

# 2024 Technology Adoption Roadmap for Infrastructure and Operations (I&O)

I&O leaders should use this research to benchmark their adoption plans for technologies and practices across operations; cloud, edge and data center; and network and digital workplace. We offer technology adoption timelines and risk and value drivers for 52 technologies from 144 of their peers.

### Enterprise value

The value factor awarded to each technology is based on the analysis of value drivers, including increased cost-efficiency; improved speed and agility; enabled resilience and reliability; enhanced employee productivity; and enabled innovation by internal consumers.



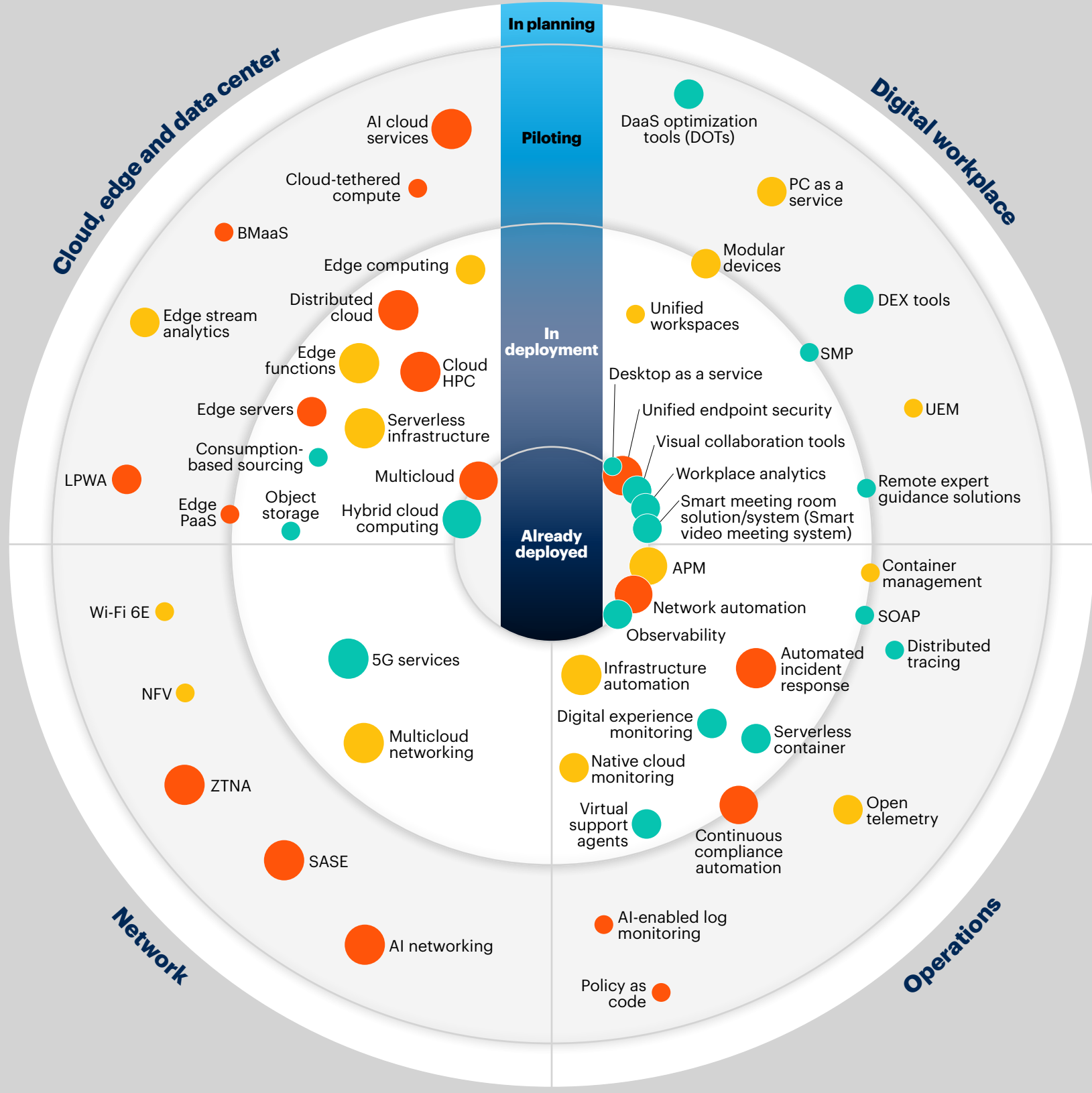
### Deployment risk

The risk factor awarded to each technology is based on the analysis of potential risks posed, including talent unavailability; high or unpredictable costs; cybersecurity risk; technical incompatibility or architectural complexity; and lack of vendor or service provider support.



