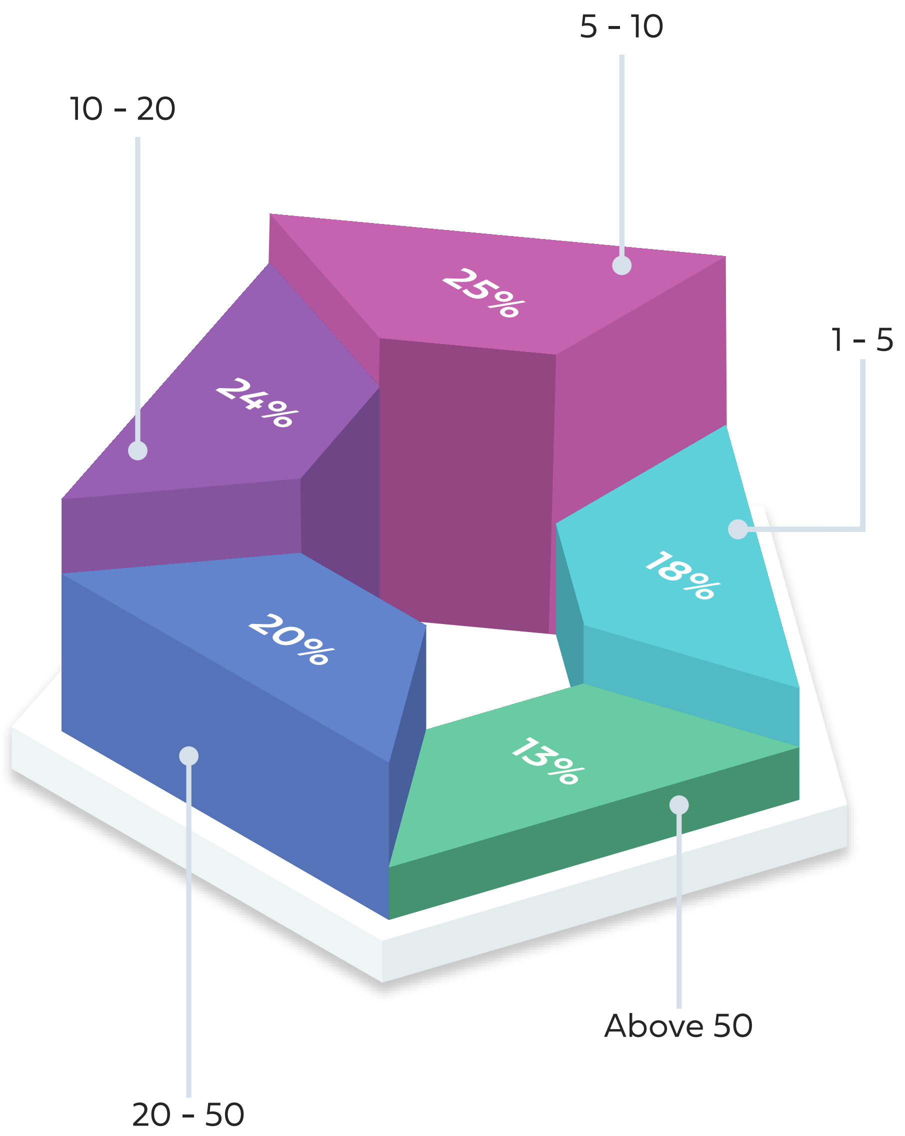
aryaka SOTW 2021 Global State Of The WAN

Continued SaaS Growth

How many SaaS applications do you connect to?

Top Responses	%
1 – 5	18%
5 – 10	25%
10 – 20	24%
20 – 50	20%
Above 50	13%

Total Responses	1386

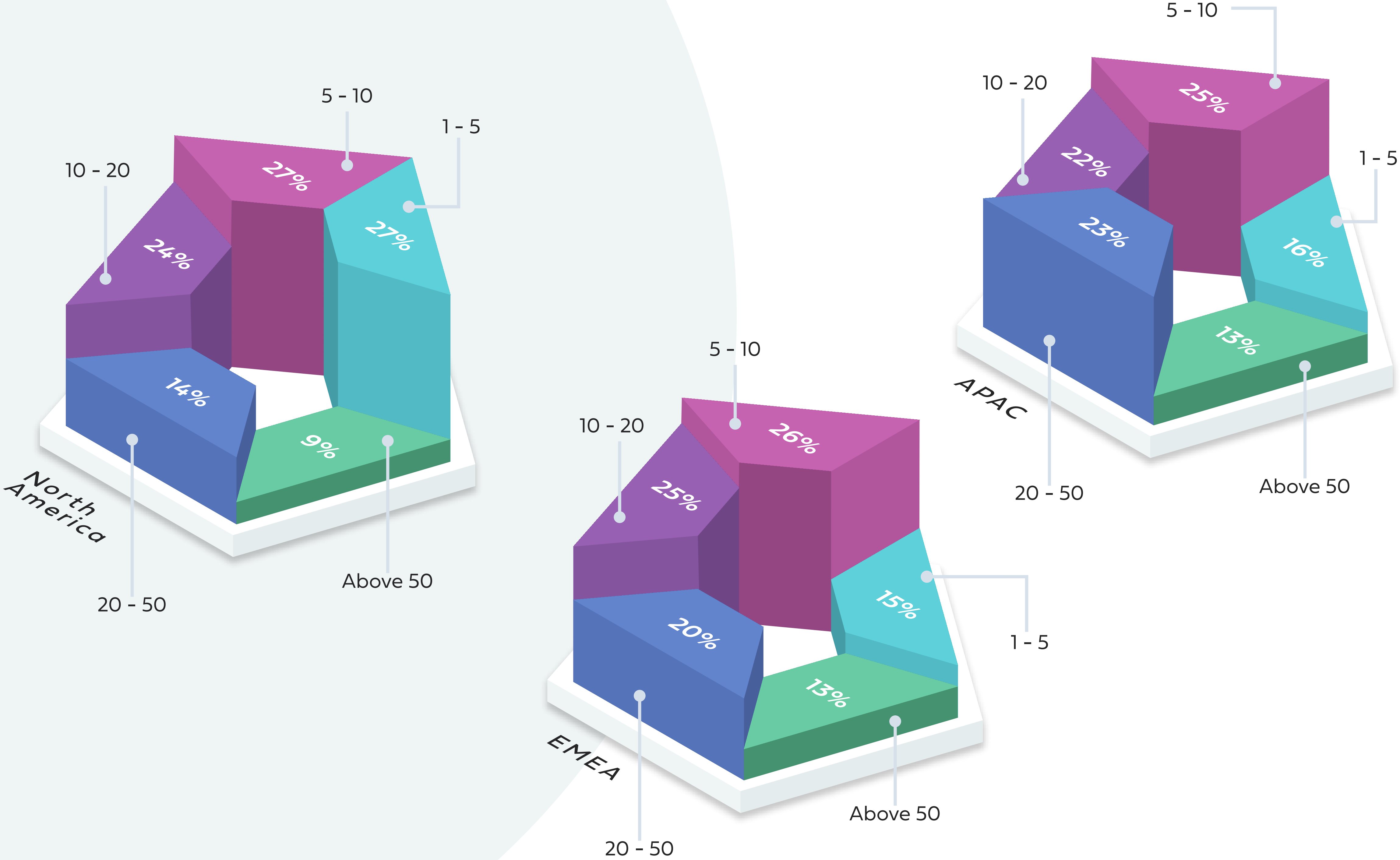


Year-to-Year

- In the same way, SaaS adoption continues to gain steam, with those reporting use of over 20 distinct applications growing from 14% in 2019 to 24% in 2020 and now to 33% in 2021
- There are less issues with what were considered unsanctioned applications, as more become mainstream and officially adopted

aryaka SOTW 2021 Global State Of The WAN

Geographic Breakdown 2021

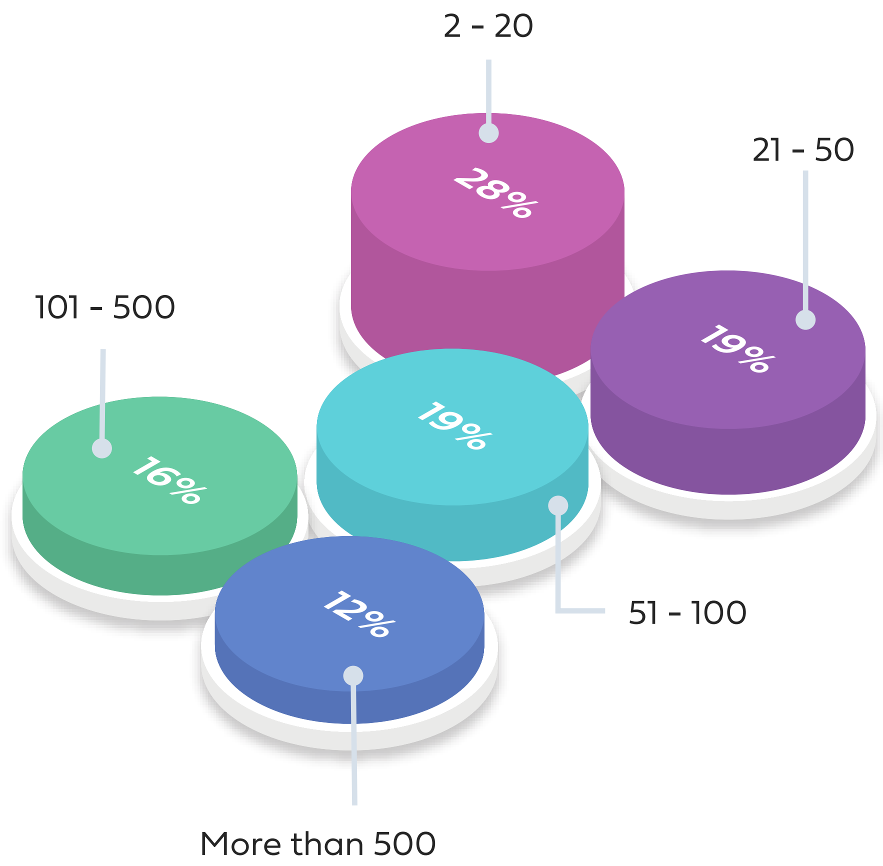


Continued Inter-Region Office Growth

How many globally distributed (inter-region) branch offices does your organization have connected to your WAN?

Top Five Responses	%
2-20	28%
21-50	19%
51-100	19%
101-500	16%
More than 500	12%

Total Responses	1386



The survey also included:

1 (7%)

Year-to-Year

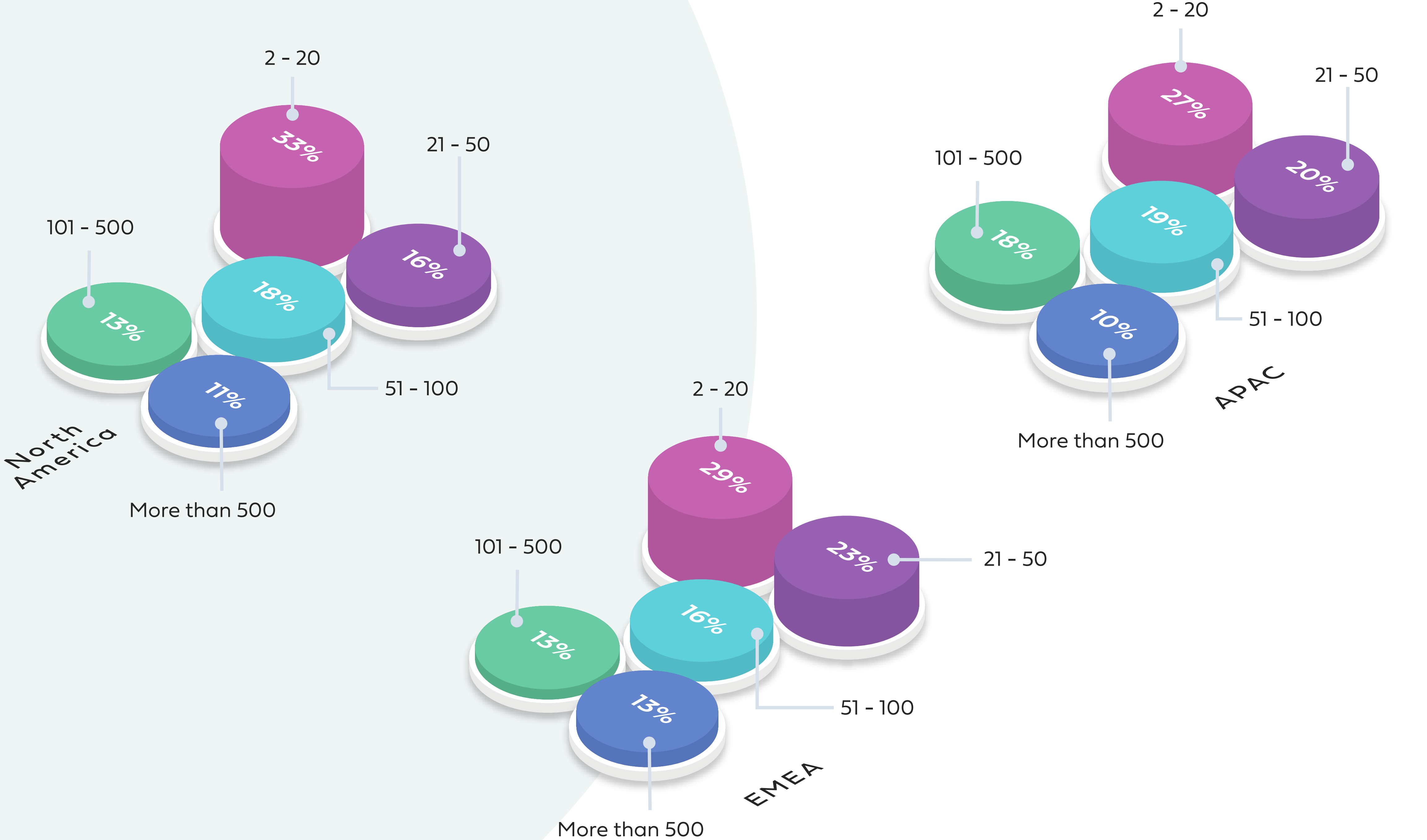
- Reliance on the WAN continues to increase as well, with those reporting over 100 inter-regional sites connected growing from 19% in 2020 to 28% in 2021

Legend

2 – 20 | 21 - 50 | 51 - 100 | 101 - 500 | More than 500

aryaka SOTW 2021 Global State Of The WAN

Geographic Breakdown 2021

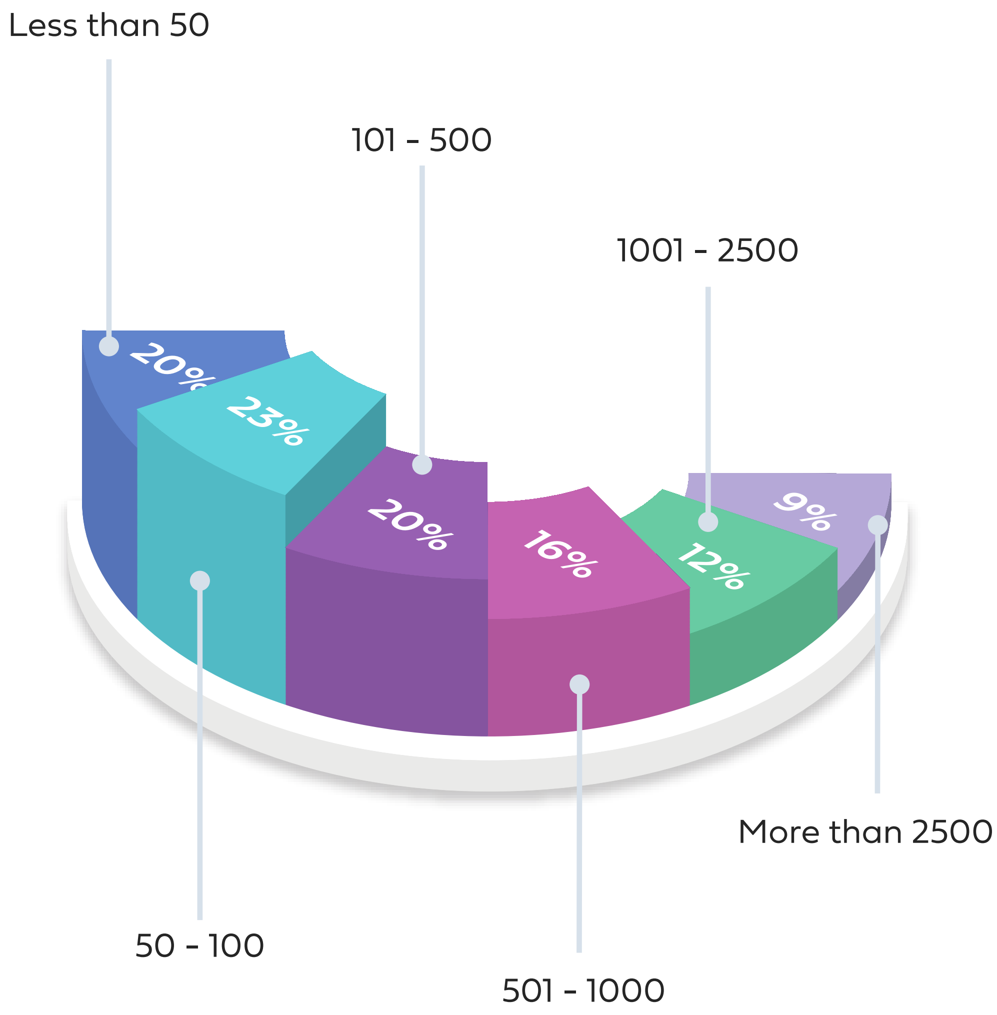


Continued International Office Growth

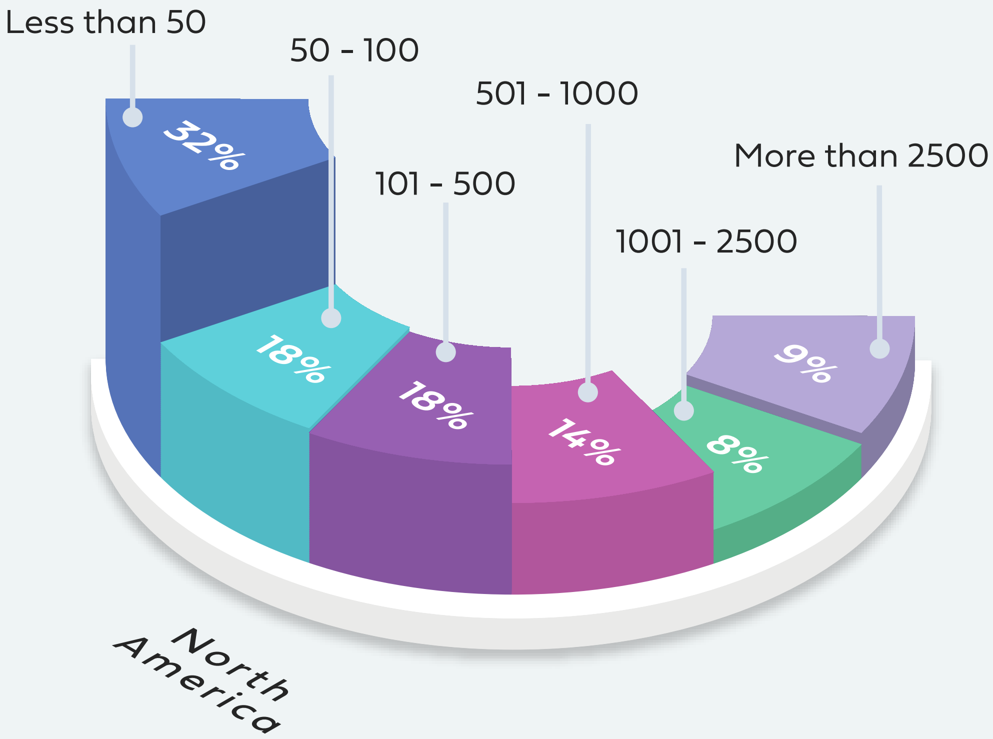
How total branch offices (local, regional, global) do you have connected to your WAN?

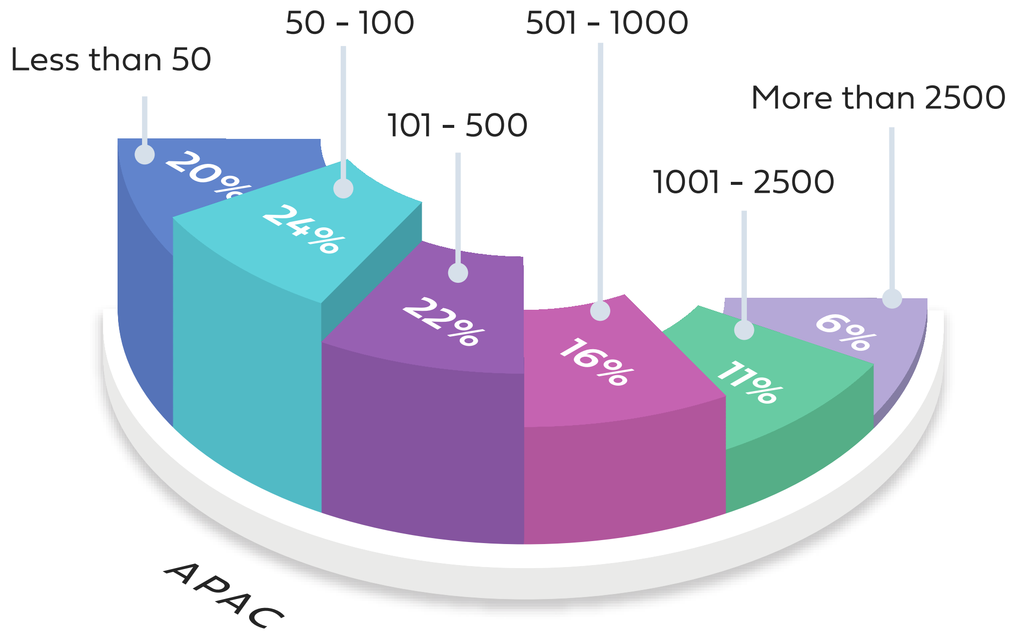
Top Responses	%
Less than 50	20%
50-100	23%
101-500	20%
501-1000	16%
1001-2500	12%
More than 2500	9%
Total Responses	1386

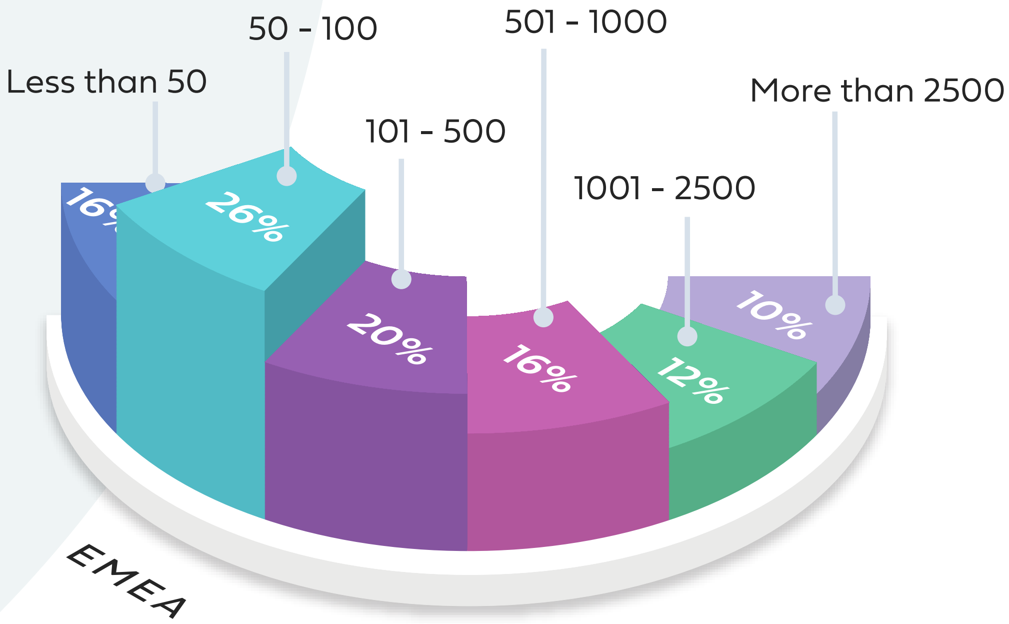
This growth also corresponds with the overall WAN footprint, with those reporting over 500 sites growing substantially from 12% in 2020 to 37% this year.



Geographic Breakdown 2021







Application Adoption

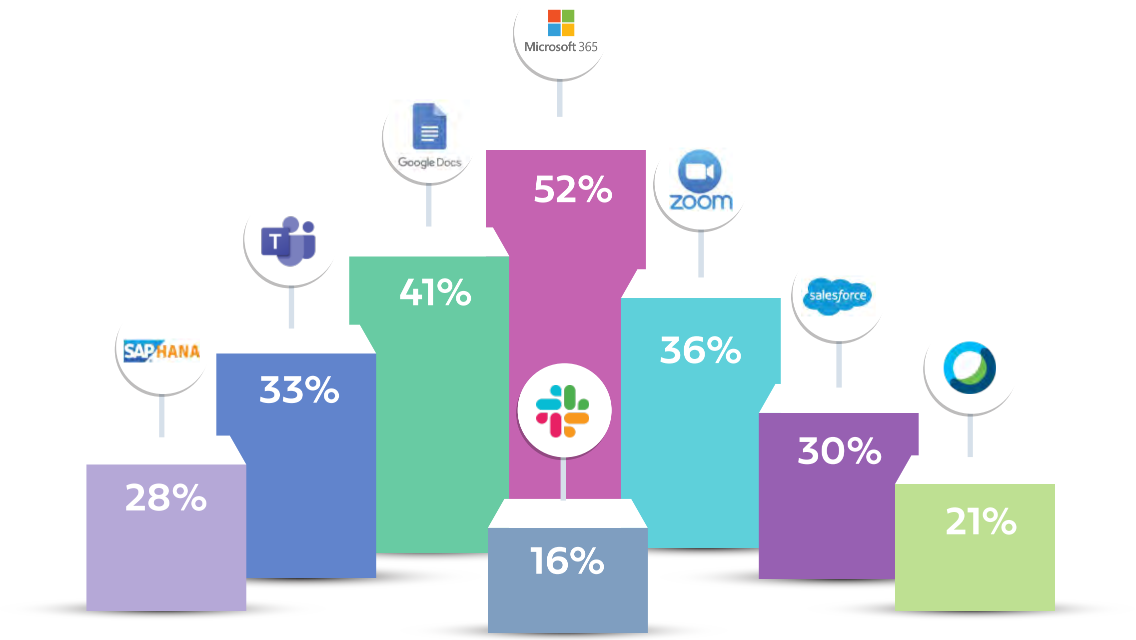
UCaaS in particular experienced especially strong uptake due to the pandemic, and unsurprisingly that Zoom experienced major growth of 44%, from 25% identifying it as critical in 2020, growing to 36% in 2021, at the expense of other collaboration platforms. This trend carried across regions.

Other up-and-coming applications include Microsoft Teams, SAP/HANA, and Slack.

Cloud and SaaS Application Growth

Which Cloud/SaaS applications are most important to your organization?

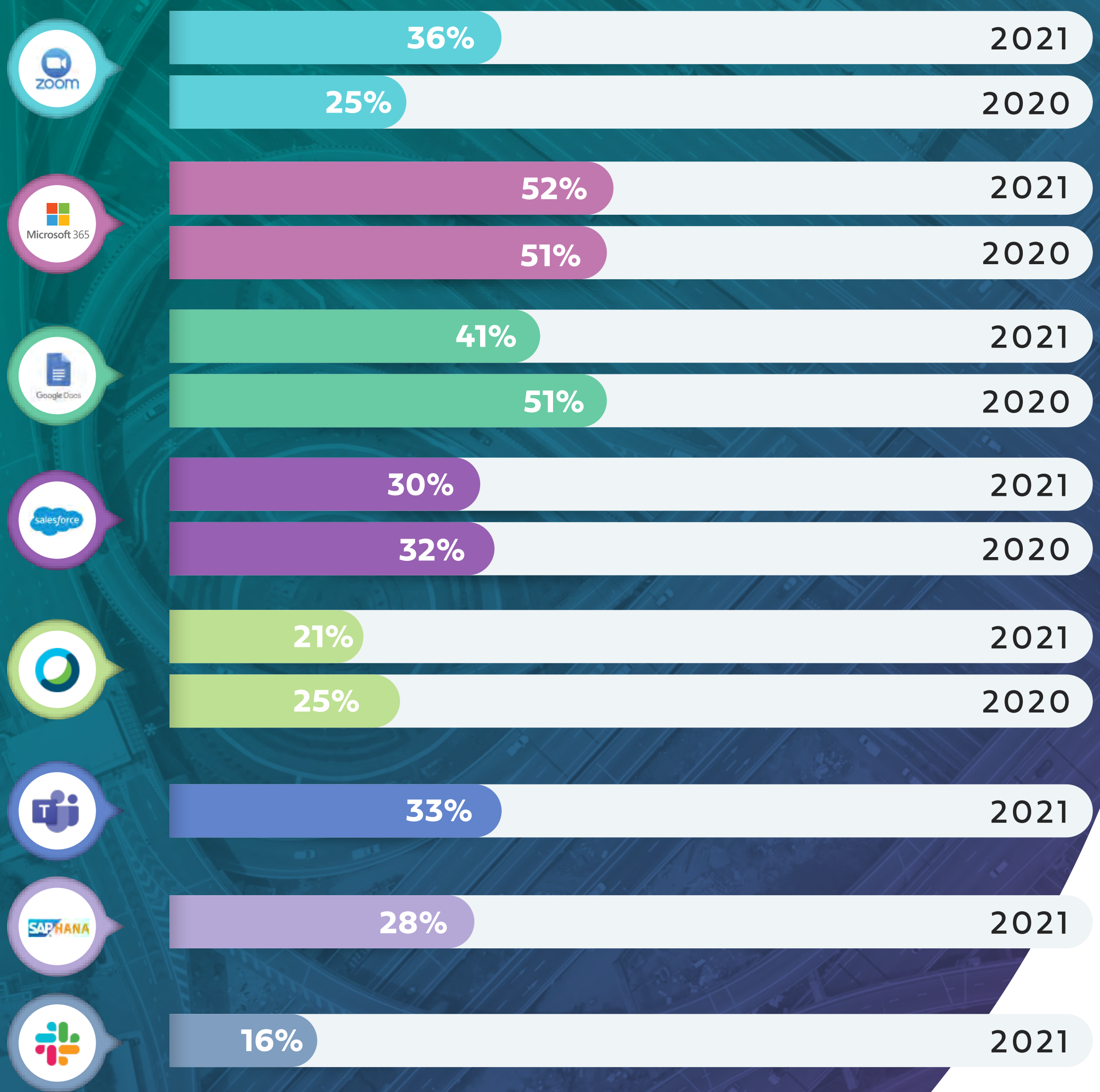
Responses	%
Microsoft 365	52%
Google Docs	41%
Zoom	36%
Teams	33%
Salesforce	30%
SAP/HANA	28%
WebEx	21%
Slack	16%
Total Responses	1354



The survey also included:

Confluence / Jira (12%), Manufacturing (12%), Engineering (10%), Finance (10%), RingCentral (10%), Healthcare (9%), 8x8 (9%), Other UCaaS/CCaaS (7%), Retail (6%), Transportation and Logistics (5%), Other (1%)

