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# Network as a Service: State of the Market

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# In This InfoBrief

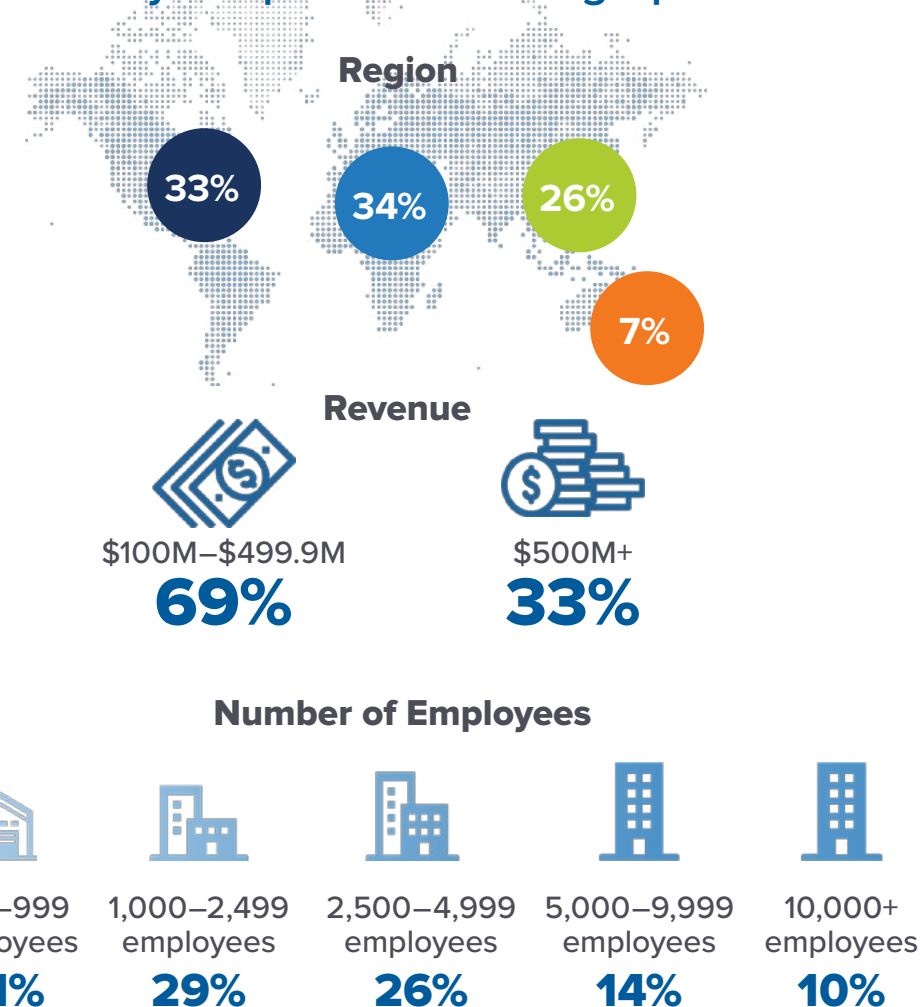
This IDC InfoBrief presents findings from a global online survey of enterprises on the opportunities, drivers, and benefits of network as a service (NaaS).

NaaS has emerged in recent years as a flexible consumption model for networking. Organizations are increasingly realizing how a NaaS provider can become a strategic partner for providing enterprise-grade cloud and edge network access connectivity to their business.

This survey explores the current state of the NaaS market, focusing on network access delivered as a service. The survey, sponsored by Aruba, a Hewlett Packard Enterprise company, targeted:

- ▶ 1,101 respondents from 11 countries: United States, Canada, United Kingdom, Germany, Spain, India, Japan, South Korea, Singapore, Australia, and New Zealand
- ▶ Respondents with titles ranging from C-level (CIO, CTO, CFO, COO); to VP, executive VP, senior VP; to director/manager of IT or networking or IT/network architect
- ▶ Respondents from a range of vertical industries such as hospitality, education, retail/wholesale, manufacturing, banking, telecom/utility, government, and healthcare

## Survey Respondent Demographics



# Network as a Service Addresses Top Network Concerns

## Enterprise network access is continuing to evolve:

There are more user and Internet of Things-based devices than ever, and all need network access.

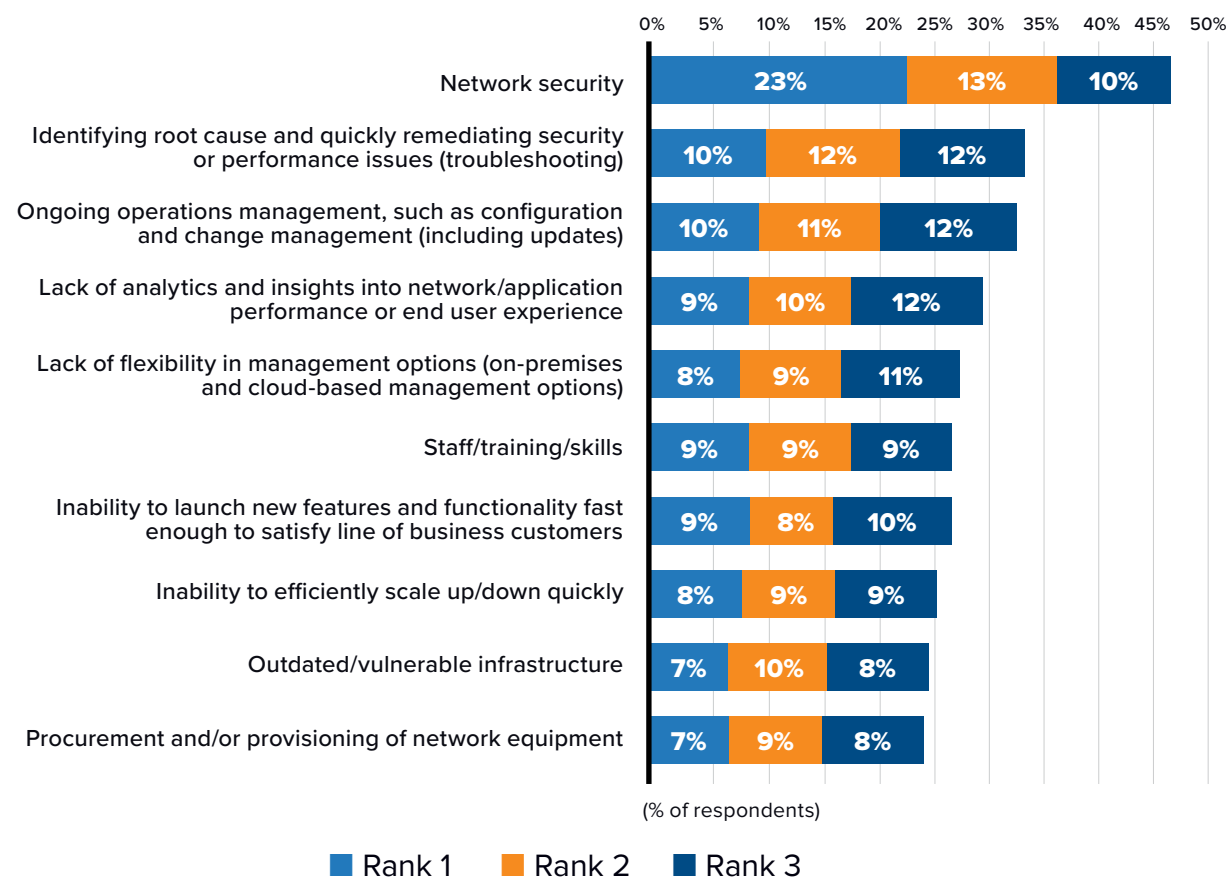
The edge of the enterprise network has become increasingly distributed; enterprise-class connectivity must extend to not just offices, but to remote workers and field operations.

