



FUTURE OF
Digital Infrastructure

***Are Your Digital Infrastructure Investments
Aligned with Your Business Goals?***

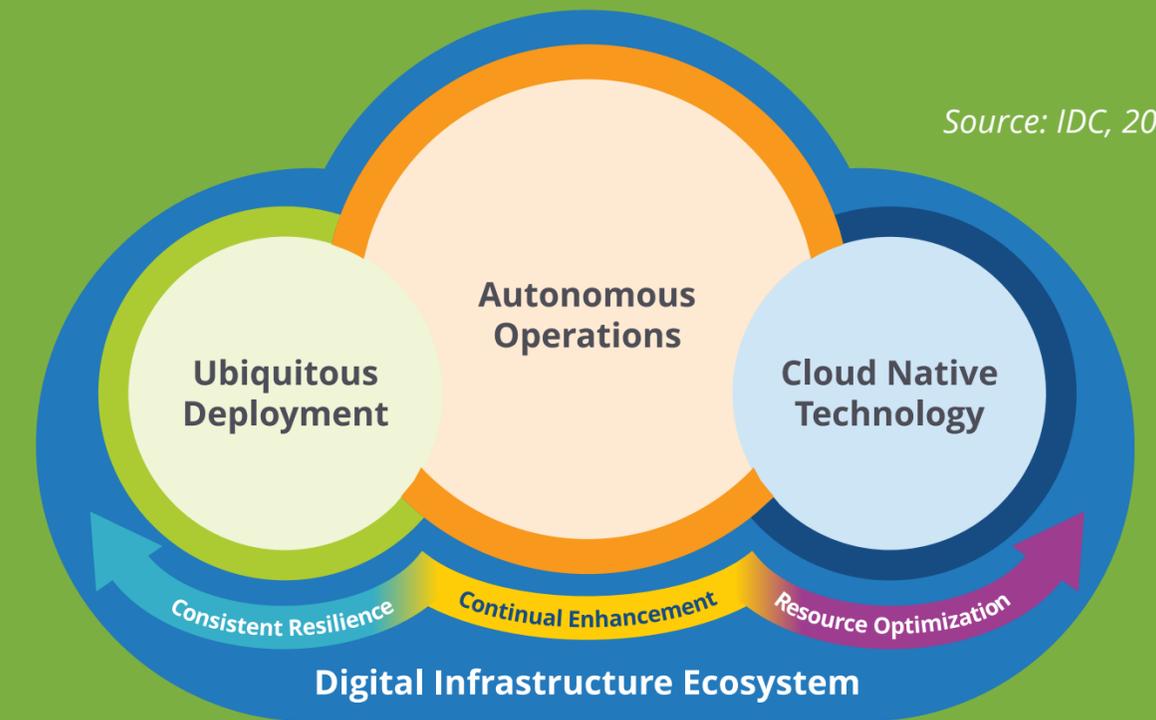


The Critical Role of Digital Infrastructure

Over the past two years, in response to the pandemic, organizations have accelerated widespread adoption of remote work while recognizing the need for deeper online customer engagement. At the same time, organizations have had to deal with a rising number of cyberthreats and challenges related to recruiting and retaining employees.

In this environment, the most effective digital infrastructure leaders are able to disrupt traditional approaches to IT planning and budgeting and align infrastructure architecture, modernization, operations, and funding models with their organization's most important digital business goals.

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



The model highlights the investment areas necessary to address today's digital business priorities:

- Cloud-native technologies that allow for on-demand resource scaling, migration, and flexibility
- Autonomous operations enabled by software-defined automation technologies paired with AI/ML analytics and best-in-class operational workflows, policies, and governance
- Ubiquitously deployed resources enabled by consumption-based sourcing and consistent visibility and control across storage, compute, and network infrastructure and services, regardless of where they are physically deployed

Traditionally, IT infrastructure budget planning has treated individual digital infrastructure components as CapEx assets, where sizing those types of investments depends on accurately forecasting usage of those assets for several years into the future. Since infrastructure, such as servers, storage, and network equipment are tied to depreciation schedules – often on different acquisition and payback cycles – many organizations overprovision resources to ensure that they do not run out of capacity before the equipment is fully depreciated.

At the same time, in their attempts to speed digital innovation initiatives, many DevOps and line-of-business teams often leverage public cloud services from multiple providers in an uncoordinated way, resulting in shadow IT functions that are difficult to manage and can hamper integration and security.

Effective digital infrastructure leadership demands a shift away from silo-based views of digital infrastructure as individual assets to an approach that treats the entire environment as a comprehensive platform for digital business transformation.

Digital infrastructure provides the compute, storage, networking, and security services needed to connect buyers and sellers, enable remote work, and provide ubiquitous access to innovative data analytics and developer resources, regardless of where workers are physically located.

To be successful, digital infrastructure leaders must frame the business case for creating and enabling these digital infrastructure platforms in terms that extend far beyond traditional datacenter and cloud budget calculations. And, they must work closely with other business leaders across the organization to transform the associated operational environments, sourcing, and financial models to align with and achieve top priority business outcomes.

Ultimately, the most effective leaders will clearly articulate how the transformation of digital infrastructure will provide a core platform for enabling new levels of business agility, customer engagement, and employee productivity focused on business outcomes and KPIs.

IDC's Future of Digital Infrastructure survey identifies some of the most important business outcomes, including:

- **Customer experience and digital engagement** – For many organizations, this is the most critical KPI and serves as a business case anchor for digital infrastructure modernization and investment.
- **Digital business agility and innovation** – Accelerating time to market for new releases of key applications enabled by self-healing and self-driving infrastructure operations that continuously apply policies, adapt to the level of resources available, and scale critical applications and data access can improve developer productivity and provide seamless access to advanced capabilities.
- **Employee productivity and retention** – Benefits associated with developer productivity, employee self-service mechanisms, and the overall ability to make access to infrastructure services easier and on demand for employees will contribute to employee productivity, satisfaction, and retention.