Year-to-Year

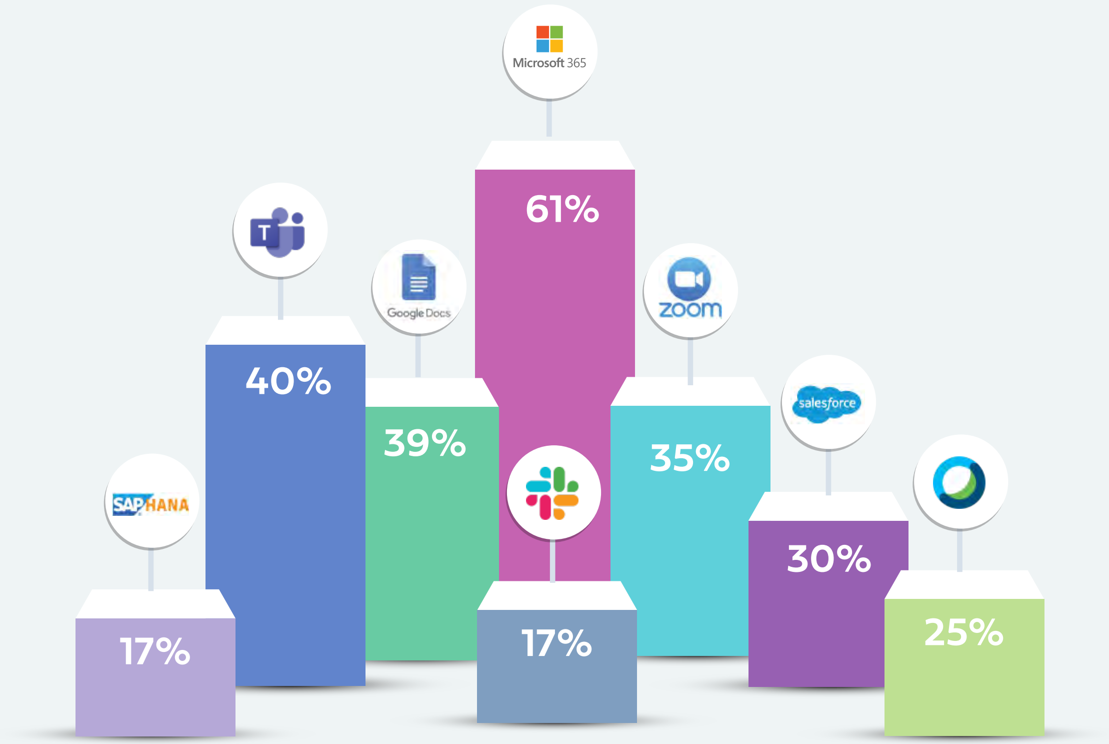


- 2020 experienced major shifts in the types of apps used most widely and expectations as to performance
- Zoom grew from 36% in 2021 from 25% in 2020, at the expense of other collaboration applications
- For foundational applications, Microsoft 365 held on to first place at 52%, up from 51% in 2020, and G-Suite at 41%, an interesting drop from 51% in 2020
- Salesforce also remained strong at 30%, a slight drop from 32% in 2020
- Newer applications included Teams at 33%, SAP/HANA at 28%, and Slack at 16%

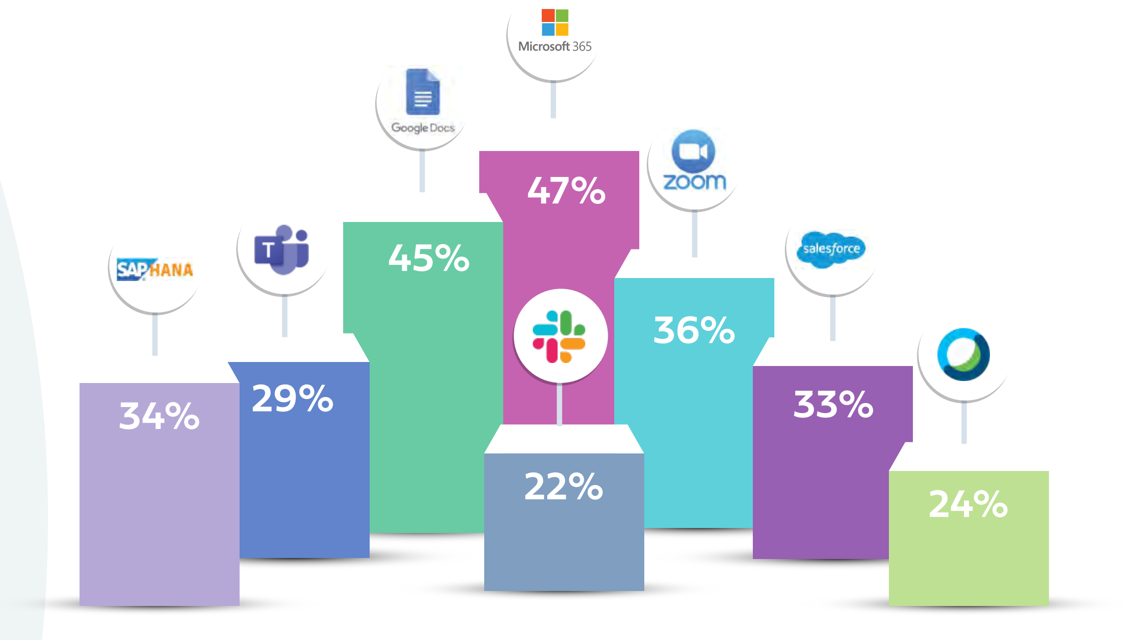
Legend

Zoom · Microsoft 365 · Google Docs · Salesforce · Teams · SAP/HANA · Slack · WebEx

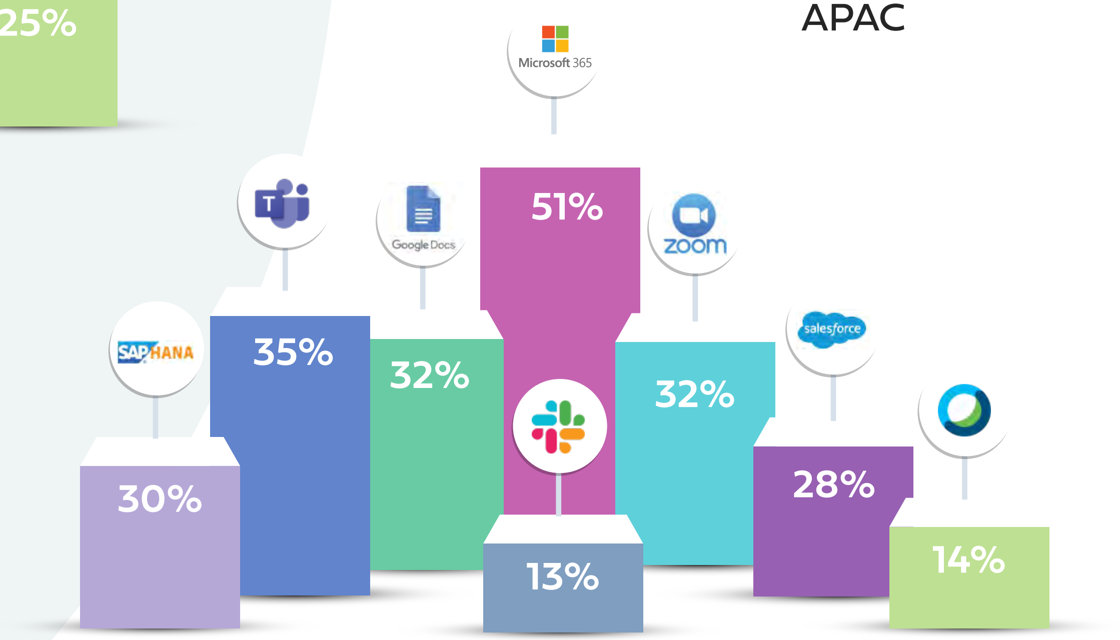
Geographic Breakdown 2021



North America



APAC



EMEA

Legend

- Zoom
- Microsoft 365
- Google Docs
- Salesforce
- Teams
- SAP/HANA
- Slack
- WebEx

Growing Complexity Results in Challenges and Time Sinks

WAN Challenges:

With growth comes complexity, which is still the #1 issue for IT on par with last year at 37%, followed by slow application access (33%) and performance (32%).

One area that stood out was cost, identified by 20% in 2021 vs 16% in 2020, a 25% rise.

IT Time Sinks:

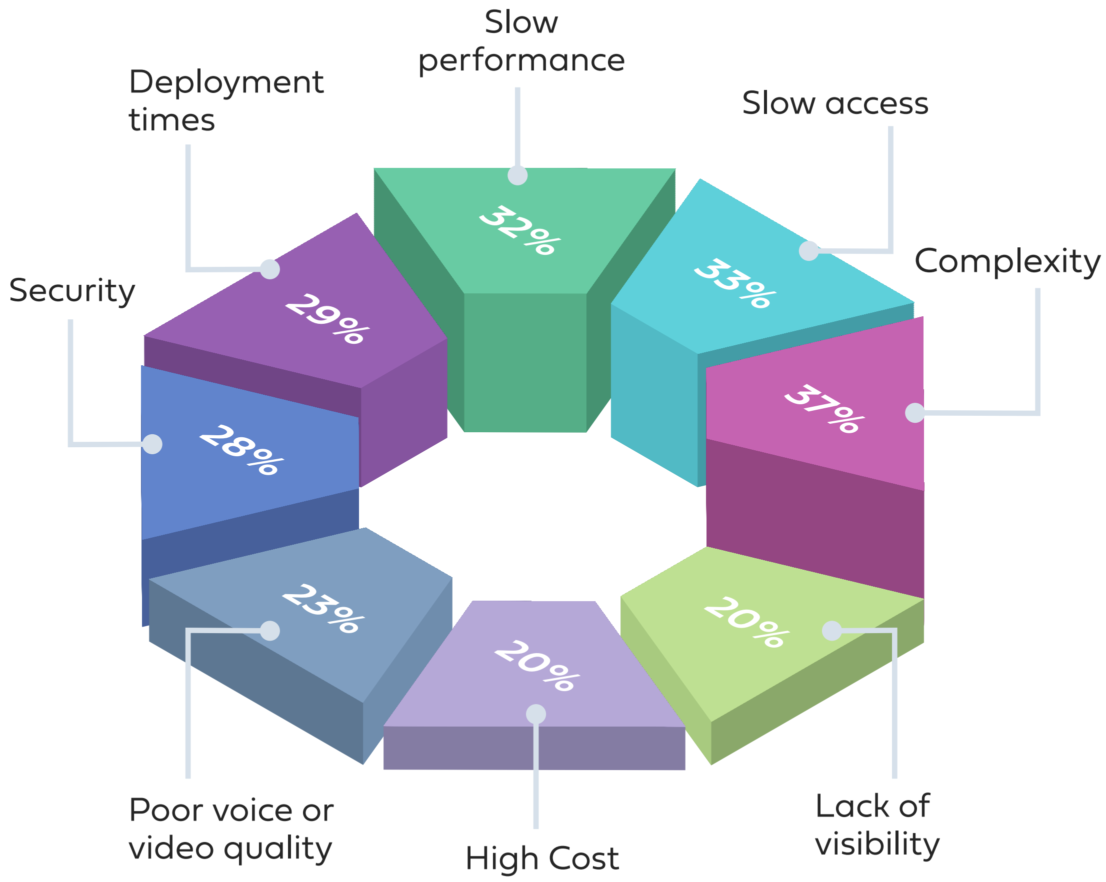
Complexity results in increased resource requirements, spanning slow performance for both the branch and remote workers (44%), security breaches (38%), integration of cloud and SaaS applications (36%), and managing telcos (33%).

1.iii.a

WAN Challenges

What are the biggest challenges you're facing with your WAN?

Responses	%
High Complexity/Difficult to manage or maintain	37%
Slow access to cloud services and SaaS applications	33%
Slow performance of on-premises applications	32%
Long Deployment times to bring up new sites	29%
Lack of adequate security	28%
Poor voice or video quality	23%
High Cost	20%
Lack of visibility	20%
Total Responses	1386



aryaka SOTW 2021 Global State Of The WAN

Year-to-Year

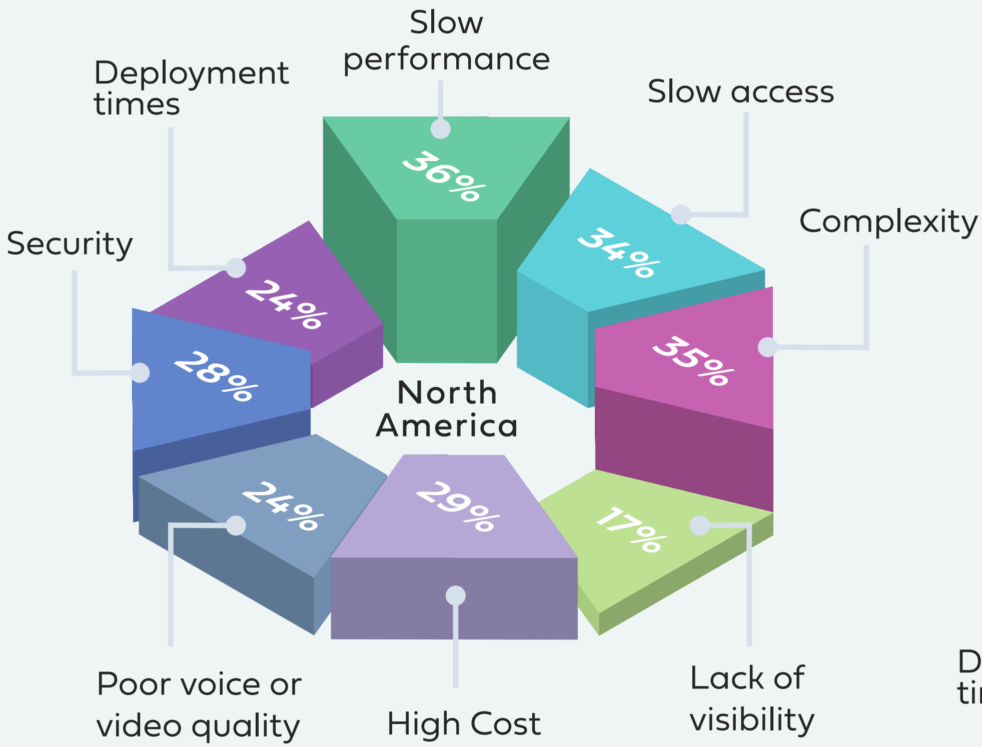
- With this growth come challenges. Concern over costs, which measured 39% in 2019, and had decreased to 16% in 2020, have risen to 20% in 2021. This could be due to increasing WAN complexity as well as scrutiny of cloud costs
- As with previous years, complexity is still #1 at 37%, the same as 2020 and a rise from 34% in 2019
- Slow access to cloud and SaaS is still #2 at 33%, a slight gain from 32% in 2020 and up from 24% in 2019
- Slow on-premises performance is #3 at 32%, same as 2020 but up from 23% in 2019
- Deployment delays are still an issue at 29%, a slight decrease from 30% in 2020 but up significantly from 17% in 2019
- Lastly, security is still an issue at 28%, but a decrease from 32% in 2020 and still up from 19% in 2019

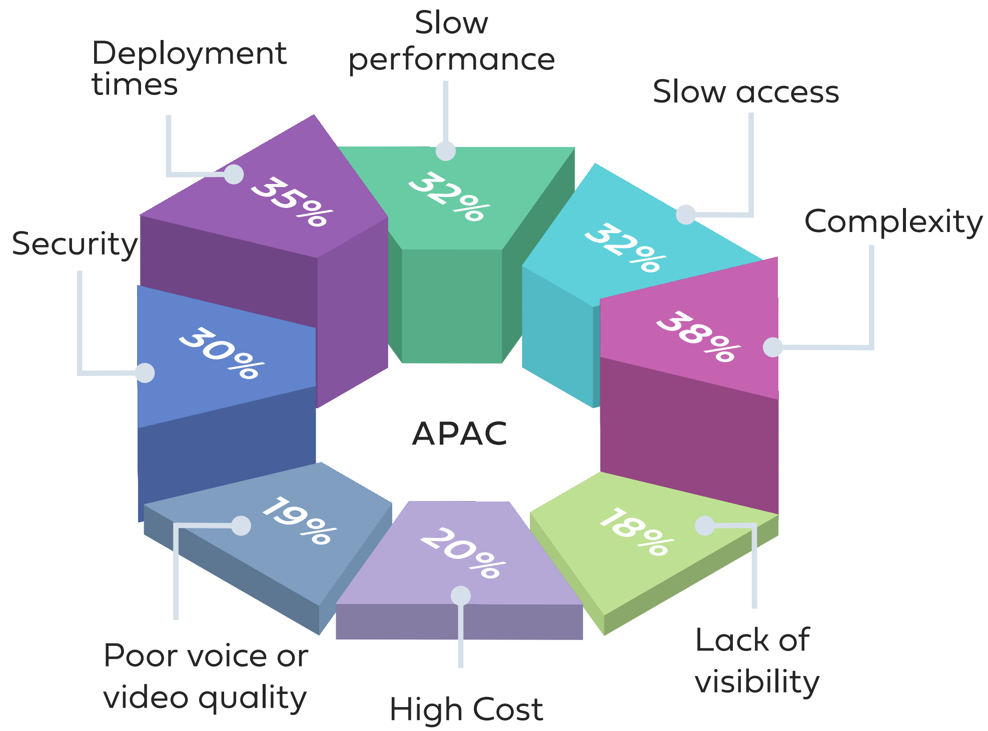
Legend

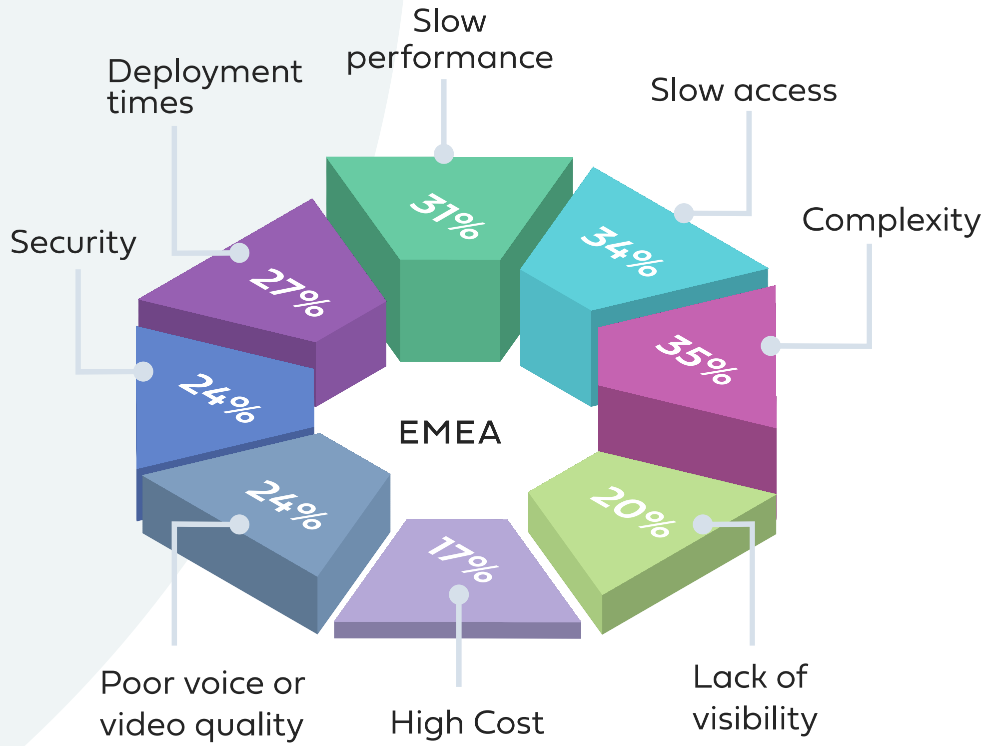
High Costs, Complexity, Slow Access, Slow Performance, Deployment Time, Security, Poor voice or video quality, Lack of visibility

aryaka SOTW 2021 Global State Of The WAN

Geographic Breakdown 2021







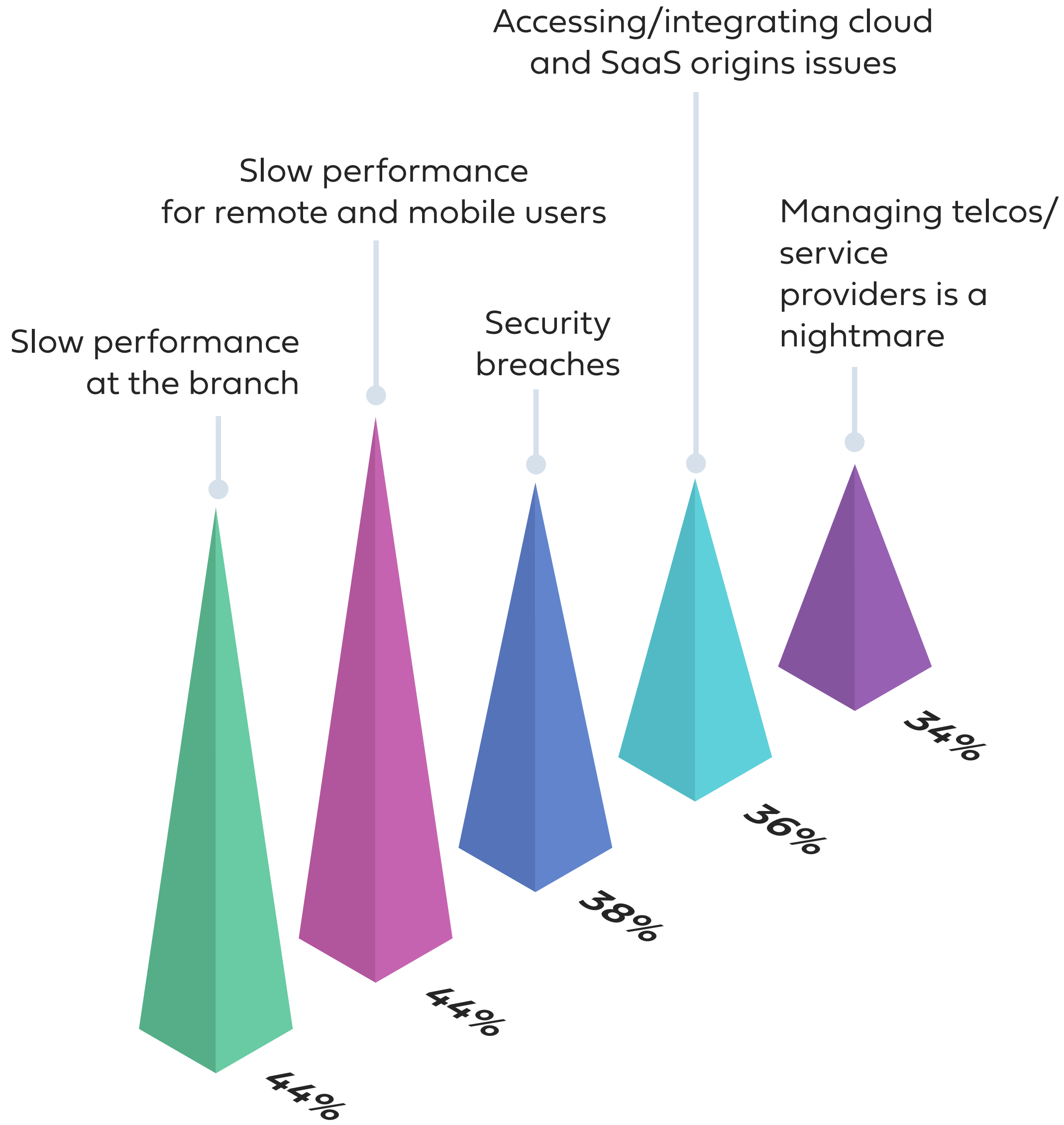
aryaka SOTW 2021 Global State Of The WAN

IT Time Sinks

What are the biggest resource-consuming/time-consuming issues faced by your IT help desk or support teams?

Top Five Responses	%
Slow performance at the branch	44%
Slow performance for remote and mobile users	44%
Security breaches	38%
Accessing/integrating cloud and SaaS origins issues	36%
Managing telcos/service providers is a nightmare	34%

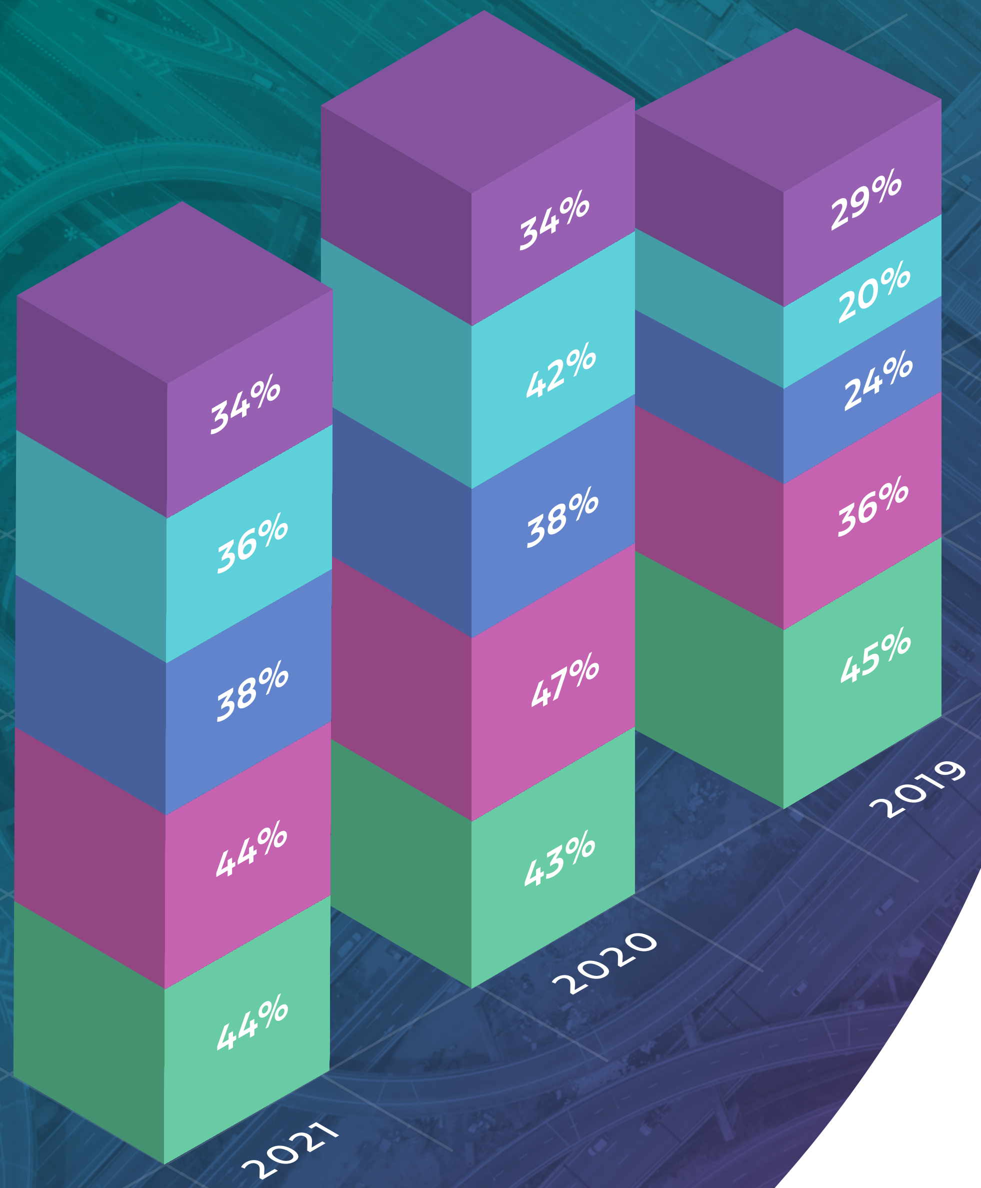
Total Responses	1386



The survey also included:

Issues caused by shadow IT (14%)

Year-to-Year



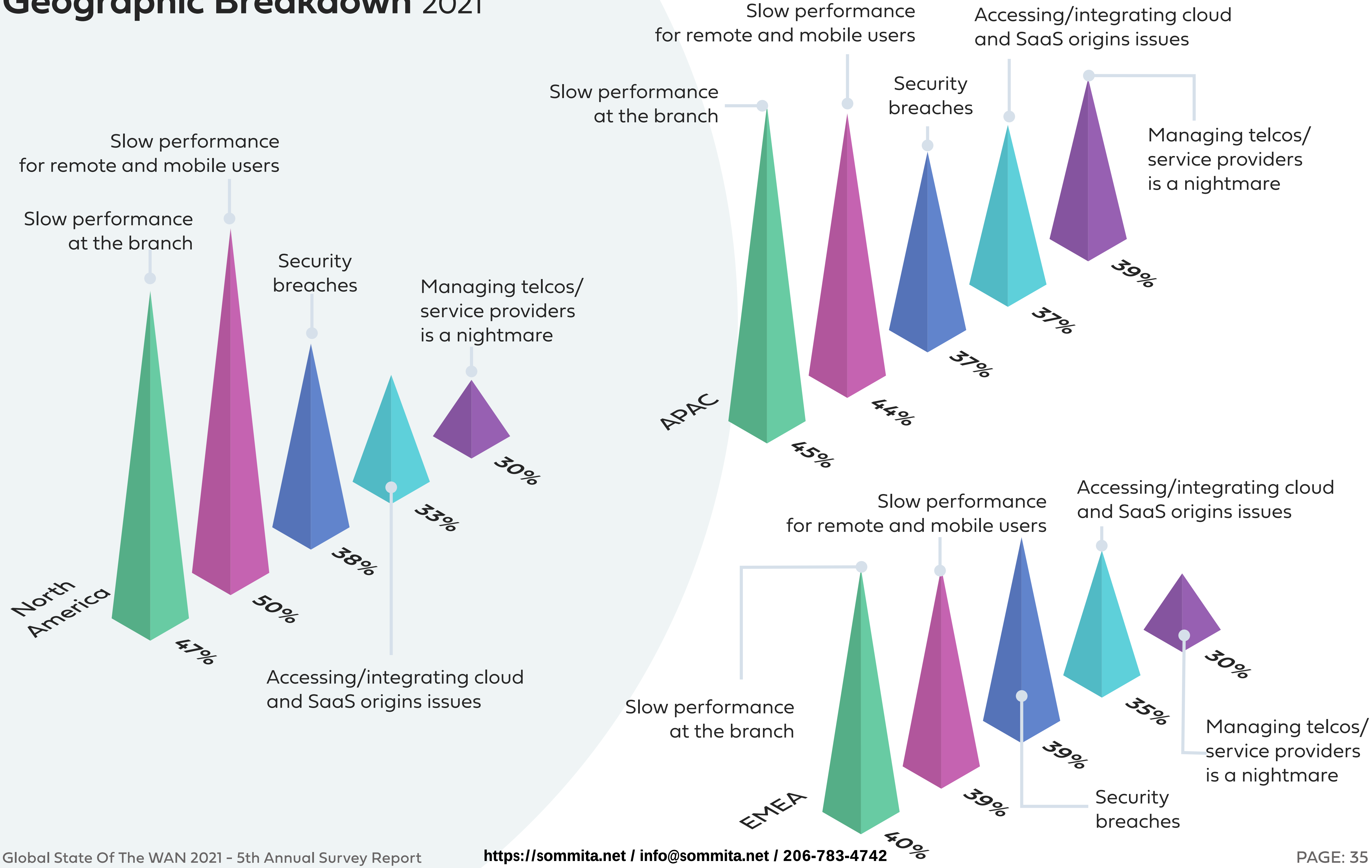
- Now looking at specific IT time sinks, addressing slow performance at the branch remains almost constant at 44% from 43% in 2020 and 45% in 2019
- Rotating to remote workers, 44% identified concerns, a decrease from 47% in 2020 but up from 36% in 2019
- 36% identified cloud and SaaS origin issues, down from 42% in 2020 but still up from 20% in 2019
- Security remained constant at 38% for both 2021 and 2020, up from 24% in 2019
- Rounding out the top 5, managing telcos/service providers is still a nightmare at 34% in 2021 and in 2020, and up from 29% in 2019

Legend

Slow performance at the branch
Slow performance for remote and mobile users
Security breaches
Accessing/integrating cloud and SaaS origins issues
Managing telcos/service providers is a nightmare

aryaka SOTW 2021 Global State Of The WAN

Geographic Breakdown 2021



Pandemic Impact

Challenges were of course compounded by the pandemic, accelerating near-term digital transformation plans while impacting future investment to better address they hybrid workplace. We discuss future plans up next.

aryaka SOTW 2021 Global State Of The WAN

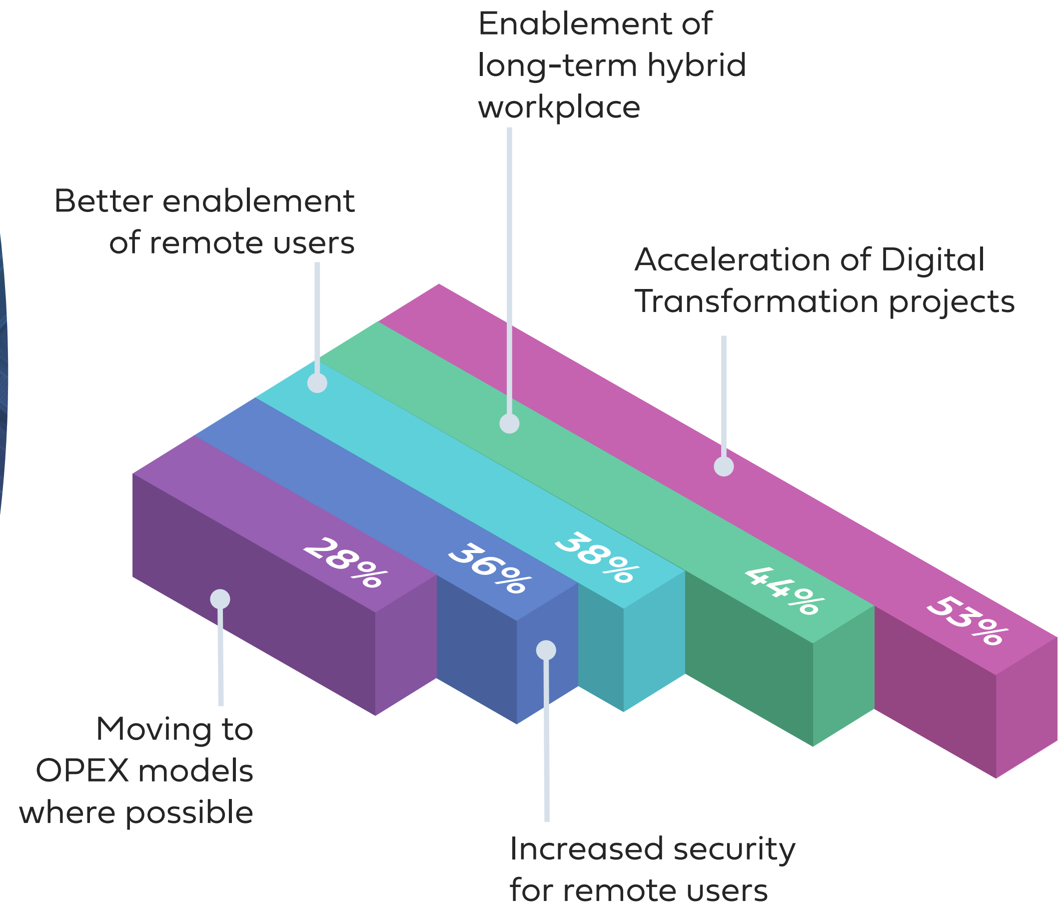
Disruptions

How do you expect 2020's disruptions to impact your organization's networking priorities in 2021?