High-bandwidth, latency-sensitive, cloud-hosted applications dominate network traffic. Top network management challenges include securing the network, identifying issues before they impact users, and easing ongoing operations.

Organizations are looking to accelerate connectivity to edge locations while easing the burden of managing those new locales. They want simple platforms that enable access to new technology, and they want to ensure the network meets the needs of their business.

**Enterprise NaaS has emerged as a solution to these challenges.**

## Q: What are the biggest concerns with managing your network today? (Rank top 3)



Source: IDC Aruba NaaS Study, sponsored by Aruba, a Hewlett Packard Enterprise company, December 2021. n = 1,101

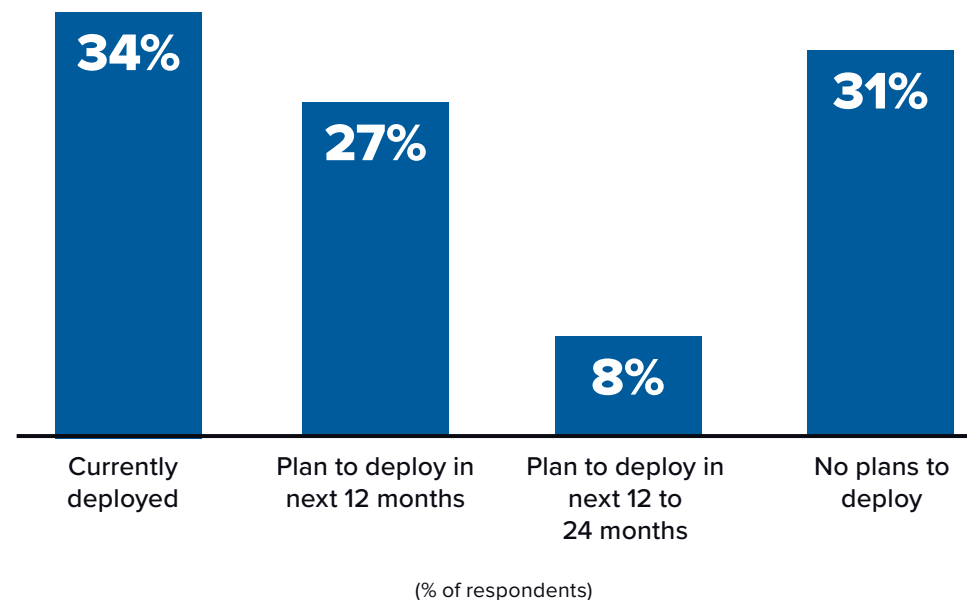
# NaaS Adoption Is Set to Grow in the Next 12 Months

Over the past decade, enterprises have gained familiarity with “as a service” consumption models. Now those models are being applied to networking. NaaS implementations can differ, but over **60% of survey respondents associate NaaS with network infrastructure being delivered as a service**, which IDC refers to as Enterprise NaaS. Other types of NaaS offerings include cloud-based infrastructure-as-a-service (IaaS) network services or WAN network connectivity from ISPs.

**Adoption of NaaS is nascent but growing.** About one-third of respondents say they already use NaaS, with another quarter saying they plan to deploy NaaS within the next year.

**C-level IT executives (CIO, CTO) are bullish on NaaS**, with 58% saying they’ve currently deployed NaaS. Network practitioners (network architects or admins) were more likely to say they don’t plan to deploy NaaS, indicating the need to educate IT workers on the benefits of NaaS.

## Q. What is your organization’s current or planned use of network-as-a-service offerings?



Source: IDC Aruba NaaS Study, sponsored by Aruba, a Hewlett Packard Enterprise company, December 2021. n = 1,101

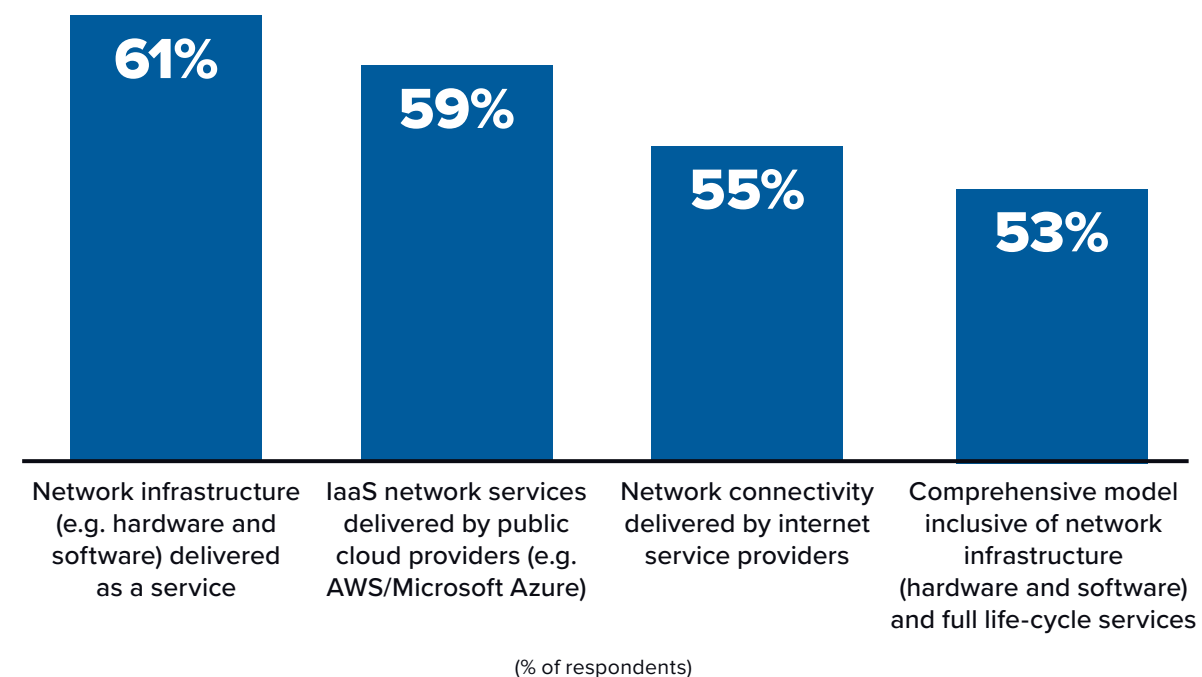
# NaaS Adoption Is Set to Grow in the Next 12 Months (continued)

For network practitioners, **NaaS can increase productivity**: Edge network infrastructure delivered as a service with advanced management capabilities allows IT workers to rely on a trusted NaaS provider for the non-differentiated, day-to-day management of the network, which frees up time for IT workers to focus on business-enabling tasks while improving the performance and security of the network.

