CSP's Emerging Technology Priorities and Progress by Use Case

Published 30 November 2023 - ID G00802827 - 6 min read

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Initiatives: CSP Digital Transformation and Innovation

CSP CIOs face multiple competing technology demands every day. Use this research to gauge your priorities against peers' technology investments for use cases like ensuring compliance, modernizing networks and offering enhanced network services.

Overview

Key Findings

- Seventy-two percent of communications service provider (CSP) technology and business leader respondents report that the most important technology use case to achieve their organizations' business objectives is using network security technologies to meet compliance requirements.
- The top two technology use cases that 76% of the CSPs are currently deploying or have fully deployed include SD-WAN and SASE for enhanced networking services and 5G SA, network slicing and low earth orbit (LEO) satellites for a modernized wireless network infrastructure.
- Hyperautomation or AI-related technologies for efficient network, IT and business operations and green energy or hardware optimization for sustainability have relatively lower deployment.

Recommendations

CSP CIOs advancing digital transformation initiatives should:

- Utilize security technologies not only to secure network infrastructure, but also to embed them in the products and services offered to customers and, thereby, improve CSP trust.

- Seize opportunities beyond connectivity to offer vertical and industry-specific solutions and applications by utilizing modernized infrastructure and enhanced networking services.
- Build a roadmap to adopt and set appropriate timelines to implement hyperautomation, AI and robotic process automation (RPA) for network, IT and business operations, and green energy or hardware optimization for sustainability.

Survey Objective

The 2023 Gartner Business Outcomes of Technology by Use Case Survey [1] was conducted online from June through August 2023. This survey investigates how organizations leverage industry-specific technologies, including generative AI, for particular use cases. In total, 624 director-level or above respondents representing 10 industries participated (n = ~60 per industry). Qualified respondents were associated with either a business or IT function (~50% each) and either influenced or had the final say in technology investment decision making for their organizations.

Data Insights

CSP CIOs Prioritize Network Security to Meet Business Goals

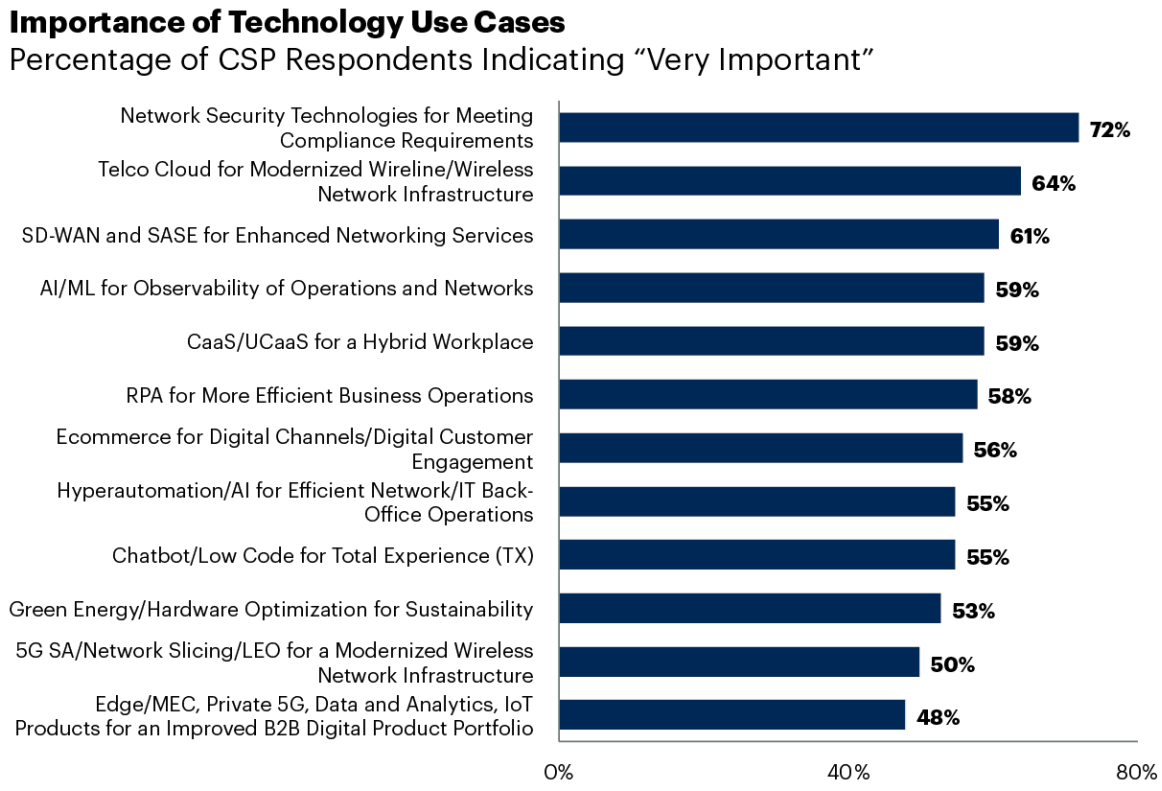
CSP CIOs face multiple competing demands from business and IT leaders every day. Gartner has conducted a survey to help CIOs level-set on which technology areas are seeing the most investment and the potential gains that CSPs' business teams reap from new technology. The theme of the data is stark: CSP organizations are at an inflection point where network security not only underpins almost all technology decisions, but also generates tangible business results. CSP leaders continue to shift their focus toward elevating current capabilities through enhanced security.

