IDC

MAY 2023 | InfoBrief, sponsored by

Singtel

REGION FOCUS: ASIA/PACIFIC

Network as a Service

Unlocking the Full Potential of Your Digital Infrastructure

Nikhil Batra
Research Direction, Telecom and IoT, Asia/Pacific

Executive Summary

Network as a service (NaaS) is the next step in enterprise network strategies. By applying a consumption-based model to the enterprise network, NaaS provides businesses with the infrastructure flexibility and agility needed to support a hybrid work model and overcome the IT skills shortage.

This as-a-service model for network infrastructure is part of what IDC sees as the emerging digital infrastructure ecosystem, the underlying platform for all IT and business automation initiatives anywhere and everywhere.

NaaS enables a hybrid workforce by ensuring the security and efficiency of connected infrastructure and simplifies enterprisewide deployment, management, and resilience of networks.

NaaS encompasses multiple networking domains, but early offerings focus on WLAN, software-defined WAN (SD-WAN), secure access service edge (SASE), and SD-Branch. NaaS, therefore, offers a road map for increased use of automation, platforms, and programmability in managed connectivity and security solutions.

Enterprises across Asia/Pacific have aggressively adopted virtual networking through SD-WAN, cloud-based management and automation, and enhanced security models.

This IDC InfoBrief takes a closer look at the emergence of the enterprise NaaS model, the benefits, and the use cases driving interest in these flexible consumption solutions that combine hardware, software, and life-cycle services.

IDC Predicts

By 2023, **40%** of enterprises will benefit from optimised operational efficiency, enhanced security, and reduced network costs by leveraging SD-WAN and security for cloud-managed networking and security

By 2026, **40%** of enterprises will double investments in hyperconnected digital spaces to increase productivity, improve collaboration, and boost energy efficiency

Source: IDC FutureScape: Worldwide Future of Connectedness 2023 Predictions

Digital Infrastructure Underpins Digital Business Growth

Digital infrastructure serves as the foundation for successful digital businesses. It provides the necessary support systems for businesses to scale and gain the flexibility they need to operate efficiently and effectively.

According to IDC's Worldwide Future of Digital Infrastructure research, 80% of decision makers globally acknowledge the significance and criticality of digital infrastructure in achieving business objectives.

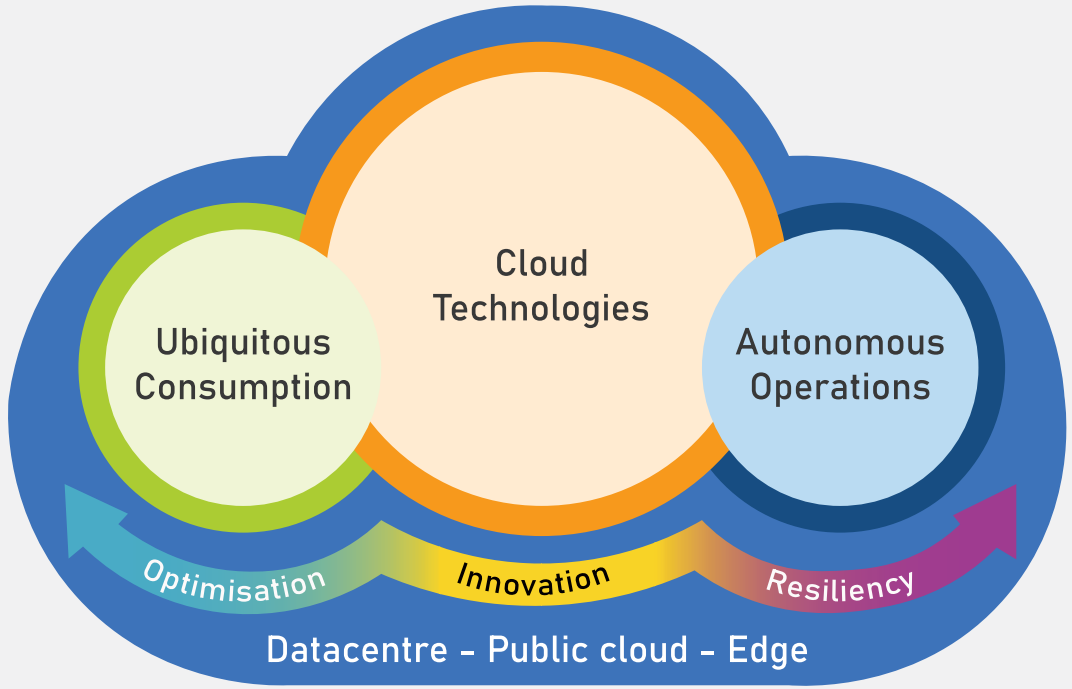
The emerging digital infrastructure ecosystem will increasingly be built on cloud-centric technologies, ubiquitous consumption options, and automated IT operations, as outlined by IDC's Future of Digital Infrastructure framework (see Figure 1). It will focus on ensuring faster delivery of innovative infrastructure hardware, software, resource abstraction, and process technologies to support the development and continual refinement of resilient digital services and digital experiences.

