IDC

InfoBrief, sponsored by Nutanix
APRIL 2024

Seamlessly Extend to the Edge with Scalable and Flexible IT infrastructure

Luis Fernandes,
Senior Research Manager,
Future of Digital Infrastructure

Andrew Buss,
Senior Research Director,
Future of Digital Infrastructure

NUTANIX

Executive summary

Digital businesses that invest in edge-to-cloud infrastructure are the most successful businesses.

As digital products and services mature, companies are moving IT out of the back office and establishing it as the foundation of customer engagement and experience — and, increasingly, of the business model itself.

Companies that invest strongly in edge-to-cloud infrastructure see the highest level of revenue growth, as well as enhanced profitability due to greater scale and efficiencies.

Edge enables organizations to deliver the seamless digital experiences needed by customers and employees without breaking the bank.

The explosion of data generation in modern business — coupled with highly agile and distributed work and operations — means the effective processing of data and the delivery of interactive applications depends more on local data and processing capabilities than on centralized datacenters or public cloud services.

Edge solutions can deliver applications and digital services with the required quality, security, and responsiveness, enabling organizations to avoid potentially prohibitive investments to connect all sites.

Unified management is key to enabling the edge at scale — and HCI is an ideal platform to deliver this.

Edge is highly distributed. A solution that relies on manual configuration and management will lack the necessary flexibility and is bound to become unmanageable.

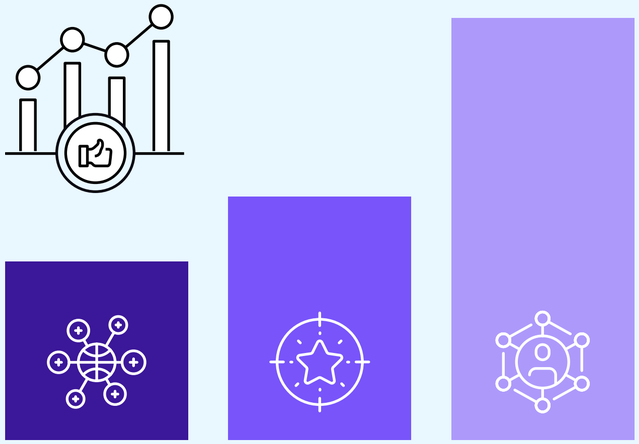
As edge workloads quickly evolve, an end-to-end architecture built from the ground up is needed to support integrated automation and orchestration. This enables seamless configuration and management across the entire edge estate, at the click of a button. Hyperconverged infrastructure (HCI) — designed from the outset to support integrated automation — thus becomes a compelling edge platform.

Digital leaders invest for success.

The global economy is increasingly shifting to digitally augmented or digital-native goods and services. We are nearing the point where the digital economy overtakes the traditional economy.

IT is shifting out of the backoffice, where the focus was business efficiency. IT now underpins the entire business model and drives differentiation, competitive advantage, and revenue growth.

Share of Companies Where IT is Seen as a Driver of Competitive Advantage or Differentiation

