Optimizing the Value of Hybrid Cloud:
The Need for a New Services Operating Model

David Tapper
Vice President, Outsourcing and Managed Cloud Services, IDC

Pete Marston
Research Director, Worldwide Intelligent Application Services, IDC

Table of Contents

CLICK BELOW TO NAVIGATE TO EACH SECTION IN THIS DOCUMENT.

Executive Summary

In shifting to cloud to meet more demanding business requirements, enterprises have transformed their portfolio of capabilities which now incorporates a much wider array of resources both internally and externally. Hybrid cloud is becoming the central means of provisioning the required IT capabilities.

These capabilities span the use of platforms (e.g., IaaS, PaaS, SaaS), new processes (e.g., SRE, CI/CD, DevOps), and innovative technologies (e.g., AI, Metaverse) as well as the need to deploy resources much more quickly while aligning consumption with individual needs across multiple geographies which have unique regulatory and security requirements.

IaaS	Infrastructure as a service
PaaS	Platform as a service
SaaS	Software as a service
SRE	Site reliability engineering
CI/CD	Continuous integration/ continuous delivery
DevOps	Development operations
AI	Artificial intelligence

The ultimate impact is a new operating model of service delivery that can effectively overcome the following enterprise challenges:

Complexity: Supporting complex needs involving application portfolios, talent requirements, cloud deployment models, service levels, modern delivery models for modernization, automation, user-based requirements, geographic reach, and more

Integration: Effectively integrating across technologies involving applications, infrastructure, and data as well as across the life cycle of services

Governance: Orchestrating and managing required resources to ensure operational excellence while achieving business outcomes

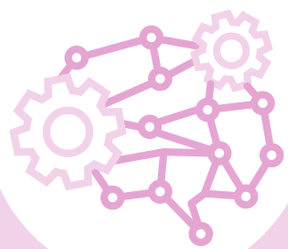
Continuum: Having access to an entire spectrum of cloud options across technologies, platforms, and geographies and means of adapting and adjusting use of these resources across this continuum

Achieving Business Objectives Utilizing Strategic Platforms Involving Hybrid Clouds

Enterprises are leveraging hybrid cloud as one of three key strategic platforms in meeting critical business objectives.

Hybrid cloud
(combining private and public cloud)

Public clouds spanning IaaS, PaaS, and SaaS
(AWS, Google, Azure, Salesforce, Workday, ServiceNow, etc.)



Automation
(cognitive/AI, machine learning)

Achieving Business Objectives Utilizing Strategic Platforms Involving Hybrid Clouds (continued)

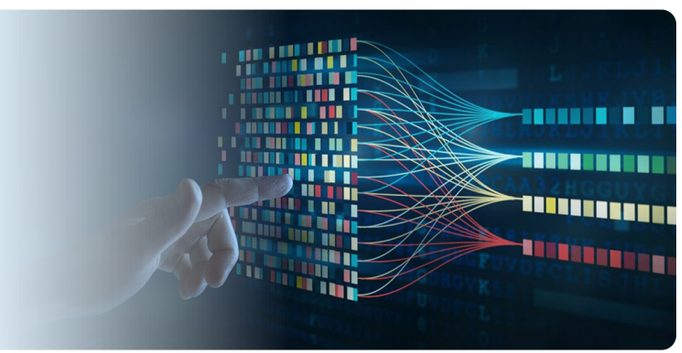
Business Objectives	Drive growth	Ensure business agility and resiliency	Meet sustainability requirements
Key Imperatives	▶ Drive product innovation and market thought leadership ▶ Support localization of products and shorter product development life cycles ▶ Improve supply chain optimization	▶ Optimize functionality of facilities (e.g., shift office building to warehouse; change type of production in plant) ▶ Support flexibility of workforce across locations ▶ Adjust deployment of resources (e.g., workforce, facilities) impacted by climate change and government policies	▶ Reduce energy consumption and carbon footprint while meeting government compliance and regulations ▶ Utilize analytics to determine the optimal approach for datacenters while minimizing the number of applications and devices ▶ Replace datacenters with IaaS from public cloud providers

Overcoming Complexity of Portfolios

Larger portfolios are getting larger.
Over the next five years, the share of firms with portfolios of 500 or more applications will grow from 39% to 47%.

Diverse technologies require extensive pool of talent.
Breadth of different technologies from legacy to modern platforms and delivery architectures including containers require access to an extensive pool of talent and skills.

Effective management is required.
Scale and diversity of application technologies require implementing the right management process and tools along with policies and a governance structure to ensure alignment with critical business requirements such as speed to market and agility.

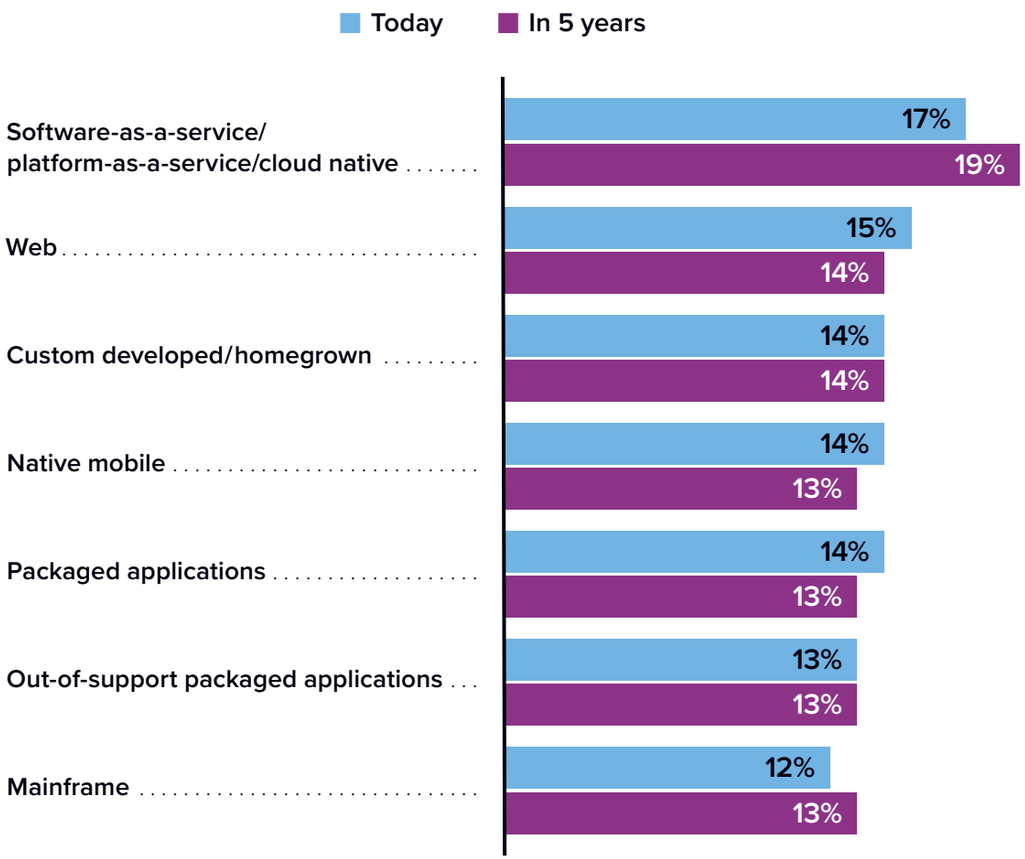


Source: *IDC Worldwide Application Services Survey,* Q4 2022

Overcoming Complexity of Portfolios (continued)