Top Five Responses	%
Acceleration of Digital Transformation projects	53%
Enablement of long-term hybrid workplace	44%
Better enablement of remote users	38%
Increased security for remote users	36%
Moving to OPEX models where possible	28%
Total Responses	1342

It goes without saying that 2020 threw us all for a loop.

Changing priorities, influencing overall purchasing plans, include support for the hybrid workplace at 44%, continued focus on Digital Transformation at 53%, remote worker enablement at 38%, and remote worker security at 36%.

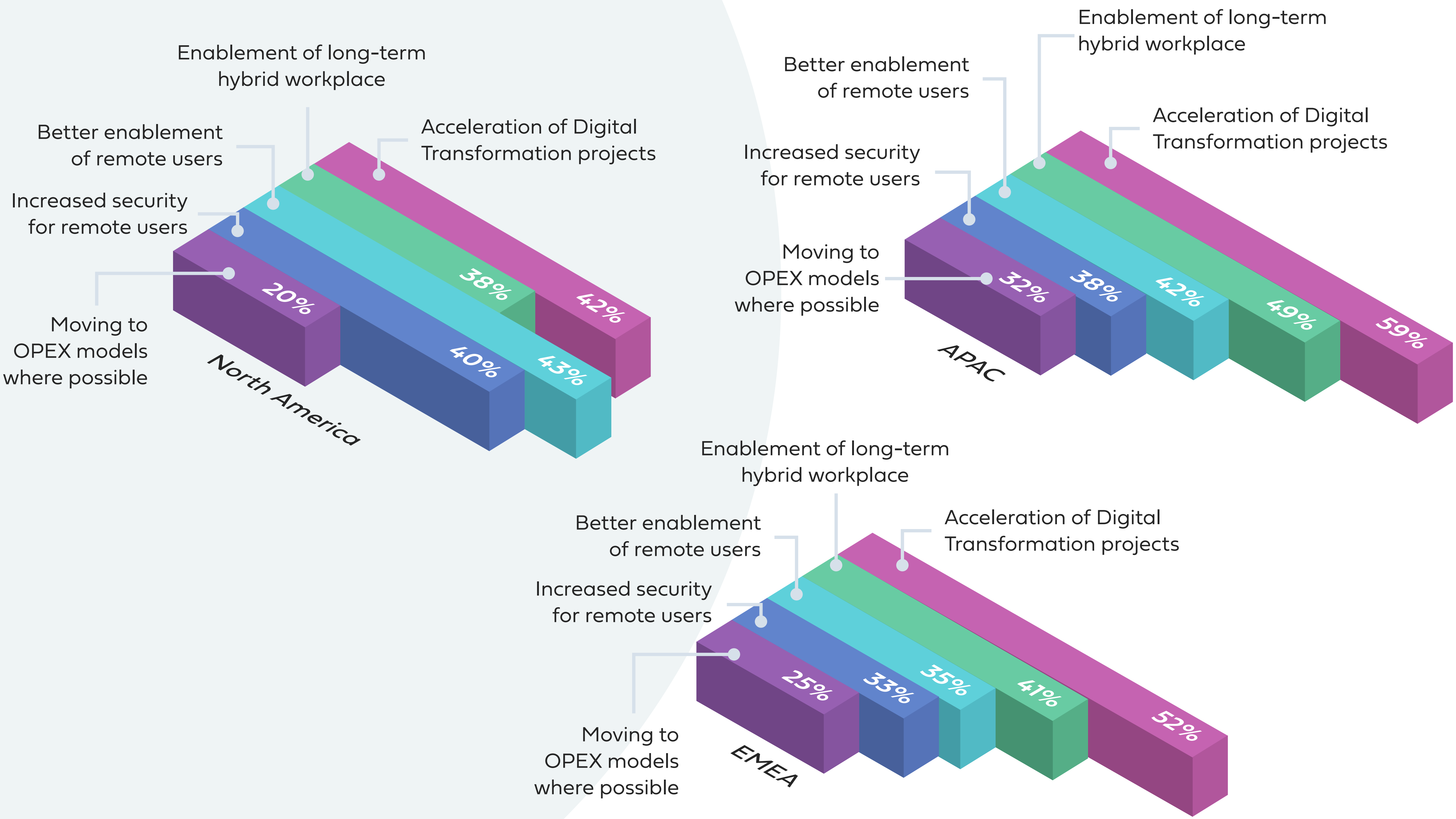


The survey also included:

No changes (9%)

aryaka SOTW 2021 Global State Of The WAN

Geographic Breakdown 2021



2

What They Plan to Do for Change: Investment Planning

- To address the challenges that come with WAN complexity and growth, enterprises identify key areas for investment
- New areas of focus include remote worker support and adoption of a SASE architecture, both interrelated
- These are coupled with major IT and networking initiatives that remain mostly unchanged, including application performance, WAN upgrades and refresh, the cloud, big data, and automation
- However, we noted some dropoff in timing for these initiatives, potentially due to more tactical concerns on the back of the pandemic

Shifting Investment Priorities

Overall IT Planning:

At a broad level, enterprises are looking to invest in SD-WAN (17%), the cloud (29%), security (17%), and a new entry-remote access upgrades and enhancements (22%). The combination of SD-WAN and remote access equates to 39%.

Big data (29%), automation (37%), IoT (24%), and AI/ML (23%) also figure into their plans.

Network Planning Initiatives:

Drilling down to IT, 21% plan a WAN refresh, from 15% in 2019 and 26% in 2020. The same trend applies to the cloud, at 34% vs 42% last year.

SD-WAN is 18%, vs 21% in 2019 and 25% in 2020. However, if adding SASE, a new option at 16%, the total is 34%.

Two areas experiencing strong growth are LTE/5G at 31% vs 9% in 2019 and 24% in 2020, and VPNs at 31% vs 18% in 2019 and 27% in 2020.

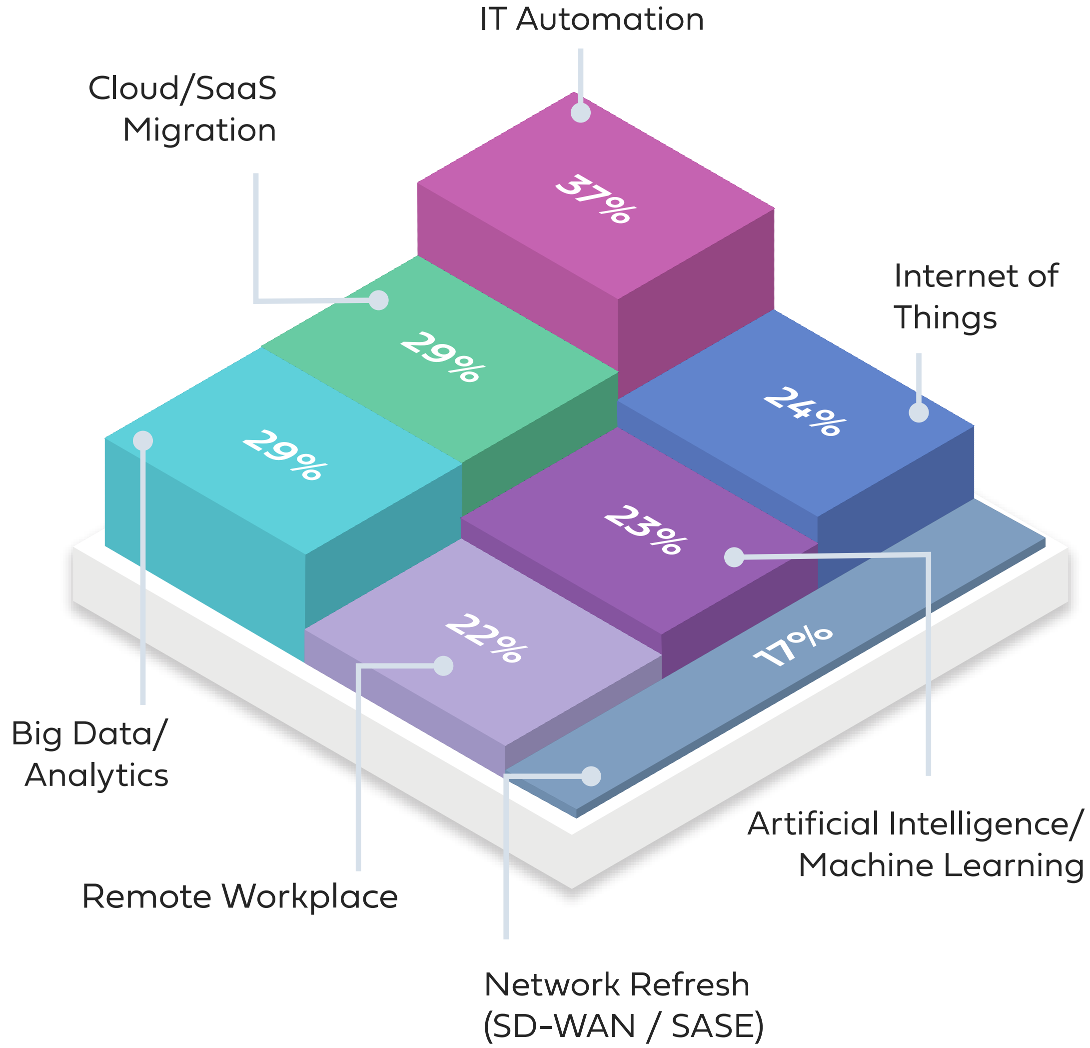
aryaka SOTW 2021 Global State Of The WAN

Overall IT Planning

Which of these broad IT initiatives is your company evaluating for implementation in 2021?

Responses	%
IT Automation	37%
Cloud/SaaS Migration	29%
Big Data/Analytics	29%
Internet of Things	24%
Artificial Intelligence/Machine Learning	23%
Remote Workplace	22%
Network Refresh (SD-WAN / SASE)	17%

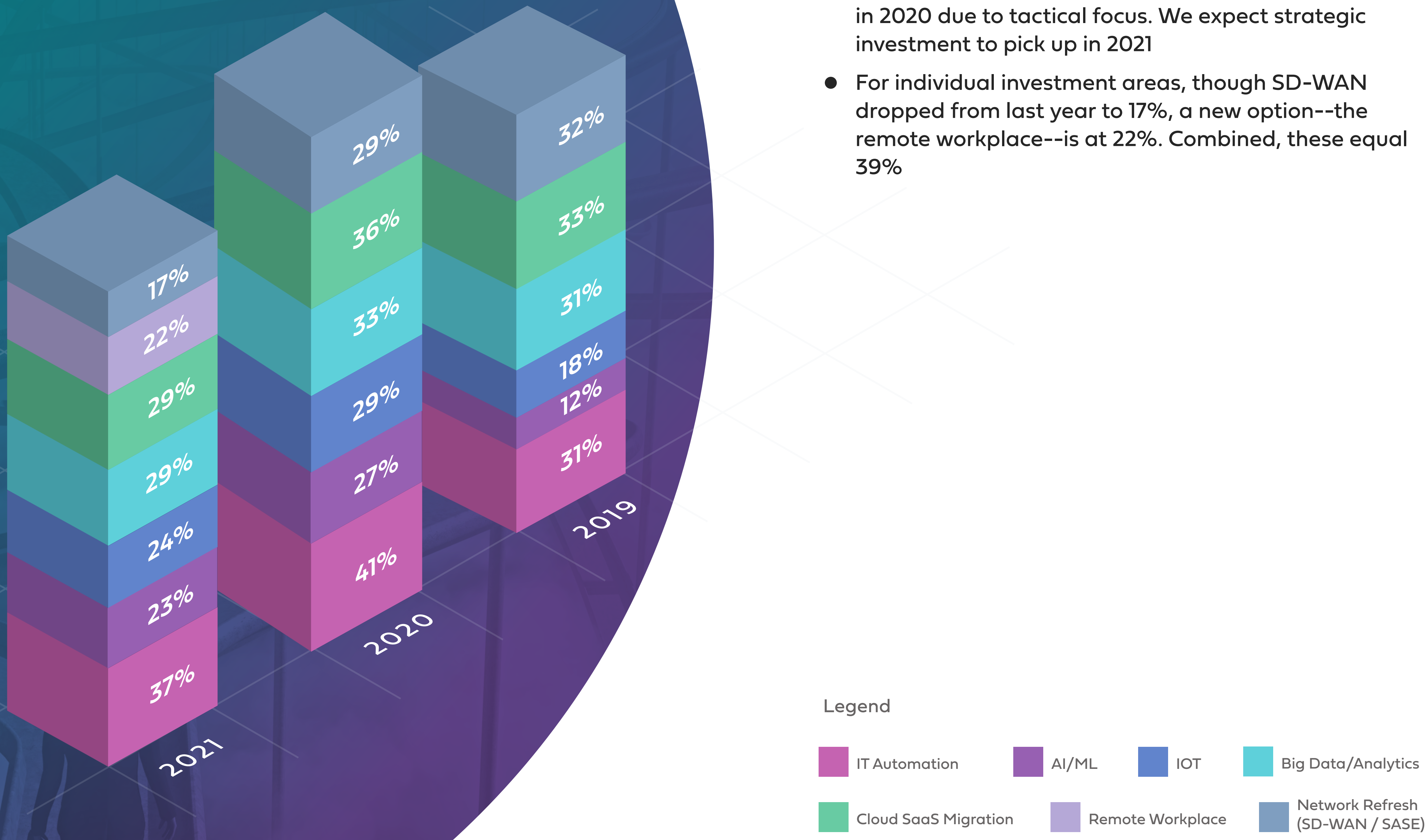
Total Responses	1354



The survey also included:

Advanced Security / SASE (21%), Application/Network Performance Management (22%), Virtualization (22%), Mobility (21%), Blockchain (20%), Datacenter Consolidation (17%), DevOps (18%), Unified Communications/UCaaS (12%)

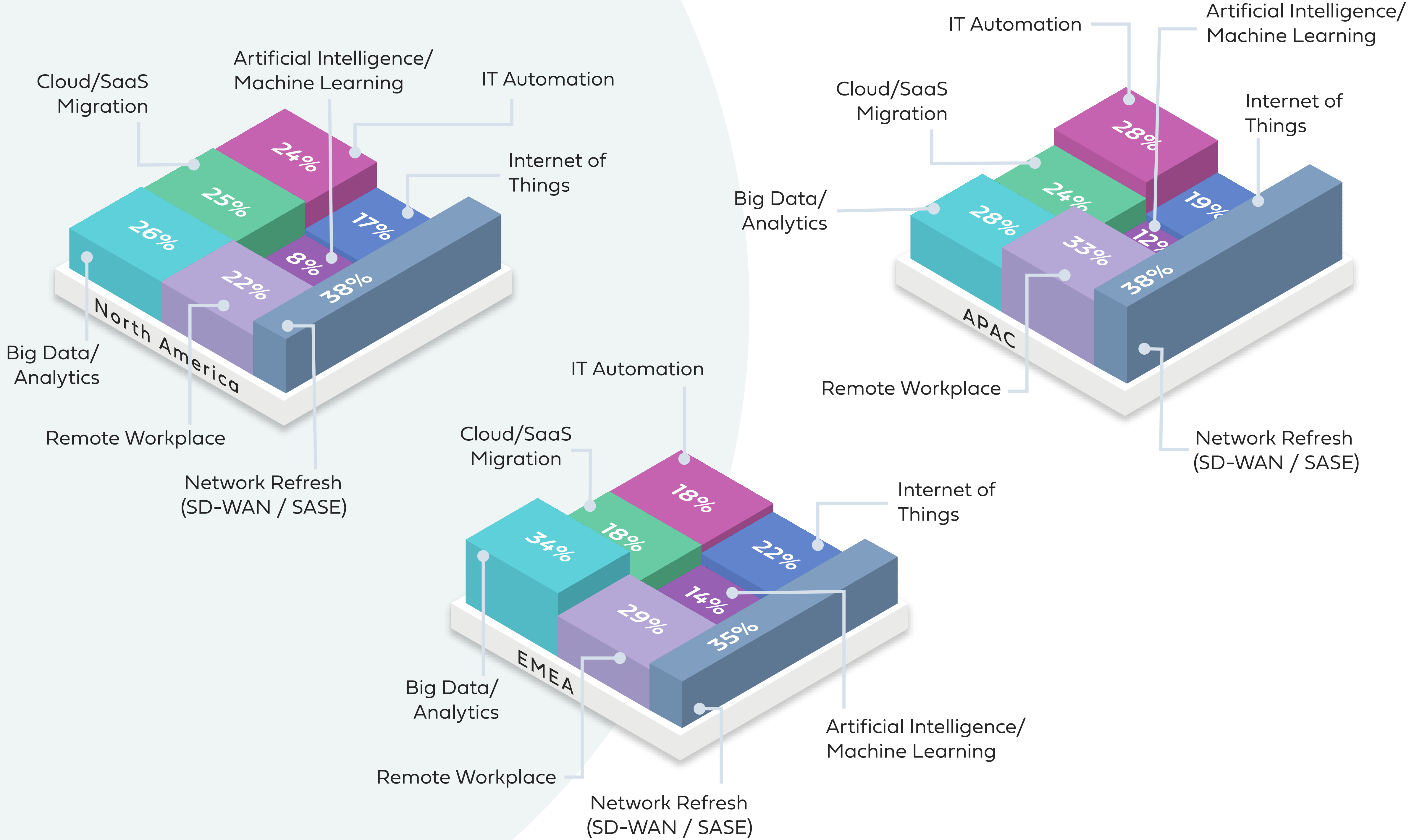
Year-to-Year



- To address these challenges, what plans do IT have? At a high level, they continue to invest, with some slowdowns in 2020 due to tactical focus. We expect strategic investment to pick up in 2021
- For individual investment areas, though SD-WAN dropped from last year to 17%, a new option--the remote workplace--is at 22%. Combined, these equal 39%

aryaka SOTW 2021 Global State Of The WAN

Geographic Breakdown 2021

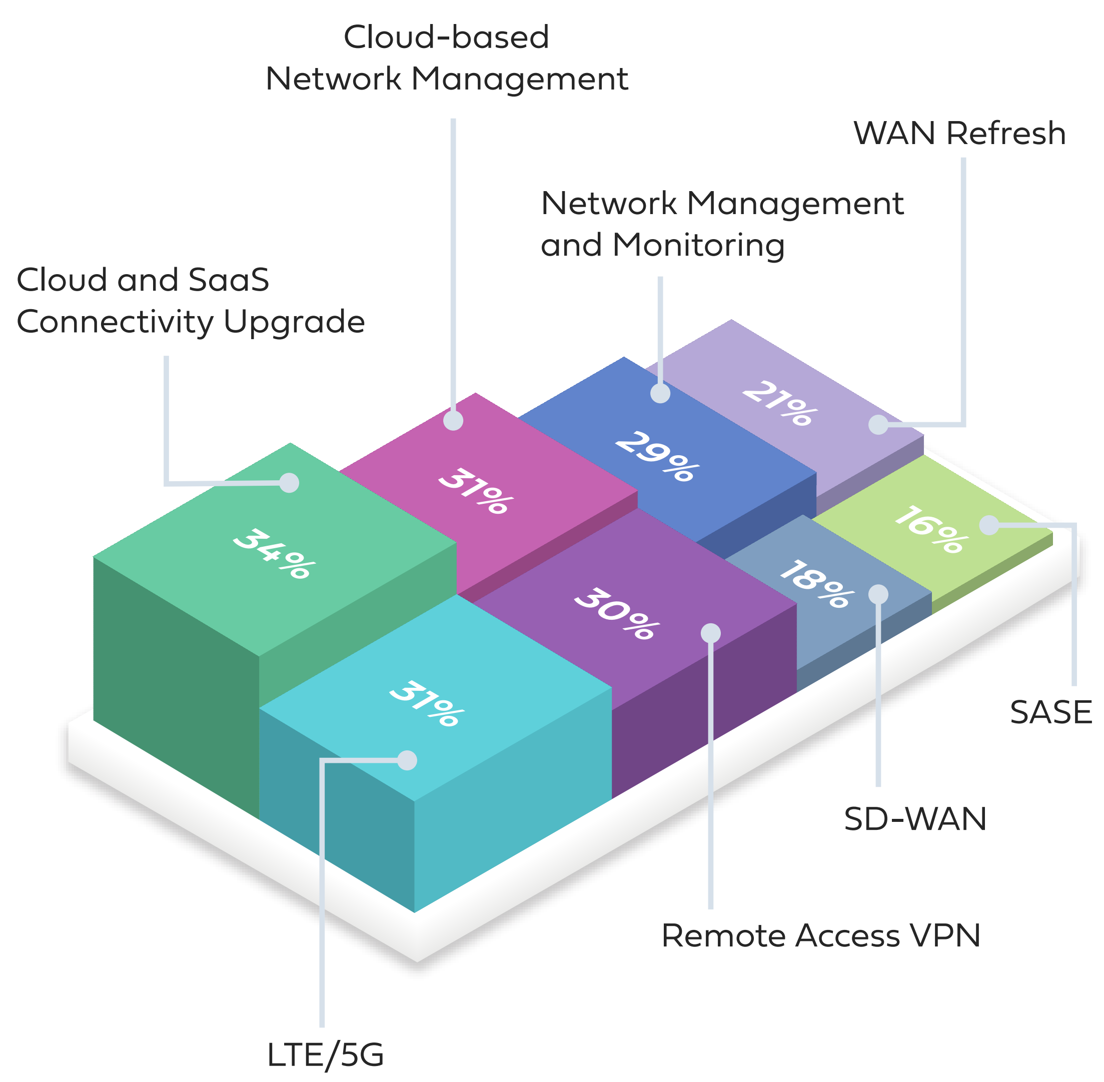


Network Planning Initiatives

Which of these networking initiatives will your company implement in 2021?

Top Responses	%
Cloud and SaaS Connectivity Upgrade	34%
LTE/5G	31%
Remote Access VPN	30%
Cloud-based Network Management	31%
Network Management and Monitoring	29%
WAN Refresh	21%
SD-WAN	18%
SASE	16%

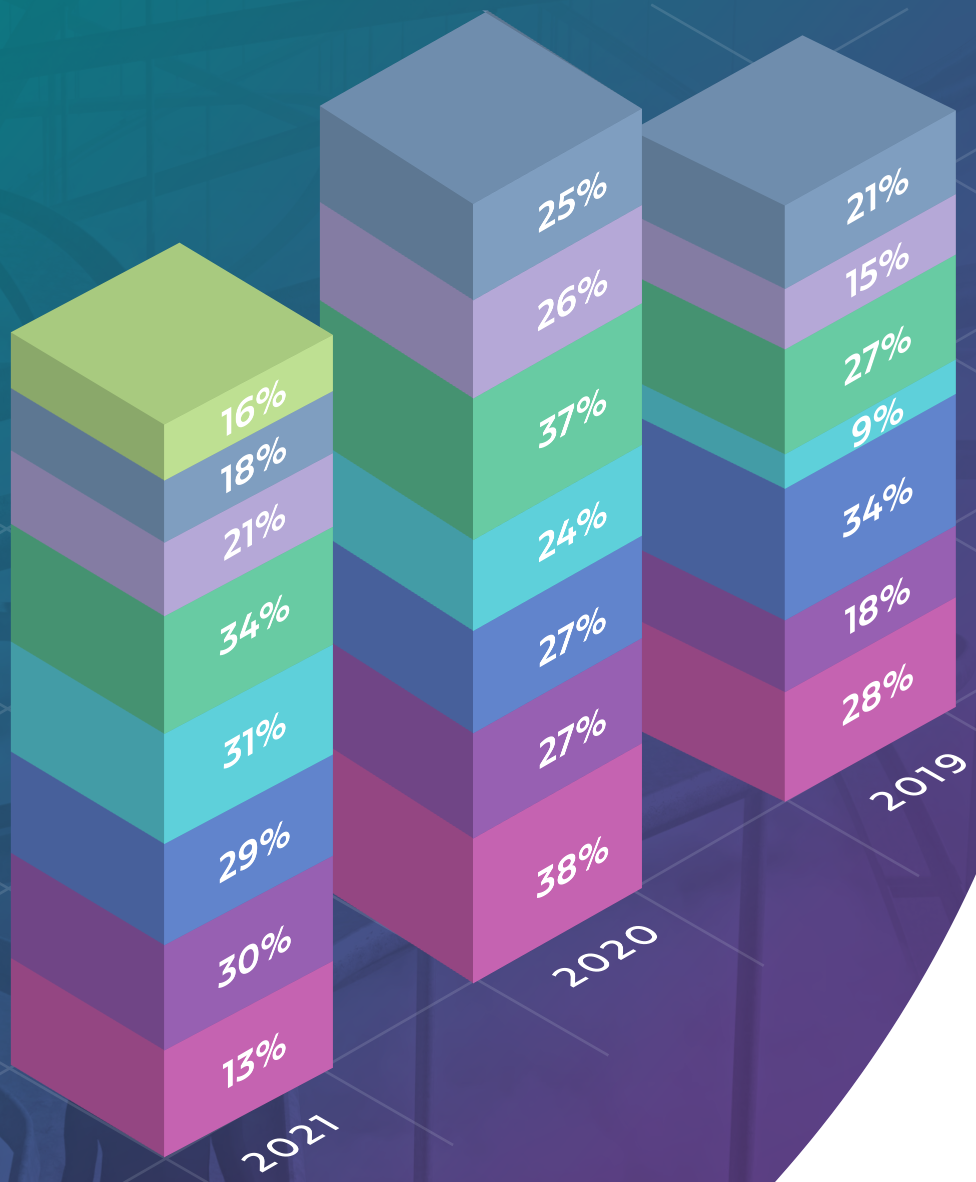
Total Responses	1354



The survey also included:

Network Automation (29%), WAN Optimization (29%), IoT Infrastructure (28%)

Year-to-Year

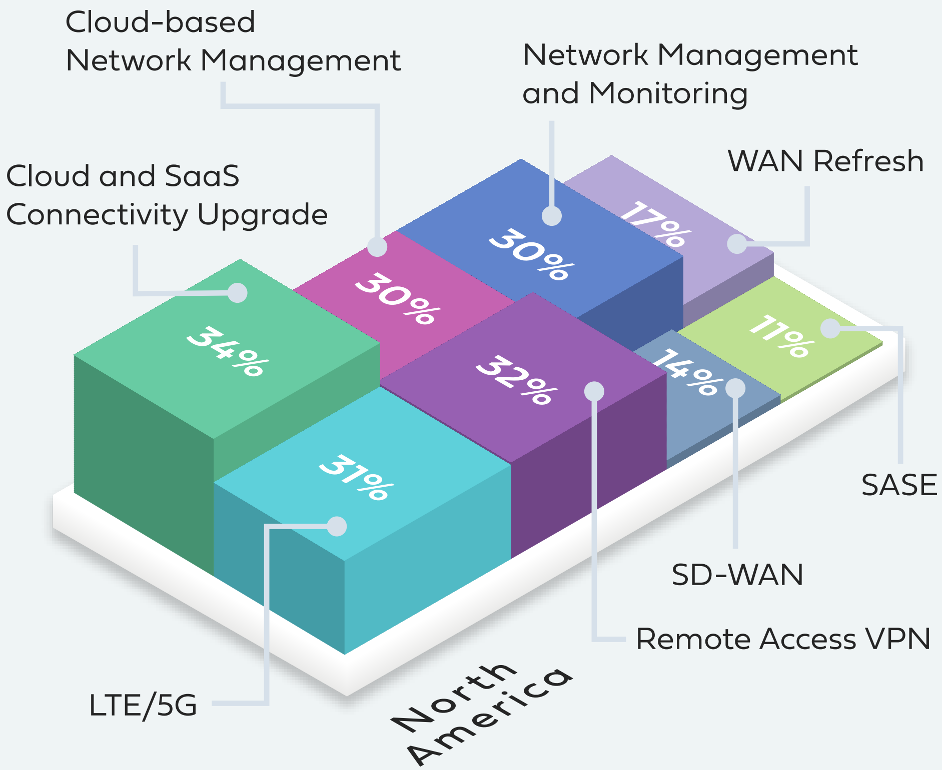


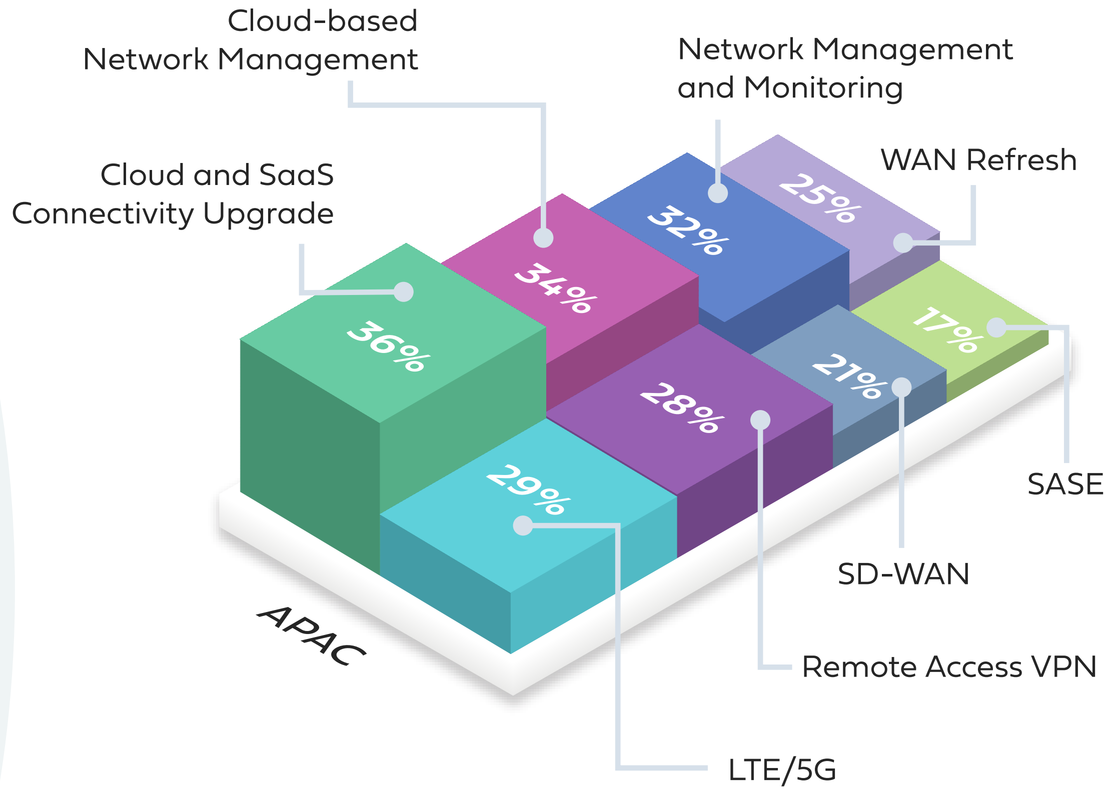
- Adding more color, and drilling down to networking initiatives, 21% identified WAN refresh as a priority this year, down from 26% in 2020 but up from 15% in 2019
- The combination of SD-WAN and SASE is 34%, demonstrating strong interest in networking and security convergence
- Not surprisingly, VPN investment also grew to 30%

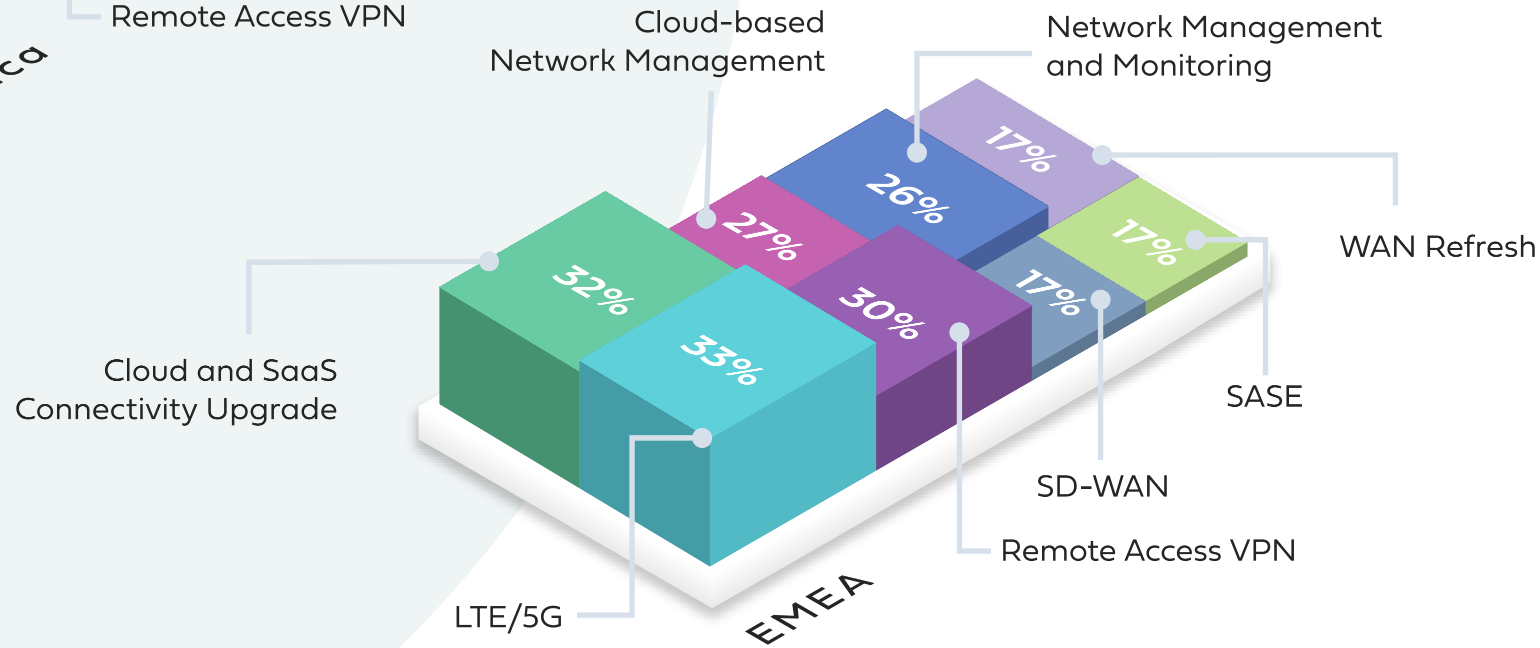
Legend

Cloud-based Network Management
Remote Access VPN
Network Management and Monitoring
LTE/5G
Cloud and SaaS Connectivity Upgrade
WAN Refresh
SD-WAN
SASE

Geographic Breakdown 2021







The Hybrid Workplace

Planning for the hybrid workplace must take into account expectations for continued work-from-home and the requirement of seamless reallocation of resources between premises.