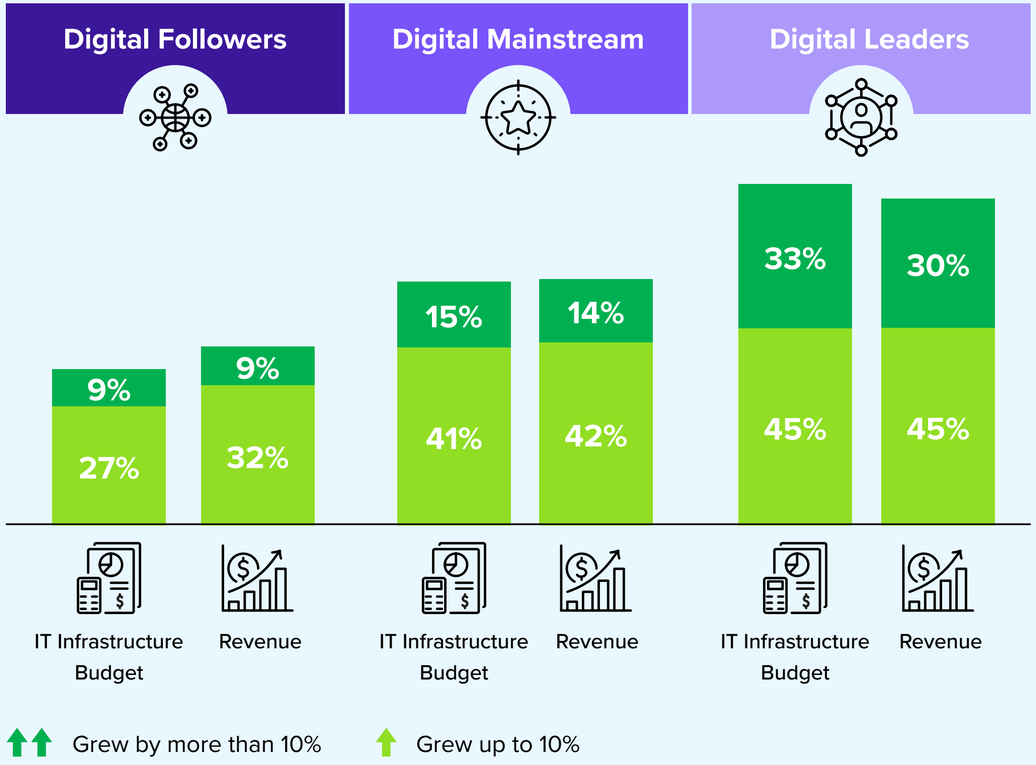


11% Digital Followers

15% Digital Mainstream

26% Digital Leaders

IT Infrastructure Budget and Company Revenue Growth by Digital Rank — latest year vs. previous year



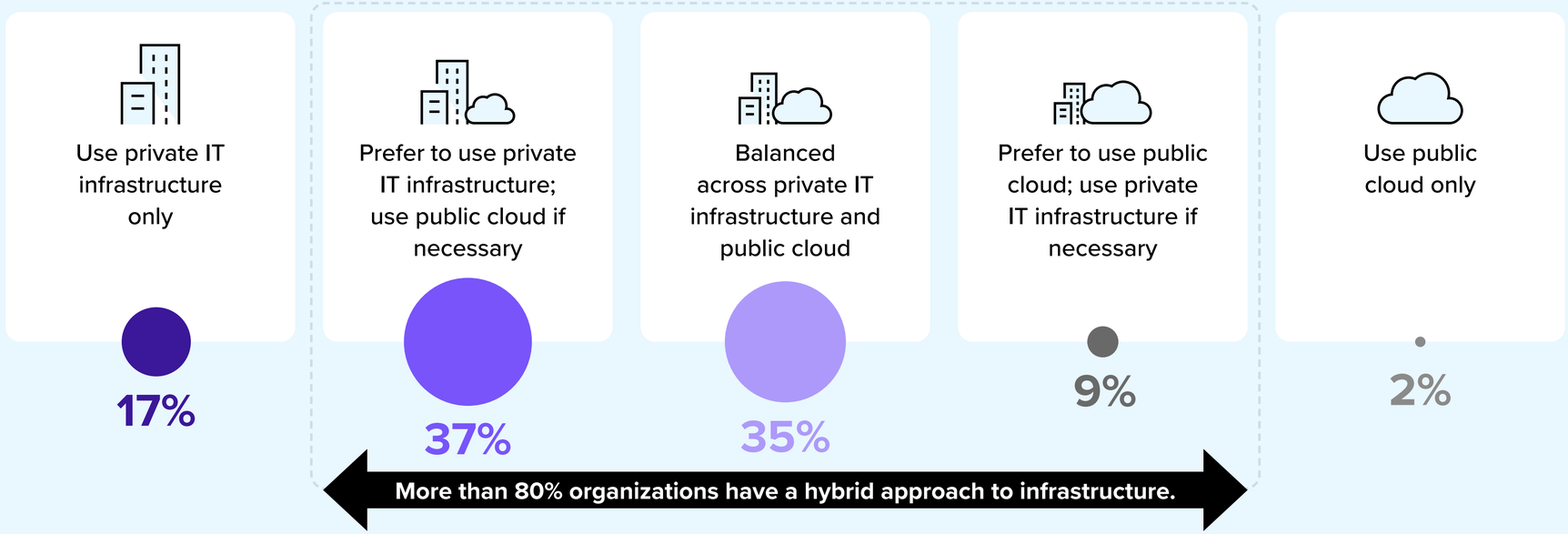
Digital leaders invest in core, edge, and cloud to enhance business outcomes.

Digital leaders are at the forefront of change in how IT applications and services are built, deployed, and operated.