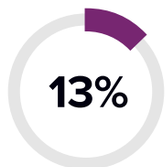
Application Portfolio Distribution

(Percentage of portfolios)

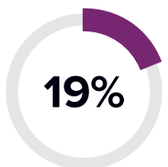


Enterprise Container and Microservices Strategy

(Percentage of firms)

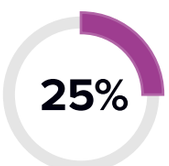


Optimizing across **all applications** while regularly refining and enhancing strategy

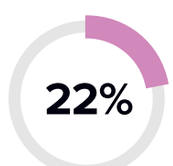


Synchronizing and coordinating across **a majority** of applications

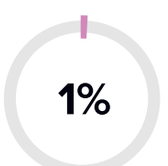
Refining and standardizing across **a large portion** of applications



Developing and/or piloting for **one or a select few** applications



Starting to explore



Not exploring

Source: *IDC Worldwide Application Services Survey,* Q4 2022 | For an accessible version of the data on this page, see Supplemental Data in the Appendix.

Application Modernization: Need for New Platforms and Delivery Models

Enterprises look to third-party experts for SaaS acumen, as well as modern application delivery and security expertise.

Need for partners

Enterprises often need an **ecosystem of partners** to help transform their application portfolio to achieve corporate imperatives.

Public cloud platforms

Utilizing public cloud platforms such as PaaS and SaaS — combined with modern delivery approaches — can enable enterprises to **scale more easily** and have the **flexibility to meet agile requirements.**

Talent requirements

Expertise in cloud combined with progressive forms of **application delivery and security** are key competencies enterprises seek from partners to enable business transformation and support modernization journeys.

Collaboration

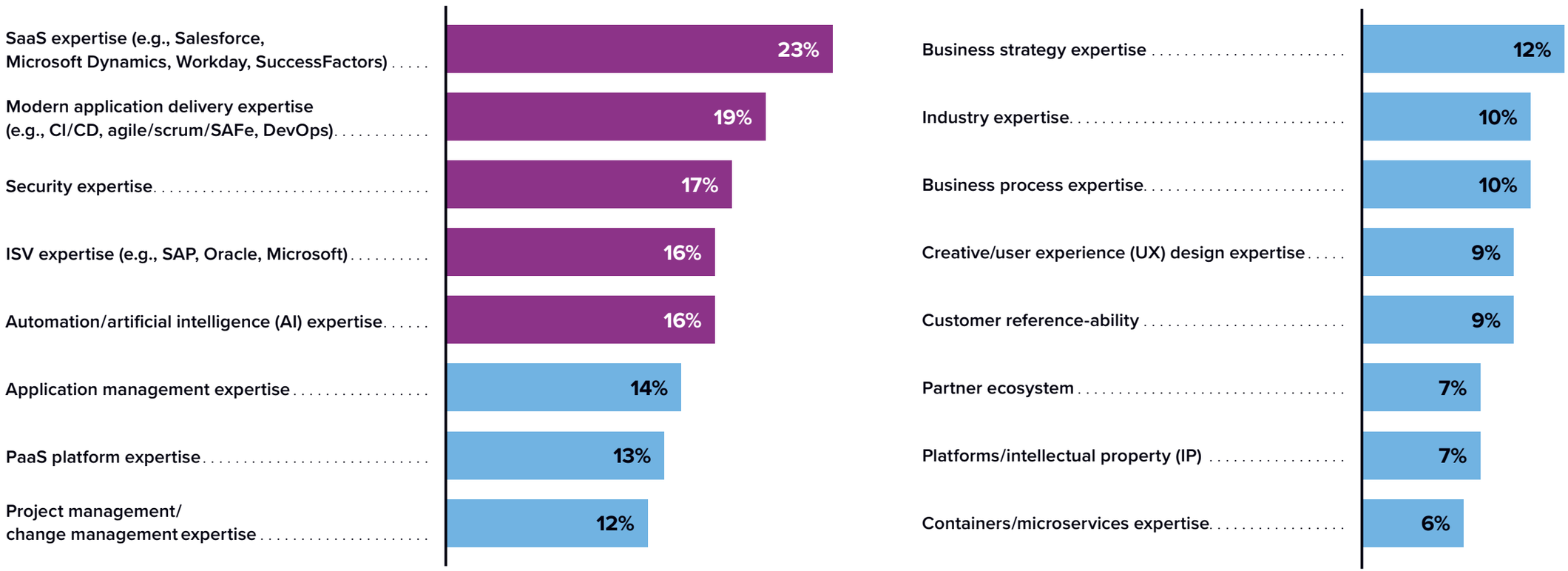
Significance of utilizing DevOps for modernization reflects the need to **develop an integrated organization** that can enable seamless collaboration.

Source: *IDC Worldwide Application Services Survey,* Q4 2022

Application Modernization: Need for New Platforms and Delivery Models (continued)

Top Application Modernization Capabilities

(Percentage of respondents)

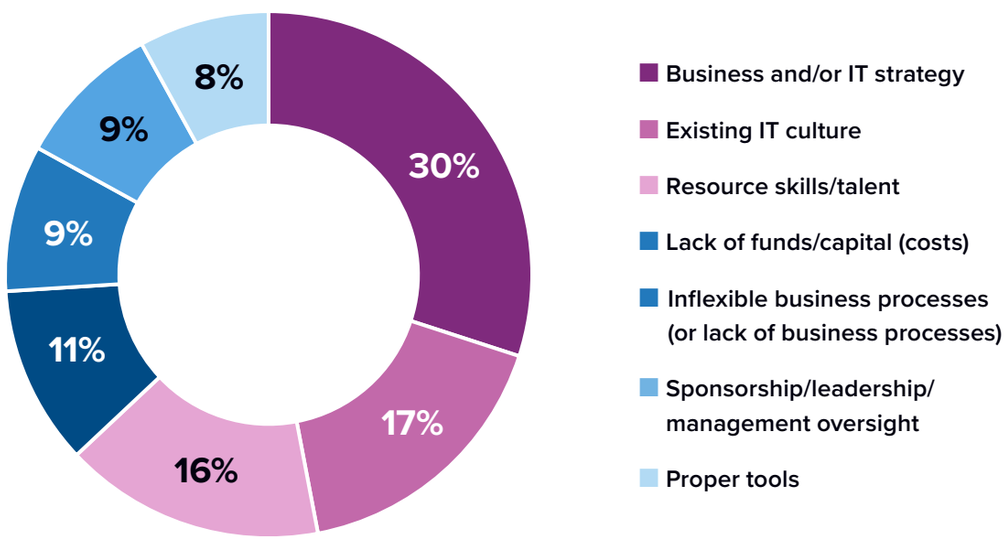


Source: *IDC Worldwide Application Services Survey,* Q4 2022

Application Modernization: Challenges in Moving to the Cloud

Successful application modernization hinges on enterprises aligning strategy across business and IT, as well as transforming cultures and evolving talent.

