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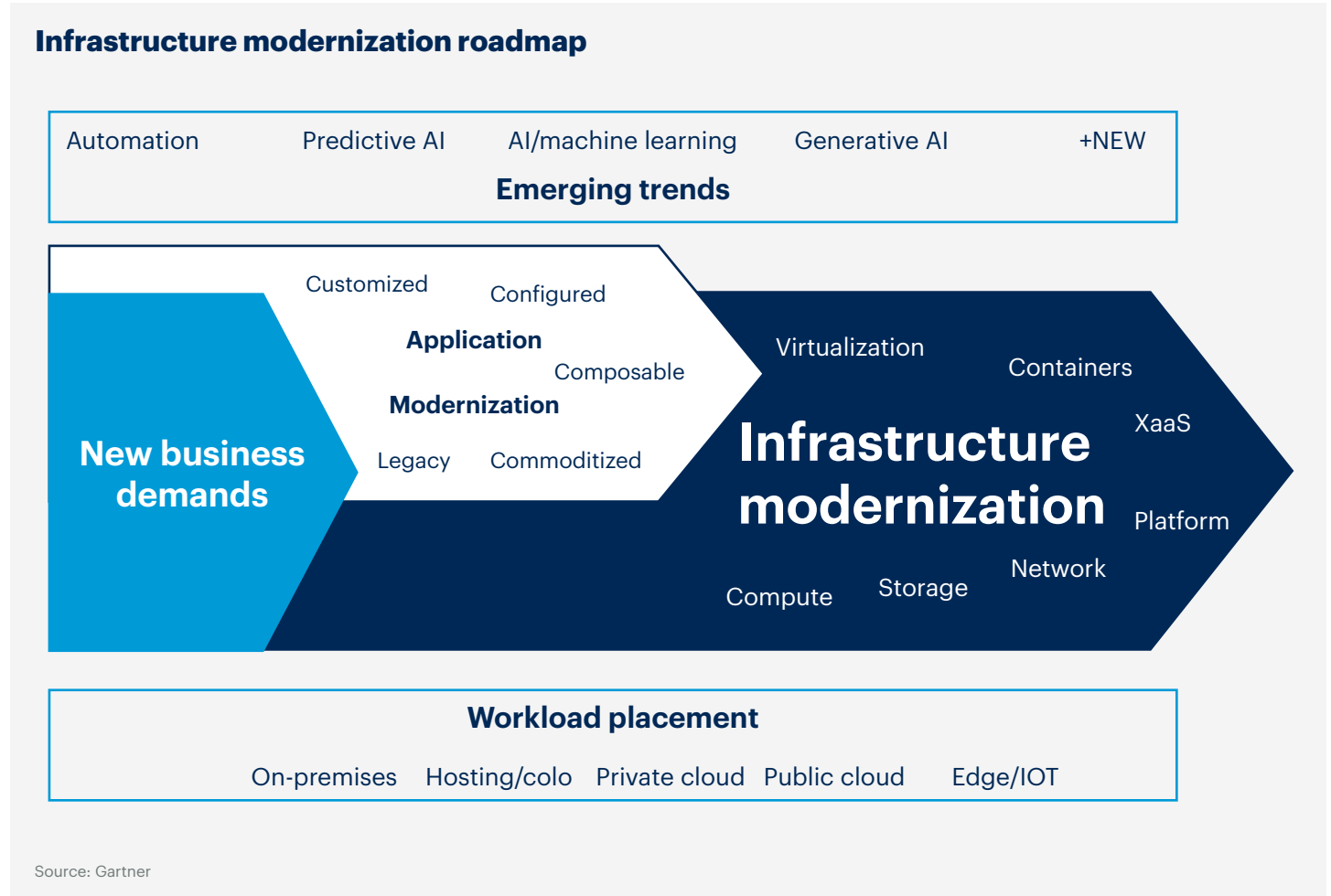
Roadmap

Modern Infrastructure: Built for Tomorrow's Business Demands

How do I modernize infrastructure, satisfying new business demands while balancing applications requirements?

Infrastructure and operations leaders' expertise in operational realities and technological strengths and limitations are often underutilized.

Your organization can use this roadmap to understand the key stages, resources and personnel required to plan and execute an effective infrastructure modernization initiative.



Some of the top questions about an infrastructure modernization initiative are:

- 1** What is the status of your infrastructure and applications portfolio?
- 2** What are the drivers of your cloud adoption?
- 3** How do you align infrastructure delivery with your business success?