As Asia/Pacific businesses transition from physical infrastructure to a cloud-centric digital infrastructure, a critical part of their transition depends on the consumption of innovative infrastructure technologies and the timely access to them.

Today, enterprises also have the option of flexible consumption of networking infrastructure and services under the NaaS umbrella. This cloud model provides businesses with scalable network solutions, along with increased flexibility and control over their network infrastructure.

Figure 1

IDC's Future of Digital Infrastructure framework provides a model for understanding how a successful digital-first strategy is built on critical digital infrastructure investments deployed across dedicated on-premises datacentres, edge locations, and public cloud resources.



The Future of Digital Infrastructure framework

Source: The Future of Digital Infrastructure: Distributed by design, IDC

Fundamentals of NaaS: Revolutionising Network Services and Infrastructure

NaaS is a delivery model that provides network services and infrastructure as a fully-managed and outsourced service. It enables organisations to access network resources, such as connectivity, security, and performance, through a cloud-based or as-a-service model, without the need for capital investment or in-house management, allowing digital businesses to focus on their core operations and growth.

Major Elements of a NaaS Portfolio

Source: IDC FutureScape: Worldwide Future of Digital Infrastructure 2023 Predictions

IDC defines enterprise NaaS as enterprise network infrastructure with a flexible consumption operating expenditure (opex) model, including hardware, software, management tools, licences, and life-cycle services.

By 2026, **65% of tech buyers will prioritise as-a-service consumption models** for infrastructure purchases to help restrain IT spending growth and fill IT ops talent gaps.

But how does NaaS help organisations accelerate their digital infrastructure and broader digital transformation journey?

NaaS Drives Innovation and Efficiency in Digital Infrastructure

NaaS builds on the promise of as-a-service delivery to minimise the disruption of technology adoption, refresh, and operations, allowing enterprises to ensure that their technology investments yield the desired business results.

Enterprises need to focus on four key tenets as they start on the NaaS journey.

Four Tenets of NaaS Addressing the Enterprise Digital Infrastructure Agenda

01

Virtualisation

Shift from a hardware-centric network environment to a virtualised one to offer greater flexibility and agility — deploying network services at scale to support business needs.

02

As a service

The application of as-a-service offers usage-based pricing on demand to reduce upfront capex cost. This applies to consumption, software, network, and cloud access.

03

Unified 'secure' platform

Seamless management and troubleshooting with deep insights on a single platform, enabling ease of operations with a single pane of glass.

04

Automation

Automation and artificial intelligence (AI) ops enable proactive issue detection and predictive analytics that drive the automated resolution of incidents.

Source: IDC, 2023

Start on the NaaS Journey with Secure Virtual Network Services

For organisations, the starting point of the NaaS journey is usually a shift from a hardware-centric model to a virtualised services model for network infrastructure in a consumption-based model.