Top Application Modernization Capabilities



Aligning IT with business objectives

Modernization initiatives are complex, and enterprises face significant hurdles to transform applications. Enterprises must evaluate and consider what the future enterprise will look like, how applications will be leveraged for business operations, as well as devise methods to incentivize talent to evolve and change behaviors.

Best practices for modernization

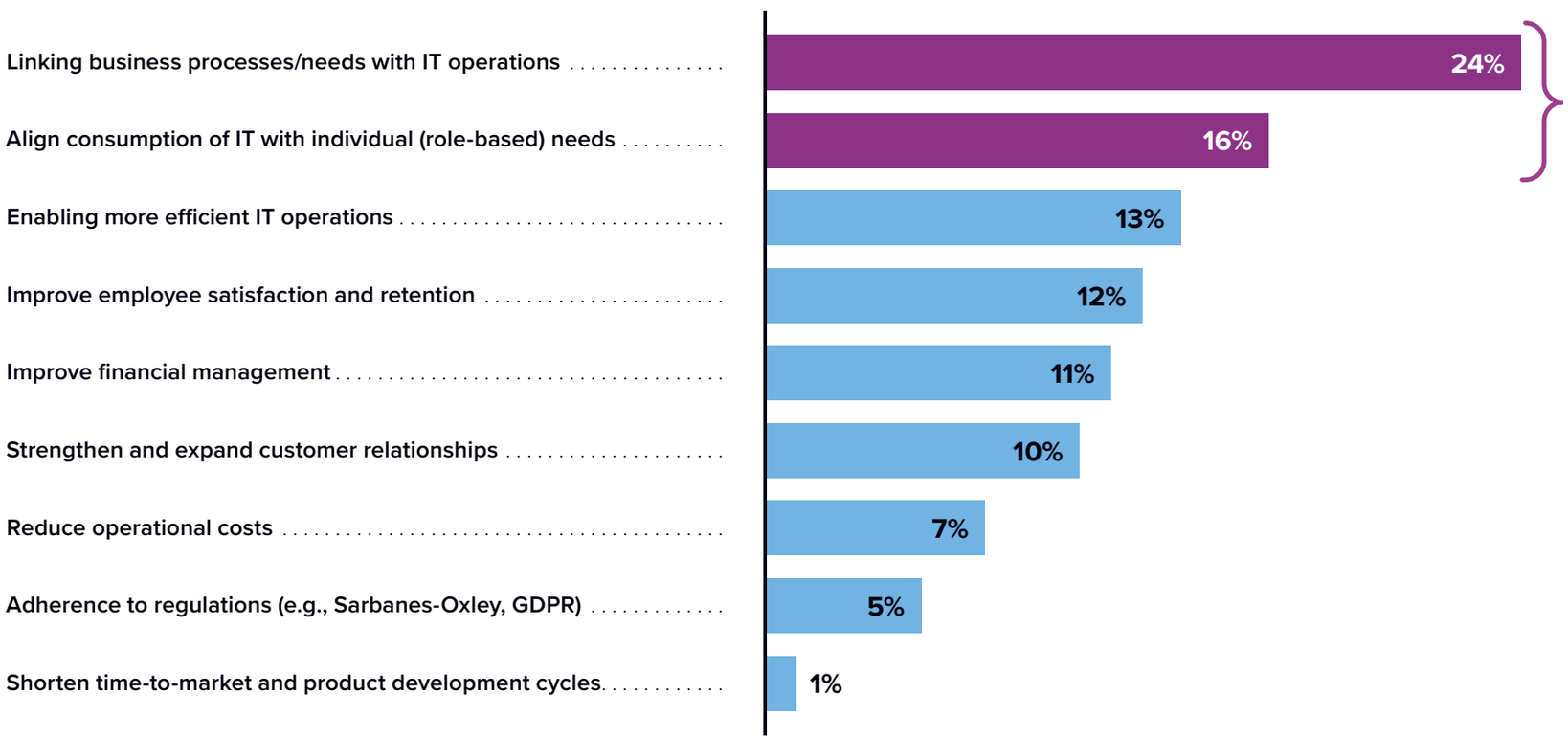
Lessons learned from successful modernization initiatives show that enterprises must establish a holistic strategy for modernization, as well as build effective governance and risk management, and prepare for people and process change.

Source: *IDC Worldwide Application Services Survey,* Q4 2022 | For an accessible version of the data on this page, see Supplemental Data in the Appendix.

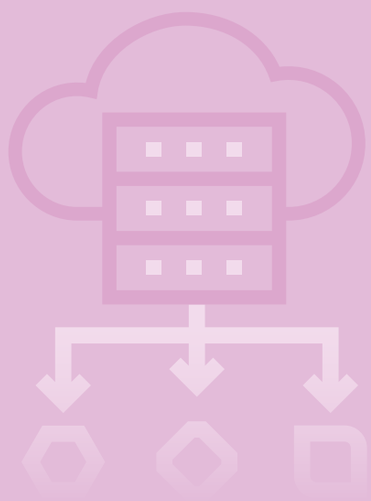
Expected Value in Using AI Across the Services Life Cycle

Overall Objective of AI in Utilizing Managed Cloud Services

(Percentage of respondents)



Top enterprise needs in using AI with managed cloud services in supporting hybrid clouds