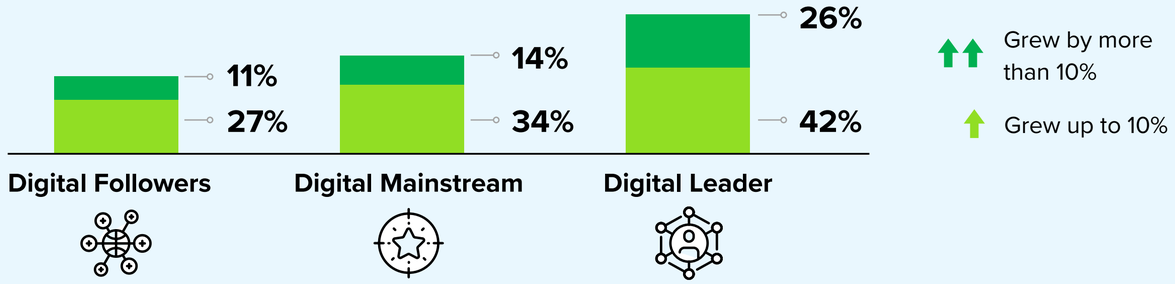
One key area where they lead the IT mainstream: They are much more open to using public cloud to deliver applications and services.

They also use their data to deliver more local and personalized applications and services, driving investment in edge solutions.

Attitudes to Use of Public Cloud



Increase in Spending on Edge Environments, Workloads, and Solutions Increase in Spending on Edge Environments, Workloads, and Solutions latest vs. previous year



Source: IDC's *EMEA Edge-to-Cloud Infrastructure Survey 2023* (N = 1,626)

Digital-first businesses smoothly leverage data across the entire organization.

Top Digital-First Drivers of Edge Investment

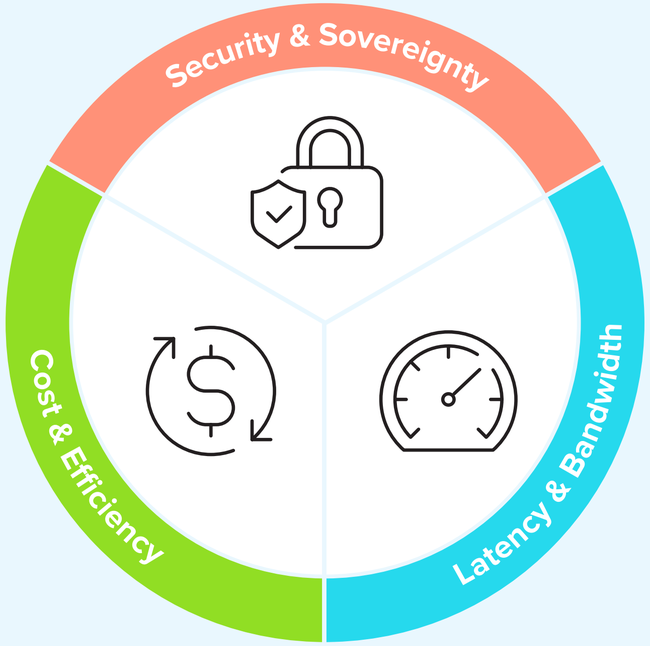
Implementing new digitally enhanced business operations

Creating new customer experiences and engagement

Implementing new digital processes in the field

Expanding the business to new regions

Key Factors to Consider for Edge Workloads



The global economy continues to shift toward digitally enabled or digital-native goods and services.

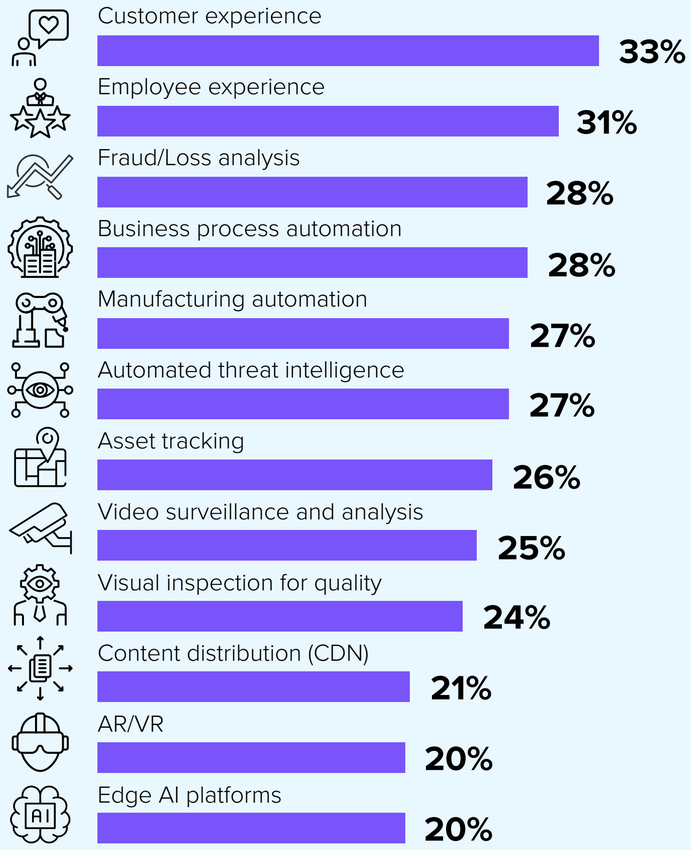
IT is evolving its capabilities and role in the face of this change.