Tech Use Cases Rated Most Important Enable CSPs to Ensure Compliance, Modernize Networks

The 2023 Business Outcomes of Technology by Use Case Survey [1] reveals that CSP technology and business leaders surveyed rate the following top-two technology use cases as very important for achieving their organizations' business objectives (see Figure 1):

- Network security technologies for meeting compliance requirements (72%)
- Telco cloud for a modernized wireline and wireless network infrastructure (64%)

Figure 1: Importance of Technology Use Cases, CSP Respondents



n = 64-66 senior technology and business executives; excluding "don't know/not sure"; CSP industry

Q: How important is each of these to meeting your enterprise's overall goals and objectives?

Source: 2023 Gartner Business Outcomes of Technology by Use Case Survey

Note: SD-WAN = software-defined wide-area network; SASE = secure access service edge; AI/ML = artifical intelligence/machine learning; CaaS = communications as a service; UCaaS = unified communications as a service; RPA = robotic process automation

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Utilizing network security technologies enables CSP CIOs to mitigate infrastructure security concerns, as well as provide secure and trustworthy services to their customers. Additionally, telco cloud infrastructure enables scalability in network infrastructure and service flexibility. It also provides the agility required by CSPs to offer new services and better monetize network infrastructure in the API economy. The ambition to securely offer services and achieve network scalability, flexibility and agility has resulted in CSPs prioritizing network security and telco cloud technologies.

The next important technology use cases for CSP leaders for achieving business goals are:

- Software-defined wide-area network (SD-WAN) and secure access service edge (SASE) for enhanced networking services (61%)

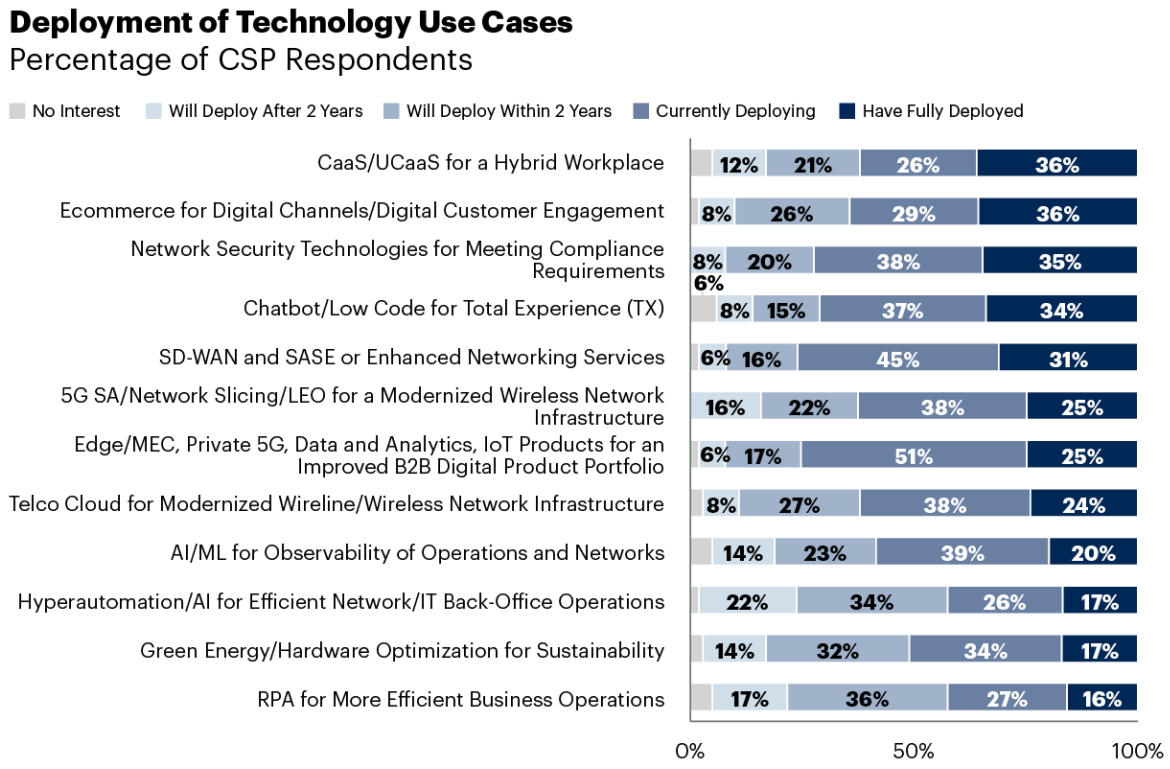
- Communications as a service (CaaS) or unified communications as a service (UCaaS) for a hybrid workplace (59%)
- Artificial intelligence or machine learning (AI/ML) for observability of operations and networks (59%)