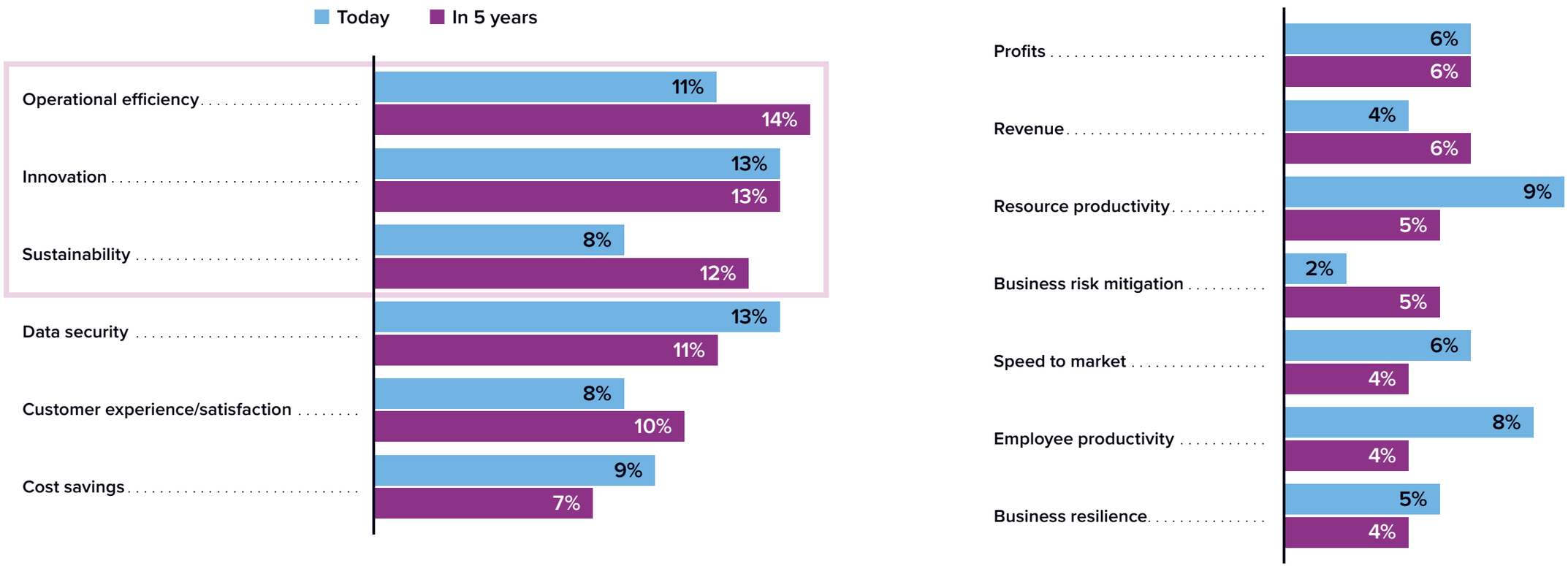


Source: *IDC Worldwide Application Services Survey,* Q3 2023

Expected Value in Using AI Across the Services Life Cycle (continued)

Top Business Priorities for AI with Application Development, Testing, and Management Initiatives

(Percentage of respondents; interim results shown)



Source: *IDC Worldwide Application Services Survey,* Q3 2023 | For an accessible version of the data on this page, see Supplemental Data in the Appendix.

Ensuring Seamless Delivery: Integrating Across Services and Technology

The need to provision applications—the heartbeat of the business process—has accelerated, with enterprises looking to deploy their applications in as little as a week or even a day or less.

Achieving this degree of rapid provisioning requires developing an operating model that enables integration across both the life cycle of services and the technologies spanning infrastructure, applications, and data that can help achieve the following:

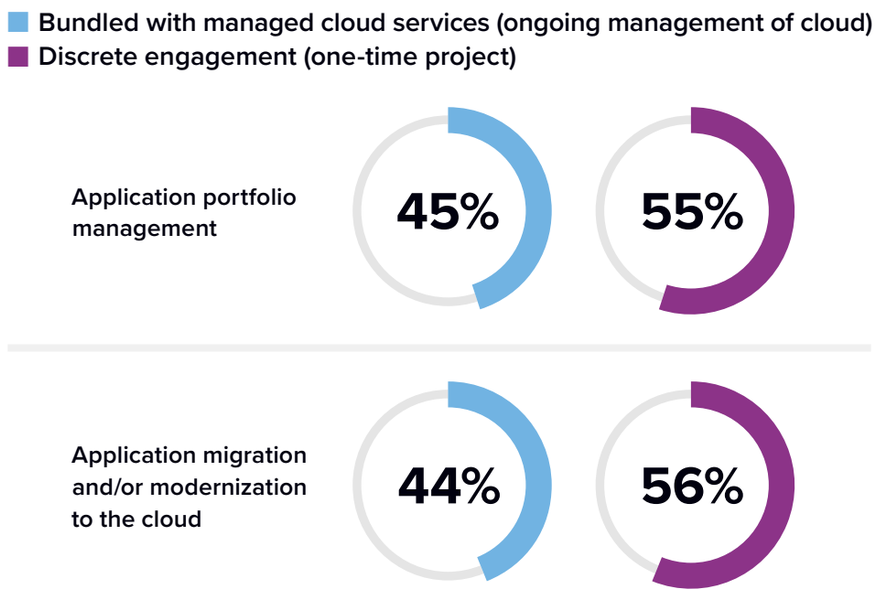
Alignment: Aligning business and IT objectives requires linking the management of a firm's application portfolio with its objectives in migrating, modernizing, and managing hybrid cloud environments and technologies.

Continuous innovation and resiliency: Integration can also support continuous innovation and the ability to adapt more quickly.

Organizational flexibility: Designing an integrated environment must be done jointly with creating an organizational structure in which there are seamless connections across all stakeholders spanning business and IT that results in ability to collaborate unimpeded.

Integration: Bundling of Services Across the Life Cycle

(Percentage of respondents)



Source: *IDC Worldwide Application Services Survey,* Q3 2023 | For an accessible version of the data on this page, see Supplemental Data in the Appendix.

Optimizing Hybrid Clouds: Need for Flexibility in Aligning Value with Enterprise Requirements

Enterprises are looking for flexibility in aligning how to optimize the value of private and public clouds based on an array of the following IT and business requirements.

- **Ensure security and comply with regulations** that increasingly require sovereign clouds
- **Meet alignment-critical financial key performance objectives** including ROI, cost savings, and total cost of ownership
- **Optimize resources** by assigning assets by preferred cloud provider and cloud type (private versus public)
- **Deploy and configure applications more quickly** to support greater agility in meeting business goals
- **Standardize technology** that enables seamless ability to migrate across public and private clouds
- **Improve user productivity** that requires delivering more personalized services

Optimizing Hybrid Clouds: Need for Flexibility in Aligning Value with Enterprise Requirements (continued)

Which type of IaaS cloud **(private versus public)** would you prefer using to achieve the following results as part of a managed cloud service?