- IT must own the **digital customer and employee experience** that modern businesses need to deliver to build loyalty and satisfaction.
- IT is becoming the **business model** for many organizations.
- IT must deliver apps, services, and experiences across the organization and into the partner and customer ecosystems — and provide them wherever they are demanded.

Source: IDC's *EdgeView Survey 2023* (N = 985)

Edge solutions have evolved from enabling distributed processes to driving employee and customer experiences.

Extensive Adoption of Edge Workloads



Early edge solutions were often focused on workloads (e.g., real-time manufacturing) that dealt with the local processing of data generated in a specific facility where factors such as the latency of processing were vital.

As edge services have evolved into the experiential edge, latency is not always as important. Instead, data privacy and bandwidth management and conservation tend to be the biggest areas of focus in the solution.

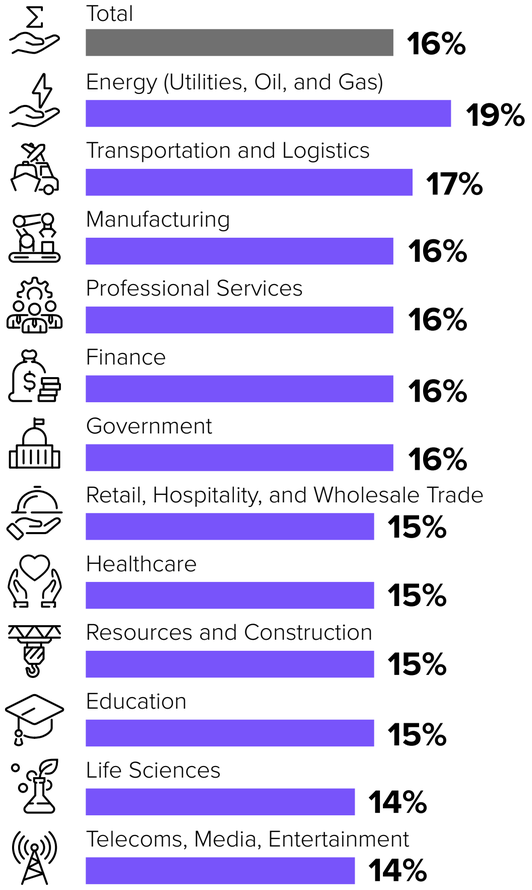
Source: IDC's *EMEA Edge-to-Cloud Infrastructure Survey 2023* (N = 1,626)

Edge platforms are changing from custom to shared as more edge solutions are developed and deployed.