Most Deployed Technology Use Cases

Figure 2 demonstrates the deployment of technology use cases by CSPs. The top two most deployed (fully deployed or currently deploying) technology use cases cited by CSP respondents are:

- SD-WAN and SASE for enhanced networking services (76%)
- 5G SA, network slicing and LEO for a modernized wireless network infrastructure (76%)

Figure 2: Deployment of Technology Use Cases, CSP Respondents



n = 64-66 senior technology and business executives; excluding "don't know/not sure"; CSP industry

Q: Please choose whether you have deployed, plan to deploy or have no interest in deploying these technologies coupled with the use cases.

Source: 2023 Gartner Business Outcomes of Technology by Use Case Survey

Note: SD-WAN = software-defined wide-area network; SASE = secure access service edge; AI/ML = artifical intelligence/machine learning; CaaS = communications as a service; UCaaS = unified communications as a service; RPA = robotic process automation

Percentages below 6% are not shown in the chart.

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High deployment of these use cases reflects CSPs' focus on modernizing the network infrastructure to adopt new business models such as platforms and including enhanced services in the offerings to provide new products/services to their customers.

High Priority: Ensuring Compliance, Offering Enhanced Networking Services and Modernizing Network Infrastructure

Figure 3 summarizes the use cases and technologies that are most important and most frequently deployed, with the top right quadrant signaling both high deployment and high importance by more than 60% of the surveyed technology and business leaders. The technology use cases that are both highly important and highly deployed are:

- Network security technologies for meeting compliance requirements
- SD-WAN and SASE for enhanced networking services