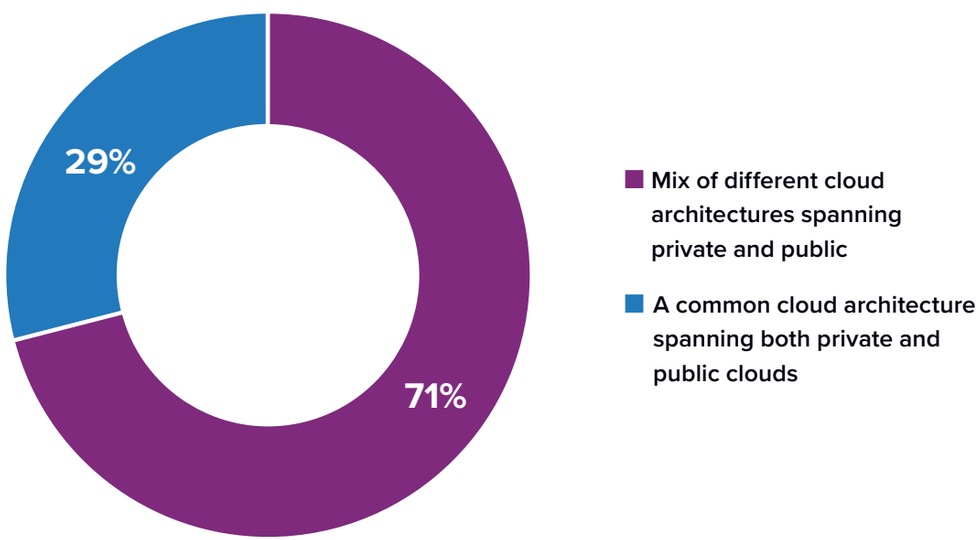
Client Preferences: ■ Public ■ Private ■ Either	COUNTRIES						INDUSTRIES							
	Australia	Germany	China	Brazil	UK	USA	Finance	Manufacturing	Healthcare and life science	Services	Transportation, communication, utilities	Retail or wholesale	Energy resources	Construction
Access to better security	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Meet regulatory requirements	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Optimize ROI (return on investment)	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Optimize resource utilization (e.g., compute, storage)	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Configure requirements more quickly	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Standardize IT infrastructure and applications platforms	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Reduce total size of IT budget	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Improve IT staff productivity	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Improve internal service delivery levels and business agility	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Source: *IDC Worldwide Managed CloudView Services Survey,* 2023 | For an accessible version of the data on this page, see Supplemental Data in the Appendix.

Providing a Continuum of Options: Meeting Geographical and Technological Complexity

Supporting enterprise use of hybrid clouds requires managing a complex technological architecture and geographic footprint across a continuum of options to help meet business agility and resiliency requirements.

Preferred Architectural Structure of Hybrid Cloud



Sovereign cloud:

- 37% of organizations require sovereign clouds to **meet government regulations** for data/information access, privacy, and control.
- Sovereign clouds need to **support nine countries on average,** and 30% of companies need support for 10 or more countries.
- Additional reasons for using sovereign clouds include **repatriating back to internal systems more quickly and supporting industry requirements.**

Source: *IDC Worldwide Managed CloudView Services Survey,* 2023
For an accessible version of the data on this page, see Supplemental Data in the Appendix.

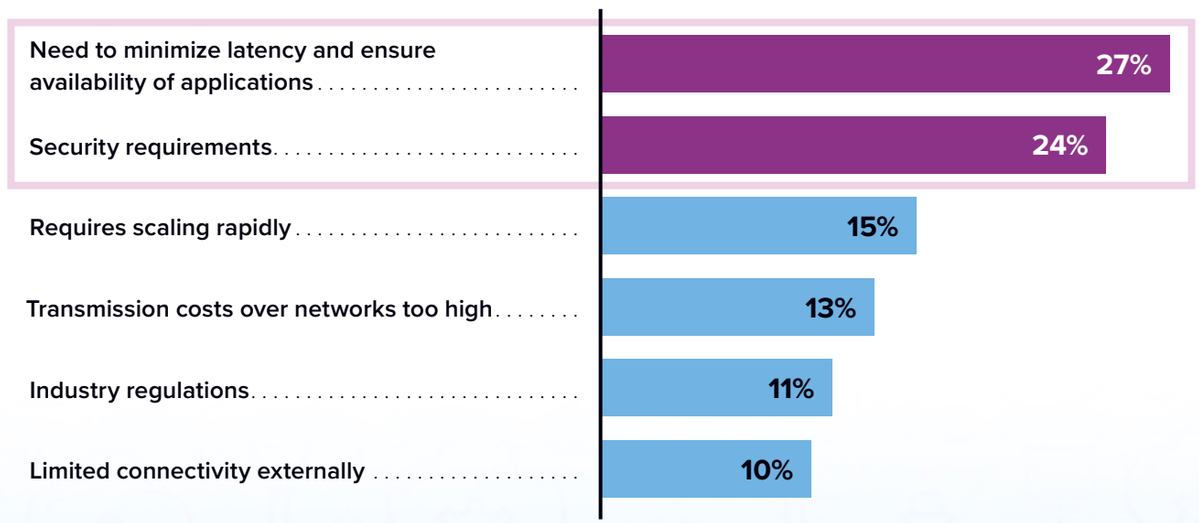
Providing a Continuum of Options: Meeting Geographical and Technological Complexity (continued)

Edge computing:

- Edge computing can help achieve the **availability and agility** required by business
- Need **choice of multivendor solutions** spanning different private cloud options including public cloud providers and OEMs

Primary Reasons for Edge Computing

(Percentage of respondents)



Source: *IDC Worldwide Managed Services Survey*, 2022

Delivering Operational Excellence: Governance and Management Requirements

Effective governance in managing hybrid cloud environments requires incorporating the following critical capabilities.

Functional Factors

Security, risk, and compliance	Mitigating risks to minimize financial and operations impacts
Operations and performance management (SLAs)	Delivering operational excellence
Data management and sovereignty	Ensuring effective use of data through controls and compliance

Structural Factors

Multicloud management platforms (control planes)	Means of supporting the continuum of resources required for effective operations
Centralized IT organization with federated/localized capabilities	Organizational hierarchy is critical to optimizing use of cloud capabilities
Standardized processes in managing IT	Effective integration requires implementing standardized processes for IT

Delivering Operational Excellence: Governance and Management Requirements (continued)