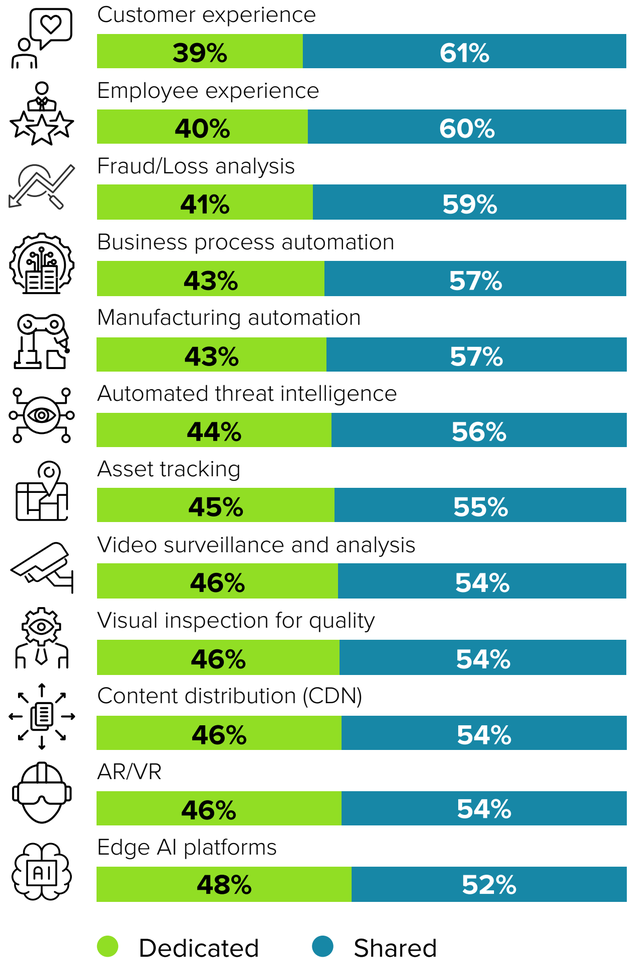
Edge solutions are gaining traction across all industries. The greatest adoption is seen among organizations with a large, highly distributed set of facilities/infrastructure or that are highly mobile in nature.

The new generation of edge solutions delivers enhanced engagement and experiences beyond process management and optimization. Edge platforms are evolving from being unique and custom-developed to being off-the-shelf and suited to hosting multiple different edge workloads simultaneously.

Approximately what percentage of your organization's total infrastructure spending was allocated to edge solutions in the last full year?



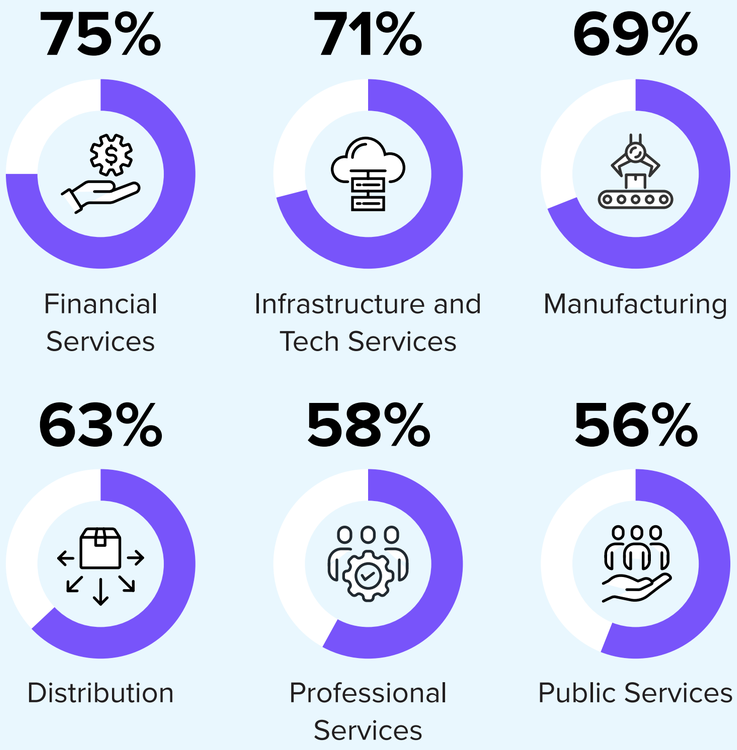
Dedicated vs. Shared Edge Platform Use for Different Edge Workloads



Source: IDC's *EMEA Edge-to-Cloud Infrastructure Survey 2023* (N = 1,626)

AI workloads at the edge are getting a high priority.

Plans to Run AI/ML Workloads at the Edge in 2024



Infrastructure Needed at the Edge to Support AI

#1 — More powerful servers

#2 — Remote management

#3 — More storage capacity

#4 — More power capacity

#5 — Dedicated AI accelerators

Most organizations have firm plans to investigate the use of AI workloads across the company. GenAI is now the top overall priority for CXOs as companies seek to counter the disruptions already being felt in the market.