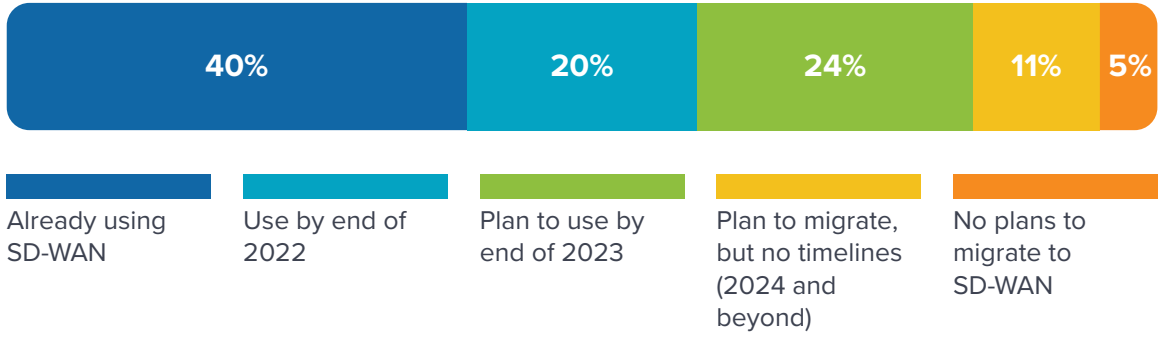
IDC's Asia/Pacific (excluding Japan) Enterprise Communications and Collaboration Services Survey 2022 found that about 60% of organisations have already invested in SD-WAN, while an additional **24%** are expected to adopt a SASE framework, led by SD-WAN, by 2023.

Organisations are further looking at virtual networking services, combined with the adoption of universal customer premises equipment (CPE) model, in a consumption-based model.

43% of organisations in Asia/Pacific strongly agreed that they are actively eliminating multiple appliances at the WAN edge/enterprise branch and replacing them with universal CPEs, to help achieve more flexibility, agility, security, and ease in managing the network environment and investments.

Source: IDC APEJ Enterprise Communications & Collaboration Survey 2022, n = 1,200

SD-WAN Adoption in Asia/Pacific



BENEFITS

Consumption-Based Business Models Gaining Traction to Meet Complex Enterprise Demands

The consumption-based business model of NaaS lets organisations pay only for the network services they consume, instead of making large capital investments and commitments. This eliminates the need for upfront investment and reduces operational costs, enabling organisations to focus on growth and innovation. The flexible and scalable nature of NaaS makes it easy for organisations to quickly adapt to changing business requirements, increasing their agility in today's dynamic business environment while also addressing their financial and other growth challenges.

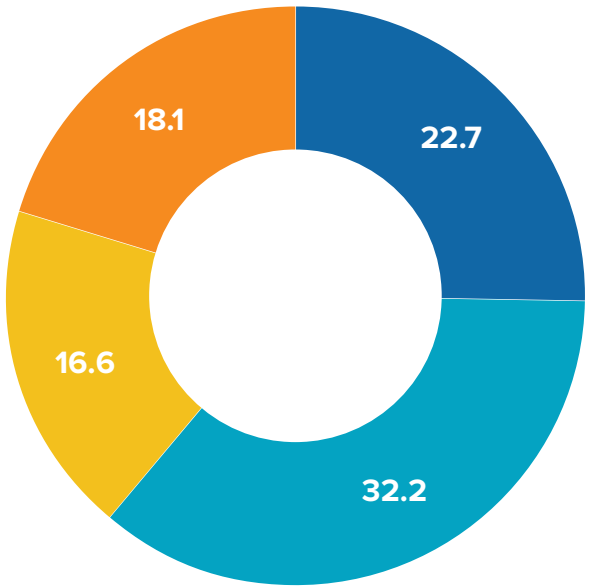
Worldwide spending on network consulting and integration services is expected to grow at a compound annual growth rate (CAGR) of **5.7%** from 2021–2026 to top **US$64.3 billion** by 2026

Consumption-based models are resonating well with organisations in the region. IDC research shows that enterprises expect a more than **15%** increase in expenditure in NaaS, cloud services, 5G, and multicloud networking over the next 12 months.