## This InfoBrief will focus on Enterprise NaaS:

Enterprise edge network infrastructure delivered as a service. Enterprise NaaS represents an opportunity for enterprises to reconsider campus, branch, datacenter, and cloud network management. Consuming network hardware and software via a service model can help alleviate network management challenges, accelerate network transformation strategies, and ensure the network is an enabler rather than an inhibitor of business goals.

Q. Which of the following types of network-as-a-service offerings is the organization deploying or planning to deploy?



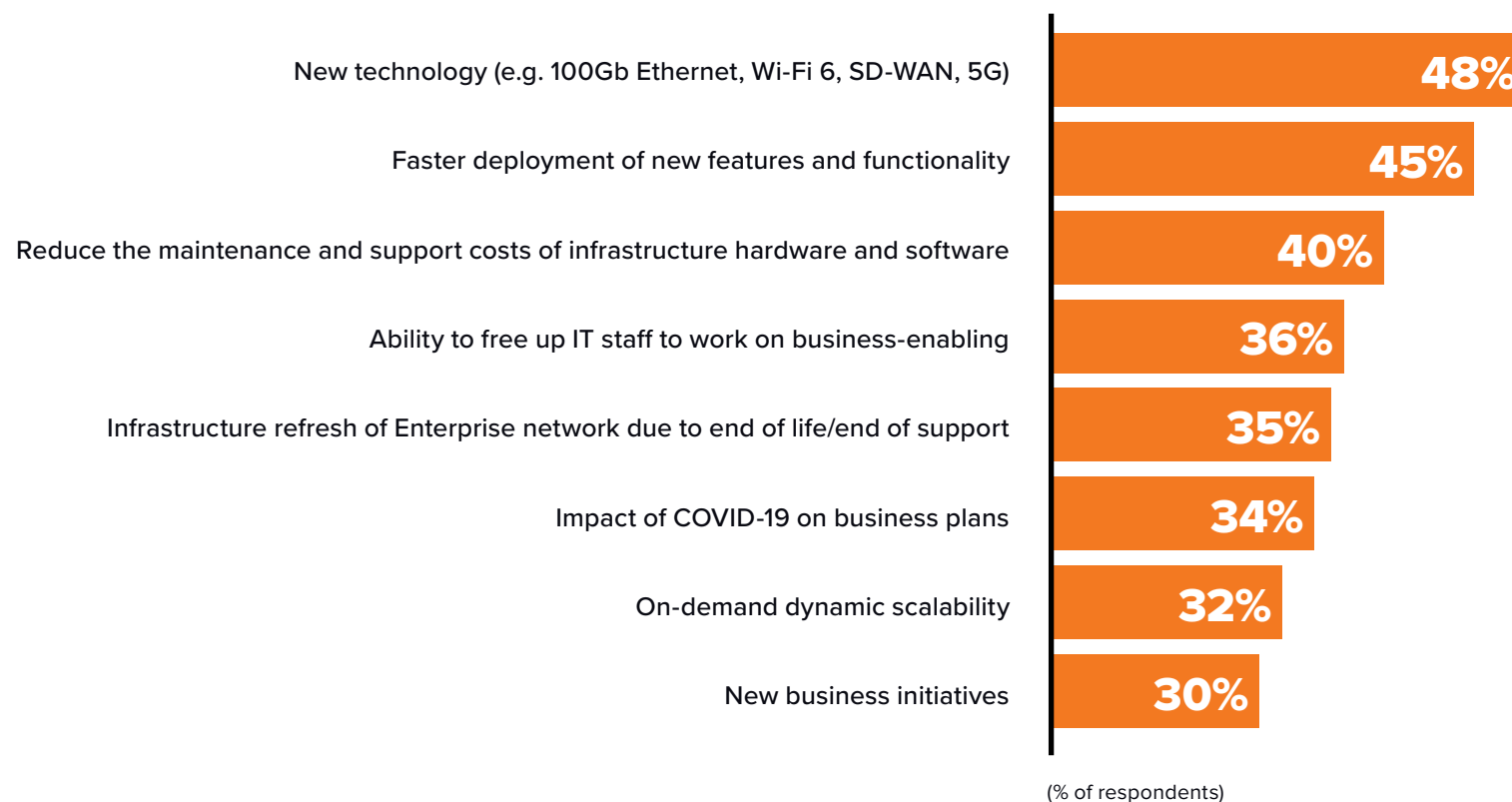
Source: IDC Aruba NaaS Study, sponsored by Aruba, a Hewlett Packard Enterprise company, December 2021. n = 756

# Access to New Technology and Faster Deployment Are Catalysts For NaaS Adoption

Numerous factors can be catalysts for organizations to deploy NaaS, but the top survey responses fall into two broad categories:

- ▶ **Accessing new technology quickly** and efficiently, specifically cutting-edge features, latest security advancements, and business-advancing functionality of network hardware and software. NaaS helps organizations get access to the latest technologies in a flexible consumption model.
- ▶ **Reducing the cost of operating** and maintaining the network by relying on artificial intelligence–enhanced operations to identify and resolve problems before they impact users, freeing up IT staff to work on business-enabling tasks rather than “keeping the lights on.”