What are the key stages?

This roadmap shows the sequence of objectives and desired outcomes and is useful for aligning all stakeholders. It's distilled from interactions with clients who have successfully implemented infrastructure modernization initiatives.

A few key milestones and associated Gartner resources are highlighted, but our full roadmap includes complete details of all milestones and resources for each stage of the initiative.





Stage 1: Assess current state

Identify capability gaps and areas for improvement.

Actions to take



Understand existing capabilities and requirements, and assess the organization's efficiency.



Conduct gap analysis between identified capabilities and requirements.



Benchmark current performance against industry competitors.

Sample resources available to Gartner clients

- **Consultation:** Understand existing capabilities, requirements and assessment of organization's efficiency: [IT Score for Infrastructure and Operations](#)
- **Research:**
 - Start with trends in technology adoption and readiness: [Infographic: 2024 Technology Adoption Roadmap for Infrastructure and Operations \(I&O\)](#)
 - Review research for major data center and modernization options: [Toolkit for Estimating Data Center Build and Modernization Costs by Tier Level](#)
- **Expert Inquiry:** Define I&O KPI/metrics for measuring performance and availability.
- **Consultation:** Assemble team and select agile pilot projects based on readiness of initiative, team and stakeholders.



Stage 2: Identify root cause

Establish modernization focus areas.

Actions to take



Develop a strategy that encompasses all aspects of modernization, including data center facilities, compute, storage and network infrastructure.



Categorize infrastructure into stacks: data tier, application tier, presentation tier and networking infrastructure.



Define current workloads and systems.

Sample resources available to Gartner clients

- **Consultation:** Introduction to the [Gartner BuySmart™](#) process, and review of strategic, financial and technical requirements to identify where the spend management is needed.
- **Expert Inquiry:** Categorize infrastructure into stacks: data tier, application tier, presentation tier and networking infrastructure.
- **Conference 1:1:** Attend Gartner Infrastructure, Operations & Cloud Strategies Conference, and participate in an expert-led workshop.
- **Research:** Evaluate and plan for I&O cost optimization best practices: [Ignition Guide to Efficient Cost Management in I&O](#)



Stage 3: Evaluate strategies

Finalize the modernization approach and create RFPs.

Actions to take



Ensure the evaluation team includes a mix of functional, technical and line-of-business staff, as well as typical end users.



Analyze the areas that require modernization using specific drivers.



Evaluate the modernization approaches based on their ability to address the root cause.

Sample resources available to Gartner clients

- **Consultation:** Ensure evaluation team includes functional, technical and line-of-business staff, as well as end users.
- **Expert Inquiry:**
 - Learn from best practices in modernization:
 - [How to Improve Infrastructure Fitness and Sustainably Reduce Technical Debt](#)
 - [How to Pursue Mainframe Modernization Patterns](#)
 - Introduce architectures, such as microservices, and evolve virtualized environments to software-defined infrastructures.
- **Virtual Executive-Partner-Led Strategy Session:** Develop a strategy that encompasses all aspects of modernization.
- **Research:** Evaluate implications of digital workplace infrastructure: [Predicts 2024: Build a Sustainable and Collaborative Digital Workplace Infrastructure](#)



Stage 4: Prepare and execute

Implement modernization efforts with acceptable risk and cost.

Actions to take



Choose the modernization approach with the highest effect and value, while also considering cost, risk and impact.



Identify the most effective automation methods.



Focus modernization efforts on improving resilience.

Sample resources available to Gartner clients

- **Consultation:** Choose a modernization approach with the highest effect and value.
- **Expert Inquiry:**
 - Identify best approaches from peers working to modernize: [Toolkit: I&O Automation Roadmap](#)
 - Participate in a [Gartner BuySmart™](#) review of vendor proposals.
- **Conference:** Attend Gartner IT Symposium/Xpo™ conference.
- **Research:**
 - Balance investments to improve resilience across infrastructure, operations and applications: [9 Principles for Improving Cloud Resilience](#)
 - Align software engineering with SREs: [How Software Engineering Teams Should Work With Site Reliability Engineers](#)



Step 5: Optimize and scale

Review progress assessment and processes.

Actions to take



Ensure transparency across the entire value stream (workflow).



Provide the right level of metrics to the appropriate people — determine what top-level leadership, managers and other stakeholders need to know.



Redefine agile as a collaborative, flexible and customer-centric approach rather than an IT-specific methodology.