These changes will influence investment for years to come, and any solution deployed must fuse on-premises and remote worker orchestration, policy management, and visibility. Silos won't suffice!

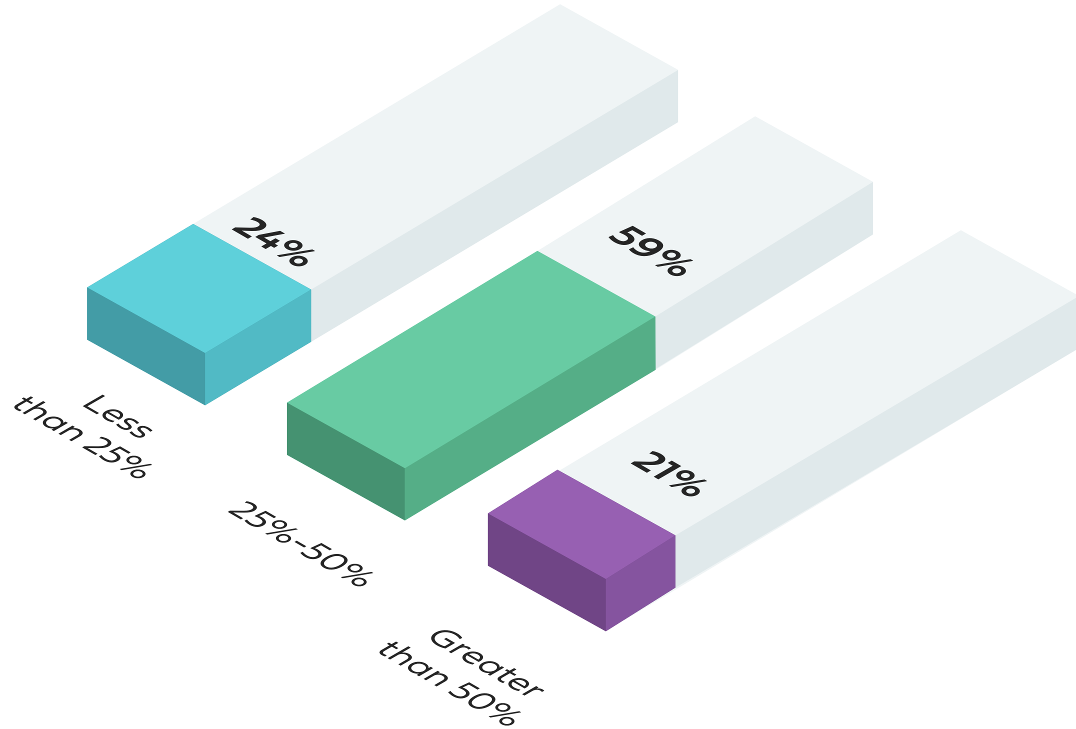
Percentage Workers Remaining Remote

At the end of 2021, what % of your employees do you expect to be working remotely?

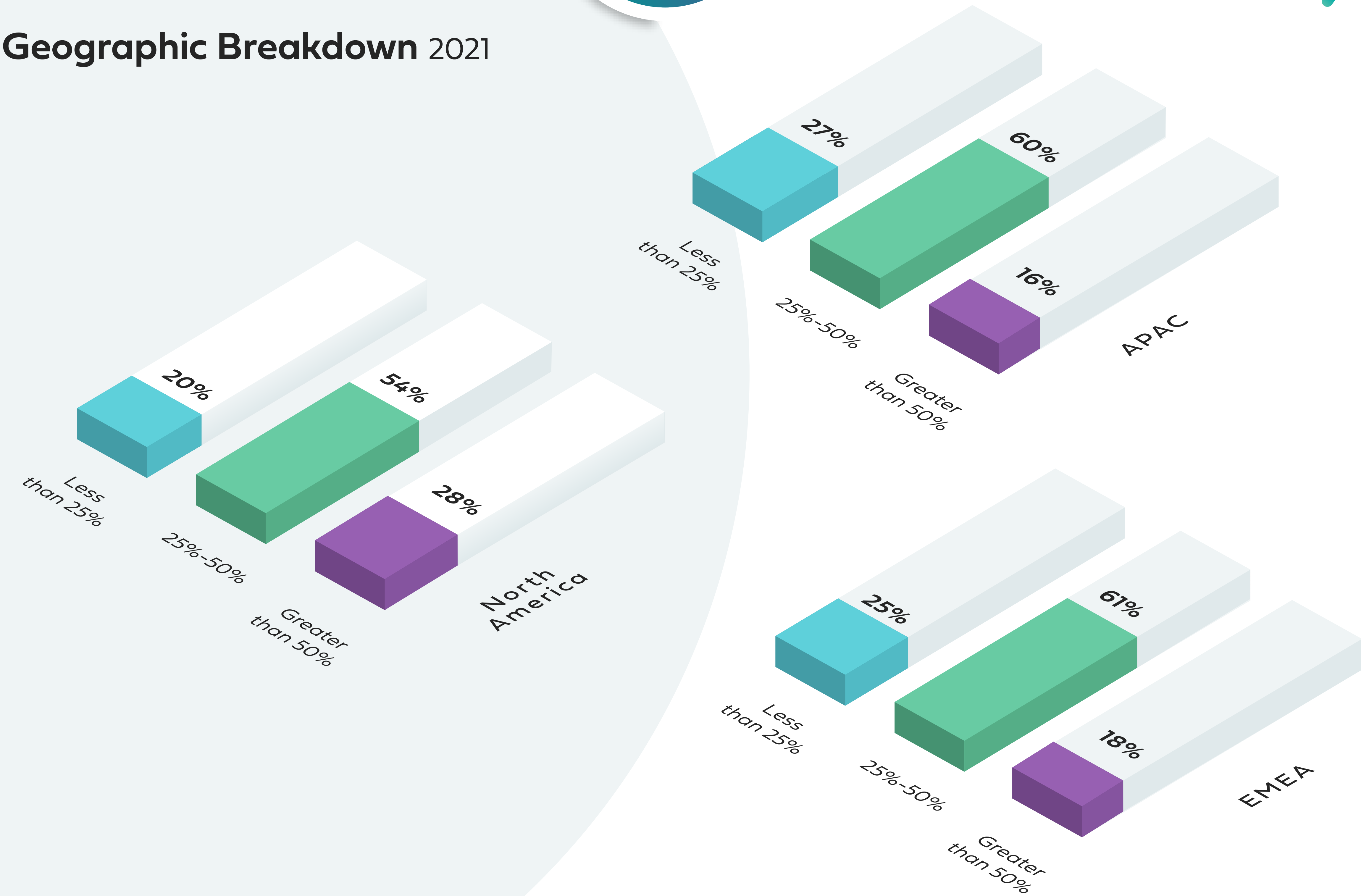
Top Responses	%
Less than 25%	24%
25%-50%	59%
Greater than 50%	21%
Total Responses	1336

Continuing on this line of thought, 59% expect 25-50% of their employees to remain remote post-pandemic, while only 24% expect less than 25% and 21% greater than 50%.

Nevertheless, this is a massive shift in the remote workplace and will influence investment for years to come.



Geographic Breakdown 2021



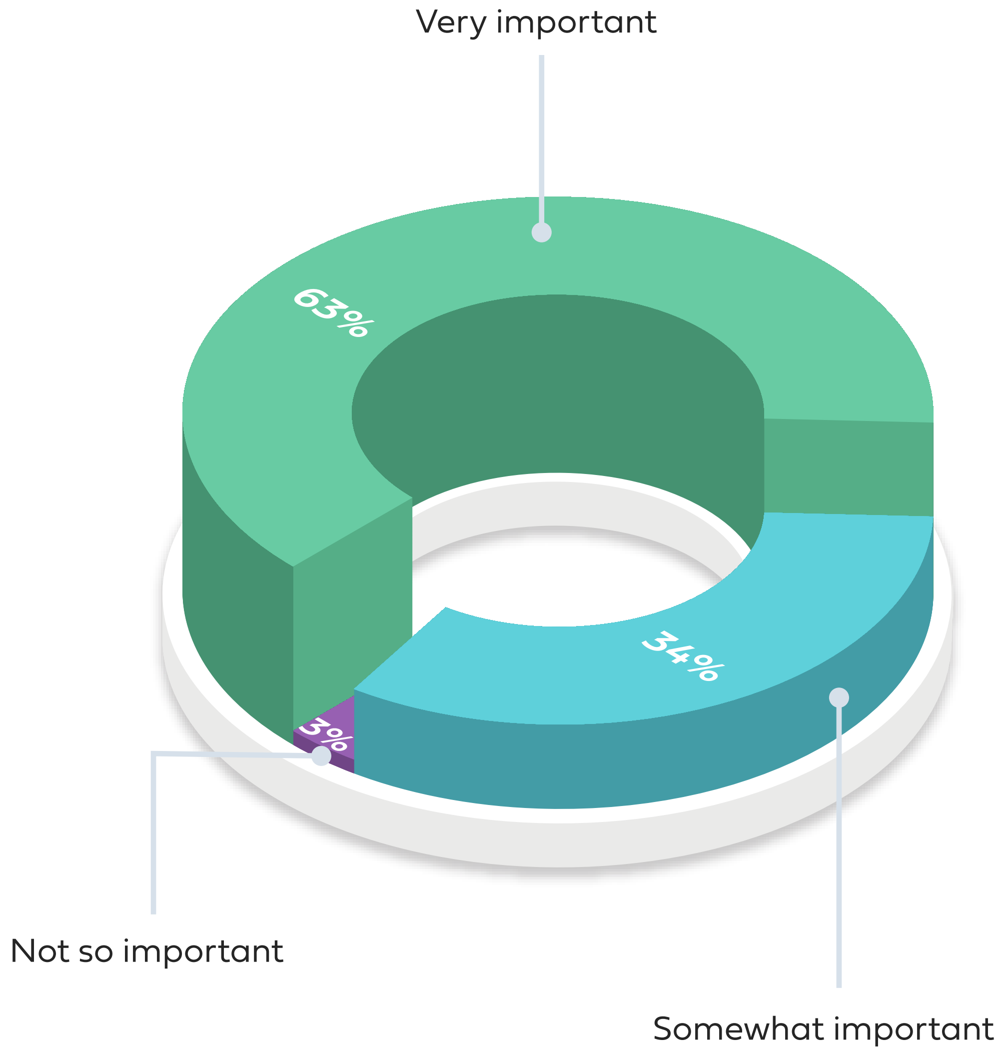
2.ii.b

Bandwidth Reallocation

In light of Work from Home initiatives, how important is it to be able to dynamically reallocate bandwidth and connectivty from on-prem to the home?

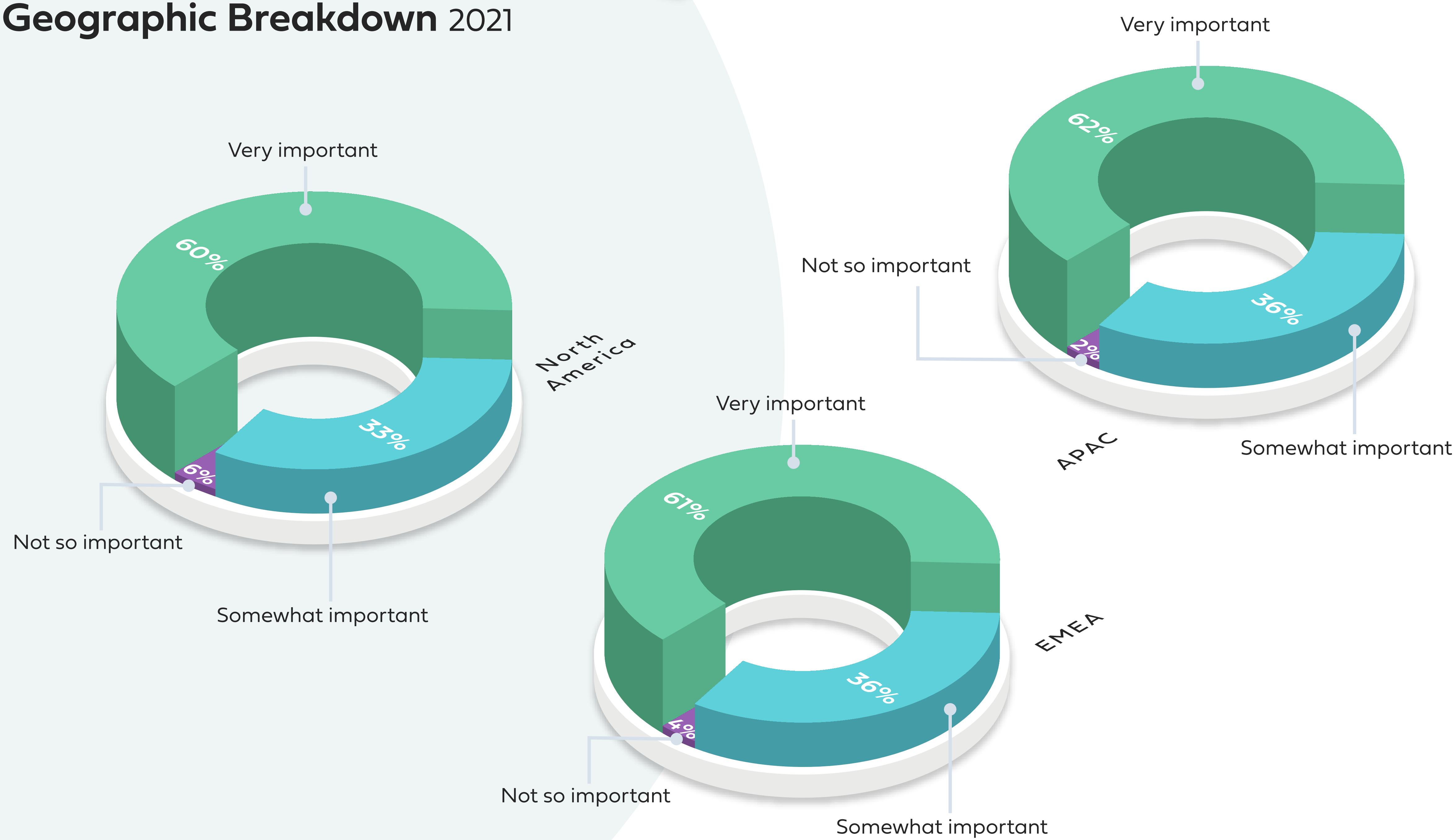
Top Responses	%
Very important	63%
Somewhat important	34%
Not so important	3%
Total Responses	1328

The flexibility mandated by the hybrid workplace is also reflected in 63% stating that the ability to quickly reallocate resources is critical



https://sommita.net / info@sommita.net / 206-783-4742

Geographic Breakdown 2021



Enter SASE

SASE, standing for 'Secure Access Service Edge,' was defined by Gartner in 2019 as a cloud-delivered architecture for networking and security.

It has taken the industry by storm, but has also created confusion due to vendor marketing. Our view is that SD-WAN is a critical component. Enterprises need a choice of edge and cloud security, and they should be able to leverage their incumbent security vendors.

SASE Plans

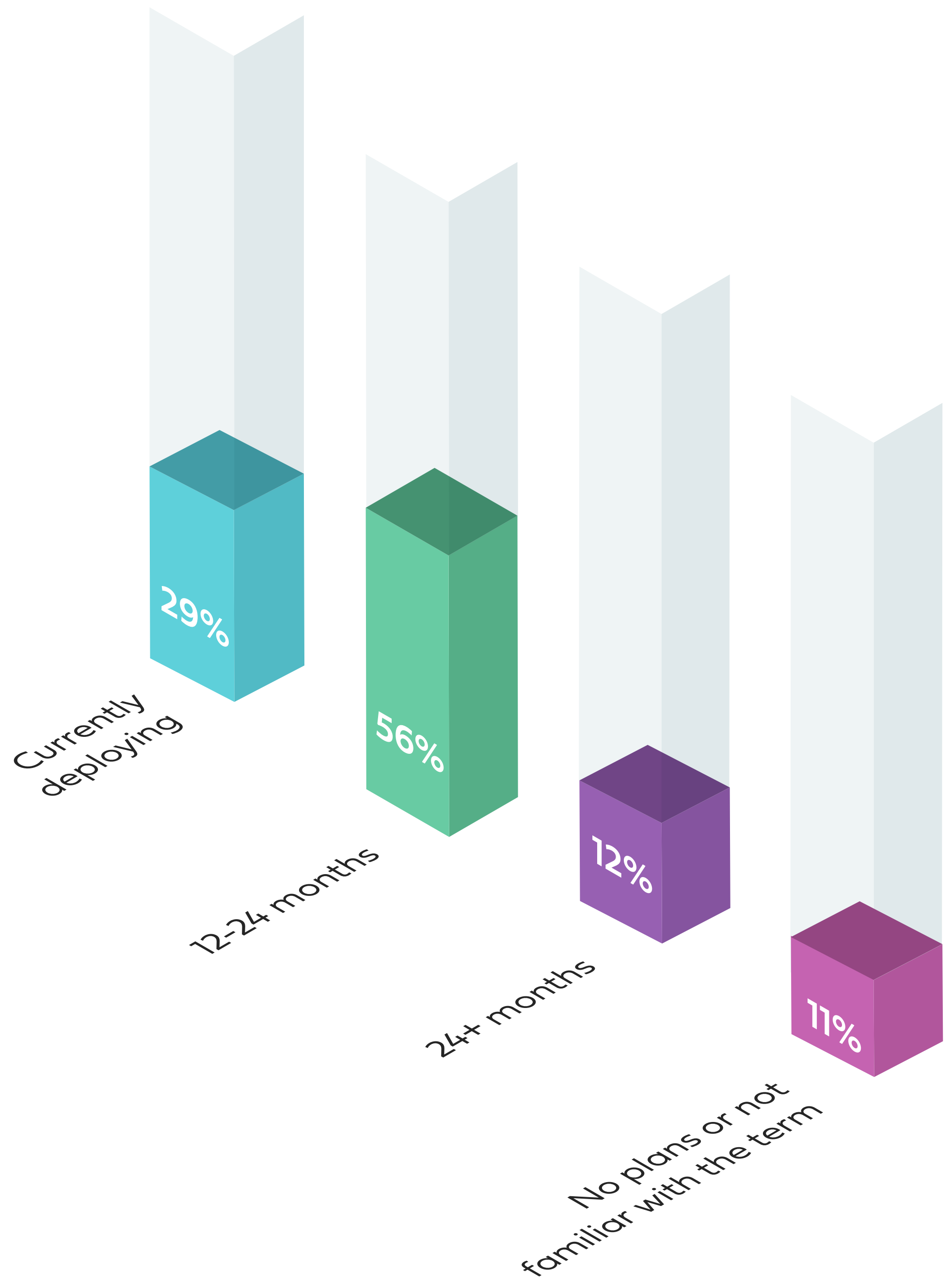
Where are you in your evaluation of a SASE architecture?

Top Responses	%
Currently deploying	29%
12-24 months	56%
24+ months	12%
No plans or not familiar with the term	11%
Total Responses	1339

SASE, and the fusion of SD-WAN with security, has been top-of-mind for many in IT. The WAN decision increasingly integrates security planning.

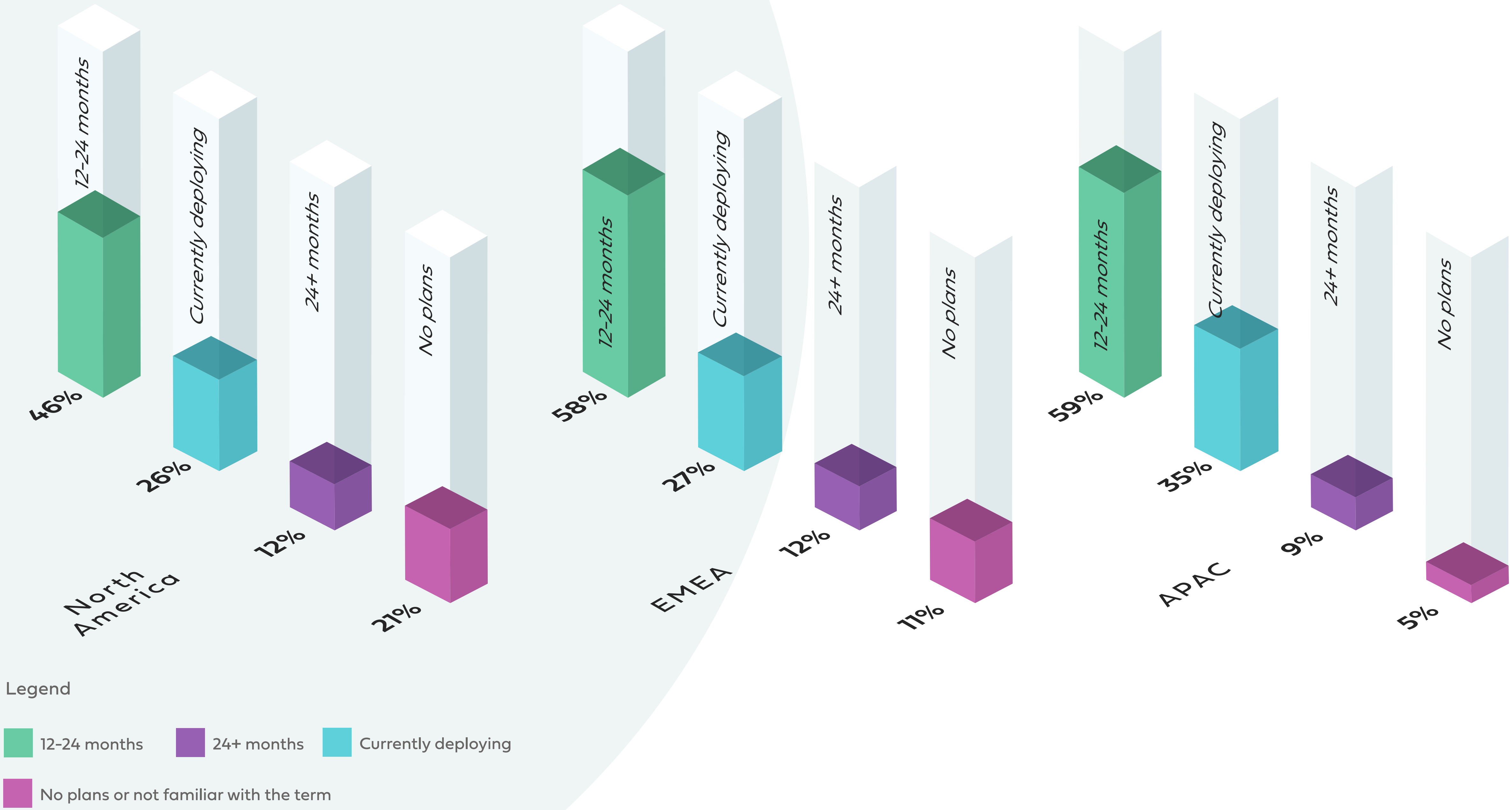
In a very short time, SASE has become a well-known acronym, and 29% state they are currently deploying, with another 56% looking at deployments in 12-24 months.

Only 11% have no plans, and a further 12% will deploy in two years or more.



aryaka SOTW 2021 Global State Of The WAN

Geographic Breakdown 2021



SASE Capabilities

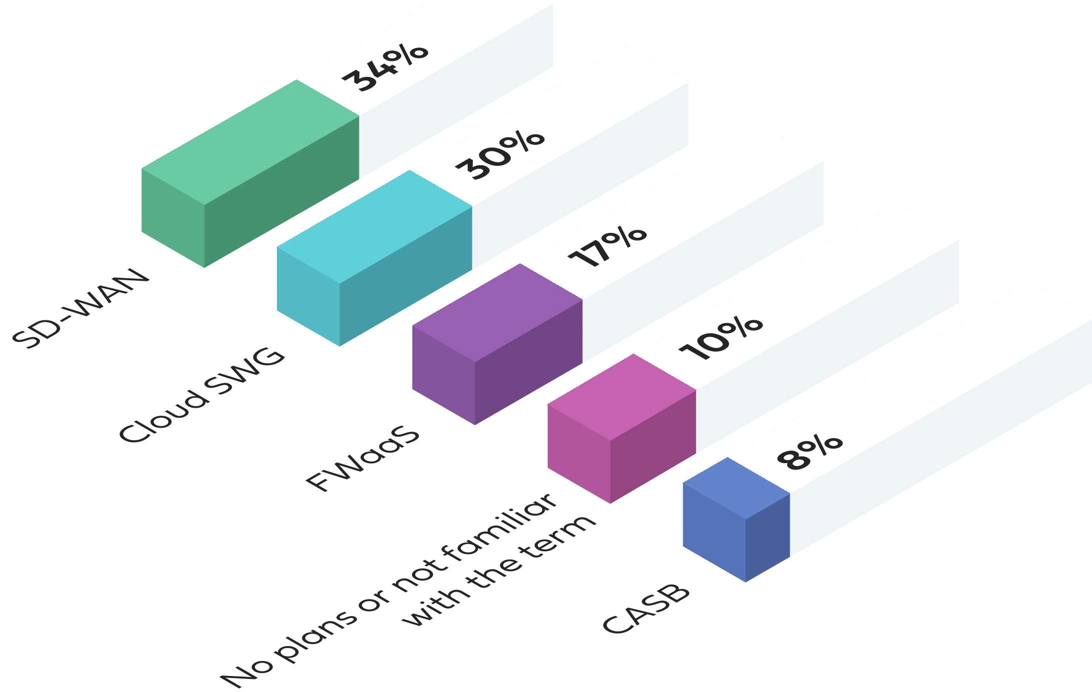
What capabilities are core to your SASE architecture expectations?

Top Five Responses	%
SD-WAN	34%
Cloud SWG	30%
FWaaS	17%
No plans or not familiar with the term	10%
CASB	8%

Total Responses	1334

For SASE features, it isn't surprising that 34% identify SD-WAN connectivity as key, a SASE fundamental feature.

Next is a cloud security gateway at 30%, followed by a managed firewall at 17%.

