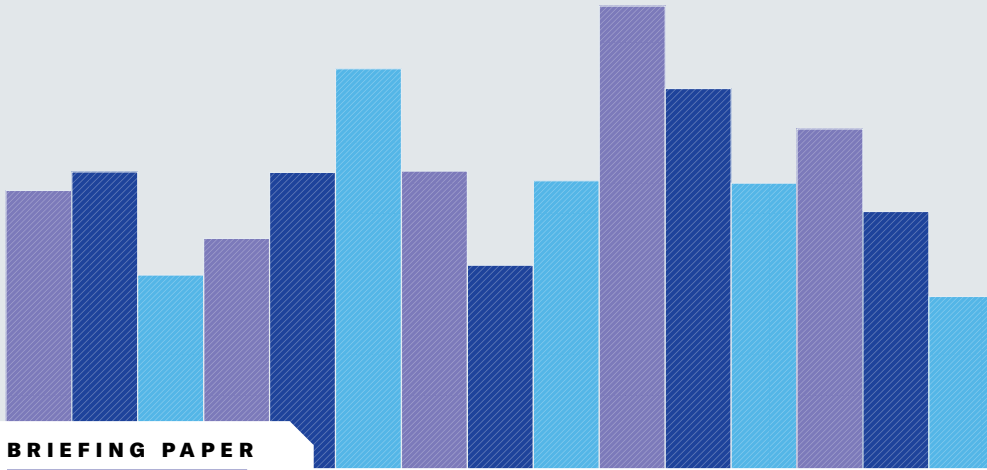




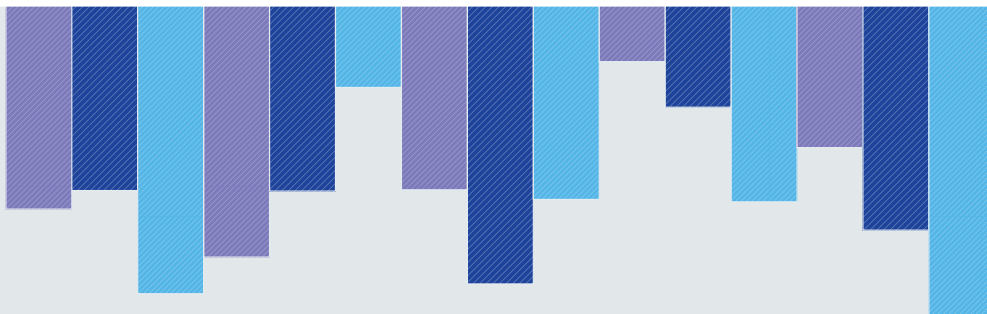
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ANALYTIC SERVICES



BRIEFING PAPER

Balancing Cloud Costs and Business Goals with FinOps



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The cloud's benefits are undeniable. Many enterprises have moved to the cloud to accelerate innovation, agility, and growth. The cloud's on-demand consumption model promises cost savings—letting you pay only for what you need. But the reality can be much different. When organizations move to the cloud, they may instead find costs spiraling out of control. This circumstance is what we call the cloud cost paradox.

Managing cloud costs and investments can be complex. It's easy to overspend on cloud services with no enterprise visibility or predictability of utilization, making it hard to ensure that your cloud investments are bringing you the speed and innovation you expect. Cloud pricing can be difficult to understand, with tens of thousands of stock keeping units (SKUs), variable pricing, constant changes in pricing models, and a lack of standardization in cloud billing—making it challenging for organizations to budget and forecast needs and consumption. As a result, wasted resources can add up to tens of thousands—or even millions—of dollars every year.

Without a unified way for organizations to assess cloud investments, they can become an unmanageable and costly tangle. A cloud cost management approach based on financial operations (FinOps) principles brings together financial, technical, and business functions to create a cost-conscious culture for cloud cost optimization. Cloud FinOps can help organizations address the complexity of cloud costs and lower their total cost of ownership through various means, including cost mapping, tagging, allocating shared costs equitably, right-sizing, and identifying data-driven cost takeout measures.