Sample resources available to Gartner clients

- **Consultation:** Ensure transparency into the full value stream (workflow).
- **Expert Inquiry:**
 - Provide the right level of metrics to the right people — what does top-level leadership need to know, as well as managers or other stakeholders.
 - Create shared objectives to align infrastructure with the needs of stakeholders: [Infographic: Co-Creating Resilience With I&O Stakeholders](#)
- **Research:** Redefine agile as collaborative, flexible and customer-centric focused vs. IT-specific methodology: [Hype Cycle for Agile and DevOps, 2024](#)
- **Consultation:** Use DevOps and platform engineering to scale a cloud operational model: [Leverage Platform Engineering to Scale DevOps Platforms Into Hybrid Cloud](#)

Who needs to be involved?

The most successful companies establish cross-functional teams for their **infrastructure modernization initiatives**. We have outlined the recommended functions to involve and their roles to ensure the best success in hitting the milestones.



Mission-critical team members for cloud migration initiatives

CIO

Collaborates with organizational leaders and guides the building of the modernization program; communicates strategy and objectives across the organization.

Infrastructure and Operations Leaders and Team

Develop I&O service strategy and technical roadmap for modernization, and foster culture for continuous improvement.

Enterprise Applications Leaders and Team

Inform strategy and provide guidance for enterprise applications; manage adoption of new technologies, delivery methods and organization models; also support and manage applications to achieve modernization objectives.

CDAO and Team

Provide intelligence and business insights to inform planning and strategy.

Enterprise Architecture Leaders and Team

Ensure business requirements are understood and agreed upon across all stakeholders; deliver innovative IT tools, facilitate new technology adoption and support technology alignment for modernization.

Program and Portfolio Management Leader and Team

Leverage strategic partnerships for adaptive program coordination and delivery, resource management, value realization, risk mitigation and effective organization change management to accomplish cloud migration initiatives.

Sourcing Procurement and Vendor Management Leaders and Team

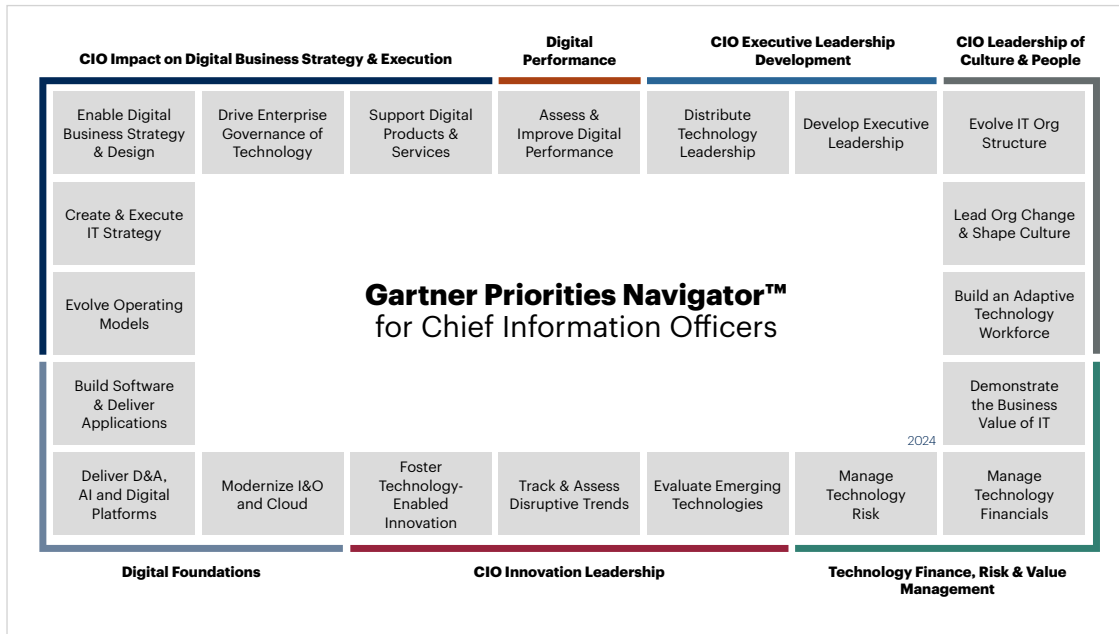
Establish vendor rules of engagement, and partner with stakeholders to manage commercial discussions before, during and after vendor agreements are negotiated and managed.