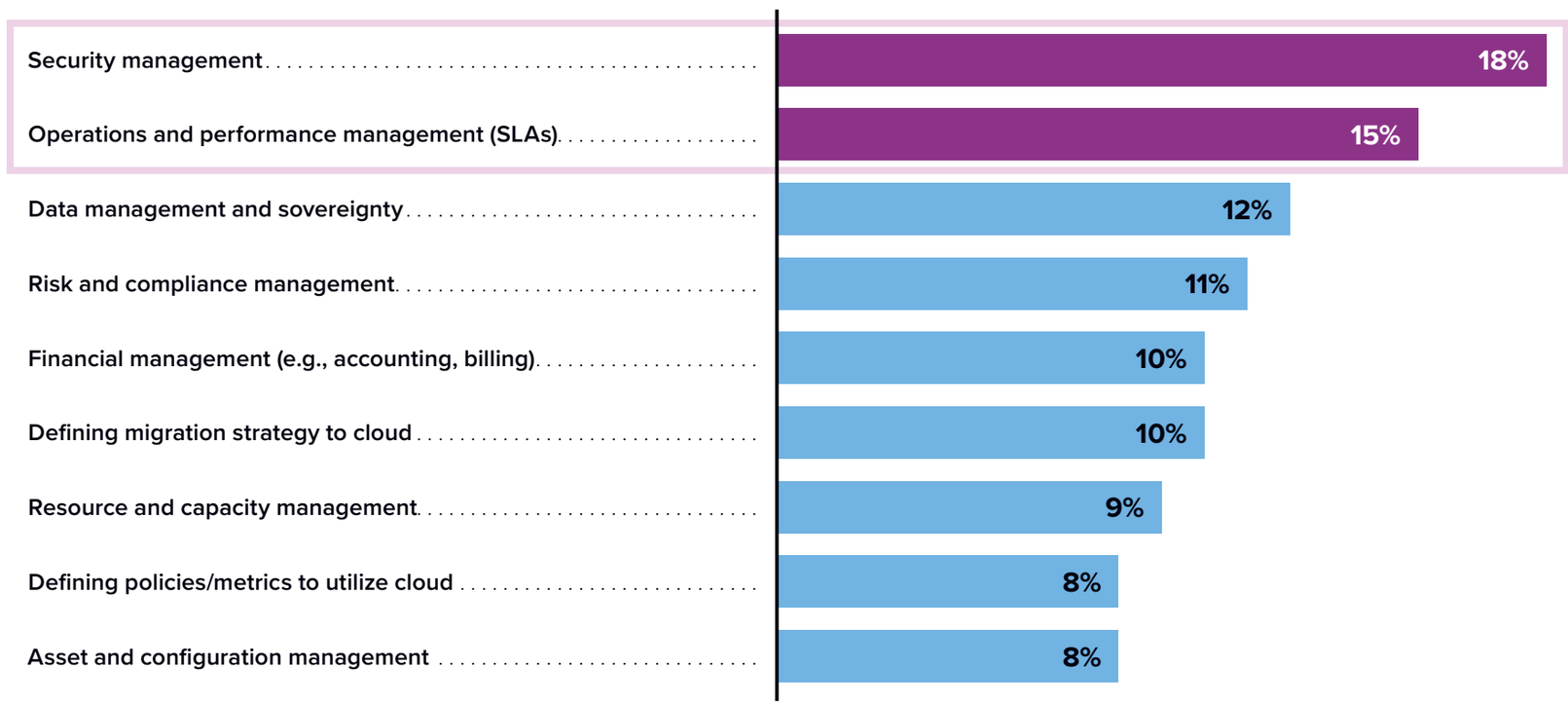
Functional Factors

Security, risk, and compliance

Mitigating risks to minimize financial and operations impacts

Which of the following does your company/organization consider the most significant capability that will help ensure **effective governance** when using managed cloud services?

(Percentage of respondents)



Source: *IDC Worldwide Managed CloudView Services Survey,* 2022

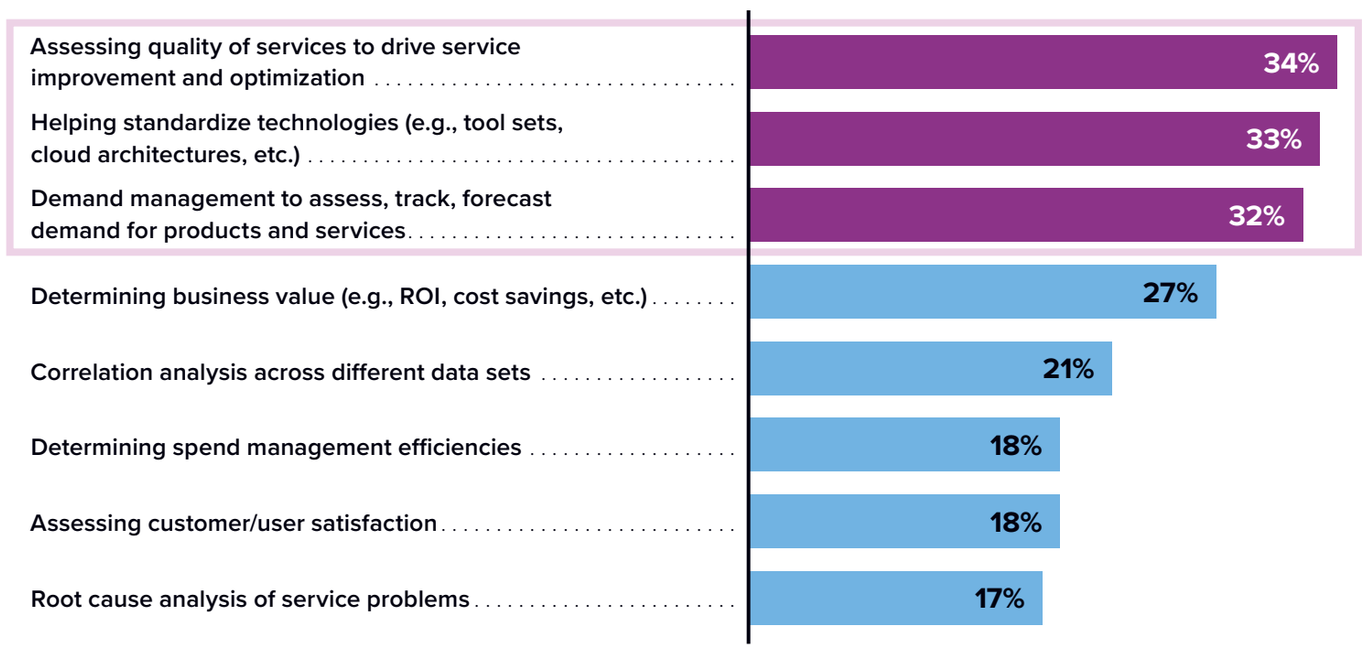
Optimizing Value of Hybrid Clouds via Cloud Management Platforms

Using cloud management platforms can help:

- Ensure high quality of **services**
- Enable integration through **standardization**
- Support meeting **business and financial objectives**

Which top two **analytics areas** does your company/organization deem most important as part of a **cloud management platform** to support all your cloud resources with managed cloud services?