- Telco cloud for a modernized wireline and wireless network infrastructure

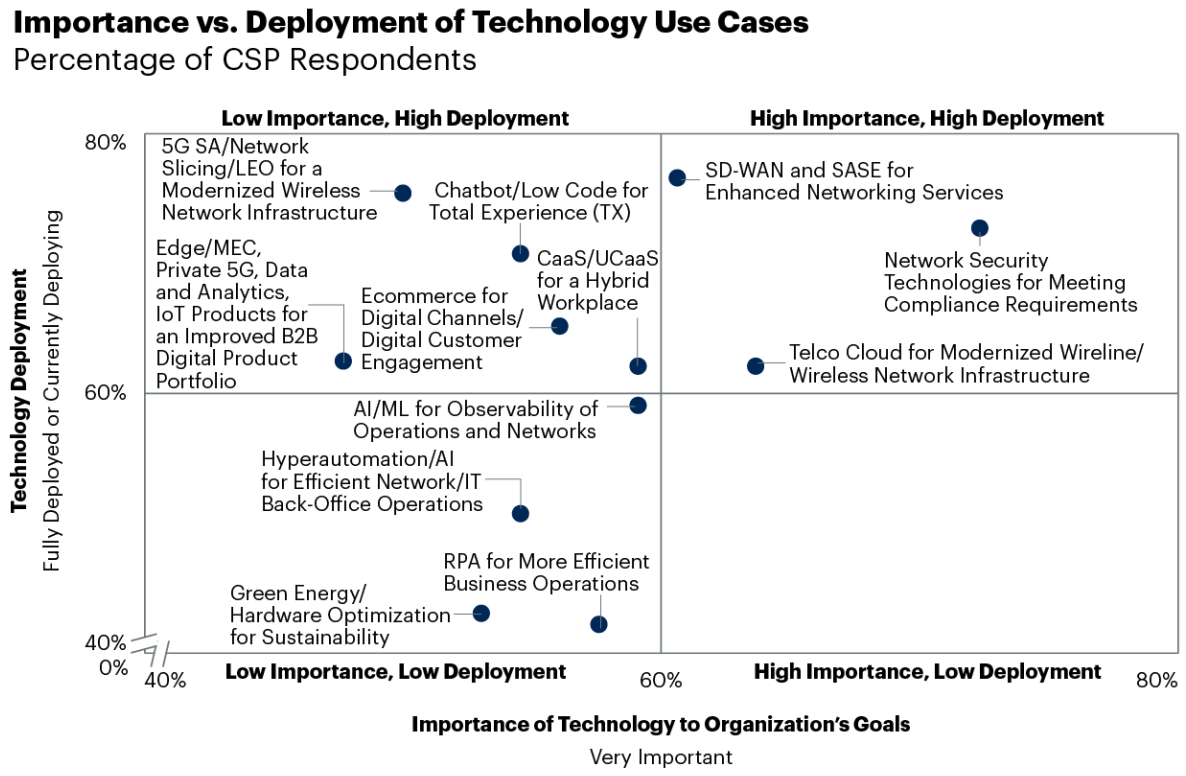
All the above high-importance, high-deployment technology use cases enable CSP CIOs to secure and modernize their infrastructure, and offer new services that support business units in their initiatives for driving growth and improving customer experience.

Compared to the technologies that have higher importance and deployment, the technology use cases that have relatively lower importance and lower deployment include:

- Robotic process automation (RPA) for more efficient business operations
- Hyperautomation or AI for efficient network and IT back-office operations
- Green energy or hardware optimization for sustainability

CSP CIOs have spent a number of years trying to apply RPA to increase operational efficiencies, but in a very fragmented way, and they face the big barrier of automating and connecting legacy systems. As BSS stacks are modernizing, RPA adoption will likely gain more traction and speed. Hyperautomation or AI for efficient network, business and IT back-office operations is likely to be adopted by CSP CIOs in a phased manner as they need to address issues such as vision, culture, vendor readiness and talent. Green energy or hardware optimization adoption faces challenges such as lack of transparency for a full value chain environmental impact and, adoption will increase as sustainability becomes a criterion for procurement and vendor selection.

Figure 3: Importance vs. Deployment of Technology Use Cases, CIOs at CSPs



n = 64-66 senior technology and business executives; excluding "don't know/not sure"; CSP industry

Q: How important is each of these to meeting your enterprise's overall goals and objectives?

Q: Please choose whether you have deployed, plan to deploy or have no interest in deploying these technologies coupled with the use cases.

Source: 2023 Gartner Business Outcomes of Technology by Use Case Survey

Note: SD-WAN = software-defined wide- area network; SASE = secure access service edge; AI/ML = artifical intelligence/machine learning; CaaS = communications as a service; UCaaS = unified communications as a service; RPA = robotic process automation

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Evidence

[1] **2023 Gartner Business Outcomes of Technology by Use Case Survey:** This survey investigates how organizations leverage industry-specific technologies, including generative AI, for particular use cases. Business outcomes are explored utilizing a "Fundamental Five" stakeholder framework to show the impact of technology investments on customers, employees, partners, funders and society. Factors influencing positive and negative business outcomes are also assessed. The survey was conducted online from June through August 2023. In total, 624 director-level or above respondents representing 10 industries participated (n = ~60 per industry). Qualified respondents were associated with either a business or an IT function (~50% each), and either influenced or had the final say in technology investment decision making for their organizations. Qualifying organizations were from North America, Western Europe and the Asia/Pacific region, and reported enterprisewide annual revenue of at least $50 million or the equivalent. *Disclaimer: The results of this study do not represent global findings or the market as a whole, but are a simple average of results for the targeted countries, industries and company size segments covered in this survey.*

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