Technical Domain Architects

Architect and implement an infrastructure consolidation, modernization and cloud integration strategy that is software-defined, composable, agile and scalable, yet also support simplification and resiliency; improve skills, as needed.

How Gartner supports your priorities

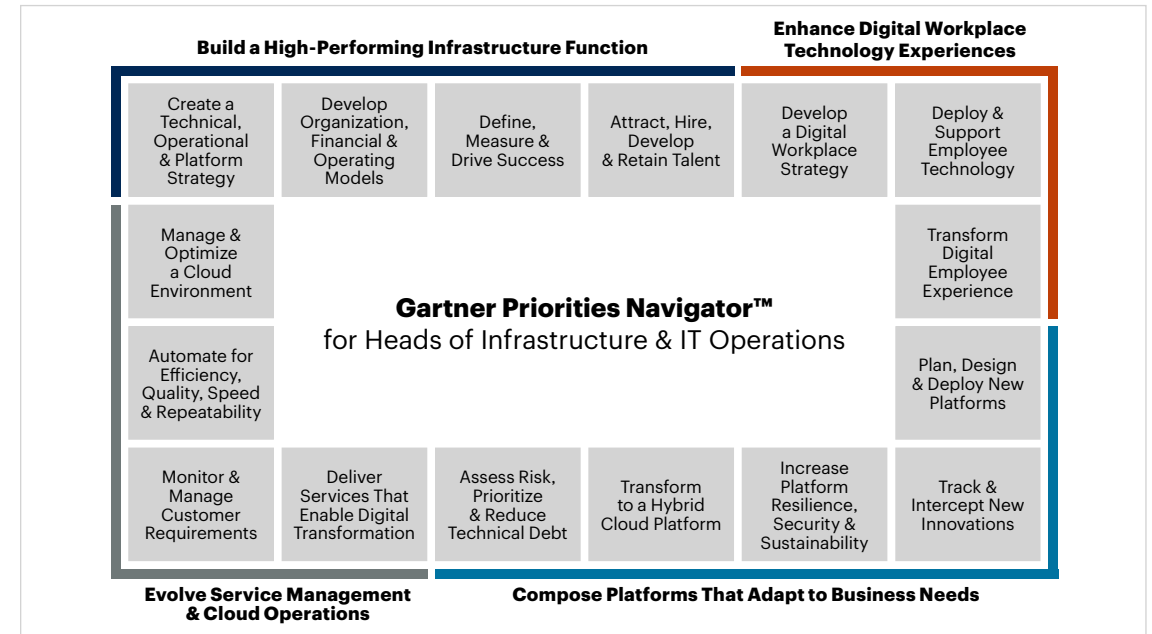
Whether you are working on your infrastructure modernization initiatives or addressing other priorities, Gartner covers the depth and breadth of heads of infrastructure and IT operations' needs.



Gartner for Chief Information Officers

Gartner provides insight, tools and guidance to support initiatives from improving digital delivery and evolving IT organizational structure to modernizing I&O and cloud, while upskilling and retaining talent. By working with Gartner, CIOs can measurably impact the bottom line, demonstrate the value of IT and drive organizational objectives.

Source: Gartner



Gartner for Infrastructure & IT Operations Leaders

Gartner offers insight, tools and guidance to help heads of infrastructure and IT operations with their four key needs: build a high-performing infrastructure function, enhance digital technology and workplace technology experiences, compose platforms that adapt to business needs, and evolve service management and cloud operations.

Actionable, objective insight

Explore these additional complimentary resources and tools on cloud migration strategies for heads of infrastructure and IT operations:

Research

[Modernizing Infrastructure Platforms and Operating Models in Support of Digital Foundations](#)

Institute fundamental changes that will enable platform teams to improve I&O's agility and customer focus.

Tool

[Gartner I&O Effectiveness Diagnostic](#)

Design an operating model that deploys the right I&O skills and work in the right places.

Article

[Design an IT Infrastructure Strategy Ready for the Unknown](#)

I&O leaders need a flexible strategy to deploy applications and workloads anytime, anywhere.

Research

[Craft a Cloud Strategy to Optimize Value](#)

Learn insight, advice and tools to help I&O and IT leaders address their top challenges with cloud computing and security.

Access other insights from Gartner:

[2024 Technology Adoption Roadmap for Infrastructure and Operations](#)

[Gartner Cool Vendors](#)

[Can Public Cloud Migration Fix Infrastructure Technical Debt?](#)

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