Source: IDC APEJ Enterprise Communications & Collaboration Survey 2022, n = 1,200

Transforming Network Security and Management with a Unified Solution

Worldwide Security Software Solutions spending (US$M) 2026



- Cybersecurity analytics, intelligence, response, and orchestration
- Endpoint security software
- Information and data security software
- Network security software

Source: IDC Semiannual Software Tracker 2022 H1

Given the ever-expanding threat landscape, a unified security platform in the form of NaaS has garnered the attention of enterprises.

A secure NaaS platform not only protects against cyberattacks but also enhances a network's overall performance, reliability, and compliance. Enterprises are committed to increasing their spending on security software products as the dependence on secure networks increases in priority across the globe. Network security and data security spending leads the way, with a CAGR of **13%** from 2021 to 2026, resulting in a combined spending of over **US$89 billion** globally by 2026.

This helps organisations protect sensitive data and network assets from cyber threats. A virtualised network infrastructure has many benefits, but security must be integrated and automated to keep pace with the dynamic nature of the network.

Achieving Operational Excellence Through NaaS

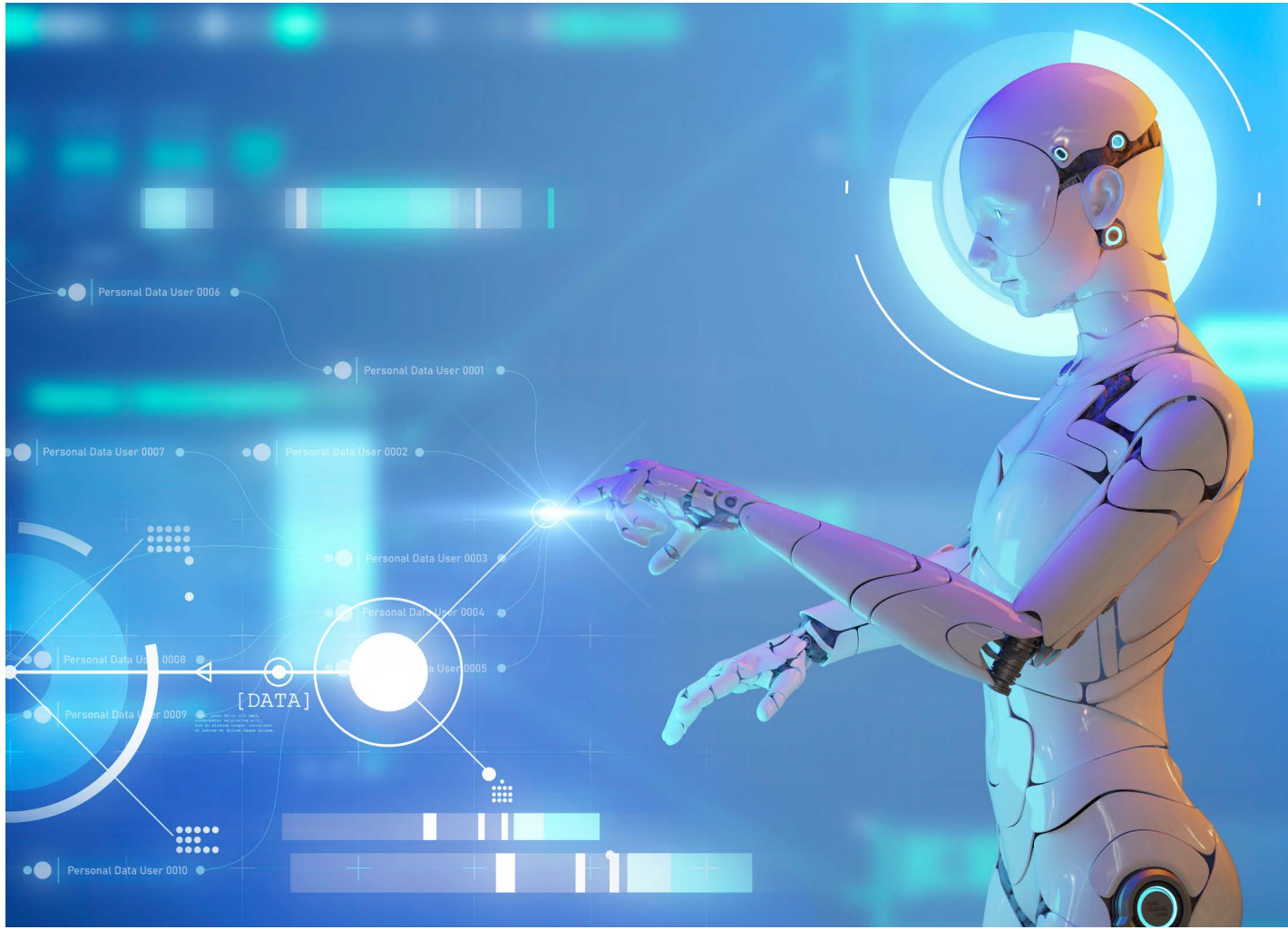
With increasing pressure for operational benefits, automation becomes a necessity.