- **Data-driven business and decision making** – Whether data is held in traditional systems of record or widely distributed across edge and cloud platforms, its value to the business is lost unless it can be effectively processed, integrated, and exploited. Digital infrastructure platforms emphasize the business need for robust data management and protection and support for advanced AI/ML analytics, data pipelines, and access to user-friendly query and data management capabilities.
- **Business risk reduction and compliance improvement** – Consistent, policy-driven automation and analytics across all digital infrastructure resources enables the business to reduce risk related to data privacy, configuration compliance, and performance degradations due to human error. Automation also reduces the time required to identify and remediate the root cause of service degradations and other performance impacts.
- **Total cost of operations (TCO) optimization** – In addition to considering the costs of raw compute and storage, TCO calculations need to factor in potential reductions in operational costs that result from augmenting or shifting traditional staff responsibilities to more automated systems or external support subscriptions and services.
- **Environmental, social, and governance (ESG) and sustainability initiatives** – Inasmuch as environmental, social, and governance and sustainability initiatives are increasingly important to C-suite and board-level decision makers, digital infrastructure can be critical for ensuring that diversity, remote work, and inclusion initiatives are satisfied.

Implementing a Business Outcomes-Driven Digital Infrastructure

Many organizations start their strategic discussions about the connection between business outcomes and digital infrastructure investments as part of a comprehensive architectural review or change control conversation. The more effective digital infrastructure leaders will continually advocate for the role of digital infrastructure as a fundamental digital business enabler and engage with the full range of relevant stakeholders in shaping the strategy and identifying the critical outcomes and metrics to drive investments.

By clearly linking digital infrastructure architectures and funding plans to business outcomes, successful organizations have been able to implement digital business and infrastructure transformations much more quickly than they could under traditional approaches.

The success of these organizations illustrate how digital infrastructure transformation efforts are tied to a willingness to disrupt the status quo by dramatically accelerating the speed of deployments, proactively breaking down operational silos, and focusing on business-centric KPIs.

Effective digital infrastructure leaders will continually advocate for the role of digital infrastructure as a fundamental digital business enabler and engage with the full range of relevant stakeholders in shaping the strategy and identifying the critical outcomes and metrics to drive investments.

Success also requires cooperation and coordination with stakeholders across the organization, including software development, security teams, HR, and line-of-business stakeholders including C-suite and board-level sponsors. Among the most important roles are:

- **CEO and Board-Level Leaders** – These senior executives must understand that the value of the digital infrastructure platform is in helping the business achieve its top priority outcomes. KPIs must be regularly tracked and provided to these senior leaders on a regular basis.
- **CIO/CTO** – Digital infrastructure planning must be led by senior IT executives who understand how all aspects of the infrastructure and applications development environment are evolving. These executive must ensure that the detailed digital infrastructure planning efforts are fully informed by parallel plans across DevOps, data science, and digital innovator teams.
- **Chief Security and Compliance Officers** – Data integration and protection, including compliance with data privacy regulations and industry-specific reporting and audit requirements, are critical elements of successful digital infrastructure transformation.
- **IT Operations/IT Service Management VPs and Directors** – IT operations leaders will be key stakeholders, ensuring that skills, tools, and processes are adapted in sync with the evolution of the actual technology stacks that they support.
- **Cloud Architects and Site Reliability Engineers** – These teams will typically be responsible for detailed evaluation of technology and cloud service options and deeply involved in choices related to standardization, compliance, performance, architecture, and scale. They will also be important advocates, socializing the vision and ensuring that systems and platforms are appropriately configured, secured, and managed.

- **DevOps Leaders** – DevOps programs that work outside corporate risk management procedures can put the entire organization in danger and can create operational and data silos. DevOps leaders need to be fully engaged in the digital infrastructure strategy discussion and ensure that their need for speed and agility is fully addressed.
- **Chief Data Officers and Data Science Leaders** – As digital business becomes increasingly more data intensive, the needs of data science teams are becoming just as important as those of developers. Digital infrastructure efforts need to consider where data is created and stored, what types of data protection and management is required, and how access to data will be democratized and secured. Digital infrastructure road maps must also anticipate the varied types of data that will be created and the types of AI and ML and related analytics, streaming, and processing that will be needed.
- **Digital Business Leaders** – Digital business leaders ultimately own the vision and the budget for how the organizations will transform. They have a broader view than development and data science teams and are best positioned to identify the business outcomes that are needed to drive digital infrastructure investments.



Technology buyers responsible for making decisions about digital infrastructure, cloud services, automation, operations, or sourcing would be well served to begin their evaluations by engaging with senior business leaders to help them identify top priority business outcomes and understand the value of digital infrastructure investment in helping create platforms for more dynamic, agile, and secure business execution.

Interested in learning more about how forward-thinking organizations are aligning their investments in digital infrastructure with their strategic business outcomes?

Download ***Investing in a Business Outcomes-Driven Digital Infrastructure: Lessons Learned from IDC's 2021 North America Best in Future of Digital Infrastructure Awards Program.***



More information can be found in [*IDC PlanScape: Business Outcomes-Driven Digital Infrastructure \(#US4867662\)*](#)

Watch our [video](#) or visit [idc.com/FoX](https://www.idc.com/FoX) to learn more about IDC's Future of Digital Infrastructure research practice.