### Adoption phase

The adoption phase is determined by the current deployment plans for a majority of organizations. Technologies placed on the border between phases are on the cusp of moving into the next deployment phase.




### Key Take-Aways

#### Infrastructure and Operations (I&O)

- I&O has increased the pace of technology adoption to respond to the growing and changing demands of their customers.** Of the 52 technologies surveyed in the roadmap this year, 52% are in deployment and 48% are in pilot, compared with 40% of technologies in deployment and 56% in planning last year.
- Cybersecurity risks and technical incompatibility remain the biggest challenges to technology adoption, even as high/unpredictable costs are a rising concern.** Respondents cited cybersecurity risk as the primary risk factor for 54% of the technologies on the roadmap this year, followed by technical incompatibility/architectural complexity for 25% of the technologies.
- Speed and agility overtake resilience as the primary value driver for technology adoption.** Respondents cited speed and agility as the primary value factor for 40% of the technologies on the roadmap this year, followed by resilience as the primary value factor for 25% of the technologies.
- I&O leaders are optimistic about the transformative potential of generative AI (GenAI) within the function.** Forty-five percent of the respondents believe that I&O will use GenAI to engage more efficiently with employees through virtual assistants or chatbots as part of the help desk. Another 44% expect GenAI to automate repetitive and manual tasks in I&O workflows, increasing efficiency and reducing human effort.
- Cloud technologies continue to be deployed by I&O leaders for their ability to enable both agility and resilience.** This year, all the cloud technologies on the roadmap are expected to accelerate speed and agility and enable resilience equally. Cloud technologies have become intrinsic to daily operations, with 75% of all the cloud technologies surveyed considered as high value.
- I&O leaders prioritize digital workplace technologies to improve the digital employee experience and drive productivity.** Digital workplace technologies are almost evenly split among the in-pilot (54%) and in-deployment (46%) phases of the roadmap.
- Automation, monitoring and observability remain a key focus for I&O leaders to build their core foundations.** Fifty-six percent of the operations technologies are in deployment, and the remaining 44% are in pilot. In fact, 69% of the surveyed operations technologies were perceived as “high and medium value” by the respondents for their ability to automate for efficiency; monitor and manage customer requirements; and make digital business observable.
- Network technologies are in pilot, despite being foundational to digital initiatives.** Of all the network technologies, 71% are considered high value. Despite their perceived value, only 29% of the surveyed network technologies are in deployment. The remaining 71% that are in pilot include ZTNA, NFV, SASE, Wi-Fi 6E and AI networking.
- The majority of edge and AI solutions continue to be in pilot given the cybersecurity risks.** Seventy-five percent of edge and AI solutions are in pilot this year, indicating a cautious approach to these technologies. I&O leaders lack clarity around the use cases of edge and AI technologies and expect these technologies to create a complex environment.
- I&O leaders are cognizant of the varying levels of risk while deploying high-value technologies.** Of all the technologies considered high value, 72% are in deployment this year. Eighty-five percent of these technologies are also perceived as high to medium risk. I&O leaders can use this opportunity to focus on creating a comprehensive risk management strategy for these technologies.
- I&O leaders are optimistic about avoiding significant inflationary cuts in 2024.** A majority of I&O leaders (85%) expect some level of budget increase, whether it’s above or at least in line with inflation. This indicates a generally positive outlook on the importance of I&O functions.

## Actionable, objective insight


Explore these additional complimentary resources and tools for CIOs:

**Roadmap** 

**Craft a Cloud Strategy to Optimize Value**

Maximize the benefits of the cloud to drive business value.


[Download Now](#)

**Webinar** 

**The Gartner Leadership Vision for 2024: Infrastructure & Operations**

Learn how to maximize value of I&O by embracing advanced technologies.


[Watch Now](#)

**Resource Hub** 

**Gartner for Infrastructure & IT Operations Leaders**

Explore how Gartner resources can help you achieve your mission-critical priorities.

[Learn More](#)

**Tool** 

**Heads of Infrastructure & IT Operations Effectiveness Diagnostic**

Benchmark your performance and develop key actions that differentiate highly effective I&O leaders.

[Learn More](#)

Already a client?  
Get access to even more resources in your client portal. [Log In](#)

[Gartner for I&O Leaders](#)

[Follow Us on LinkedIn](#)

[Become a Client](#)