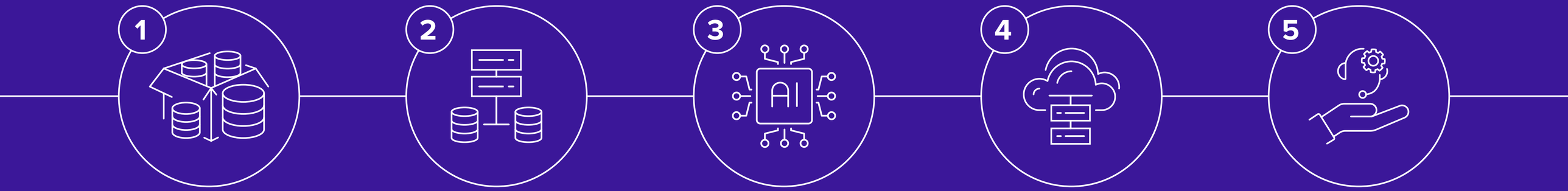
Much attention is paid to high-end core AI infrastructure used to train AI models. But the real value of AI in business comes from deploying these models across an organization's infrastructure to run inferencing calculations on local infrastructure and data.

For inferencing, there is demand for more powerful AI-enabled general-purpose servers and storage, combined with much better integrated management.

Source: IDC's *EdgeView Survey 2023* (n = 1,500)

Multicloud integration is critical for GenAI solutions.

The Most Important Characteristic to Look for in GenAI Infrastructure or GenAI Service Providers in 2024

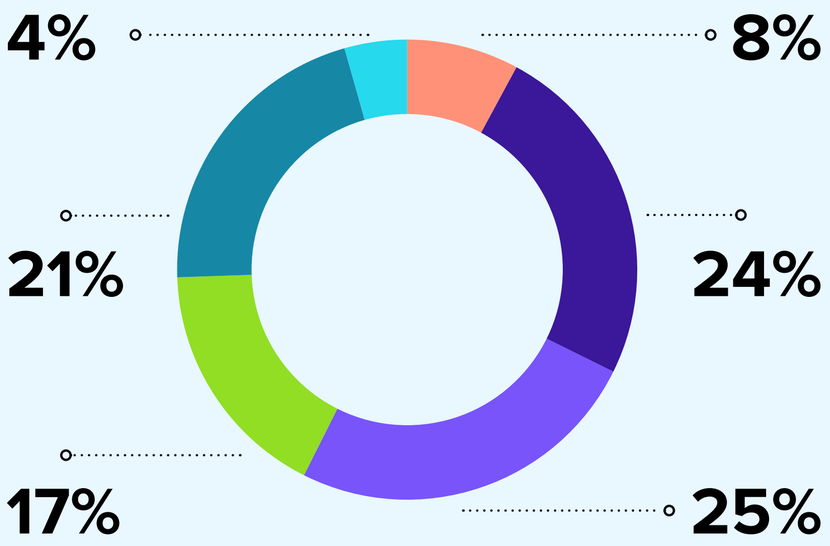


1. **Data repository integration across hybrid/multicloud architectures**
2. **Access to AI workload performance optimized infrastructure**
3. **Full AI stack included**
4. **Ability to support hybrid cloud infrastructure**
5. **Extensive vendor support for the AI environment**

Source: IDC's *GenAI ARC Survey,* August 2023 (EMEA segment n = 504)

Most edge environments cannot scale effectively.

Main Management Approach to Current Edge Solutions



- Edge environments managed ad hoc
- Edge resources managed locally, not cetrally
- Edge managed by team that is not centrally integrated
- Edge managed as part of centralized IT environment
- Edge managed by third party
- Edge managed as part of our cloud management

Edge solutions are gaining traction across all industries. The greatest adoption is seen among organizations with a large, highly distributed set of facilities/infrastructure or that are highly mobile in nature.

The new generation of edge solutions delivers enhanced engagement and experiences beyond process management and optimization. Edge platforms are evolving from being unique and custom-developed to being off-the-shelf and suited to hosting multiple different edge workloads simultaneously.

Top Investments to Ensure Future Infrastructure Success

#1 — Increase use of infrastructure automation.