## Q. What has triggered or will trigger the use of NaaS within your organization? (Rank top 3)



Source: IDC Aruba NaaS Study, sponsored by Aruba, a Hewlett Packard Enterprise company, December 2021. n = 756

# Top NaaS Benefits: Centralized Management, Greater Security, New Technology

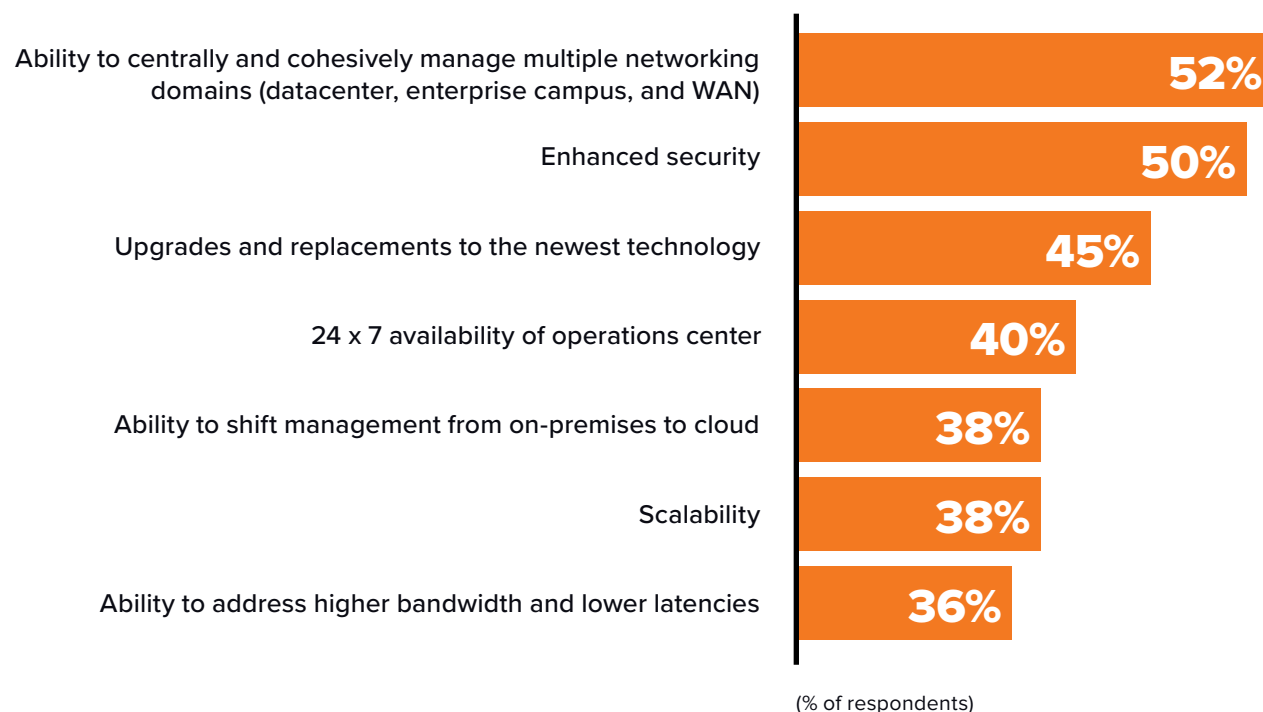
There are myriad benefits NaaS enables, including:

**Centralized management** with the ability to rely on a trusted NaaS partner to get faster access to the latest technology. NaaS platforms have innate functions for insights into network performance and service levels, allowing for centralized management across different points of the network.

**Enhanced security of the network:** NaaS deployments leverage the latest and most secure network infrastructure. Furthermore, NaaS providers can become a trusted partner that quickly identifies and remediates security issues before they impact the business by using advanced automation enhanced by machine learning and artificial intelligence.

**Scale and efficiencies:** NaaS allows organizations to upgrade to the newest technology, rely on powerful cloud-based management platforms, and have dynamic scalability of network infrastructure.

## Q. What are the three most important benefits seen or expected from adopting a NaaS offering?



Source: IDC Aruba NaaS Study, sponsored by Aruba, a Hewlett Packard Enterprise company, December 2021. n = 756



# COVID-19 Caused a Re-evaluation of Network Management

Enterprises are looking for increased agility in their network procurement. NaaS provides a flexible, scalable way to add, remove, or change capacity, along with features and functions quickly and dynamically.

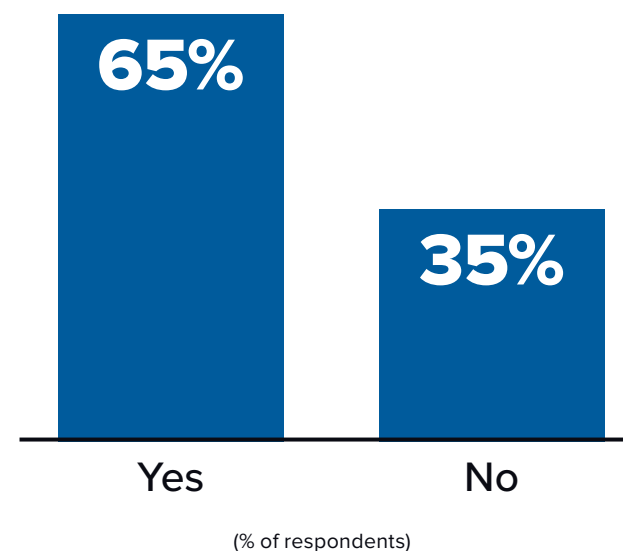
- ▶ 65% of respondents agreed that COVID-19 caused a re-evaluation of their network infrastructure, particularly in retail and hospitality industries.
- ▶ **71% reported that the pandemic shortened planning cycles** for new network infrastructure; 82% of that group said long-term planning cycles have shortened to two years or less.

Other key changes to network management since COVID-19 began include:

- ▶ Greater need for insights to optimize network performance and understand corporate space utilization
- ▶ Increased reliance on cloud-based management platforms
- ▶ Accelerated initiatives to automate networking tasks

**NaaS helps meet each of these needs with a cloud-based platform for analytics to drive automation.**

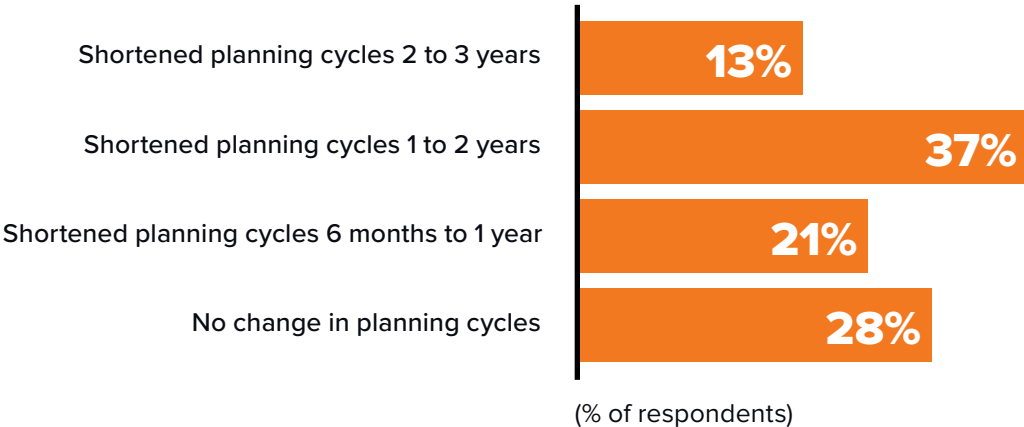
**Q. Would you say that issues arising from the COVID-19 pandemic caused you to re-evaluate your organization's network infrastructure?**