- NaaS leverages automation and AI tools to help organisations efficiently operate their network infrastructure.
- Automation can streamline routine tasks and reduce manual errors, while AI-powered tools can provide proactive issue detection and predictive analytics.

These capabilities enable organisations to quickly identify and resolve network issues, improving network performance and reducing downtime.

In a NaaS model, these tools and technologies are provided as part of the service, eliminating the need for organisations to invest, manage, and maintain complex network management systems. This helps organisations focus on their core business operations rather than dedicating resources to network management.

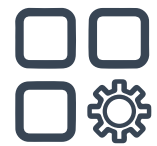
> "Successful use of technologies and partners sees enterprises looking to save up to **15%** of operational costs as they look to fill skills gaps and plan for the deployment of technologies which can adapt to the new realities of hybrid working models and the overall migration to the digital economy."
>
> — IDC Telco Research



Source: IDC APEJ Enterprise Communications & Collaboration Survey 2022, n = 1,200

Agility and Efficiency Are the Top Drivers for Pursuing Seamless Connectivity

Agility tops the list of expected benefits from adopting a Future of Connectedness strategy, which aims to create pervasive experiences by orchestrating connectivity across the workforce, customers, operations, and partners.

24%	22%	22%	21%	19%
				
Increase business agility	**Reduce cost / increase efficiency**	**Improve network performance & operations**	**Improve worker productivity & collaboration**	**Implement as-a-service procurement models**
Self-provisioning of network capabilities, coupled with security and cloud inter-connect, enable enterprises to deliver new products and services.	Improvements to lead time in servicing infrastructure allows for efficient monetisation and helps minimise the loss of productivity due to downtime.	Automation of the network improves overall resilience, reducing demand for people and time to fix issues. It also improves overall customer experience by reducing the amount of downtime.	Remote work models and 'anywhere, anytime' delivery of services improve productivity by enabling collaboration across customers, employees, and partners.	Managed services help reduce the demand on on-staff skills and increase available expertise to maintain technology leadership.

Source: IDC WW Future of Connectedness Enterprise Survey 2022, n = 800

Real-World NaaS Use Cases: From Financial Efficiency to Scalability

Use case	Business objective	Enterprise challenge	How NaaS can help
Rapidly scaling a distributed workforce	To quickly support a surge in remote workers without compromising security or performance	Difficulty in managing the provisioning of remote access, traffic routing, and network performance optimisation	Consumption-based, integrated network services under the NaaS umbrella help organisations scale up resources quickly and efficiently
Enabling hybrid and multicloud connectivity	To enable seamless connectivity and data exchange between on-premises and cloud environments	Multiple cloud environments require different types of connectivity, which can be expensive and challenging to manage	NaaS enables organisations to connect to multiple cloud providers and datacentres using a unified platform, helping to reduce costs and simplify network management
Supporting IoT and edge computing initiatives	To enable real-time data processing and analytics at the edge of the network	The complex and distributed nature of Internet of Things (IoT) devices makes it difficult to manage and secure them using traditional network approaches	NaaS enables organisations to easily and securely connect and manage IoT devices across a distributed network
Streamlining branch office connectivity	To simplify branch office connectivity and reduce network complexity and costs	Managing distributed IT infrastructure across multiple branch offices can be time-consuming and expensive	NaaS enables organisations to create and manage remote branch offices through a centralised platform, helping to reduce costs and increase efficiency
Securing network infrastructure	To allow organisations to secure their ICT infrastructure, protecting it in an ever-broadening threat landscape	Traditional network security approaches are not designed to handle the scale and evolving complexity of modern threats	NaaS helps organisations by leveraging the latest security technologies and best practices in an easy-to-consume and flexible model