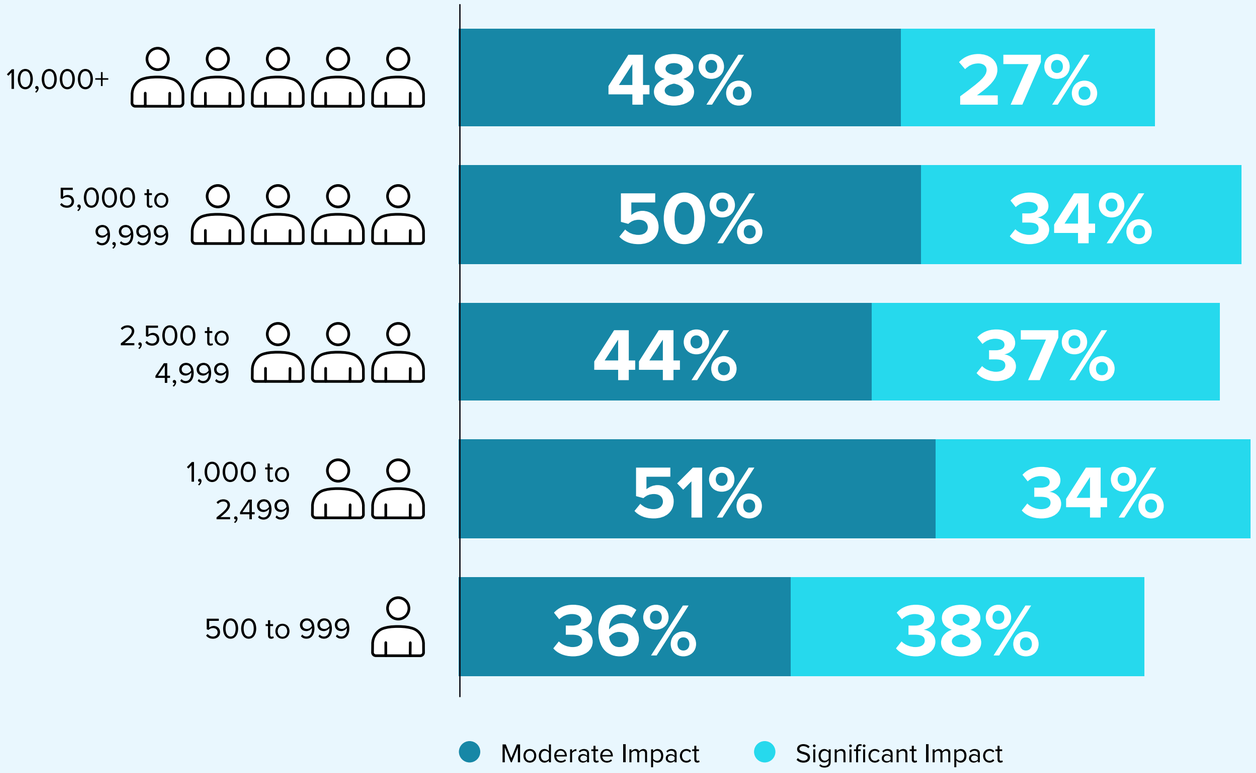
#2 — Implement a consistent management control plane across on-premises, edge, and public cloud infrastructure.

#3 — Improve network connectivity to remote sites and edge locations.

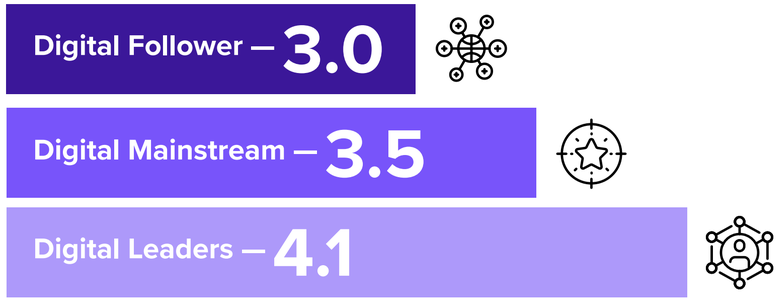
Source: IDC's *EMEA Edge-to-Cloud Infrastructure Survey* 2023 (N = 1,626); *IDC's Future of Digital Infrastructure Worldwide Sentiment Survey* 2023 (n = 876)

Hyperconverged infrastructure helps scale edge solutions.

Impact of Edge Solutions on Digital Infrastructure Requirements (by Company Size)



Importance of Hyperconverged Infrastructure (HCI) in Supporting Edge Use Cases or Solutions (Scale of 1 to 5)



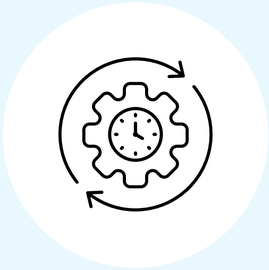
Companies of all sizes understand that edge workloads have a high impact on their digital infrastructure requirements.

Getting to grips with this to make a rollout as seamless and efficient as possible requires a careful approach to the overall architecture and management.

Digital leaders appreciate the benefits that integrated end-to-end automation can bring to a solution. They recognize that HCI — engineered from the ground up to be automated — is a good solution to scaling edge workload deployments.