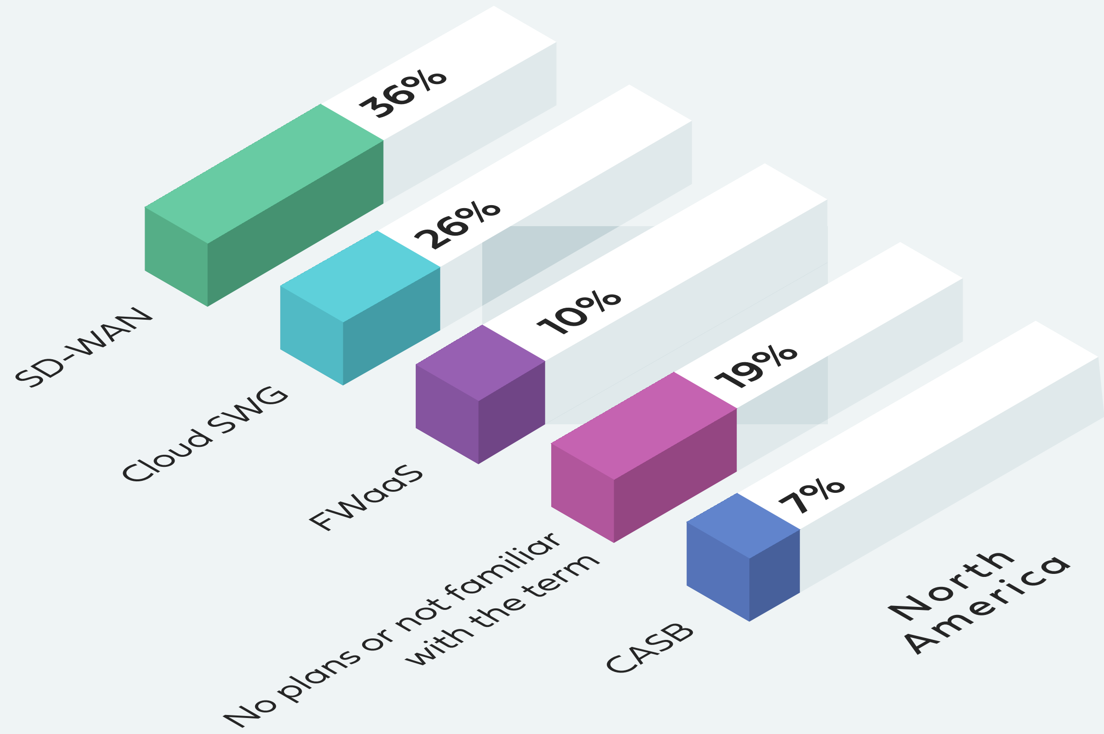


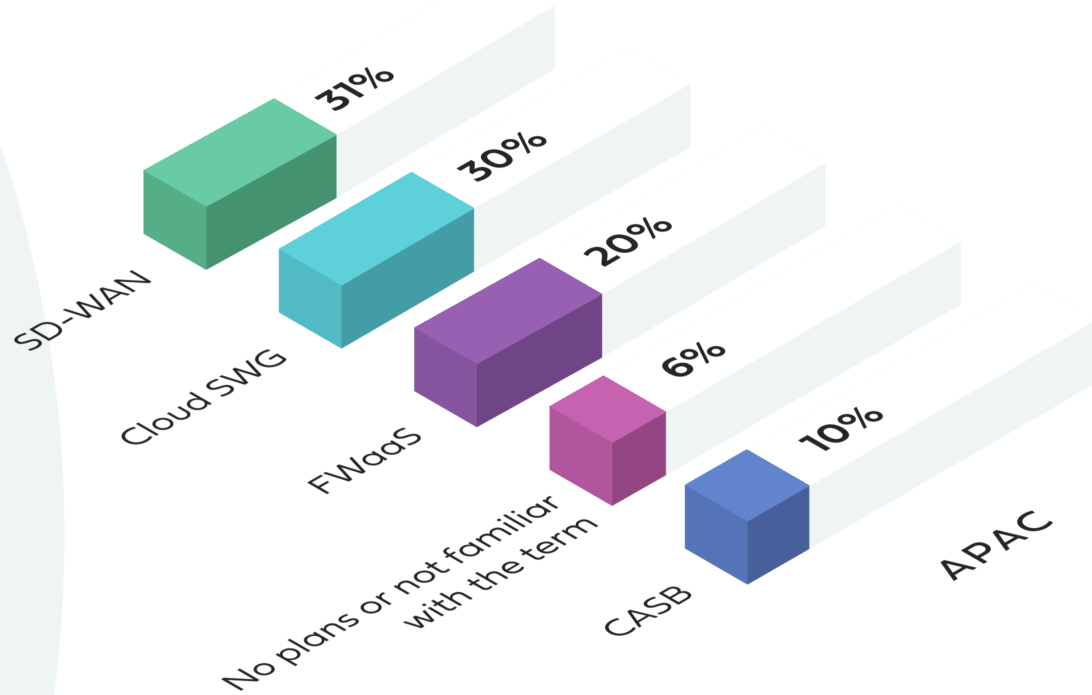
The survey also included:

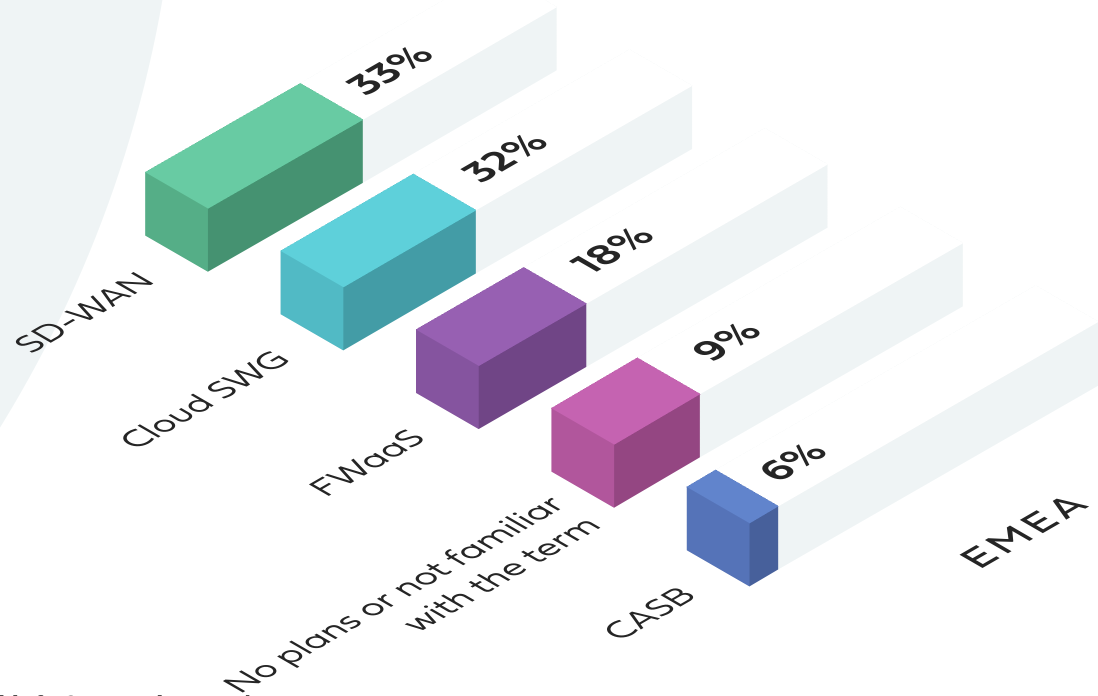
ZTNA (3%)

https://sommita.net / info@sommita.net / 206-783-4742

Geographic Breakdown 2021







BREXIT Impact

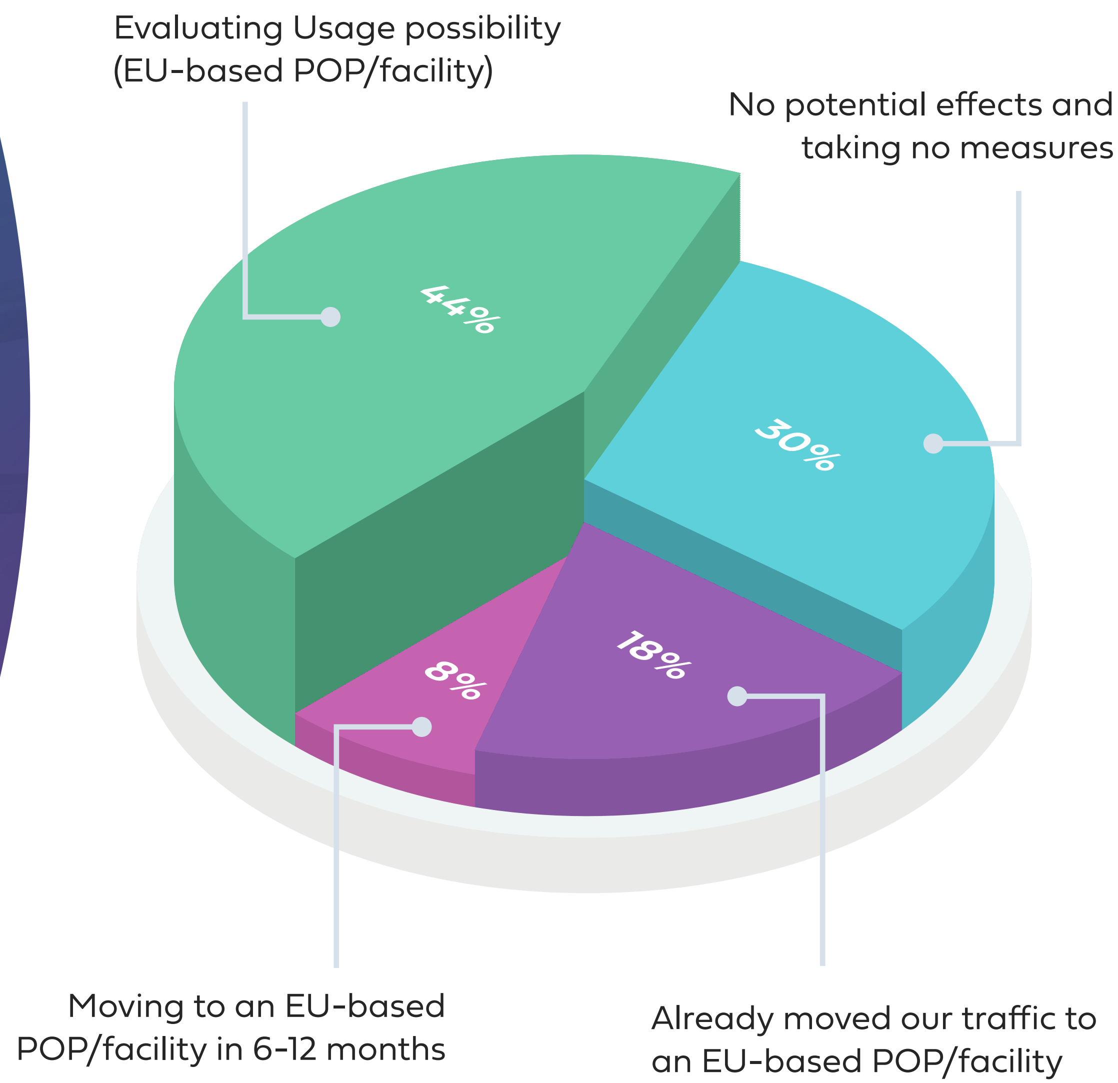
We asked about BREXIT for the first time, and how it is influencing planning. 44% are evaluating use of an EU-based PoP, 18% have already transitioned, and at a global level, 30% see no impact. Regionally, EMEA of course is further along, but APAC also shows more impact than NA.

BREXIT Plans

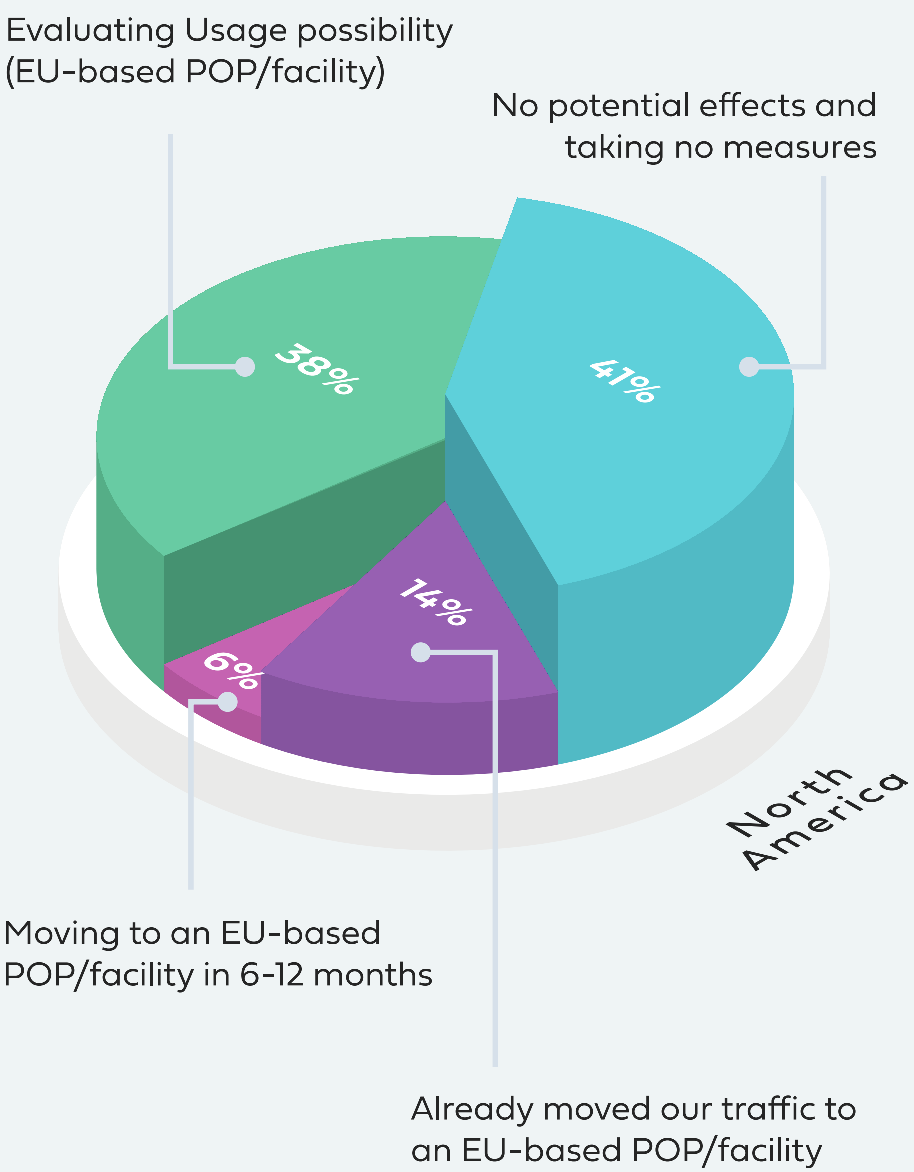
If relevant, what are your plans and preparations to adapt to the post-BREXIT landscape?

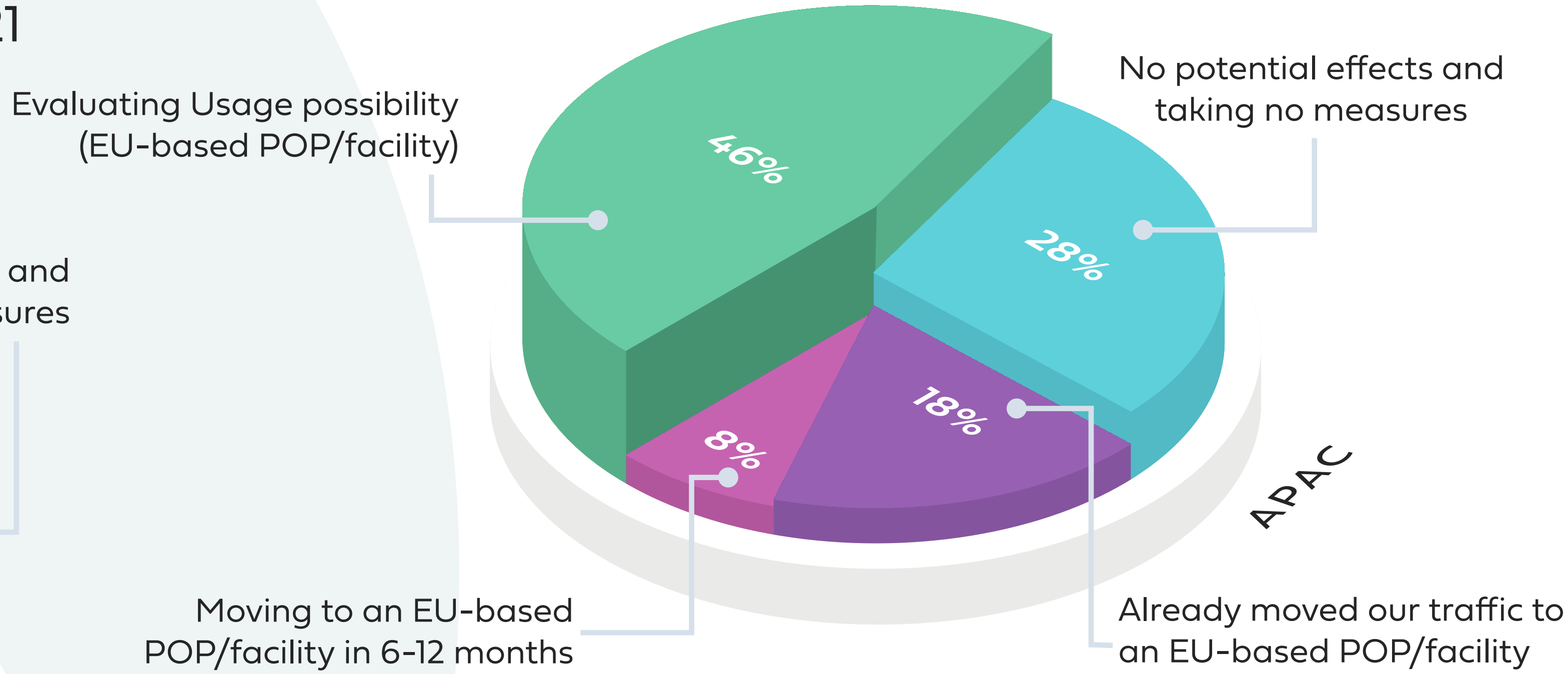
Top Responses	%
Evaluating Usage possibility (EU-based POP/facility)	44%
No potential effects and taking no measures	30%
Already moved our traffic to an EU-based POP/facility	18%
Moving to an EU-based POP/facility in 6-12 months	8%

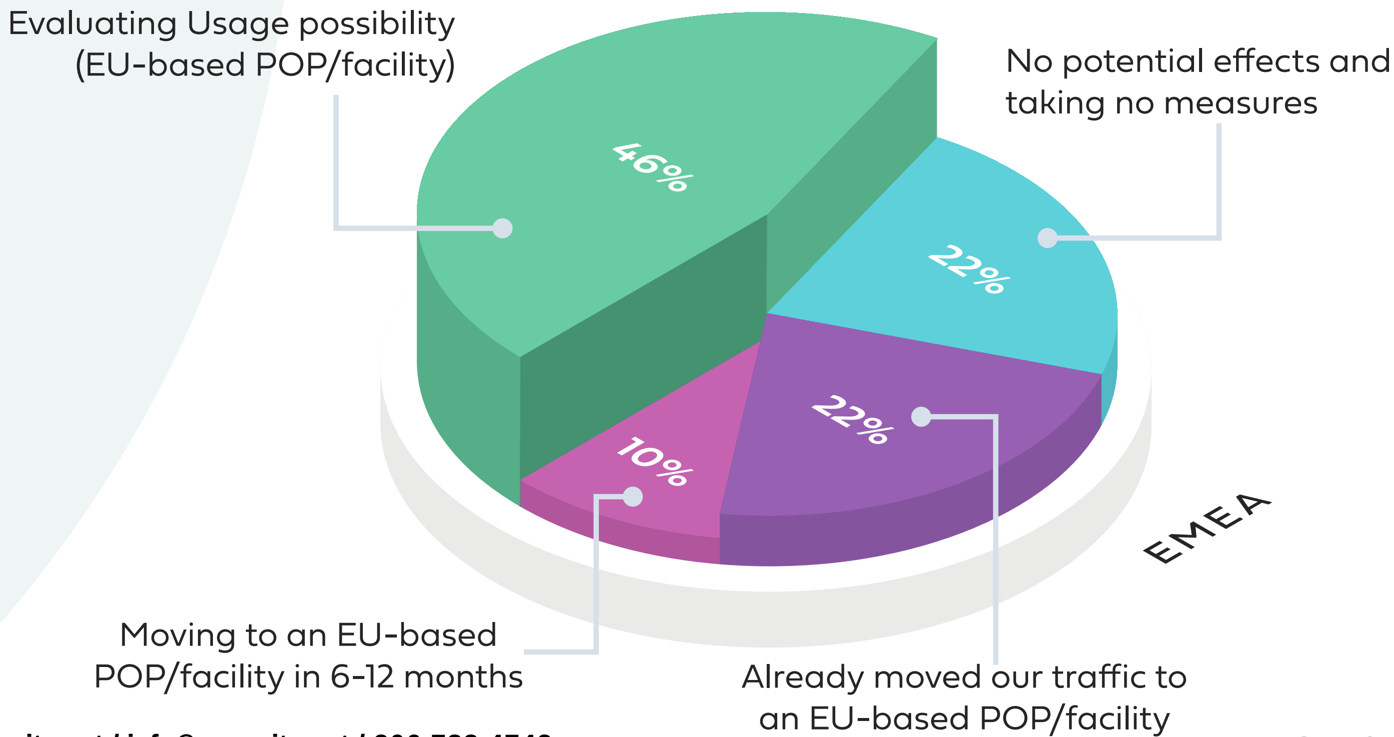
Total Responses	1342



Geographic Breakdown 2021







3

How They Plan to Get There : IT Plans for WAN Transformation

- How will they address their investment plans and what approach will they take?
- They increasingly look to managed services with a decrease in identified barriers, though expect some deployment delays on the back of tactical pandemic issues
- Some drivers for transformation include application performance and MPLS migration

Drivers for Transformation

There are many drivers for WAN transformation, but a common theme and reflected across the different responses is application performance, creating an environment that delivers enhanced productivity on a global basis irrespective of location.

This requires a true end-to-end managed service with transparent SLAs. On a more tactical level, MPLS contract expiration or augmentation is also a catalyst for change.

aryaka SOTW 2021 Global State Of The WAN

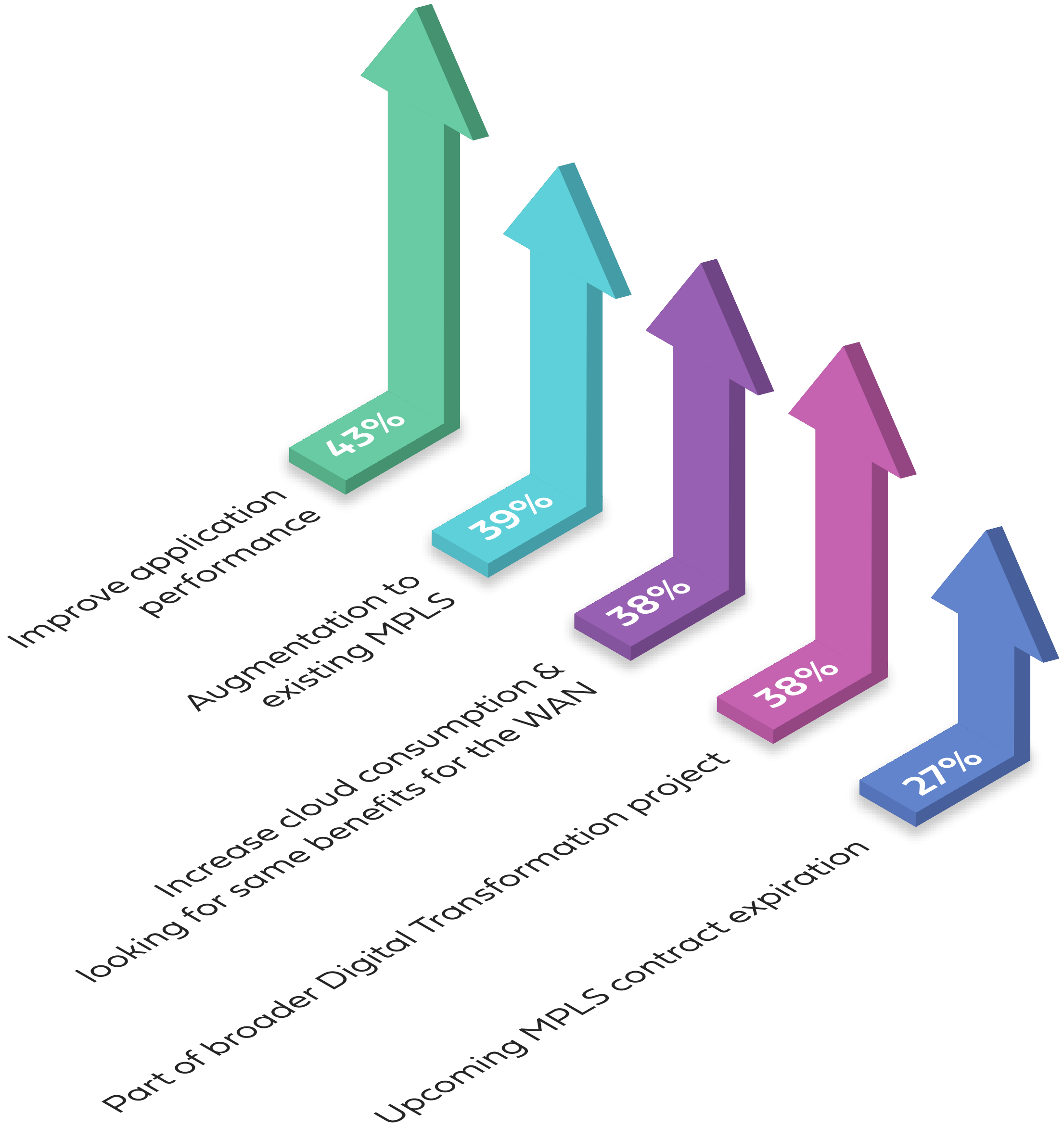
Drivers for SD-WAN

What are the primary drivers to move to an evolved WAN (SD-WAN) solution?

Top Five Responses	%
Improve application performance	43%
Augmentation to existing MPLS	39%
Increase cloud consumption & looking for same benefits for the WAN	38%
Part of broader Digital Transformation project	38%
Upcoming MPLS contract expiration	27%
Total Responses	1352

Why are enterprises looking at a WAN refresh and SD-WAN? Application performance is still #1 at 43%, followed in an increase in cloud consumption or digital transformation initiatives, both at 38%.

But another major driver is MPLS expiration at 27% or the desire to augment it with other WAN options at 39%.

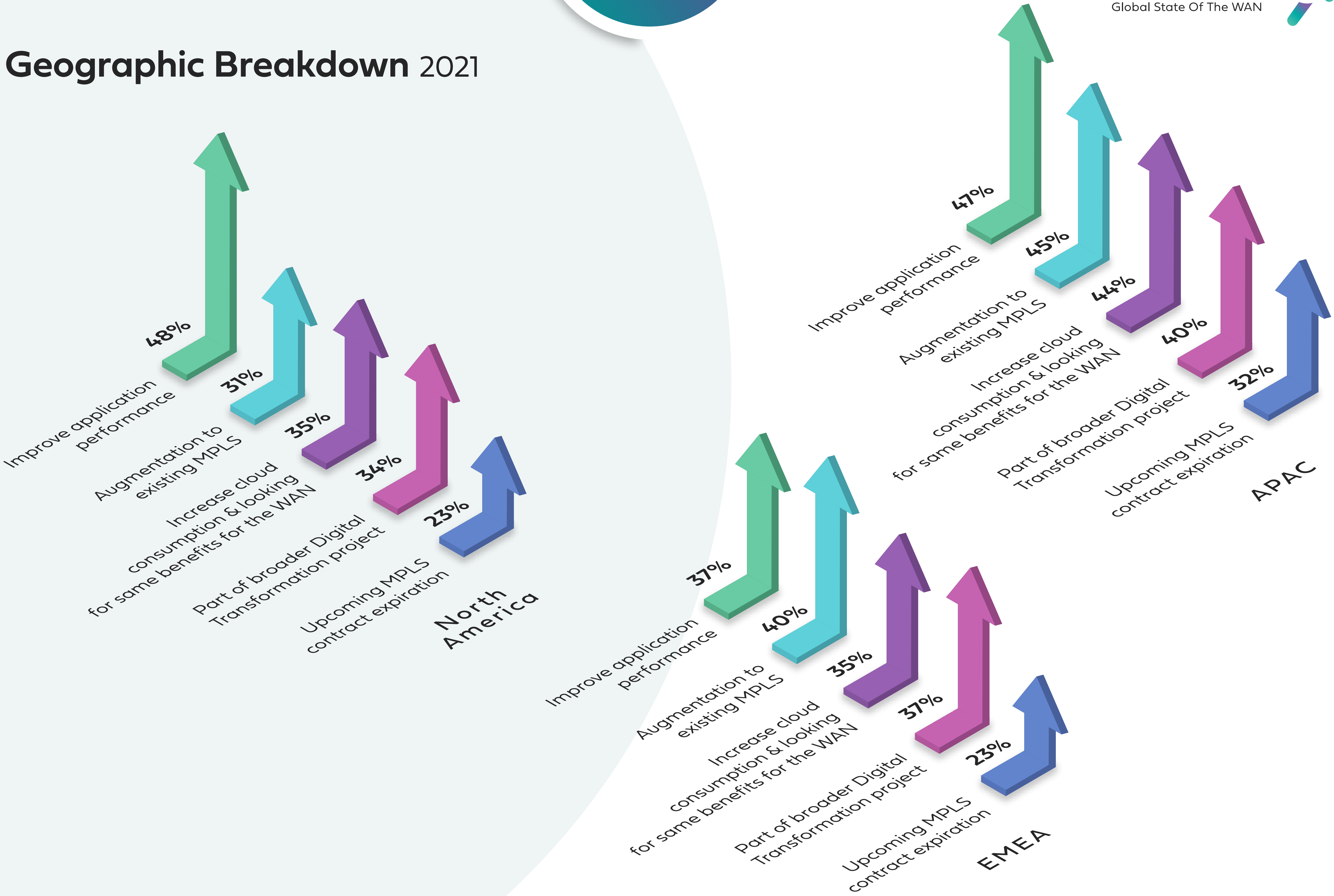


The survey also included:

Reduce complexity (20%)

aryaka SOTW 2021 Global State Of The WAN

Geographic Breakdown 2021



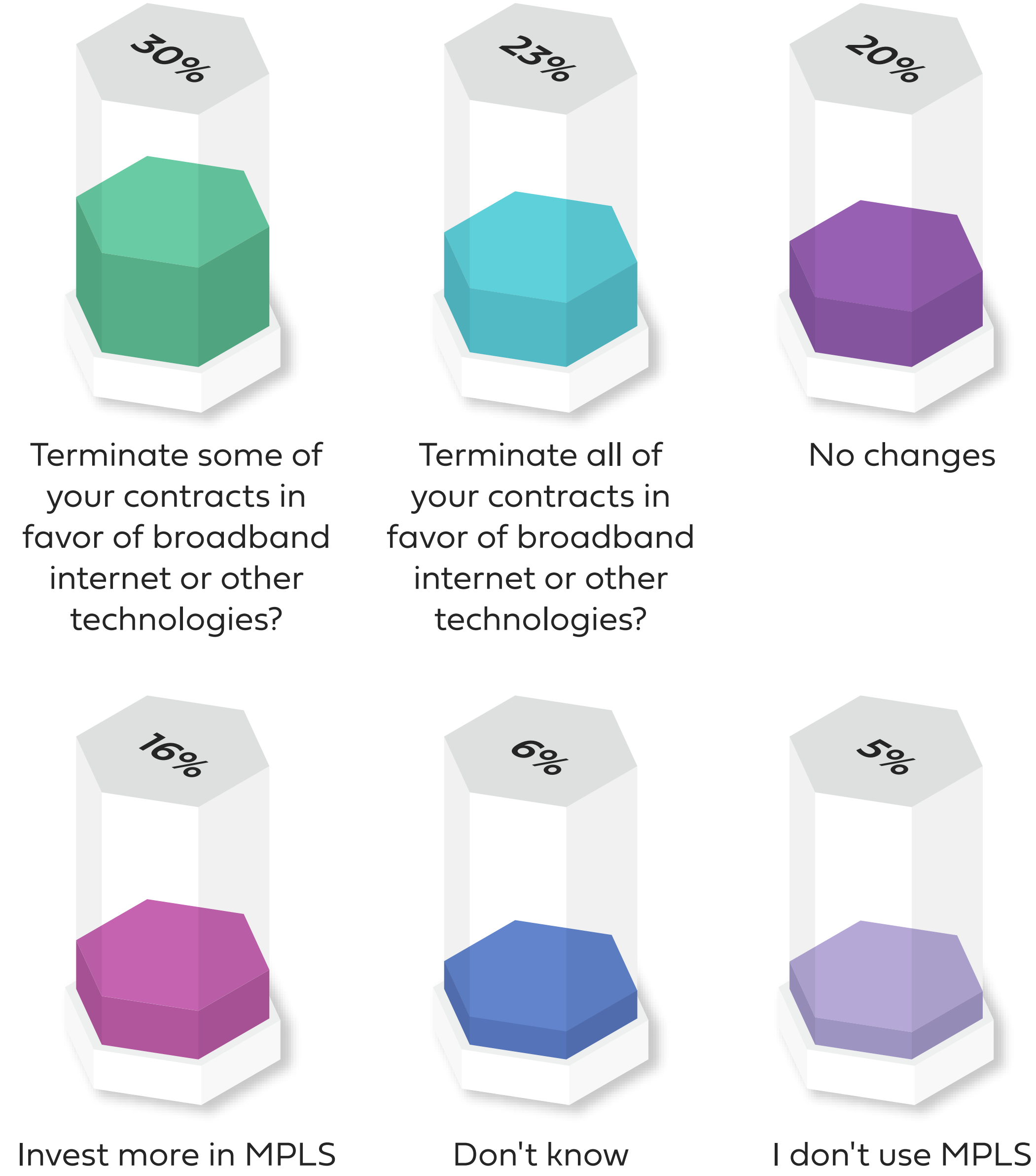
MPLS Plans

If you have MPLS deployed, over the next 12 months, do you intend to:

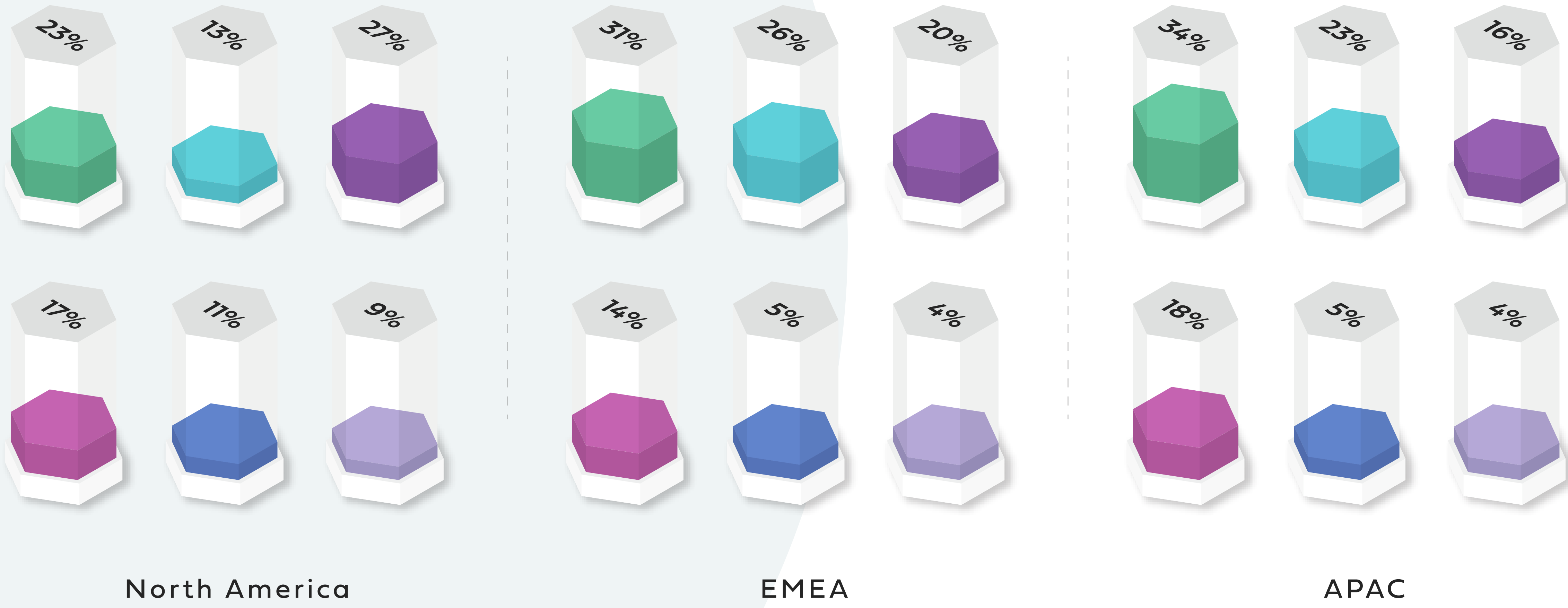
Responses	%
Terminate some of your contracts in favor of broadband internet or other technologies?	30%
Terminate all of your contracts in favor of broadband internet or other technologies?	23%
No changes	20%
Invest more in MPLS	16%
Don't know	6%
I don't use MPLS	5%
Total Responses	1348

Following the rotation away from MPLS, over 50% will transition, with 24% terminating all at expiration and 30% terminating some.

