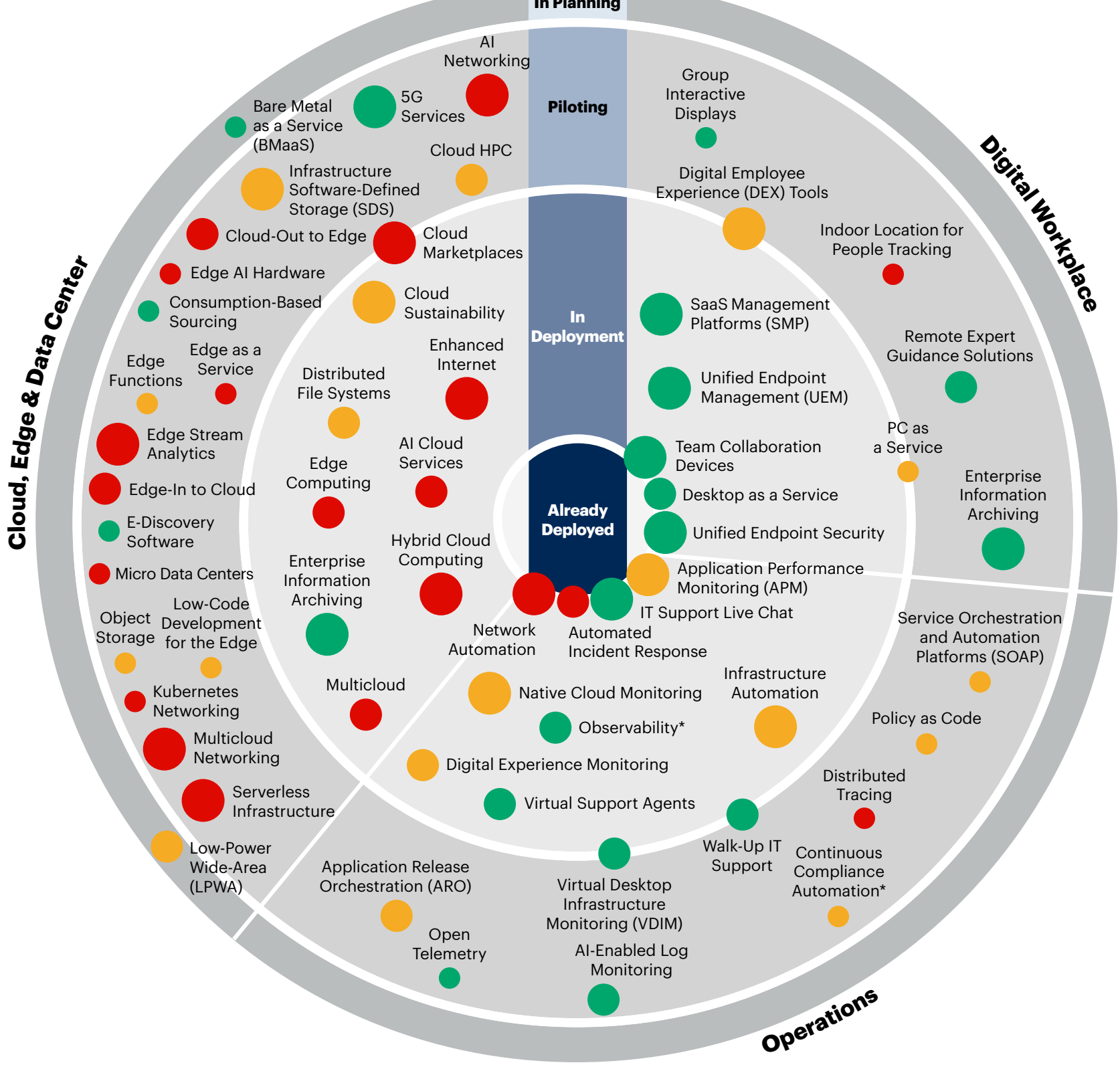


# 2023 Technology Adoption Roadmap for Infrastructure and Operations

I&O leaders should use this research to benchmark their adoption plans for technologies and practices across multiple domains. Here, we offer technology adoption timelines, and risk and value drivers for 57 different technologies for 129 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, enhanced employee productivity, and delivery of superior capabilities to 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 inability to switch providers due to vendor lock-in.

### 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 leaders are cautiously deploying technologies to enable their consumers and focus on hybrid work environments.** Of all the 57 technologies in the roadmap this year, 39% are in deployment and 58% are in pilot. Only 4% of the technologies this year are in the planning stage.
- Cybersecurity risk is seen as the biggest challenge for successfully adopting technologies.** Organizations face an increasing number of security threats, such as ransomware attacks, remote working risks, internet-facing service risks and identity-based cloud security threats. As a result, I&O leaders see cybersecurity risk as the primary risk factor for 61% of the technologies on the roadmap, followed by technical incompatibility/architectural complexity for 32% of the technologies.
- I&O leaders are seeking to increase resilience through their technology adoption choices.** Respondents cited resilience as the primary value factor for 46% of the technologies on the roadmap this year, followed by speed and agility as the primary value factor for 33% of the technologies.
- I&O leaders are focusing on deploying high-value, low-risk technologies.** Of all the high-value, low-risk technologies on the roadmap, 86% of them are being currently deployed. In comparison, of all the high-value, high-risk technologies on the roadmap, only 38% are in deployment.
- I&O leaders continue to deploy and use cloud technologies as an enabler of agility.** This year, 60% of all the cloud technologies on the roadmap are expected to accelerate speed and agility. As organizations drive digital transformation with agility, cloud technologies have become increasingly important.
- Organizations selectively deploy automation solutions in line with I&O priorities.** Technologies that support provisioning and incident management, such as automated incident response, continuous compliance automation, infrastructure automation and network automation, are all in deployment, as reported by IT leaders.
- I&O leaders prioritize high-value digital workplace technologies to drive productivity and resilience, manage risk, and enable a human-centric environment.** To create a distributed enterprise, I&O leaders are investing in digital workplace technologies that are high value and low risk. SaaS management platforms (SMP), UEM, unified endpoint security and desktop as a service, all of which were in deployment in 2022.
- I&O leaders also invest in advanced monitoring technologies to manage increasingly complex technology environments and enable better user experience.** Advanced monitoring technologies like observability, native cloud monitoring and APM are all in deployment, with the expectation of being fully deployed by the end of 2023.
- Organizations are cautiously piloting various edge and AI solutions given the uncertainty around the use cases.** Respondents expect to use edge and AI solutions to accelerate speed and agility and enable resilience as those are the main value factors for almost all of the edge and AI technologies on the roadmap. They also cited cybersecurity risk as the primary risk factor for 75% of the edge technologies and for all the AI technologies on the roadmap.
- I&O leaders are optimistic about avoiding significant inflationary cuts in 2023 as they plan to focus their investments on improving security.** Of the surveyed respondents expecting an increase in their budgets, 60% indicated “improving security” as one of the top three areas of focusing investment. I&O leaders can use these investments to support rapid cybersecurity event response and help close gaps in the early detection and remediation of security threats.

## Actionable, objective insight

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Source: Gartner  
 \*These technologies were also included in the 2023 Technology Adoption Roadmap for Software Engineering. Cross-domain technologies were evaluated based on responses from both I&O and software engineering leaders.  
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