(Percentage of respondents)



Source: *IDC Worldwide Managed CloudView Services Survey*, 2022

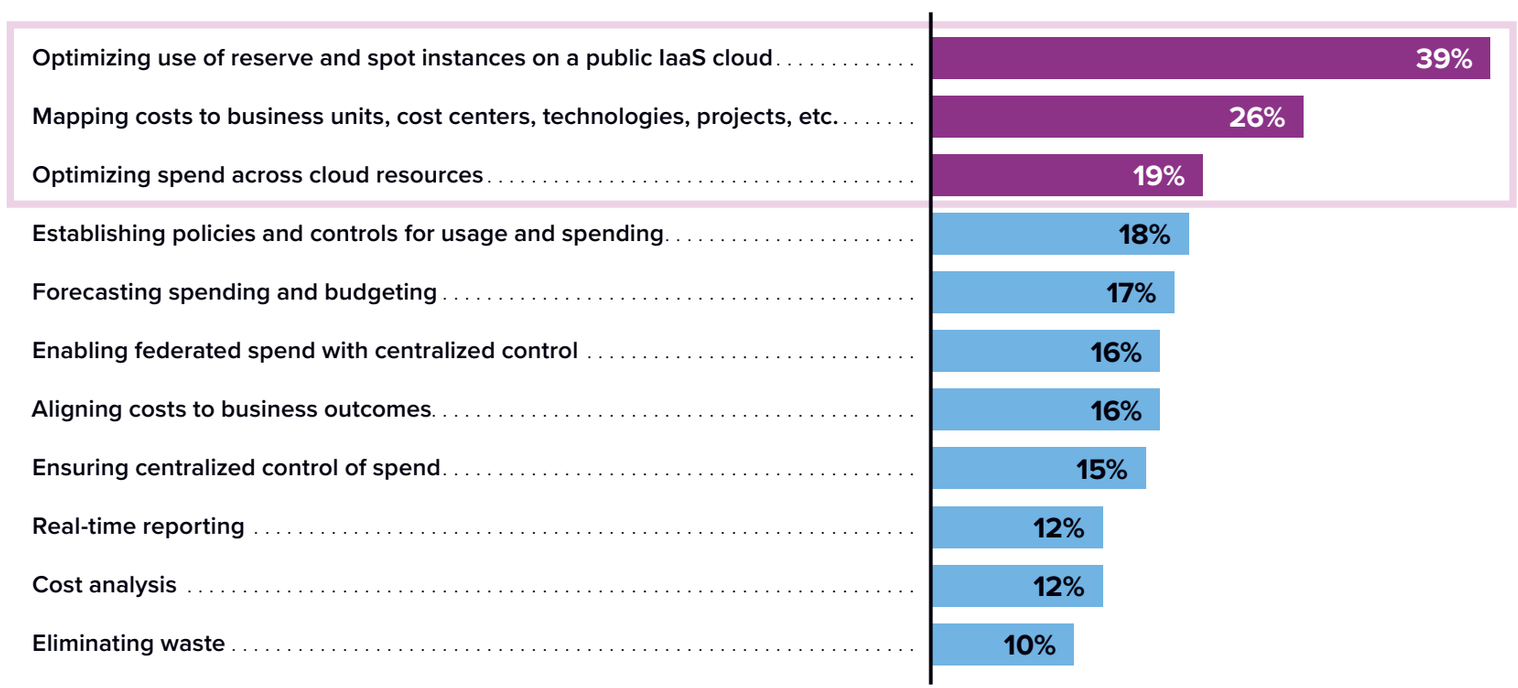
Optimizing Value of Hybrid Clouds via Cloud Management Platforms (continued)

Financial operations (FinOps) can help organizations:

- Effectively use **public cloud platforms and resources**
- Optimize **investments and spending** more granularly
- Maintain consistency of **usage**

Which two of the following does your company/organization believe are the most significant issues in optimizing financial management when using private and/or public clouds (IaaS, PaaS, SaaS) with managed cloud services?

(Percentage of respondents)



Source: *IDC Worldwide Managed CloudView Services Survey,* 2022

Risk Management: Need for Data Assurance and Effective Use of AI

Ensuring operational excellence and compliance requires incorporating robust security capabilities with data sovereignty.

Priorities for Data Assurance

(Percentage of respondents)

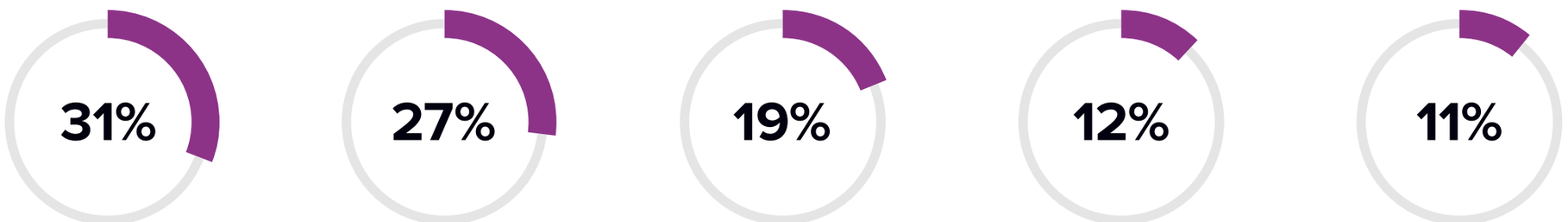
Source: *IDC Worldwide Managed CloudView Services Survey*, 2022

Risk Management: Need for Data Assurance and Effective Use of AI (continued)

Creating a risk management function and implementing rigorous testing for AI will mitigate the likelihood of underperforming business processes and operations.

Top Requirements in Using AI

(Percentage of respondents)



Source: *IDC Worldwide Managed CloudView Services Survey,* 2022

Essential Guidance

Enterprises looking to utilize managed service providers in helping to optimize the value of using hybrid clouds while achieving critical business and IT objectives should:

- **Understand the critical building blocks** that comprise a new operating model and the responsibilities and roles of each stakeholder
- **Establish clear and measurable goals and objectives** to identify what cloud migration and application modernization will and will not bring to your organization's business
- **Restructure the governance and overarching performance measurement model** to rethink and reorganize how to manage transformation as a going concern, instead of a one-time project
- **Examine trade-offs between services providers** for their abilities to be agnostic as well as their suite of services portfolio
  - It's key to evaluate service providers that are flexible and demonstrate abilities to adapt to ongoing change versus providers that approach modernization with rigid and inflexible frameworks, solutions, and mindsets.

Continued next page ►

Essential Guidance (continued)

- **Have access to a robust ecosystem of partners** spanning public cloud providers and critical technology vendors that can be orchestrated to deliver hybrid cloud solutions designed to align critical requirements as defined by specific private and public cloud needs
- **Ensure that hybrid cloud capabilities can support a diverse set of architectures** at a global level along with full range of cloud options while enabling localization of services that meet critical needs involving compliance, security, and quality of service
- **Implement a multicloud management platform** embedded with analytics capabilities to help ensure operational excellence while meeting SLAs and financial requirements as part of a governance structure

Appendix: Supplemental Data

The tables in this appendix provide an accessible version of the data for the complex figures in this document. Click "Return to original figure" below each table to get back to the original data figure.