Only 16% plan to invest more.



Geographic Breakdown 2021



Legend

- Terminate some of your contracts in favor of broadband internet or other technologies?
- Terminate all of your contracts in favor of broadband internet or other technologies?
- No changes
- Invest more in MPLS
- Don't know
- I don't use MPLS

Managed Services Acceptance

Top Managed Service Requests:

Enterprises are then looking ahead to managed offerings, with top asks including application optimization 45%, security 43%, connectivity 39%, and multi-cloud 37%.

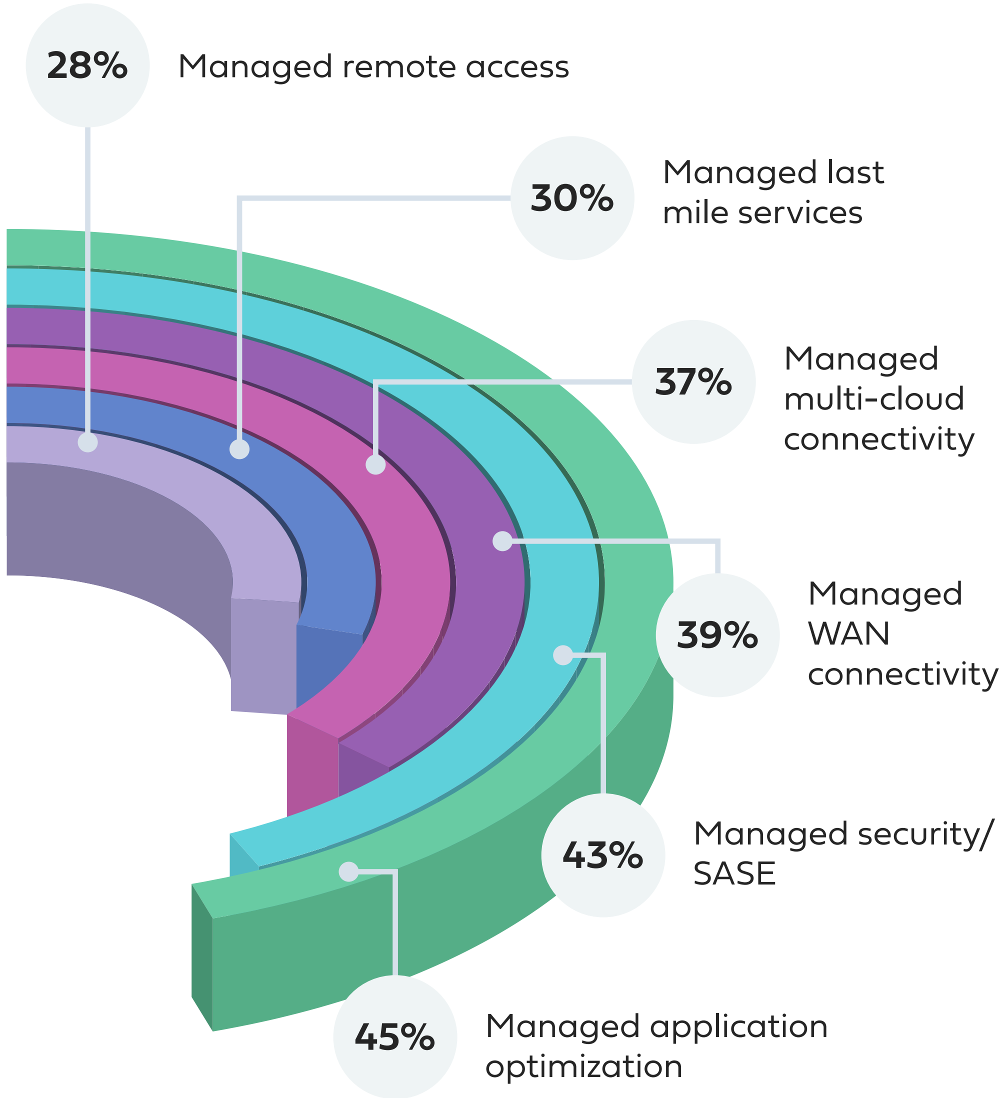
Deployment Preferences:

And, for actual deployment, a managed services still reigns supreme, at 71% vs 18% looking for a DIY solution.

Top Managed Service Requests

Which managed service offerings are important to your organization

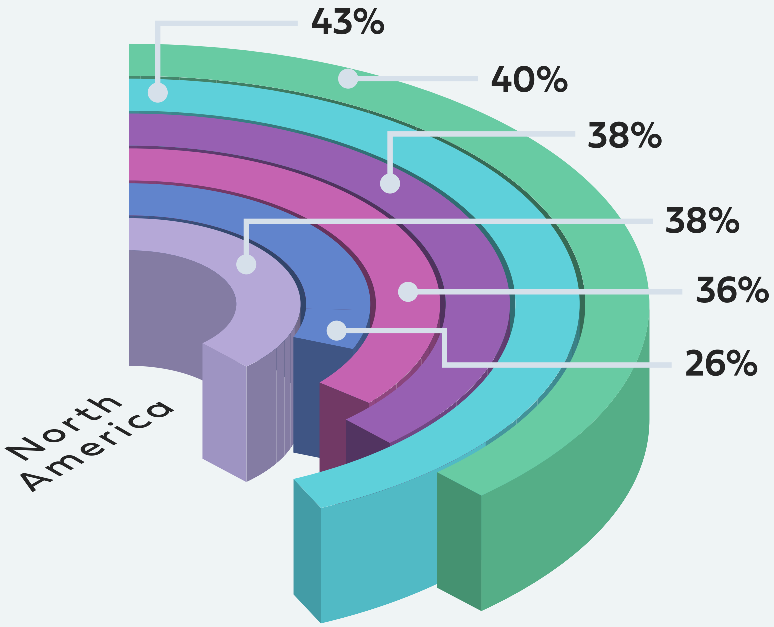
Top Responses	%
Managed application optimization	45%
Managed security / SASE	43%
Managed WAN connectivity	39%
Managed multi-cloud connectivity (multi-cloud fabric)	37%
Managed last mile services	30%
Managed remote access	28%
Total Responses	**1350**

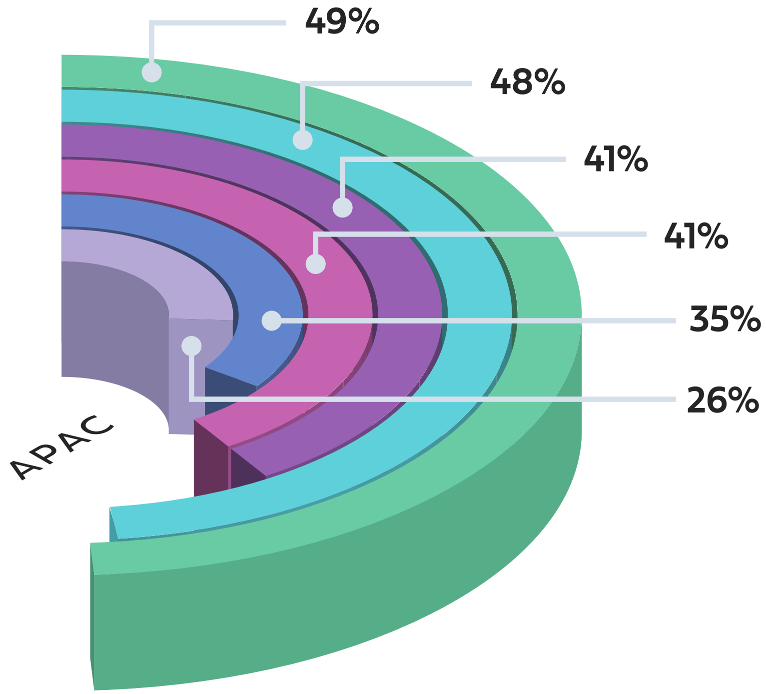


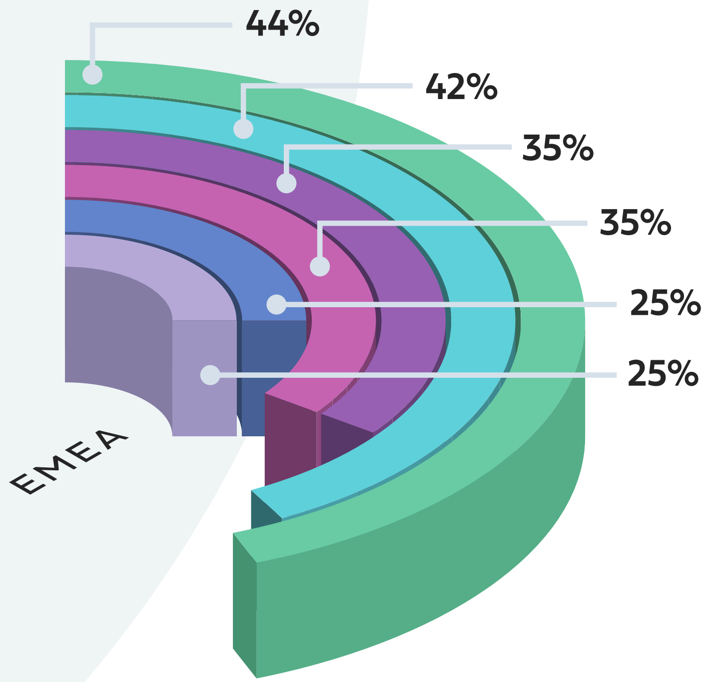
The survey also included:

None of the above (4%)

Geographic Breakdown 2021







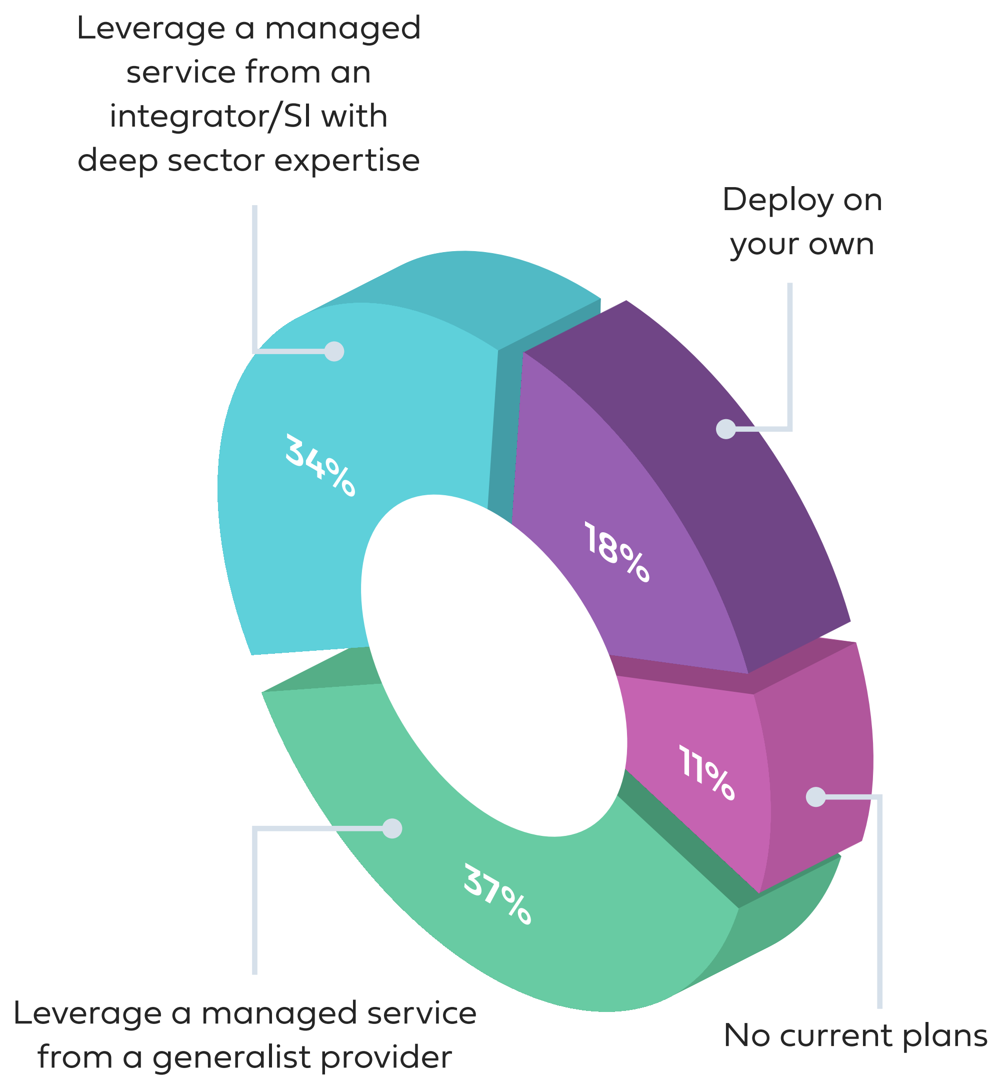
Legend

- Managed application optimization
- Managed security/ SASE
- Managed WAN connectivity
- Managed multi-cloud connectivity
- Managed last mile services
- Managed remote access

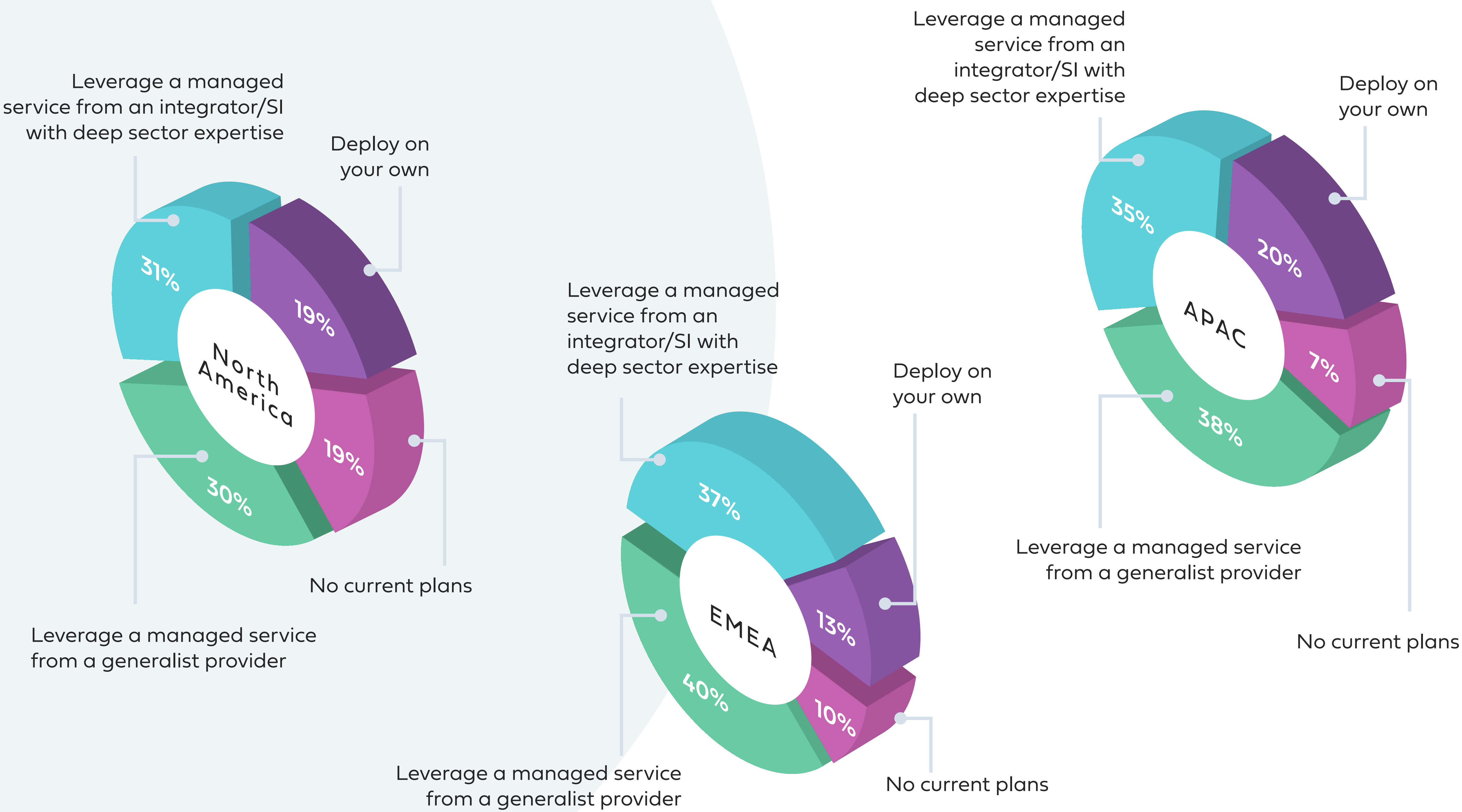
Deployment Preferences

If undergoing a WAN Transformation, including SD-WAN/SASE, do you intend to:

Top Responses	%
Leverage a managed service from a generalist provider (telco or MSP)	37%
Leverage a managed service from an integrator/SI with deep sector expertise	34%
Deploy on your own (DIY)	18%
No current plans	11%
Total Responses	1335



Geographic Breakdown 2021



Deployment Timelines

SD-WAN Buying Cycle:

How close are enterprises to deploying? More are evaluating vendors this year than last (26%) vs 23% in 2020 and have developed a business case (14%) vs 11% in 2020 vs just evaluating the technology (37%) down from 44% in 2020.

SD-WAN Barriers:

This also tracks a drop in identified barriers, including less anxiety regarding increased spending (28%) vs 35% in 2020, complexity (29%) vs 34% in 2020, application performance (36%) vs 43% in 2020, lack of SLAs (22%) vs 26% in 2020, the newness of the technology (30%) vs 34% in 2020, and lack of skills (33%) vs 40% in 2020.

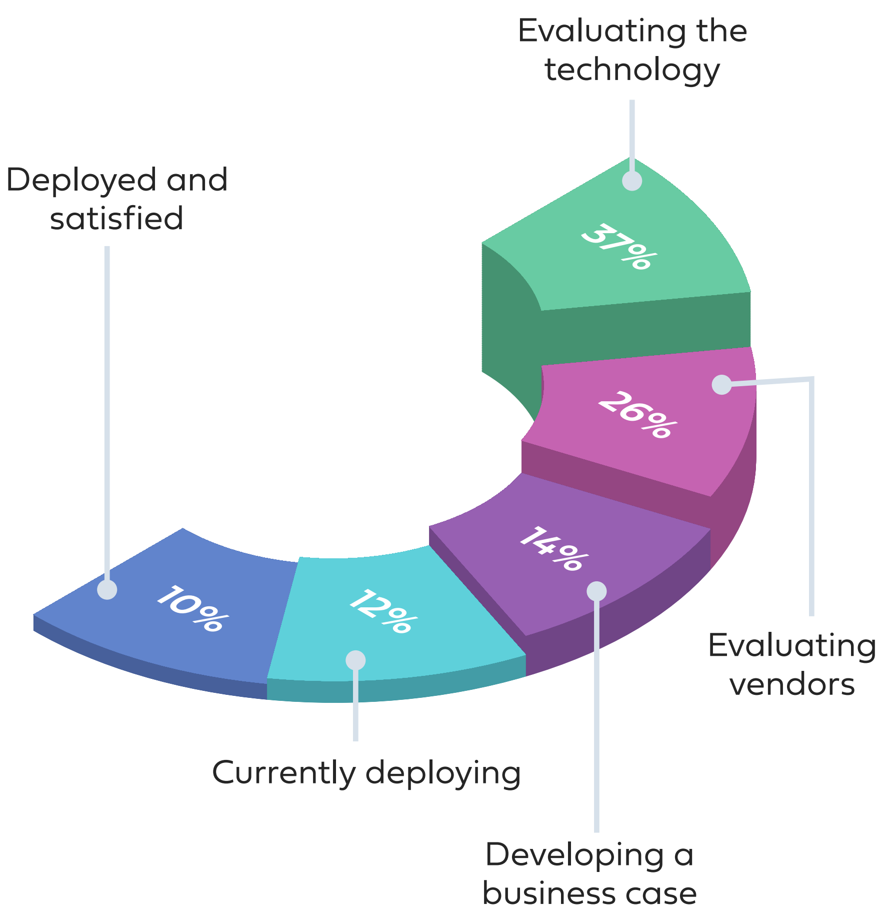
aryaka SOTW 2021 Global State Of The WAN

SD-WAN Buying Cycle

Where are you in your SD-WAN buying cycle today?

Top Five Responses	%
Evaluating the technology	37%
Evaluating vendors	26%
Developing a business case	14%
Currently deploying	12%
Deployed and satisfied	10%

Total Responses	1346

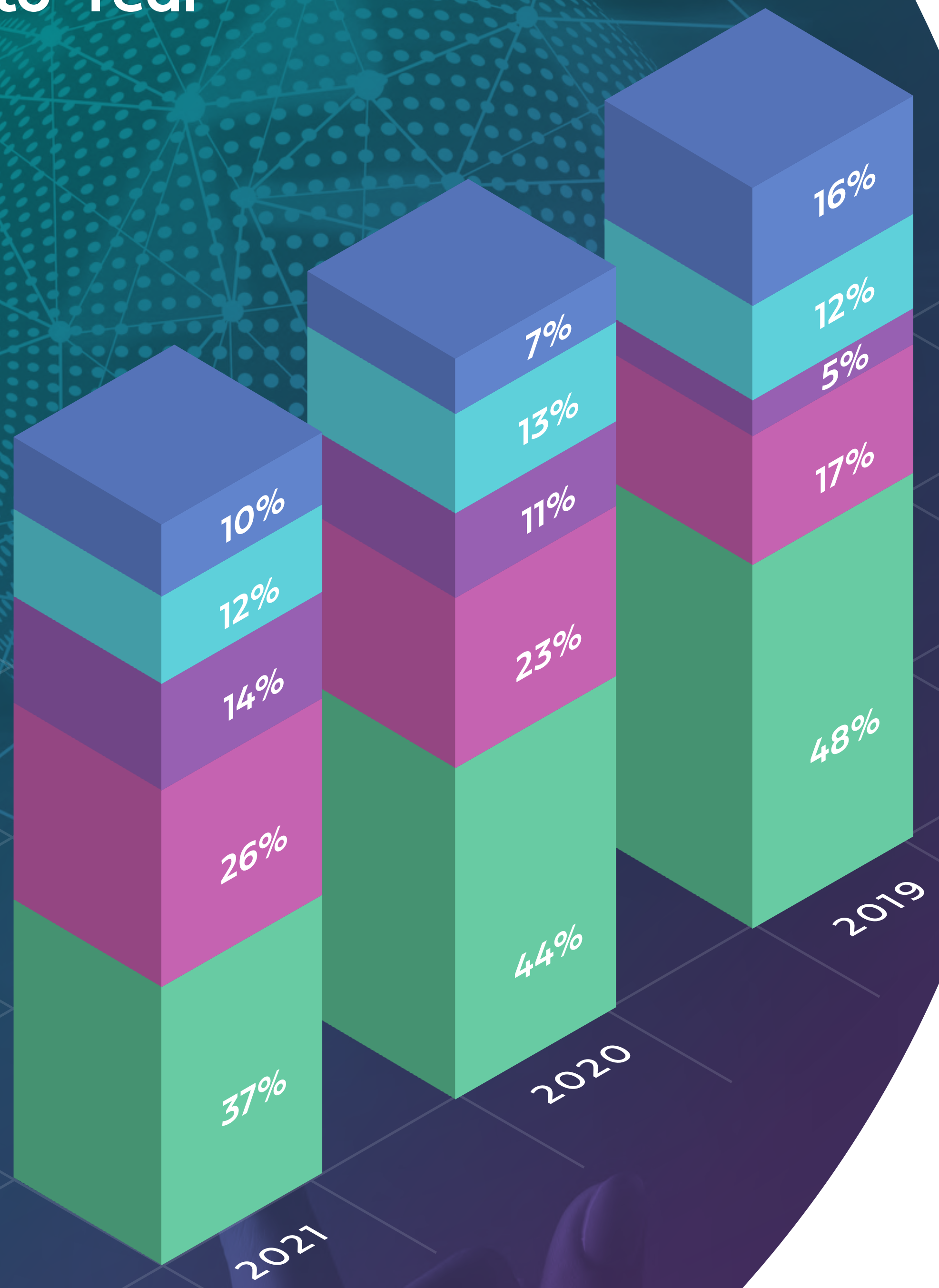


The survey also included:

Deployed but not happy (1%)

aryaka SOTW 2021 Global State Of The WAN

Year-to-Year

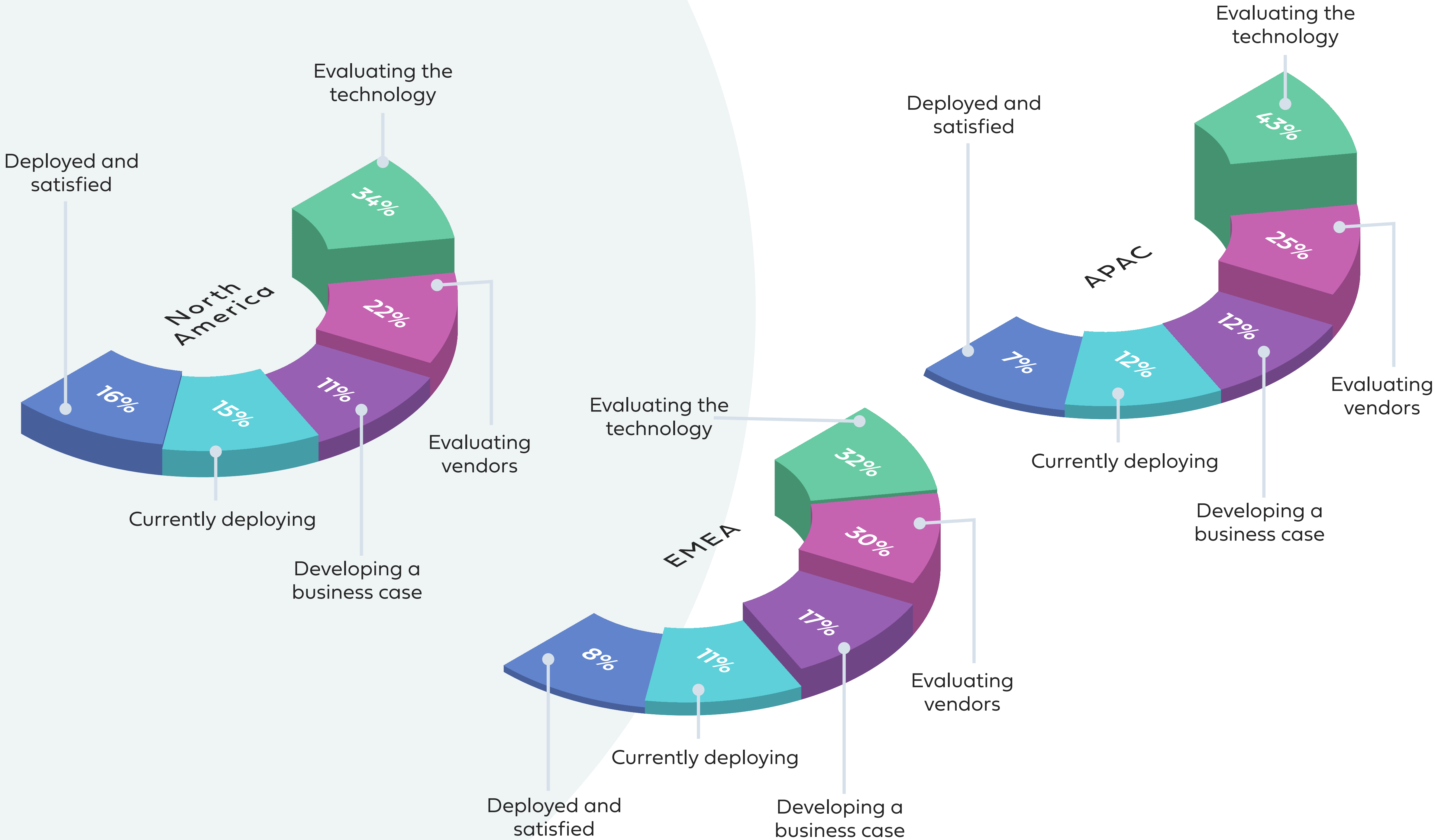


- The SD-WAN buying cycle is accelerating, irrespective of the investment delays described earlier
- More enterprises are actively evaluating the vendors, at 26% in 2021, growing from 23% in 2020 and just 17% in 2019
- This also relates to an increase in those developing a business case, at 14% this year, up from 11% in 2020 and 5% in 2019
- Correspondingly, those just evaluating the technology dropped to 37% in 2021, down from 44% in 2020 and 48% in 2019
- Lastly, those deploying are at 12%, down a bit from 13% in 2020 and even with 2019. As noted, the tactical focus in 2020 could be the reason for this

Legend

Evaluating the technology
Evaluating vendors
Currently deploying
Developing a business case
Deployed and satisfied

Geographic Breakdown 2021

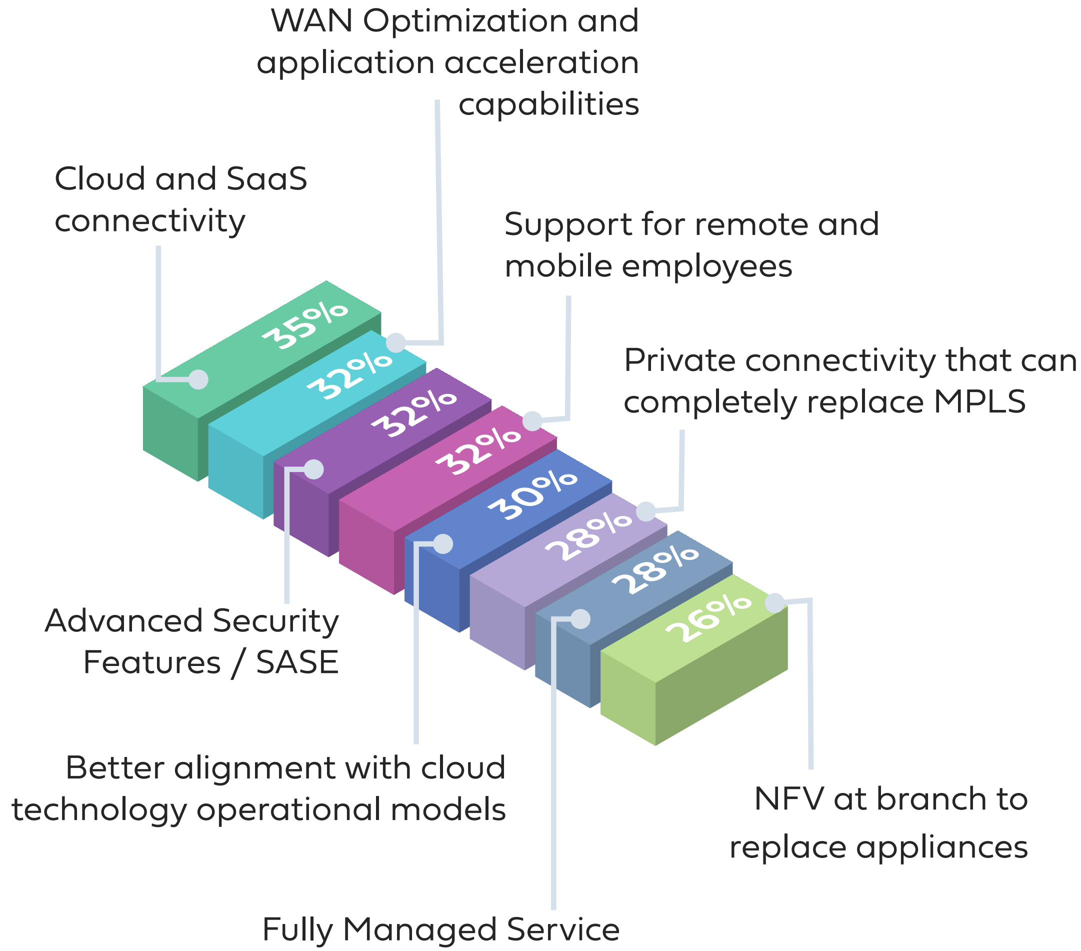


aryaka SOTW 2021 Global State Of The WAN

Features

In an ideal world, what features would you want integrated in your SD-WAN solution?