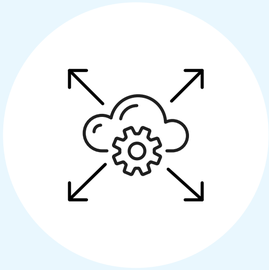
Source: IDC's *Future of Digital Infrastructure Worldwide Sentiment Survey 2023* (n = 876); IDC's *EMEA Edge-to-Cloud Infrastructure Survey 2023* (N = 1,626)

IDC’s Recommendations for Seamlessly Scaling your Edge



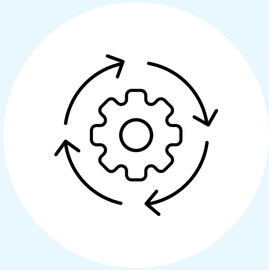
Ensure consistency of experience across all edge locations.

As companies boost reliance on digital engagement, performance and flexibility across a distributed set of edge facilities must be actively managed and monitored to ensure seamless access to apps and data.



Edge is evolving — from process-centric workloads to driving experiences.

The change is powering a shift from investments in custom edge platforms with latency sensitivity to shared edge platforms where data privacy, security, and sovereignty are key requirements.



Edge will only succeed with intensive automation efforts.

The distributed nature of edge solutions makes end-to-end management crucial, but too few companies have truly solved this. New approaches to automation from first principles must be implemented — or your edge solution may turn out to be a nightmare rather than a dream.

As edge workloads evolve, infrastructure must adapt.

Hyperconverged infrastructure is designed to be configured and reconfigured — endlessly — through a software-defined architecture and in-built automation capabilities. Digital leaders recognize the suitability of HCI for scaling edge solutions. *Have you tried it?*

Consider Nutanix for your edge-to-cloud infrastructure needs.

Nutanix Cloud Platform is a secure, resilient, self-healing platform for building a distributed IT infrastructure environment.

Nutanix Cloud supports all kinds of workload and use case across on premises, the edge, and the cloud with a unifying hybrid multicloud approach.

Nutanix Cloud Infrastructure

Standardize on powerful and secure hyperconverged infrastructure to deliver all applications and data at any scale, in any location.

https://www.nutanix.com/products/nutanix-cloudinfrastructure

Nutanix Database Service

DBaaS for Microsoft SQL Server, Oracle, PostgreSQL, MongoDB, and MySQL. Efficiently and securely manage hundreds to thousands of databases, wherever they're located.

https://www.nutanix.com/products/database-service

Nutanix Unified Storage

Nutanix Unified Storage is a software-defined data services platform that simplifies enterprise data storage operations while offering the speed and flexibility needed to build modern applications and services, no matter where they are deployed — core, cloud, or edge.

https://www.nutanix.com/solutions/unified-storage

Nutanix Cloud Manager

A unified solution for providing intelligent operations, self-service and orchestration, security compliance and visibility, and control of cloud costs across multiple locations from core sites to edge or ROBO deployments.

https://www.nutanix.com/products/cloud-manager

Message from the Sponsor

Nutanix transforms the way organizations do business. We offer a single platform to run all your apps and data across on-premises, public cloud, and hybrid environments, as well as at the edge, while simplifying operations and reducing complexity.

Our scalable and flexible IT infrastructure unifies management with one click, applies intelligent AI-driven automation, and helps ensure always-on availability. Building on our legacy as a pioneer of hyperconverged infrastructure, we've earned a reputation for customer satisfaction, powering scalable and flexible environments consistently and cost effectively.

This enables companies to have the performance and agility to seamlessly extend their IT infrastructure from core to edge while remaining focused as on achieving successful business outcomes and new innovations.

To find out more, visit www.nutanix.com.

NUTANIX

About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications, and consumer technology markets.

With more than 1,300 analysts worldwide, IDC offers global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries. IDC's analysis and insight help IT professionals, business executives, and the investment community to make fact-based technology decisions and to achieve their key business objectives.

Founded in 1964, IDC is a wholly-owned subsidiary of International Data Group (IDG, Inc.), the world's leading tech media, data, and marketing services company.

IDC Custom Solutions

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 UK
5th Floor, Ealing Cross, 85 Uxbridge Road, London, W5 5TH, United Kingdom
T 44.208.987.7100

@idc | @idc | idc.com

© 2024 IDC Research, Inc. IDC materials are licensed for external use, and in no way does the use or publication of IDC research indicate IDC's endorsement of the sponsor's or licensee's products or strategies.