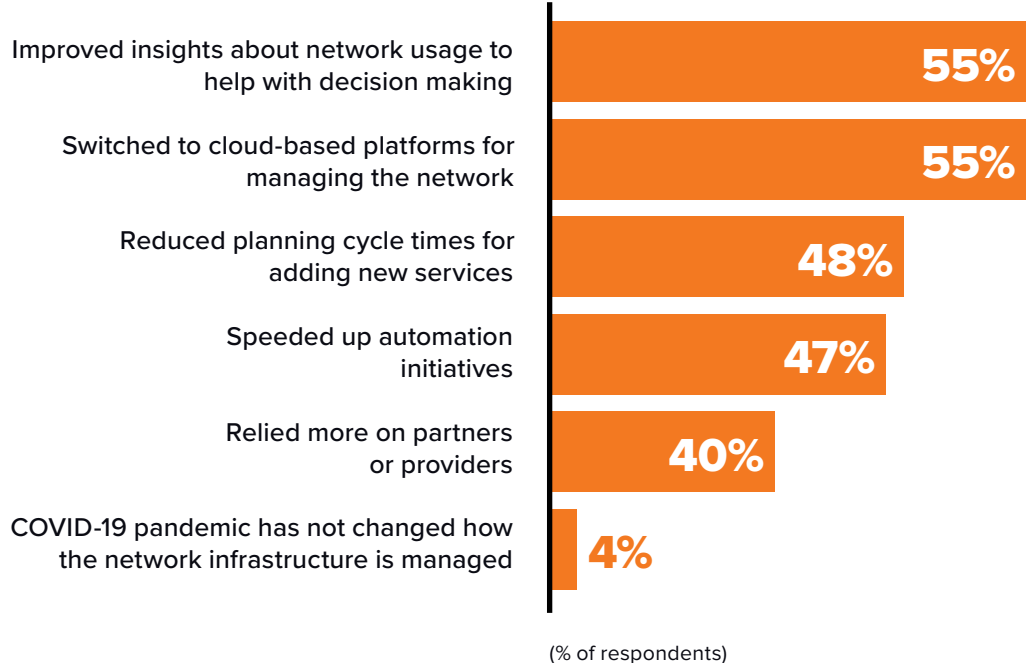
Source: IDC Aruba NaaS Study, sponsored by Aruba, a Hewlett Packard Enterprise company, December 2021. n = 1,101

# The Pandemic Changed Planning Cycles and Infrastructure Management

Q. How have your organization's typical long-term planning cycles for network infrastructure changed from before the COVID-19 pandemic?



Q. How has the COVID-19 pandemic changed how your organization's network infrastructure is managed?



**Over 70% of respondents have shortened long-term planning cycles.**

Source: IDC Aruba NaaS Study, sponsored by Aruba, a Hewlett Packard Enterprise company, December 2021. n = 1,101

# NaaS Vendors Facilitate Sustainability and ITAD Goals

Most organizations (82%) recognize the importance of IT asset disposition (ITAD) services and sustainability goals. Secure asset decommissioning reduces the risk of financial penalties and data breaches and helps meet sustainability goals.

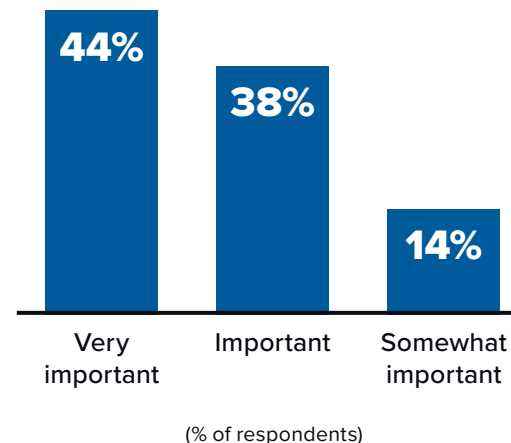
Enterprises need assistance achieving their ITAD and sustainability goals to avoid regulatory and financial penalties. Beyond penalty concerns, disposal efforts are also a burden for their IT staff. **Deploying a NaaS offering can reduce these issues.**

IDC research underscores the importance of this topic: **77% of respondents believe that ITAD services are essential to NaaS offerings.**

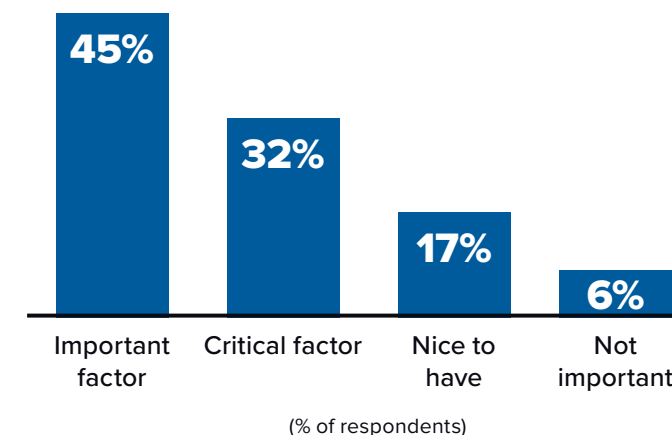
ITAD is a core part of NaaS and removes this burden from the IT staff, a benefit over purchase or lease.

Additionally, as sustainability requirements increase, IT organizations will rely on vendor partners to provide them with key metrics for SER (sustainability and environmental reporting) such as power usage, carbon emissions, and end-of-life disposal metrics (recycled, refurbished, or disposal).

Q. How important is it to the organization to utilize ITAD services in meeting sustainability goals?



Q. One of the potential advantages of a NaaS solution is that the end-of-life decommissioning and disposal (ITAD services) are part of the offer and handled by the vendor/partner. How important a factor is the provision of ITAD services in consideration of a NaaS offering?