Top Responses	%
Cloud and SaaS connectivity	35%
WAN Optimization and application acceleration capabilities	32%
Advanced Security Features / SASE	32%
Support for remote and mobile employees	32%
Better alignment with cloud technology operational models	30%
Private connectivity that can completely replace MPLS	28%
Fully Managed Service	28%
NFV at branch to replace appliances	26%
Total Responses	**1346**

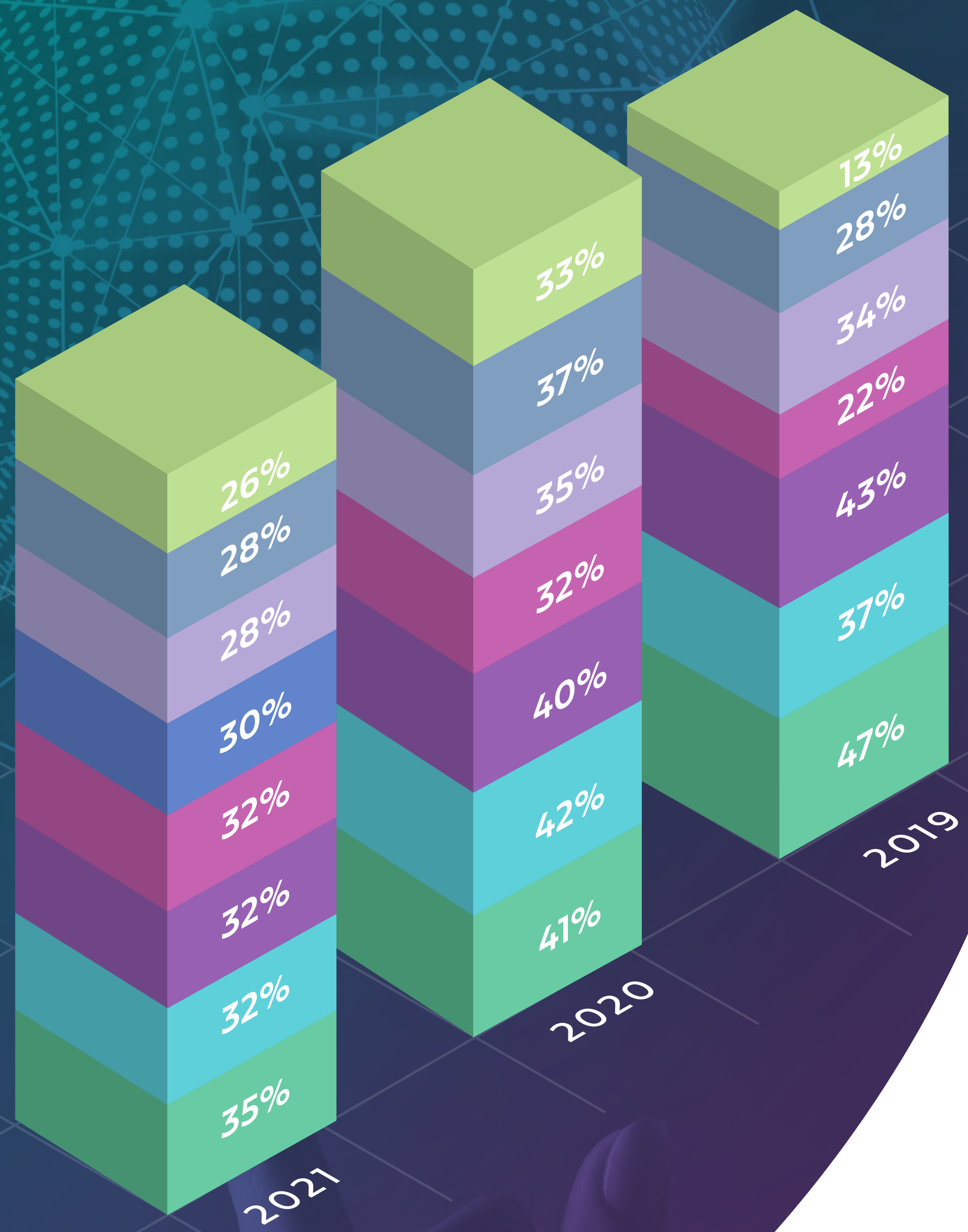


The survey also included:

Routing (22%), QoS (14%), Network and Application Visibility Portal (6%)

aryaka SOTW 2021 Global State Of The WAN

Year-to-Year



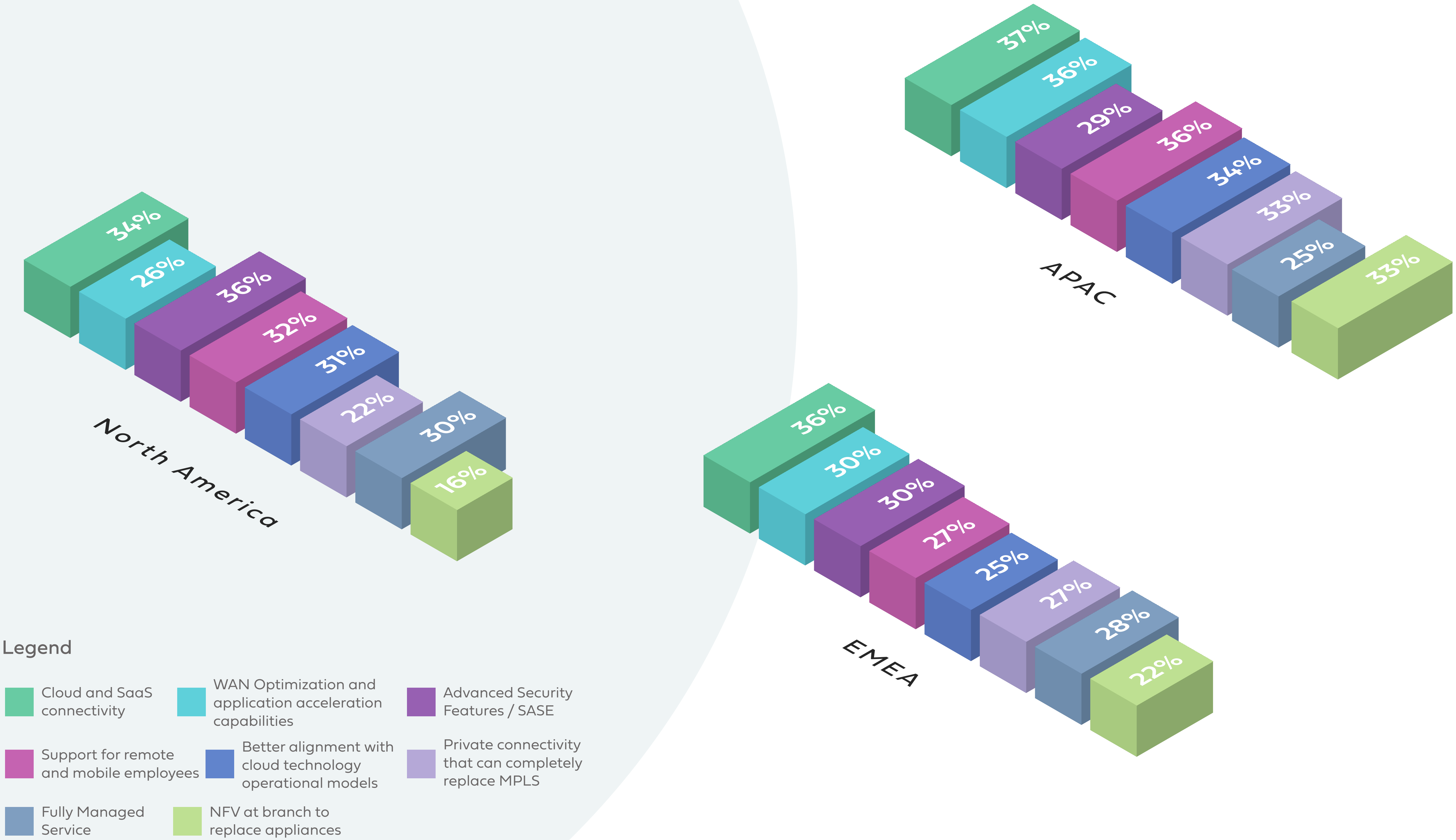
- Overall percentages for features requested experienced a decrease from 2020 to 2021. This tracks shifts in near-term investment priorities, and we believe these both correlate to pandemic-based tactical planning
- Given the importance of the cloud, it wasn't surprising that cloud and SaaS connectivity are the new #1 at 35%. This is down from 41% in 2020 and 47% in 2019
- Security clocked in as #2 at 32%, down from 40% in 2020 and 43% in 2019
- WAN optimization and application acceleration were also at 32%, down from 42% in 2020 and 37% in 2019
- Picking back up on the cloud, 30% look to better alignment with the cloud consumption model
- A desire to have private connectivity that can replace MPLS was at 28%, down from 35% in 2020 and 34% in 2019
- Rounding out the top responses is a fully managed service at 28%, down from 37% in 2020 and equal to 28% in 2019
- One significant drop was NFV, at 26% this year but down from 33% in 2020

Legend

- Cloud and SaaS connectivity
- WAN Optimization and application acceleration capabilities
- Advanced Security Features / SASE
- Support for remote and mobile employees
- Better alignment with cloud technology operational models
- Private connectivity that can completely replace MPLS
- Fully Managed Service
- NFV at branch to replace appliances

aryaka SOTW 2021 Global State Of The WAN

Geographic Breakdown 2021

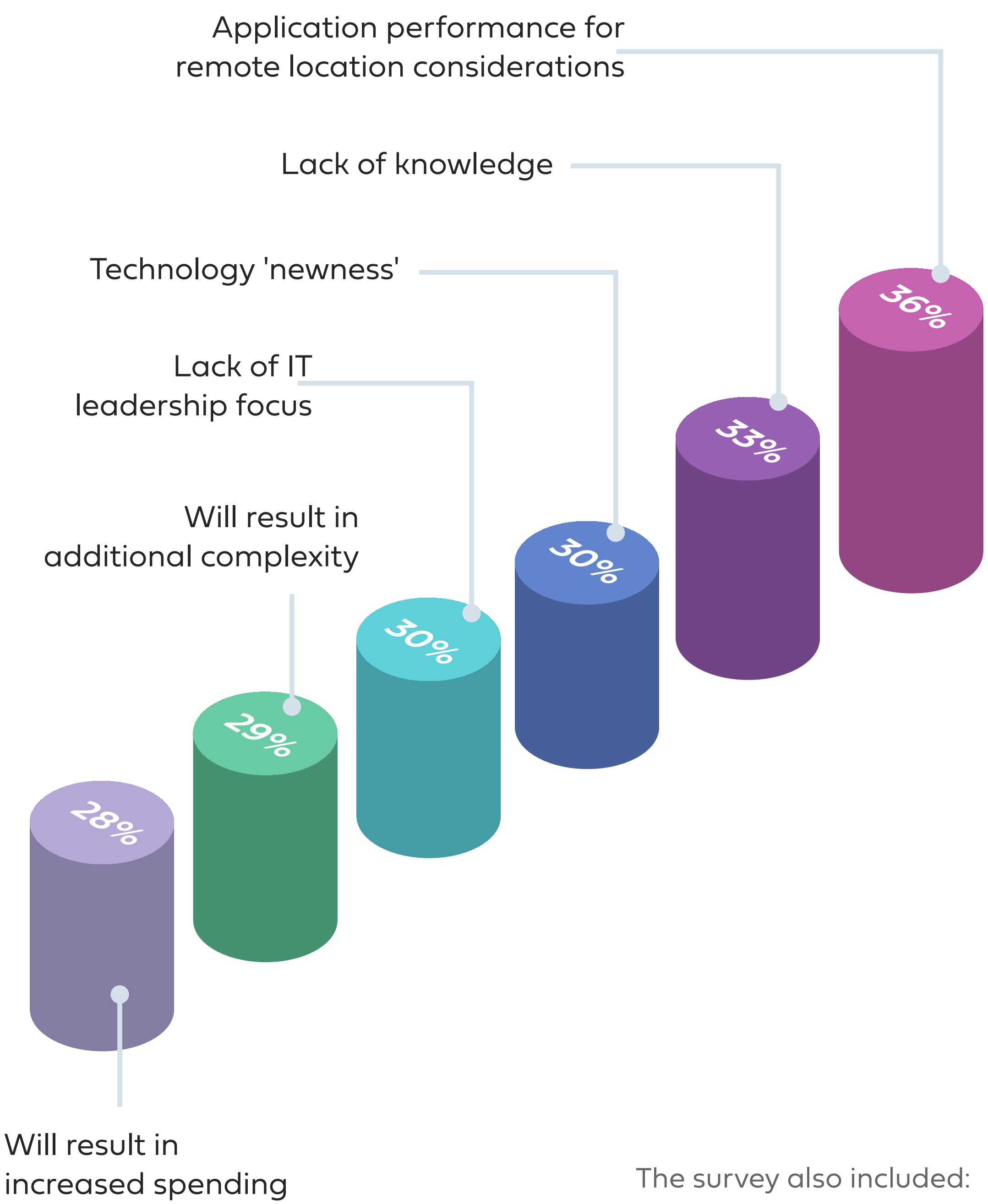


aryaka SOTW 2021 Global State Of The WAN

SD-WAN Barriers

What are potential barriers that you see to SD-WAN adoption in your organization?

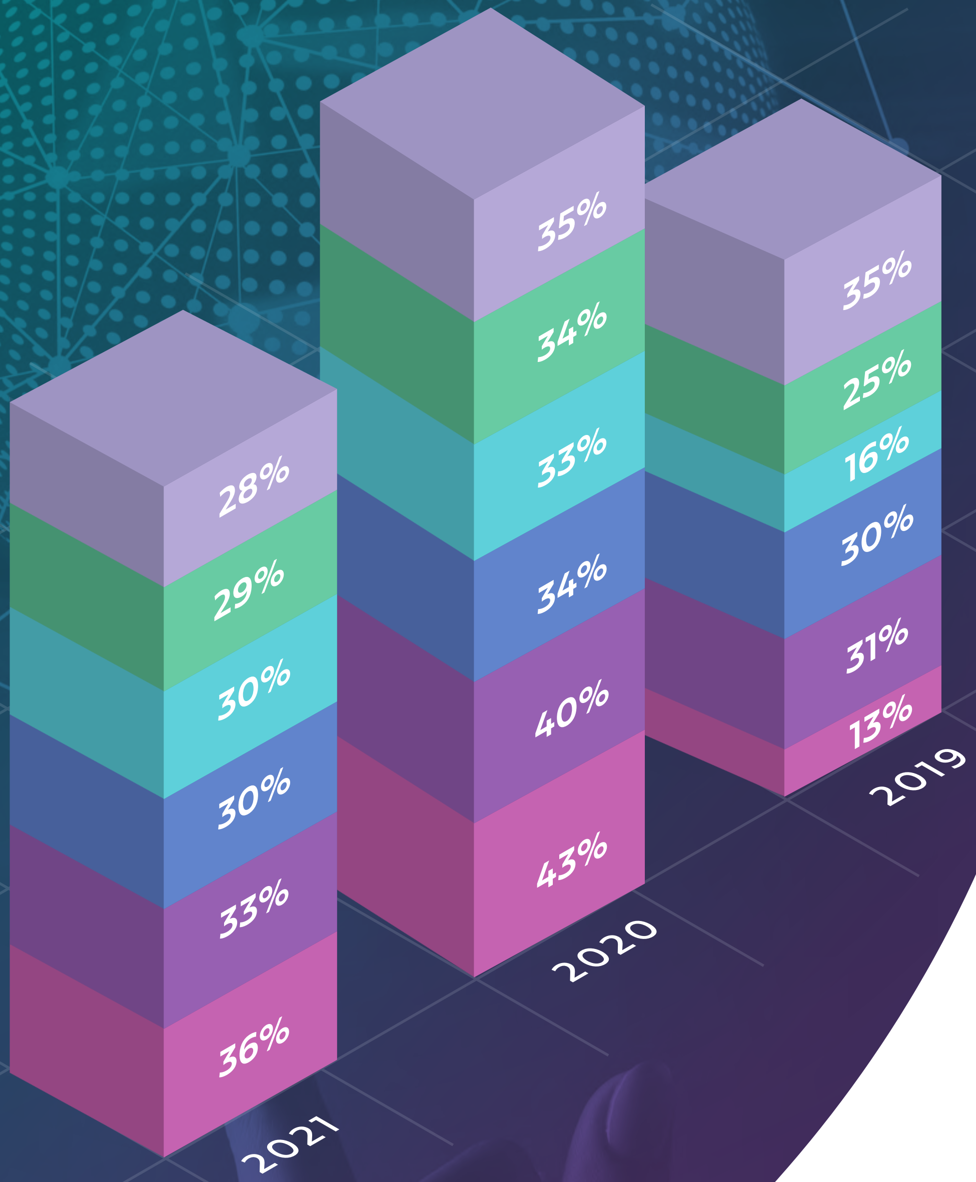
Top Responses	%
Application performance for remote locations	36%
Lack of knowledge	33%
Technology 'newness'	30%
Lack of IT leadership focus	30%
Will result in additional complexity	29%
Will result in increased spending	28%
Total Responses	1346



The survey also included:

Internal politics (27%), Lack of SLAs (22%), There are no barriers to adoption (10%)

Year-to-Year



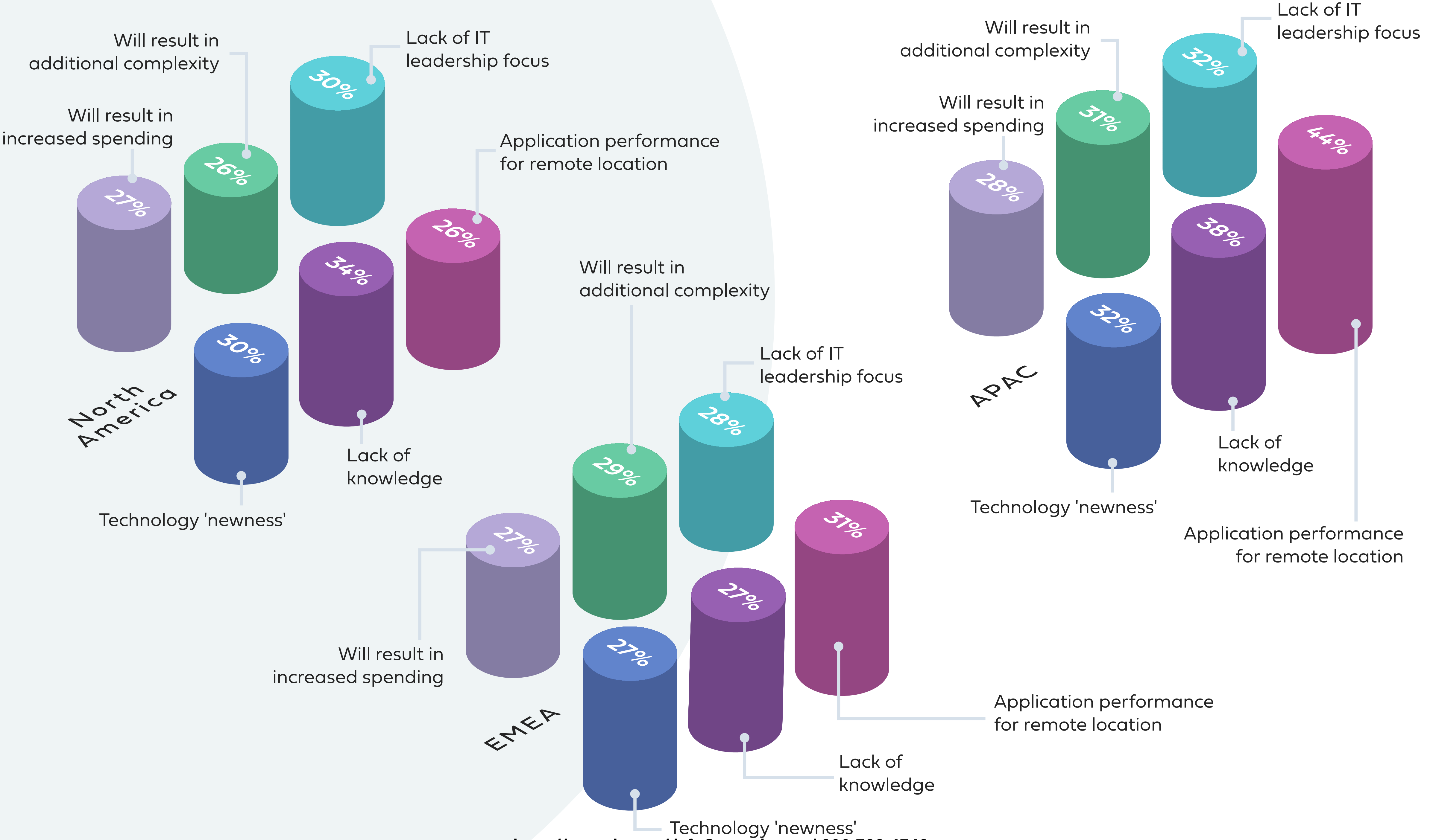
- With an acceleration of the buying cycle, perceived barriers to adoption are all down
- Application performance for remote locations is still #1 at 36%, and remember that this maps to IT's prime challenge. This was at 43% in 2020 and only 13% in 2019
- This speaks to the need for end-to-end performance SLAs
- Lack of knowledge is still #2 at 33%, but down from 40% in 2020 and 31% in 2019
- Technology 'newness' is at 30%, down from 34% in 2020 and 30% in 2019
- At 30% is lack of IT leadership focus, but down from 33% in 2020 and up from 16% in 2019
- Rounding out the top responses are complexity and spending, at 29% and 28% respectively

Legend

- Application performance for remote location
- Lack of knowledge
- Technology 'newness'
- Lack of IT leadership focus
- Will result in additional complexity
- Will result in increased spending

aryaka SOTW 2021 Global State Of The WAN

Geographic Breakdown 2021



Security Approaches

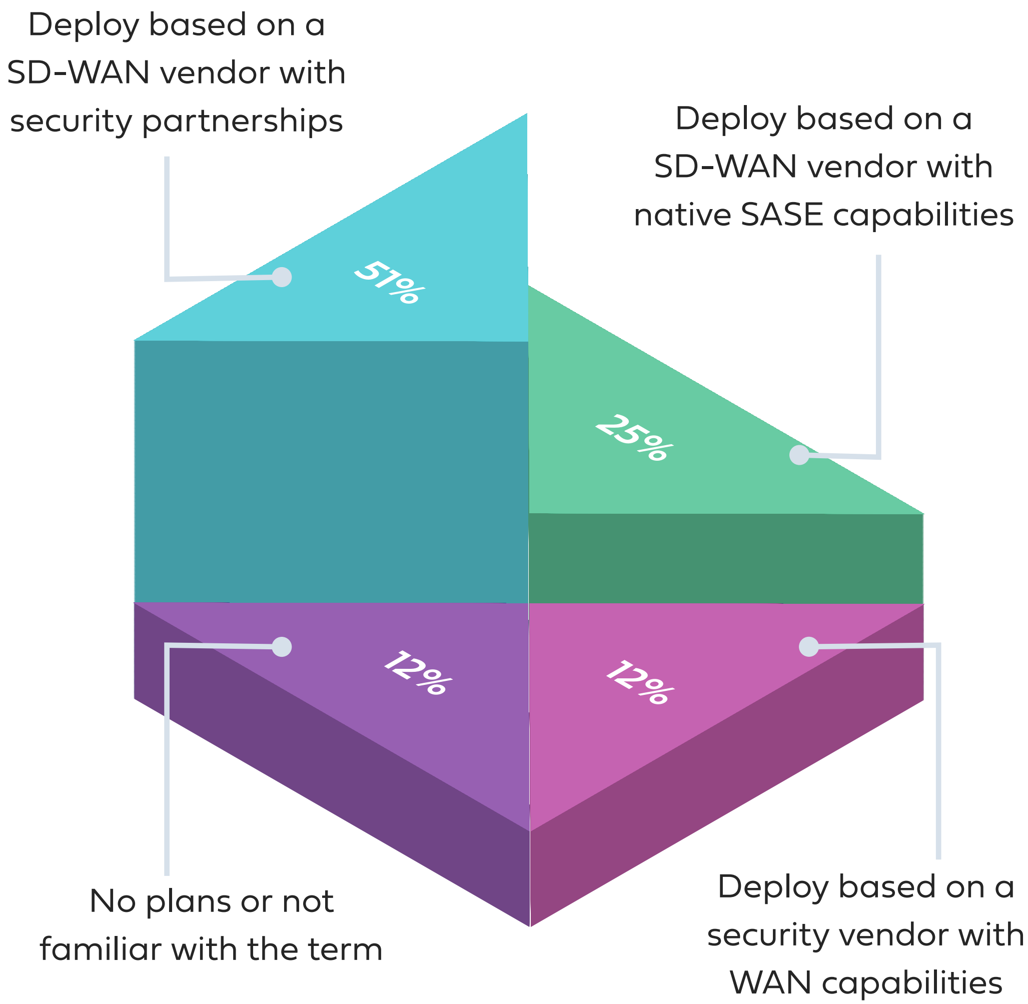
Drilling down into security, over half prefer a solution that includes both their WAN vendor and security specialists vs a quarter looking to leverage a single vendor for both, while just 12% plan to rely on their security vendor to provide all WAN components.

And, they prefer security delivered in the cloud (43%) vs the edge (27%), but this demonstrates the need for both options.

SASE Deployment Approach

If deploying a SASE architecture, will you:

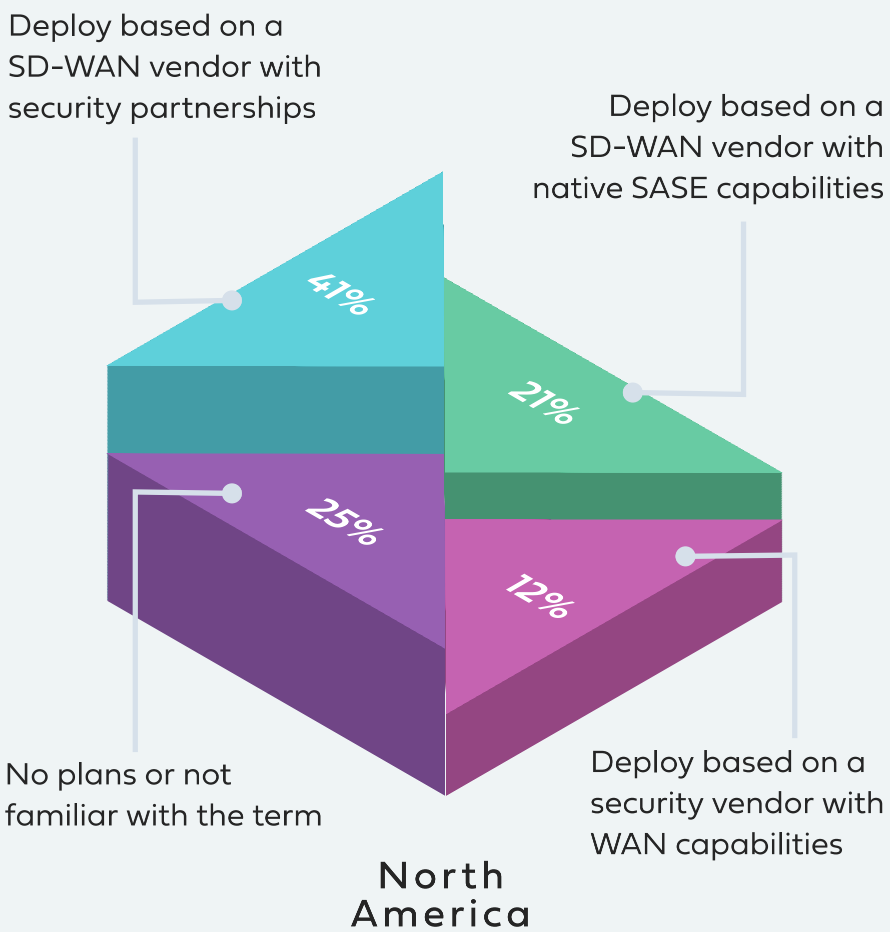
Top Responses	%
Deploy based on a SD-WAN vendor with security partnerships	51%
Deploy based on a SD-WAN vendor with native SASE capabilities	25%
Deploy based on a security vendor with WAN capabilities	12%
No plans or not familiar with the term	12%
Total Responses	1331

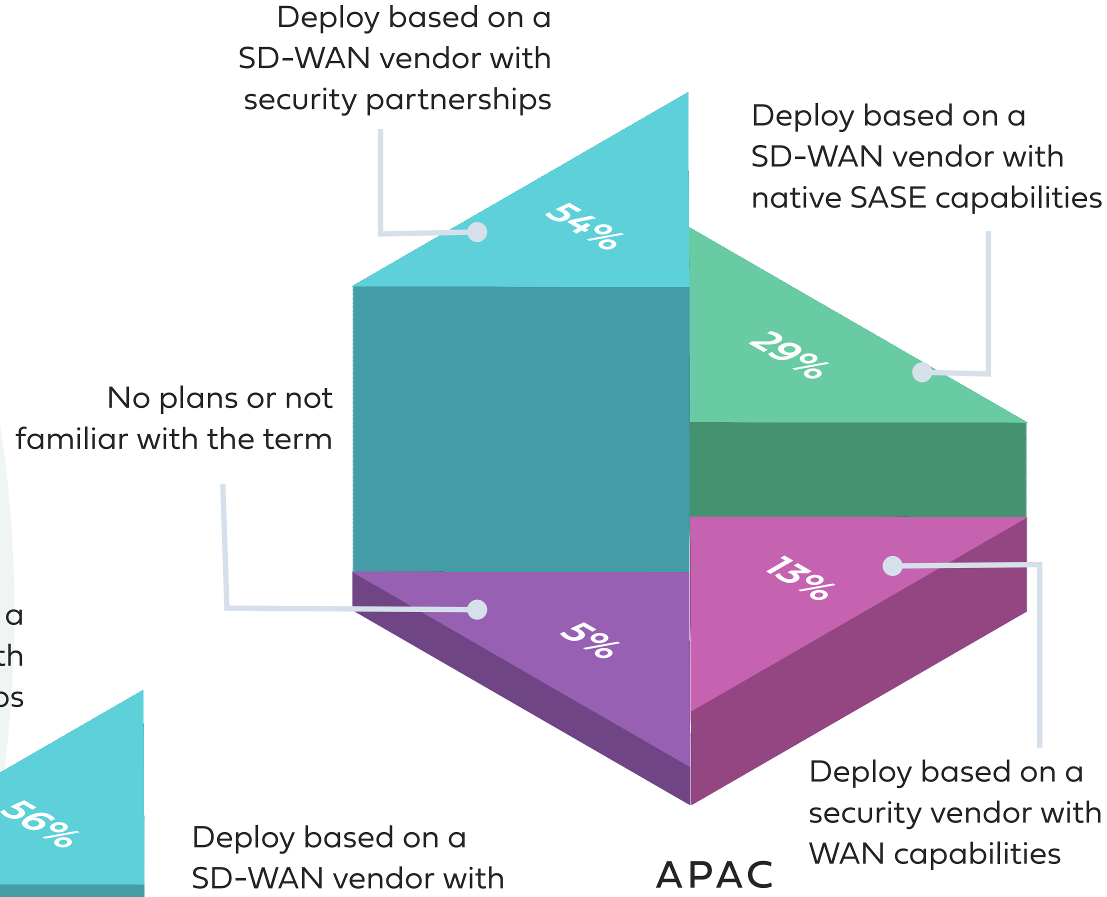


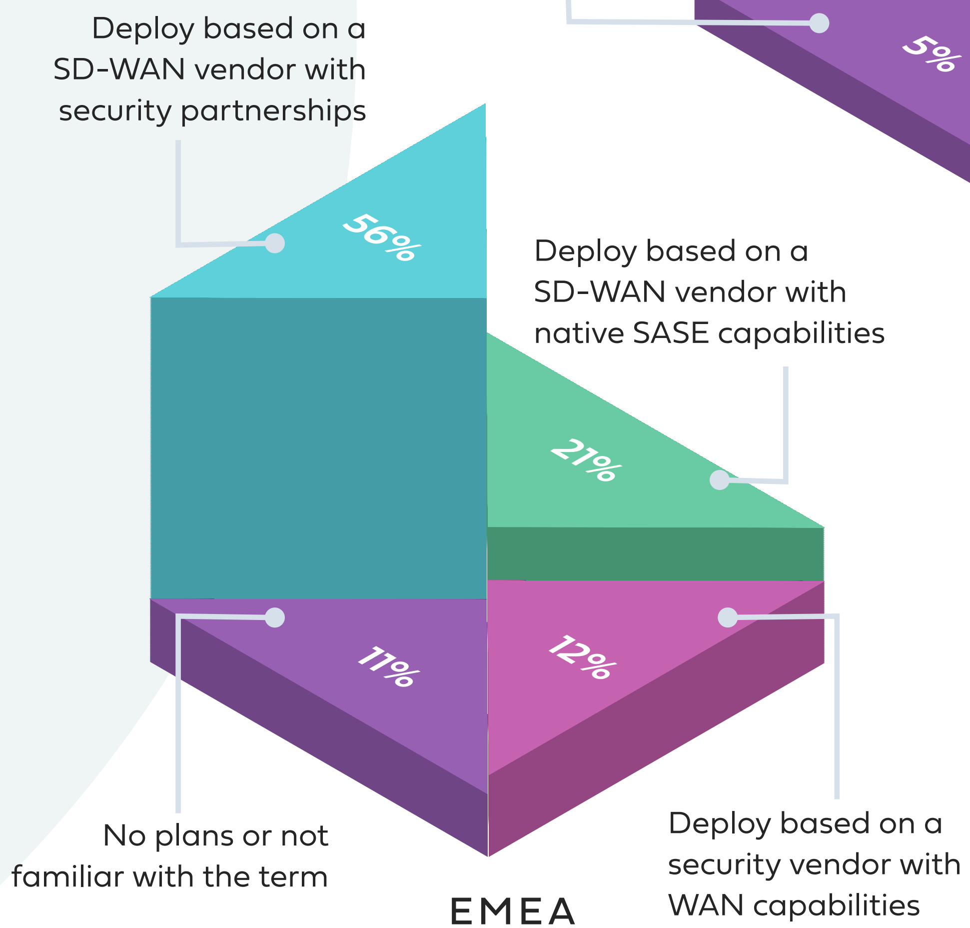
For deployment, 51% will select a best-of-breed solution combining their WAN and security vendor, with only 25% preferring an all-in-one offer.