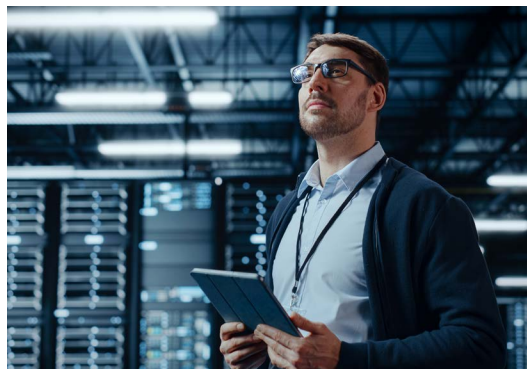
Laying the Foundation for a Future with NaaS

Although NaaS has undergone a gradual transformation over the years, its adoption is expected to rise with more enterprise networking technologies and a diverse range of system and solution providers entering the fray. The advantages of the as-a-service approach extend beyond just financial benefits.

NaaS is much more than an asset that enables cost-conscious CIOs to achieve their IT expenditure reduction goals. It can also assist them in their quest for greater speed, agility, and scale in their IT infrastructure. Adopting an as-a-service enterprise network model can be a winning strategy for ensuring security and overcome the skills gap, especially given the amount of complexity in modern network setups.

As organisations rethink their Future of Digital Infrastructure and Future of Connectedness plans, CIOs and network managers need to review how the two integrate and intertwine while keeping these points in mind:

Address the key concerns of the enterprise such as trust, vendor lock-in, compatibility with traditional solutions, and solution cost transparency — and how they work in a consumption-based, as-a-service model.



Assess NaaS solutions including cloud-managed platforms with highly automated features.

Consider the organisation's network visibility and analytics requirements. NaaS models are typically driven by service level agreements (SLAs), so both the NaaS provider and NaaS consumer need to have clear and detailed insights into service levels of the NaaS offering.

Focus on solutions which offer a single pane of glass management, integrated billing, standardised deployment models and deployment options that allow additional services to integrate seamlessly.

Singtel

According to IDC, 80% of decision-makers worldwide recognise that digital infrastructure is essential or mission-critical to achieving business goals by providing the necessary support systems for digital businesses to operate efficiently and effectively. Network as a Service (NaaS) is critical to successful digital infrastructure deployment – its consumption-based model provides businesses with the infrastructure flexibility and agility needed to support hybrid work models and overcome IT skills shortages.

Offering seamless connections from the edge to the cloud, Singtel NaaS delivers critical network and security functionalities as a service, allowing for simplified on-demand consumption models. It also provides centralised visibility and analytics into your network through a single portal, enabling you to monitor network performance and gain valuable insights.

Organisations that adopt a wait and see approach are already falling behind their peers when it comes reaping the benefits of NaaS. Don't be one of them. Start now and give your digital enterprise the competitive edge.

Contact us

This publication was produced by IDC Custom Solutions. As a premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications, and consumer technology markets, IDC's Custom Solutions group helps clients plan, market, sell, and succeed in the global marketplace. We create actionable market intelligence and influential content marketing programs that yield measurable results.

IDC Asia/Pacific
83 Clemenceau Avenue, #17-01 UE Square, West Wing, Singapore 239920
T 65.6226.0330

@idc @idc idc.com