Source: IDC Aruba NaaS Study, sponsored by Aruba, a Hewlett Packard Enterprise company, December 2021. n = 1,101

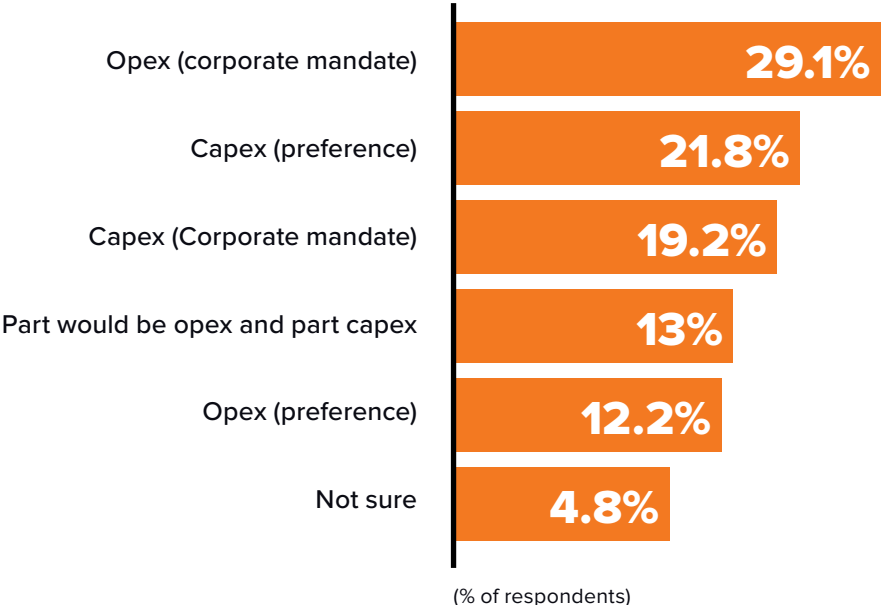
# NaaS Ushers in Flexibility for Capex or Opex Financing

As enterprises have become more comfortable with operating expense (opex) models for IT infrastructure (e.g., cloud services), those models are increasingly being applied to network infrastructure in place of capital expenditures (capex).

**41.3% of respondents are using opex budgets to fund a NaaS offering, edging out a capex option.**

Network practitioners recognize the need to tie the cost of network infrastructure to the value it provides and desire more agility in the procurement and management of the network. The flexibility of NaaS meets this need.

## Q. Which type of budget (opex or capex) would a NaaS offering be assigned to?



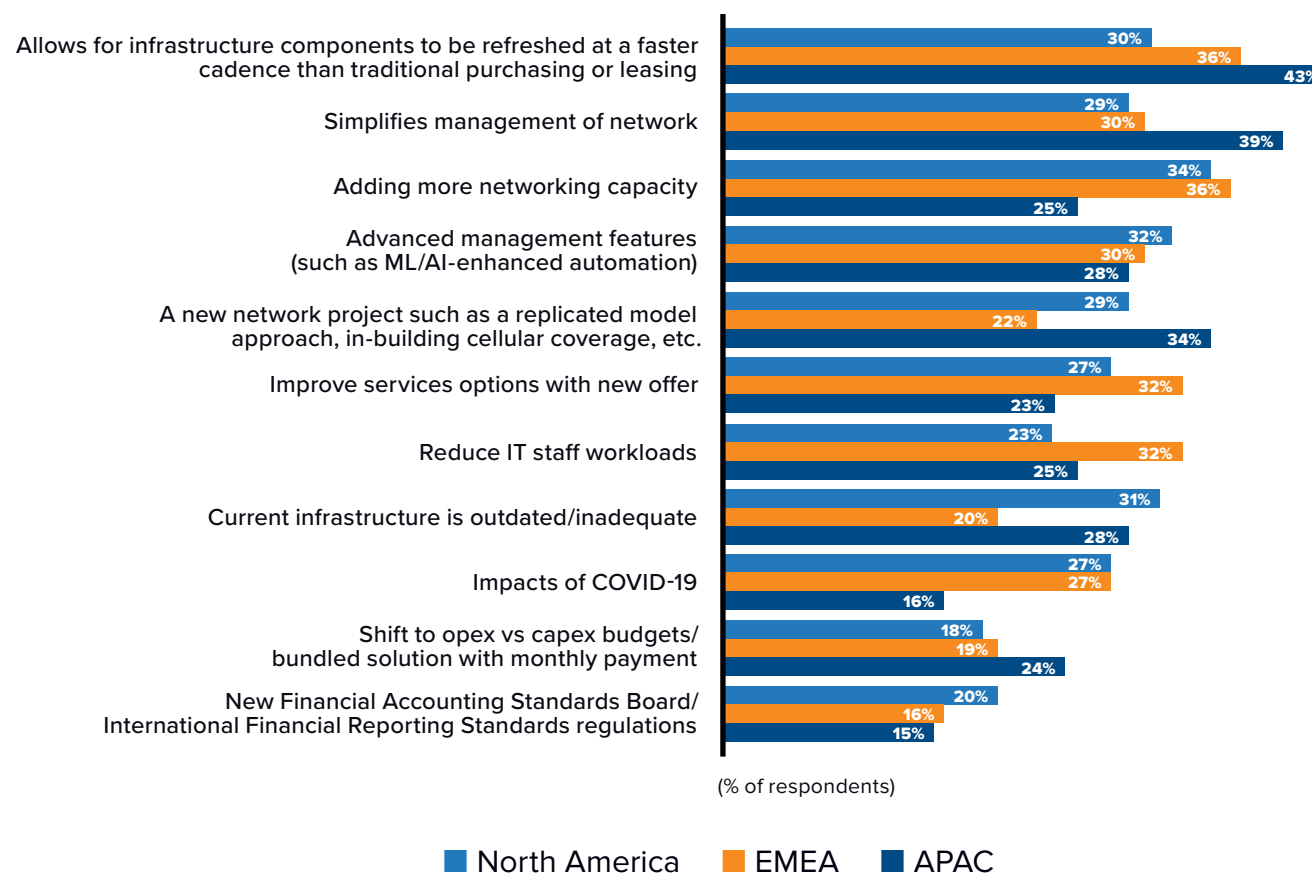
Source: IDC Aruba NaaS Study, sponsored by Aruba, a Hewlett Packard Enterprise company, December 2021. n = 756

# Future Adopters Seek Faster Network Refreshes and Simplified Management

Looking exclusively at respondents who have not yet deployed NaaS, this cohort pointed to specific benefits that are driving their plans to deploy NaaS in the future, including:

- Faster refresh of infrastructure, including more dynamic scalability
  - Simplified management, including the use of automation enhanced with machine learning or AI
  - The ability to improve network services or reduce IT staff workloads
- ▶ Within the future adopter group, respondents in Asia/Pacific specifically value faster access to new technology.
  - ▶ North America and European respondents value the ability of NaaS to add network capacity on demand.

## Q. Future adopters: Which factors are most important in driving your organization’s decision to deploy a NaaS offering?