SUPPLEMENTAL DATA FROM PAGE 7

Application Portfolio Distribution

(Percentage of portfolios)

	Today	In 5 years
Software-as-a-service/ platform-as-a-service/cloud native	17%	19%
Web	15%	14%
Custom developed/homegrown	14%	14%
Native mobile	14%	13%
Packaged applications	14%	13%
Out-of-support packaged applications	13%	13%
Mainframe	12%	13%

Source: *IDC Worldwide Application Services Survey,* Q4 2022

Return to original figure

SUPPLEMENTAL DATA FROM PAGE 10

Top Application Modernization Capabilities

Business and/or IT strategy	30%
Existing IT culture	17%
Resource skills/talent	16%
Lack of funds/capital (costs)	11%
Inflexible business processes (or lack of business processes)	9%
Sponsorship/leadership/management oversight	9%
Proper tools	8%

Source: *IDC Worldwide Application Services Survey,* Q4 2022

Return to original figure

Appendix: Supplemental Data (continued)

SUPPLEMENTAL DATA FROM PAGE 12

Top Business Priorities for AI with Application Development, Testing, and Management Initiatives

(Percentage of respondents; interim results shown)

	Today	In 5 years
Operational efficiency	11%	14%
Innovation	13%	13%
Sustainability	8%	12%
Data security	13%	11%
Customer experience/satisfaction	8%	10%
Cost savings	9%	7%
Profits	6%	6%

Continued at right ▶

	Today	In 5 years
Revenue	4%	6%
Resource productivity	9%	5%
Business risk mitigation	2%	5%
Speed to market	6%	4%
Employee productivity	8%	4%
Business resilience	5%	4%

Source: *IDC Worldwide Application Services Survey,* Q4 2022

Return to original figure

Appendix: Supplemental Data (continued)

SUPPLEMENTAL DATA FROM PAGE 13

Integration: Bundling of Services Across the Life Cycle

(Percentage of respondents)

	Discrete engagement (one-time project)	Bundled with managed cloud services (ongoing management of cloud)
Application portfolio management	45%	55%
Application migration and/or modernization to the cloud	44%	56%

Source: *IDC Worldwide Managed CloudView Survey,* Q3 2023

Return to original figure

Appendix: Supplemental Data (continued)

SUPPLEMENTAL DATA FROM PAGE 15

Which type of IaaS cloud (private versus public) would you prefer using to achieve the following results as part of a managed cloud service?

Client Preferences: ■ Public ■ Private ■ Either	COUNTRIES						INDUSTRIES							
	Australia	Germany	China	Brazil	UK	USA	Finance	Manufacturing	Healthcare and life science	Services	Transportation, communication, utilities	Retail or wholesale	Energy resources	Construction
Access to better security	Private	Public	Public	Private	Private	Private	Private	Private	Private	Private	Public	Private	Either	Private
Meet regulatory requirements	Public	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Public	Private	Private
Optimize ROI (return on investment)	Public	Public	Private	Public	Public	Public	Private	Private	Public	Public	Public	Private	Public	Public
Optimize resource utilization (e.g., compute, storage)	Public	Public	Public	Private	Private	Public	Public	Private	Public	Private	Public	Public	Public	Private
Configure requirements more quickly	Private	Public	Public	Private	Private	Public	Private	Public	Public	Private	Private	Private	Public	Public
Standardize IT infrastructure and applications platforms	Public	Public	Public	Private	Private	Private	Private	Public	Private	Private	Private	Public	Private	Private
Reduce total size of IT budget	Private	Public	Private	Private	Private	Private	Private	Public	Private	Private	Private	Private	Either	Private
Improve IT staff productivity	Private	Public	Public	Private	Private	Private	Private	Public	Private	Private	Private	Private	Public	Private
Improve internal service delivery levels and business agility	Public	Private	Public	Private	Private	Public	Private	Private	Either	Private	Public	Public	Private	Public

Source: *IDC Worldwide Managed CloudView Services Survey*, 2023

Return to original figure

Appendix: Supplemental Data (continued)

SUPPLEMENTAL DATA FROM PAGE 16

Preferred Architectural Structure of Hybrid Cloud

(Percentage of portfolio)

Mix of different cloud architectures spanning private and public	71%
A common cloud architecture spanning both private and public clouds	29%

Source: *IDC Worldwide Managed CloudView Services Survey,* 2023

Return to original figure

About the IDC Analysts

David Tapper
Vice President,
Outsourcing and Managed Cloud Services, IDC

David Tapper serves as Program Vice President for IDC's Outsourcing and Managed Cloud Services research team which develops research for technology outsourcing and managed services, business process outsourcing (BPO), and global sourcing, also referred to as offshore/nearshore. As part of this research, the group covers emerging services areas including mobility, social media, analytics, automation, IoT, and cloud services. Mr. Tapper also provides strategic thought leadership on the transformation of the services industry to newer models of delivery including cloud computing, managed cloud services and SaaS (Software-as-a-Service).

More about David Tapper

Pete Marston
Research Director,
Worldwide Intelligent Application Services, IDC

Pete Marston is Research Director for IDC's Worldwide Intelligent Application Services practice. He develops research focused on the life cycle of application delivery and related services markets that include custom application development, testing, application development and maintenance, and hosted application management. His research also reviews how modern application delivery, leading edge technology platforms and tools, and application life-cycle management methodologies are evolving and shaping the application services markets and contractual relationships.

More about Pete Marston

Message from the Sponsors

Accenture and Red Hat have partnered to help clients develop a holistic cloud strategy that embraces a hybrid approach to foster greater operational efficiency and innovation. With scalable, repeatable, and standardized offerings from Accenture built on Red Hat technology, our clients are empowered to operate anywhere in the cloud.

accenture

Accenture believes that total enterprise reinvention is a strategy that helps lead to a new performance frontier for companies and in most cases, the industries in which they operate. Amplifying the role of technology in reinvention means shifting from a technology landscape of static, standalone parts to interoperable pieces intentionally integrated and leveraging the cloud.

Read Accenture's Total Enterprise Reinvention report

Red Hat

Red Hat's open hybrid cloud strategy is built on the technological foundation of Red Hat Enterprise Linux®, Red Hat OpenShift®, and Red Hat Ansible Automation Platform enabling customers to run any application or workload consistently across any footprint, including on-premise, at the edge, and in the cloud.

Learn more about Outcomes of an Open Hybrid Cloud Strategy

IDC Custom Solutions

IDC Custom Solutions produced this publication. The opinion, analysis, and research results presented herein are drawn from more detailed research and analysis that IDC independently conducted and published, unless specific vendor sponsorship is noted. IDC Custom Solutions makes IDC content available in a wide range of formats for distribution by various companies. This IDC material is 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.

IDC Research, Inc.
140 Kendrick Street, Building B, Needham, MA 02494, USA
T +1 508 872 8200

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 helps IT professionals, business executives, and the investment community to make fact-based technology decisions and to achieve their key business objectives.