And, just 12% will look to their security vendor to provide all WAN elements.

Geographic Breakdown 2021





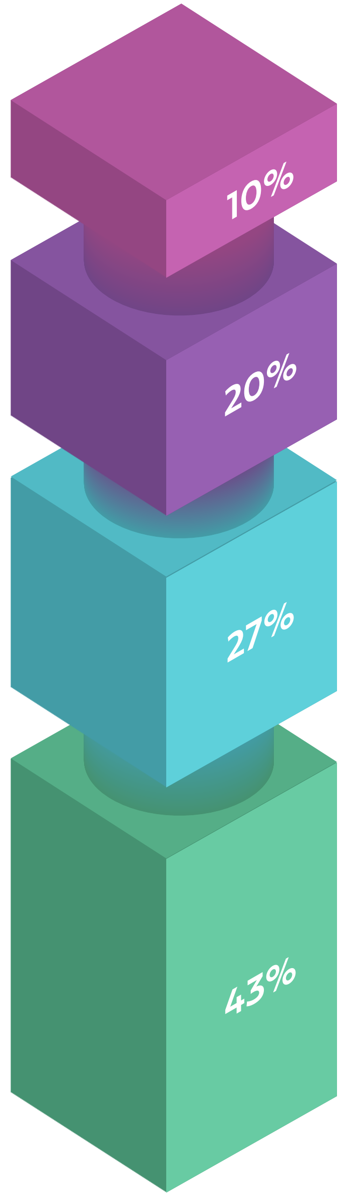


aryaka SOTW 2021 Global State Of The WAN

WAN Security Vendor Selection

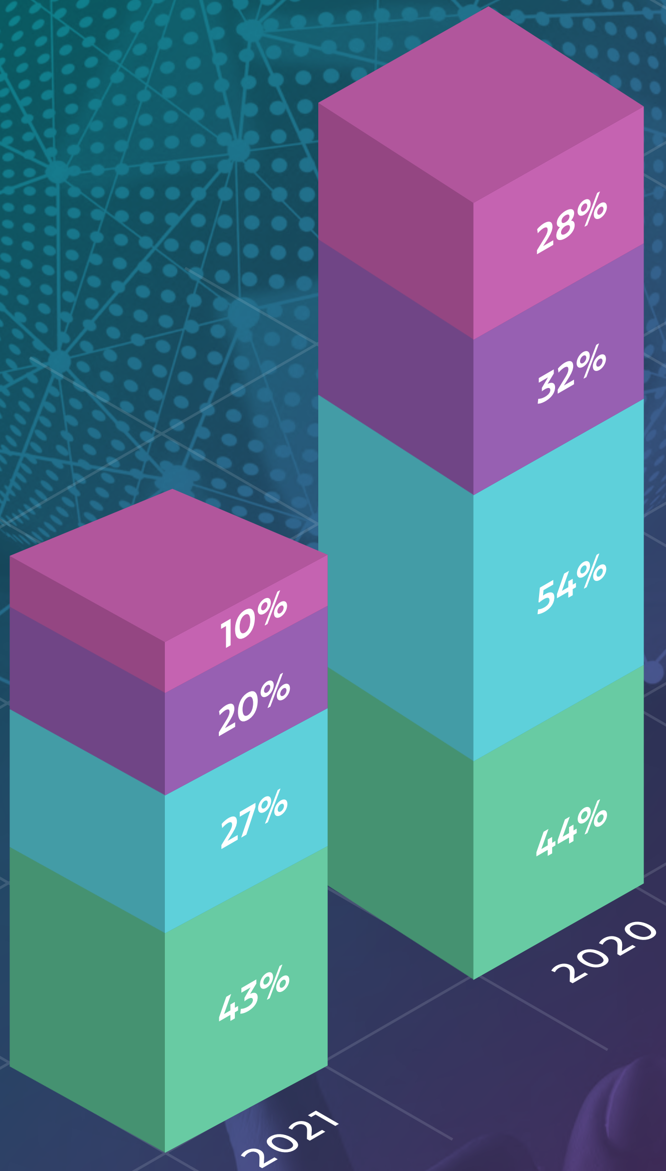
What approach will you take for WAN security?

Top Responses	%
Security provided by a single security vendor in the cloud	43%
Security provided by multiple vendors at the edge	27%
Security provided by a single SD-WAN vendor at the edge	20%
Security provided by multiple vendors in the cloud	10%
Total Responses	1334



aryaka SOTW 2021 Global State Of The WAN

Year-to-Year



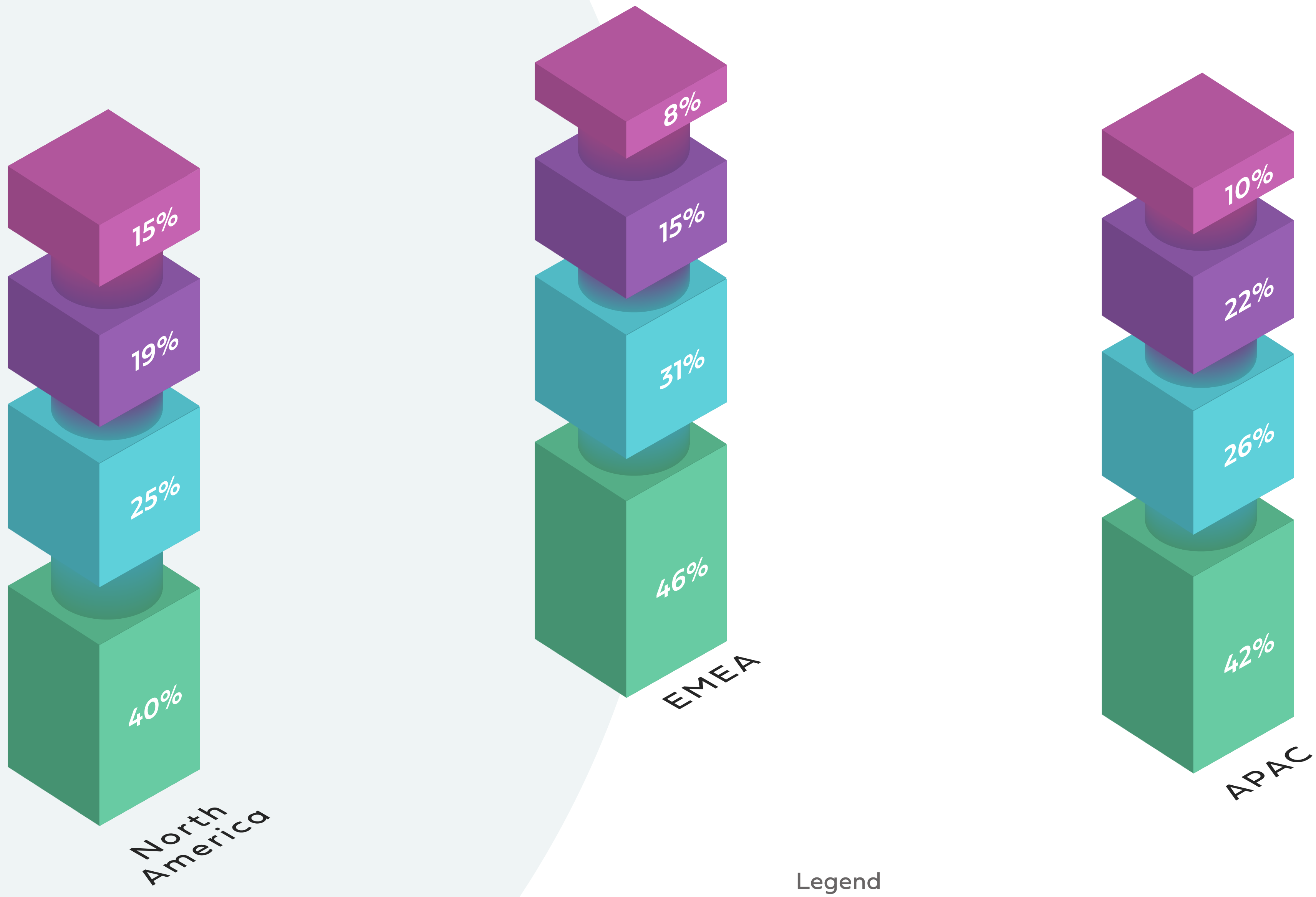
- Looking at SASE deployments, 43% identify the cloud as key. No surprise, given SASE architecture fundamentals, but 27% still see a need for edge capabilities
- Only 20% will look to their SD-WAN vendor to provide this capability at the edge

Legend

- Security provided by multiple vendors in the cloud
- Security provided by a single SD-WAN vendor at the edge
- Security provided by multiple vendors at the edge
- Security provided by a single security vendor in the cloud

aryaka SOTW 2021 Global State Of The WAN

Geographic Breakdown 2021



Legend

- Security provided by multiple vendors in the cloud
- Security provided by a single SD-WAN vendor at the edge
- Security provided by multiple vendors at the edge
- Security provided by a single security vendor in the cloud

Planning Checklist

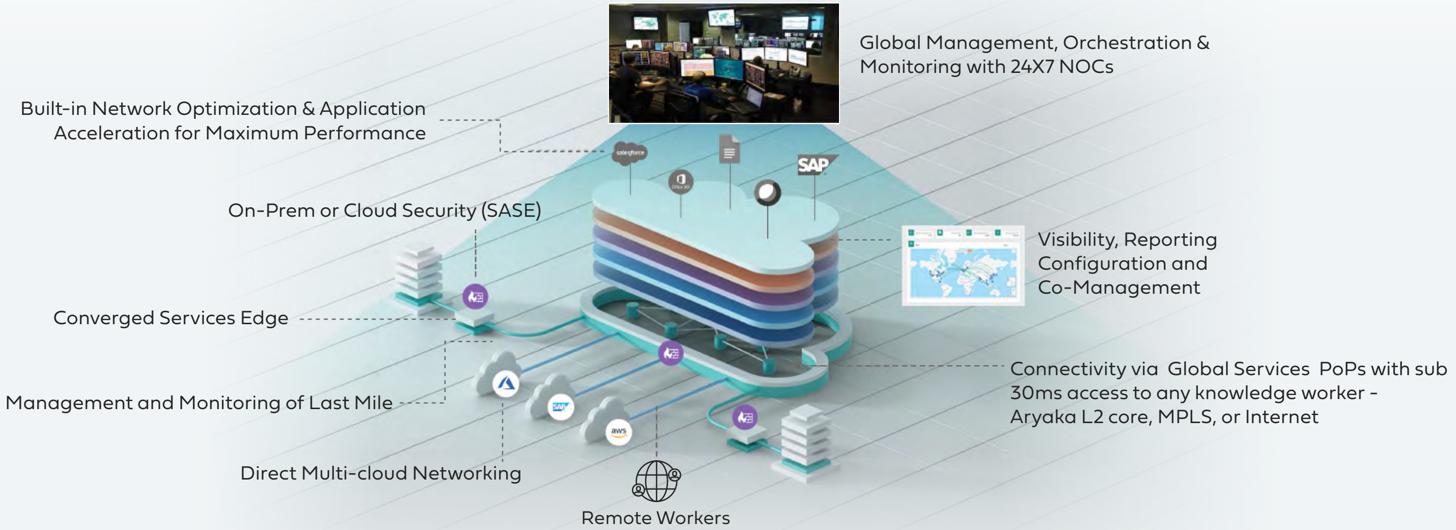
Network Architect Planning

- ☑ Design and evaluate solutions for operational simplicity
- ☑ Define and measure SLAs for global and regional application performance and the user experience
- ☑ Focus on cloud application experience and security
- ☑ Evaluate suitability of network for global voice and video delivery
- ☑ Implement the foundation for a multi-cloud fabric architecture
- ☑ Prepare a plan for gradually migrating off MPLS without risk
- ☑ Plan for service delivery and application experience vs. just speeds/feeds
- ☑ Don't underestimate the need for seamless WAN optimization
- ☑ Establish a common blueprint for SD-WAN, SASE, and the cloud
- ☑ Plan for Hybrid Workplace flexibility and scalability

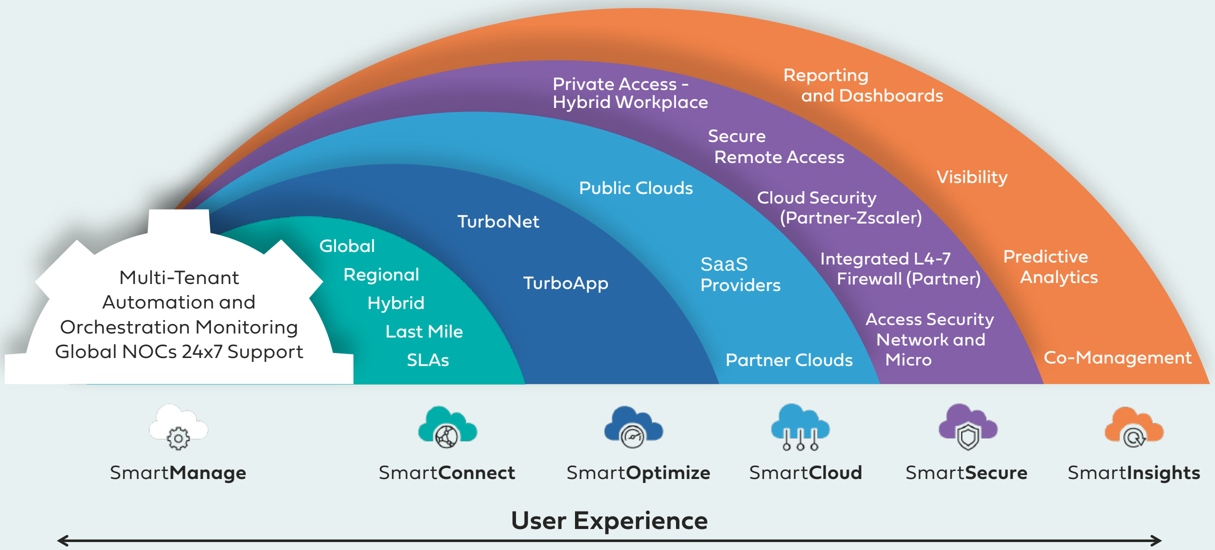
CIO Planning

- ☑ Be the agent for change, enabling collaboration between your network, security, cloud, and application teams
- ☑ Recognize the WAN as a strategic asset that can enable/disable your other investments
- ☑ Empower your network teams for WAN transformation
- ☑ Commit to Cloud-First WAN principles spanning SD-WAN and SASE
- ☑ Evaluate in-house vs. managed services approaches
- ☑ Explore managed as-a-Service approaches to de-risk change management and accelerate transformation
- ☑ Challenge your network team to deliver on business agility and look beyond old-world Telco contracts
- ☑ Double down on productivity and collaboration approaches as well as remote-worker strategies
- ☑ Invest in automation, 5G, AI/ML technologies with predictive analytics
- ☑ Don't panic!

Aryaka SmartServices: The Cloud-First WAN Company



Consume your WAN-as-a-Service: Delivering a Cloud-First Experience



Why Aryaka?

Find out why Aryaka's Cloud-First approach to managed SD-WAN resonates with hundreds of global customers

Scan me to learn more

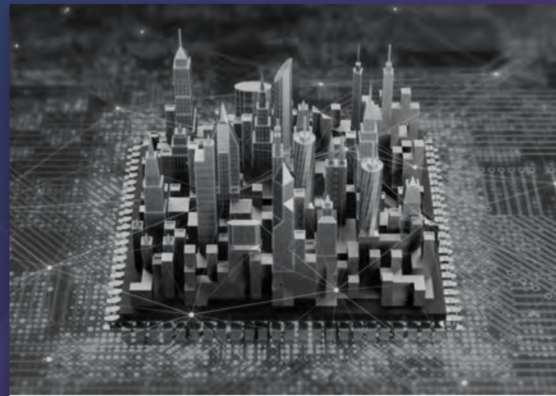
https://sommita.net / info@sommita.net / 206-783-4742

Top Use Cases

Multi-Cloud

Application Performance

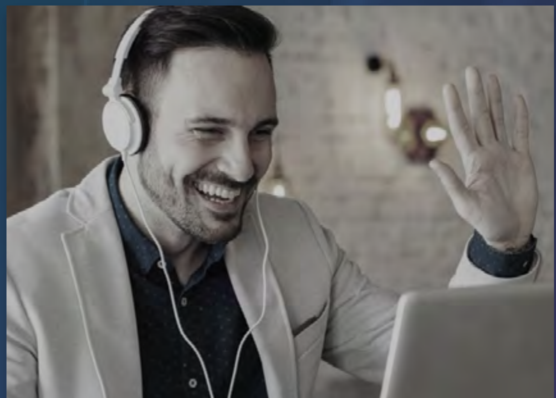
MPLS Migration



SASE

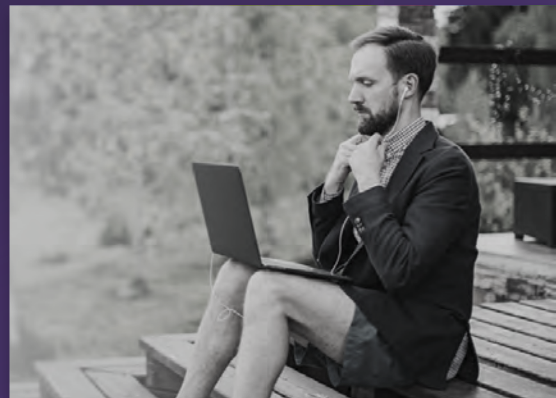
Adopt a SASE Architecture

Connectivity to China



UCaaS Around the Globe

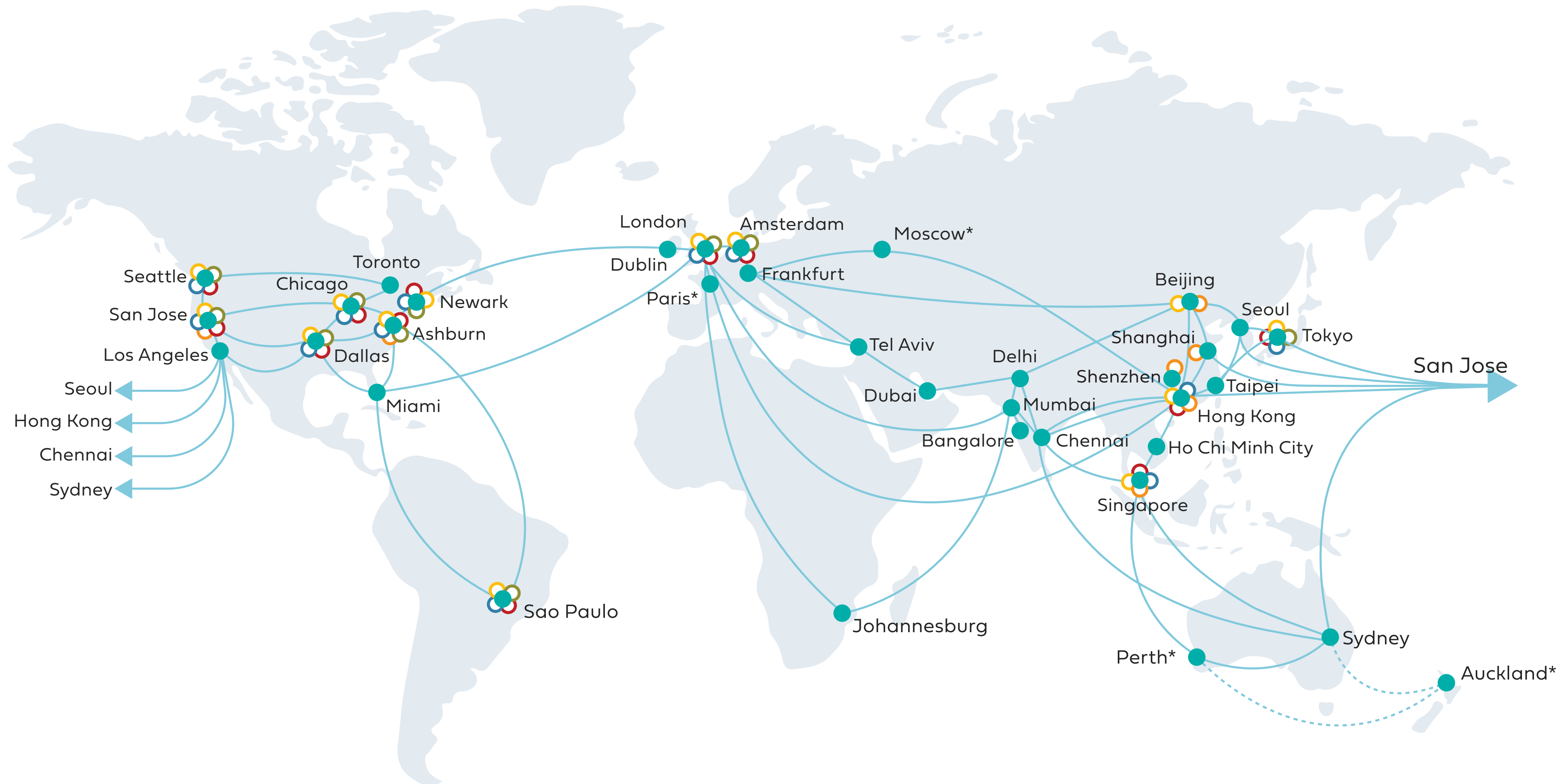
Digital Transformation



Hybrid Workplace

https://sommita.net / info@sommita.net / 206-783-4742

Global Network of Aryaka Services PoPs



*Available in 2021, while dates are subject to change: Perth in Q2, Moscow in Q3, Paris in Q4, Auckland in Q4.

Aryaka POPs AWS Google Alibaba Azure Oracle

Our Customers

What Customers Say About Us

Aryaka accelerated our global applications by up to 80% and accelerated our applications in China by 10X.

— Vladika Arhsanski, Director of Communication & Infrastructure, Nvidia Networking Business Unit

Aryaka accelerated the connections from our china locations to two cloud service providers: Azure and AWS. Files that used to take five minutes to open using the Internet now take only 30 seconds after deploying Aryaka.

— IT Manager, Large Enterprise Construction Company

Aside from the technical benefits, Aryaka's ability to monitor our network health and work directly with our ISP providers has significantly reduced the amount of time we spend on troubleshooting ISP-related issues.

— Director of Infrastructure, S&P Electronics Company

Aryaka support always treats any issue as if it's their issue, even when it's not. Most other vendors try to pass off issues to a carrier or another hardware vendor, but Aryaka will always work with us to get to a resolution.

— Director of IT, Small Business Computer Software Company

Without Aryaka's Last Mile Management service, we would be struggling to manage and care for the various circuits we have in our global locations with our limited resources.

— Director of IT, Small Business Computer Software Company

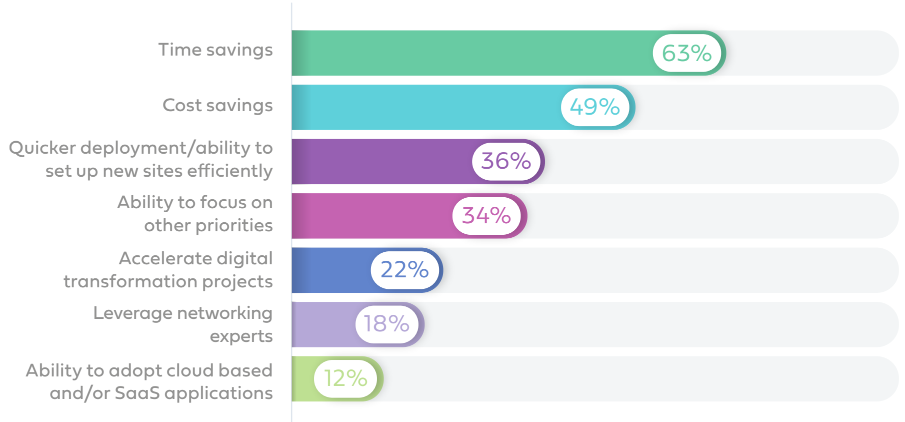
Aryaka accelerates our applications, saves us time and improves our productivity.

— Soumana Zakari, Finance, Westinghouse Air Brake Technologies Corporation

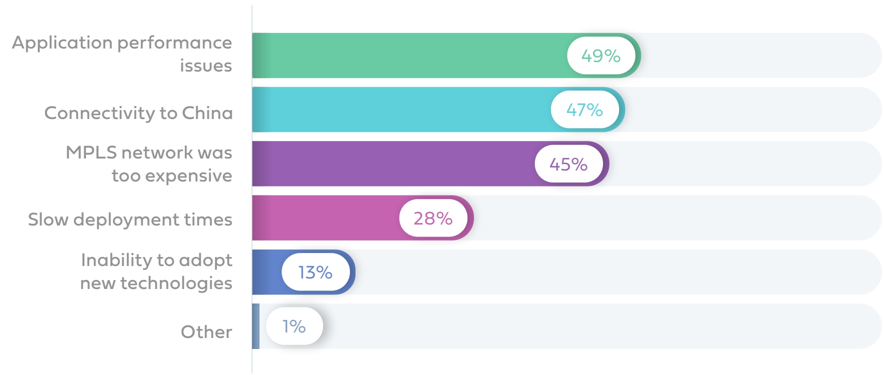
Scan Me

What Customers Say About Us - TechValidate Survey

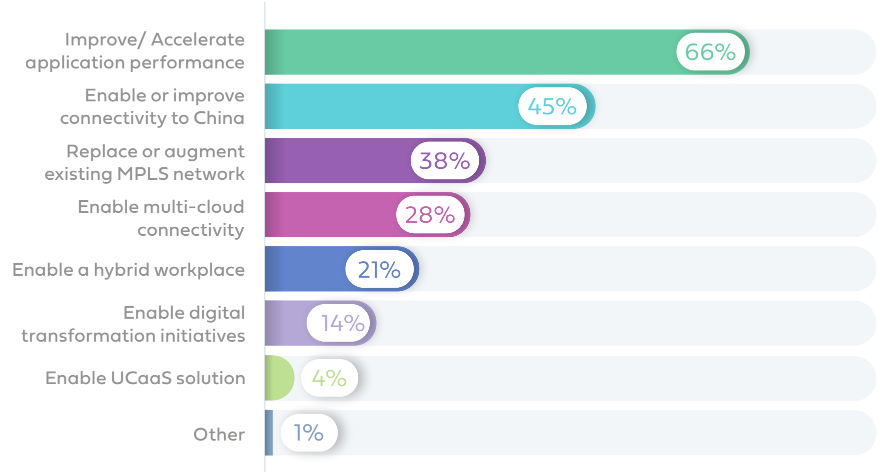
What benefits has your IT organization realized since deploying Aryaka?



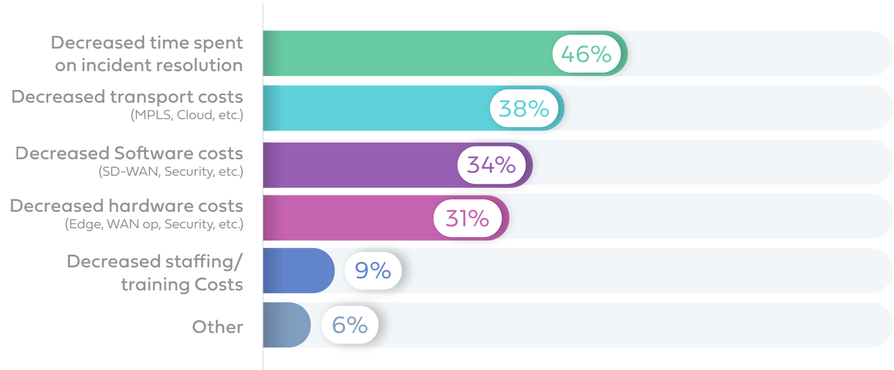
What challenges were you having that led you to select Aryaka as your SD-WAN vendor?



Which use case(s) does Aryaka help you solve?



How has Aryaka impacted your network TCO?



Aryaka partners with third-party researcher TechValidate to periodically survey our global customer database and publish the results.

Scan Me

Learn More

Scan Me

Aryaka's Cloud-First WAN for Dummies details how to consume your network as a service, how to achieve fully integrated security, and how to make your network as easy as your cloud.

Scan Me

Aryaka is recognized in the **2021 Gartner Peer Insights 'Voice of the Customer':** WAN Edge Infrastructure for the **Second Year** in a row!

Aryaka delivers global and regional managed networking and security services, combining both a private backbone and its own technology. We combine the best of SD-WAN and SASE to deliver an unparalleled customer experience.

aryaka
The Cloud-First WAN Company

About Aryaka Networks

Aryaka, the Cloud-First WAN company, brings agility, simplicity and a great experience to consuming the WAN as-a-service via a converged SD-WAN and SASE architecture. An optimized global network and innovative technology stack deliver the industry's #1 managed SD-WAN service and set the gold standard for application performance. Aryaka's SmartServices offer connectivity, application acceleration, security, cloud networking and insights leveraging global orchestration and provisioning. The company's customers include hundreds of global enterprises including several in the Fortune 100.

LEARN MORE | info@sommita.net | +1.206.783.4742

aryaka SOTW 2021
Global State Of The WAN

$10.00
ISBN 978-0-578-88181-2
51000>
9 780578 881812

https://sommita.net / info@sommita.net / 206-783-4742