Source: IDC Aruba NaaS Study, sponsored by Aruba, a Hewlett Packard Enterprise company, December 2021. n = 386

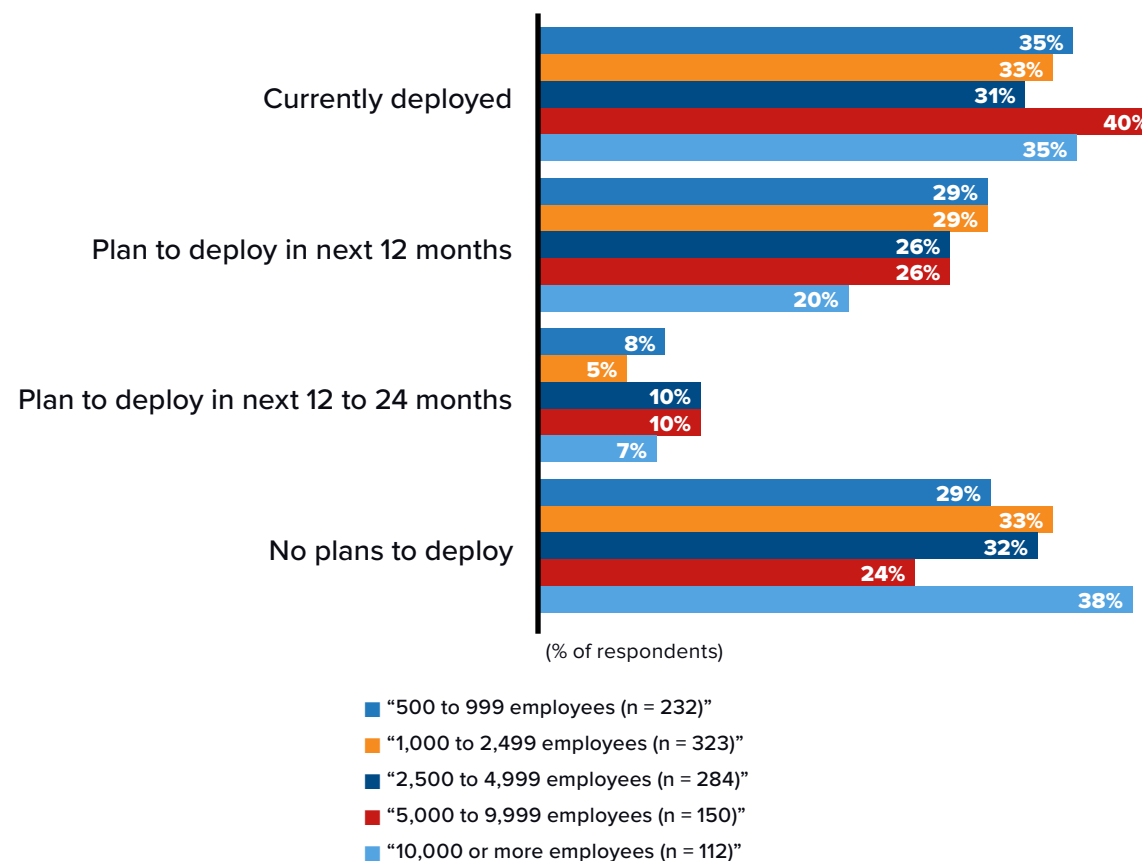
# NaaS Adoption Is Set to Expand to Wider Audience

Data from the IDC survey on NaaS comes from companies across multiple regions of the world, and in multiple sizes of company and vertical industries.

## NaaS adoption by company size:

- ▶ NaaS adoption is highest among large organizations that have been “first movers.” Large organizations were also more likely to have deployed both enterprise NaaS and public cloud NaaS; smaller organizations were less likely to have deployed public cloud NaaS.
- ▶ Midsize organizations indicated they would be most likely to deploy NaaS in the near future.
- ▶ As NaaS models continue to mature, offerings are becoming more applicable to a wider set of organizations. Whereas large organizations are typically early adopters of new technologies and offerings, IDC data indicates that midsize organizations (between 1,000 and 10,000 employees) are set to be the next wave of enterprise NaaS adoption.

## Q. What is your organization’s current or planned use of network-as-a-service (NaaS) offerings?



Source: IDC Aruba NaaS Study, sponsored by Aruba, a Hewlett Packard Enterprise company, December 2021. n = 1,101

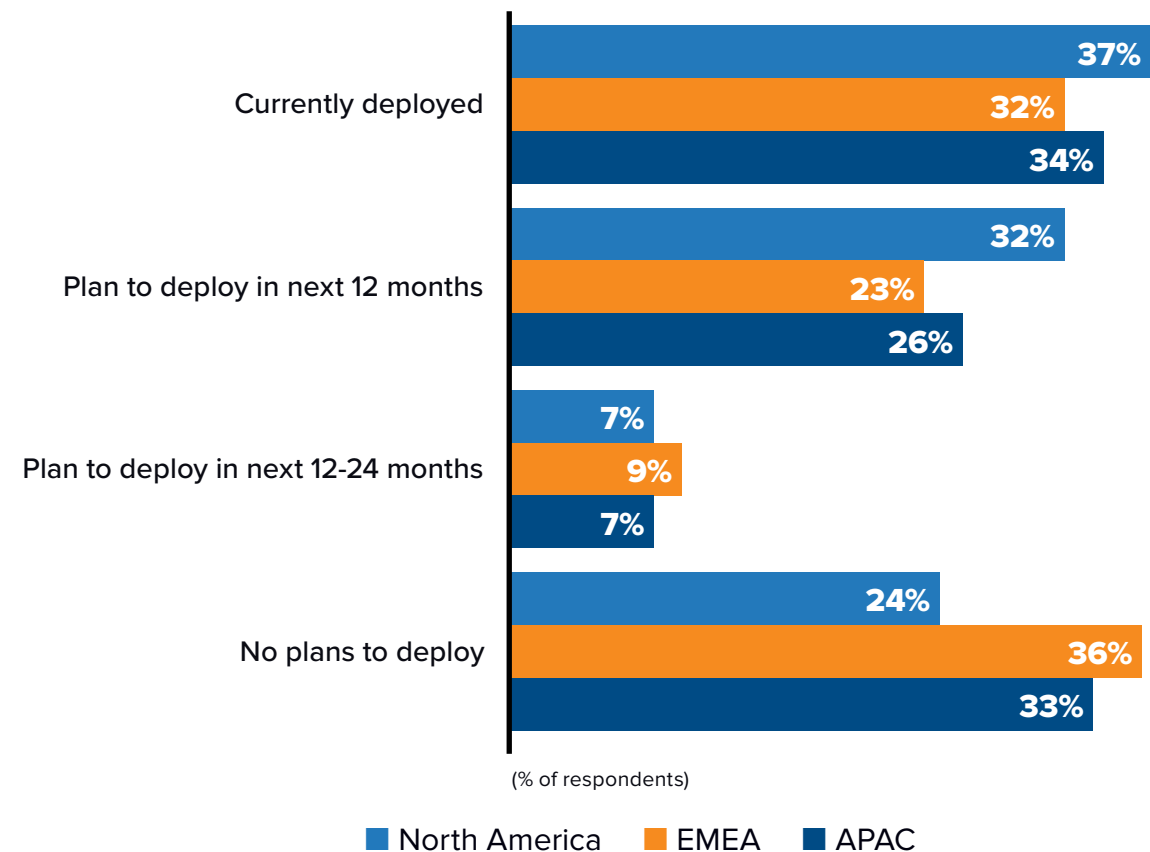
# NaaS Adoption: Regional Highlights in Europe and Asia

## NaaS adoption by region

North America has the highest initial adoption of enterprise NaaS models, but adoption is growing in Europe and Asia.

- ▶ Survey respondents in Europe are most concerned about having outdated infrastructure and alleviating staff and training shortages. NaaS can help overcome these challenges by providing a trusted partner to deploy and manage the enterprise network.
- ▶ In Asia/Pacific, a top network management concern is the fast identification and remediation of network performance issues. NaaS models provide a centralized dashboard with visibility and analytics of the enterprise network, along with advanced automation capabilities.

## Q. What is your organization's current or planned use of network-as-a-service (NaaS) offerings?



Source: IDC Aruba NaaS Study, sponsored by Aruba, a Hewlett Packard Enterprise company, December 2021. n = 1,101

# Importance of Key Attributes Will Drive NaaS Adoption

Respondents were asked to rank the most important attributes of a NaaS offering. Qualities that rose to the top include:

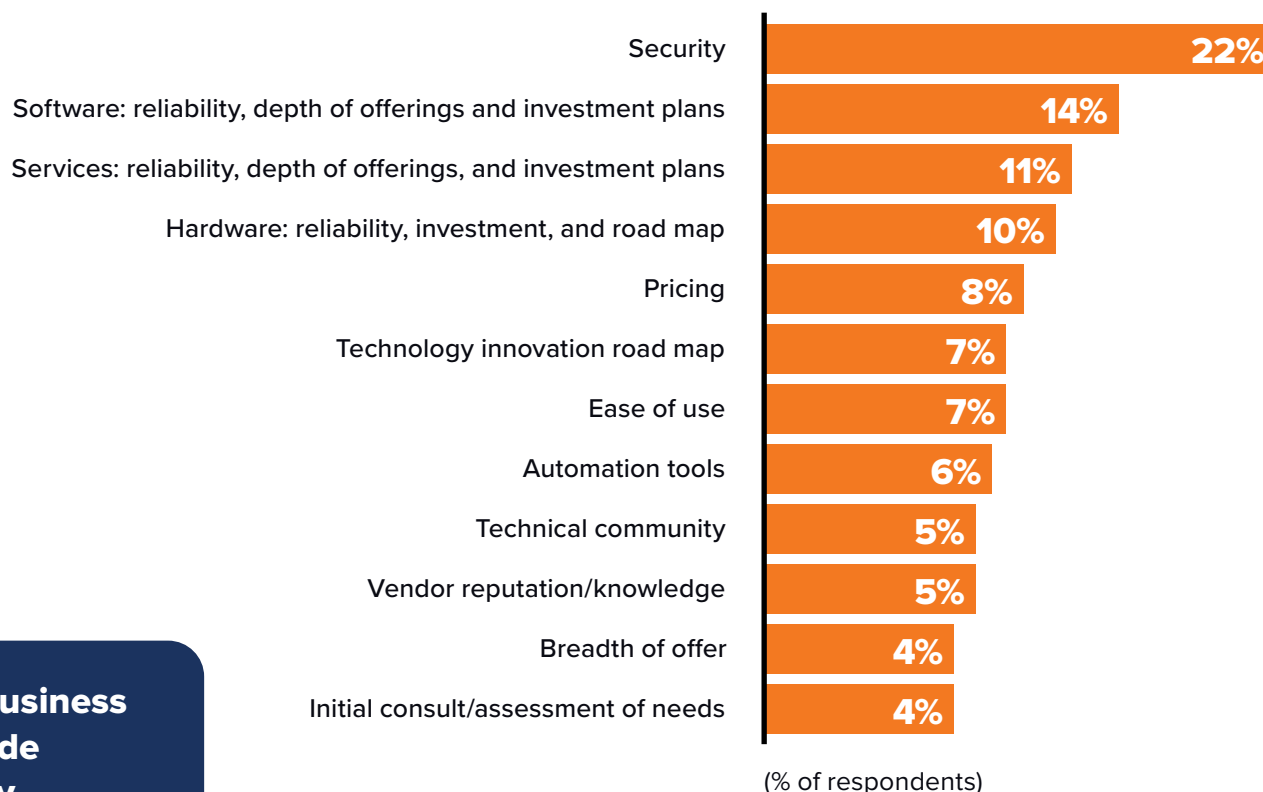
- ▶ Security through the deployment of new features and functions, plus advanced management
- ▶ Reliability of the software, services, and hardware
- ▶ Depth of offering and future road map/investment plans of NaaS vendor
- ▶ Pricing and ease of use
- ▶ Automation tools, technical community, and vendor reputation

When choosing a NaaS provider, consider an organization that can become a strategic partner to your organization.

Evaluate the key NaaS attributes listed here and consider which are most important to the overall goals of your organization.

**By 2025, IDC predicts that 60% of enterprises will fund line-of-business and IT projects through opex budgets, matching how vendors provide their services. The focus will be on outcomes that are determined by service-level agreements and key performance indicators.**

## Q. What do you think would be the most important attributes of a NaaS product offering?



Source: IDC Aruba NaaS Study, sponsored by Aruba, a Hewlett Packard Enterprise company, December 2021. n = 1,101



# About the Analysts

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Brandon Butler is a Research Manager with IDC's Network Infrastructure group covering Enterprise Networks. His research focuses on market and technology trends, forecasts and competitive analysis in enterprise campus and branch networks. His coverage includes technologies used in local and wide area networking such as Ethernet switching, routing/SD-WAN, wireless LAN, and enterprise network management platforms.

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Susan Middleton leads IDC's worldwide research on IT equipment, software, and services financing markets. As Research Vice President for IDC's Flexible Consumption and Financing Strategies for IT Infrastructure research, her analysis provides insight from both a supply-side and a buyers' point of view.

[More about Susan Middleton](#)

# Message from the Sponsor

HPE GreenLake for Aruba is a simple and flexible enterprise NaaS offering that enables organizations to consume Aruba ESP (Edge Services Platform) in a cloudlike manner, through a single monthly subscription payment and with options for flexible consumption that help align network spend with usage.

Available in over 50 countries worldwide, HPE GreenLake for Aruba leverages standardized service offerings designed around popular wired, wireless, and SD-Branch use cases, accelerating time to value.

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