As you read this report, you will learn that the true value of FinOps extends beyond cost considerations. Organizations that adopt FinOps principles achieve a more granular view of their cloud costs and usage and realize where they gain the highest value for their cloud investments. This insight helps them understand where to cut costs and where to double down to maximize innovation and business growth.

To learn more, visit www.hitachivantara.com/CloudMod.



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Balancing Cloud Costs and Business Goals with FinOps

For many organizations, the cornerstone of innovation is cloud computing—a technology that drives organizational agility and high-velocity decision making so that businesses can keep pace with changing consumer demands and market trends.

Yet many enterprises struggle to properly manage cloud costs. Too quick to add to their cloud infrastructure, they miscalculate their cloud needs and how best to optimize resources. Others fail to establish the necessary financial controls to make intelligent decisions that will ultimately result in efficient IT spending.

Without these checks and balances, cloud investment can easily become “a runaway train,” warns one executive leading the cloud financial operations (FinOps) practice at a global consumer products company.

“A FinOps program puts the organization in the conductor seat, determining the end location of that train rather than allowing it to run full steam ahead,” the executive says.

Shorthand for “cloud financial operations,” FinOps is a practice that encourages a cross-functional approach to delivering greater financial accountability for increased cost savings, reduced business risks, and improved cloud quality. Technology, operations, and finance teams work together to enable faster product delivery while at the same time managing cloud costs and encouraging greater ownership of cloud usage.

But any advantages afforded by the cloud should come with a warning label, explains Jean Atelsek, a research analyst in the cloud transformation and digital economics unit of 451 Research, part of S&P Global Market Intelligence in New York.

While FinOps can improve the economics of cloud, it demands greater communication across the organization, cross-functional collaboration, reinvented processes, and a cultural shift strong enough to break down deeply

HIGHLIGHTS

Many enterprises **struggle to properly manage cloud costs**. Too quick to add to their cloud infrastructure, they **miscalculate their cloud needs** and how best to optimize resources.

FinOps is a practice that **encourages a cross-functional approach to delivering greater financial accountability** for increased cost savings, reduced business risks, and improved cloud quality.

For those organizations that succeed, **the rewards extend beyond managing unwieldy cloud costs** to enhancing the quality of cloud consumption while **driving better business performance**.



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The Costs and Complexities of Cloud

By eliminating the need for upfront investment in exorbitantly priced hardware and reducing operational and maintenance costs, cloud computing has rightfully earned a reputation as an appealing alternative to purchasing and maintaining dedicated servers in an on-premises environment.

In fact, according to a 2020 Harvard Business Review Analytic Services survey of 260 respondents familiar with their organizations' cloud adoption, 83% of executives agreed that cloud is very or extremely important for their organization's future strategy and growth. **FIGURE 1** A total of 86% of respondents said at least 40% of their organization's infrastructure and applications would be in the cloud by 2022—a 36% increase over the past two years. And when it comes to the outcomes businesses seek most from their cloud investments, 60% said they are looking for increased business agility, while 51% seek out cost reduction or flexibility.

While the cloud can provide IT environments with greater “agility and flexibility,” the flip side, 451 Research's Atelsek explains, is that “the more applications move to the cloud, the more urgent FinOps becomes.”

One reason for this urgency is the increasing purchasing power the cloud provides to developers. In the past, an IT request for greater compute power required the IT and finance teams to embark on a monthslong procurement process. However, the cloud loosens finance's proverbial purse strings by enabling developers to purchase new instances of the cloud at whim.

“Cloud removes finance from the buying process and hands the credit card to cloud engineers,” says J. R. Stormont, executive director of the FinOps Foundation, a Portland, Ore.-based program whose mandate is to advance the practice of cloud financial management through best practices, education, and standards. For large enterprises, he says, the result could be “billing files with tens of millions of individual charges.”

Another factor driving greater adoption of FinOps is that cloud charges tend to stem from a wide array of cloud service

providers with varying pricing structures and service level agreements. Due to this lack of consistency across an IT environment, “creating an overarching picture of what's being spent on cloud and whether resources are being used cost effectively becomes much more difficult,” says Atelsek.

What It Takes to Adopt FinOps

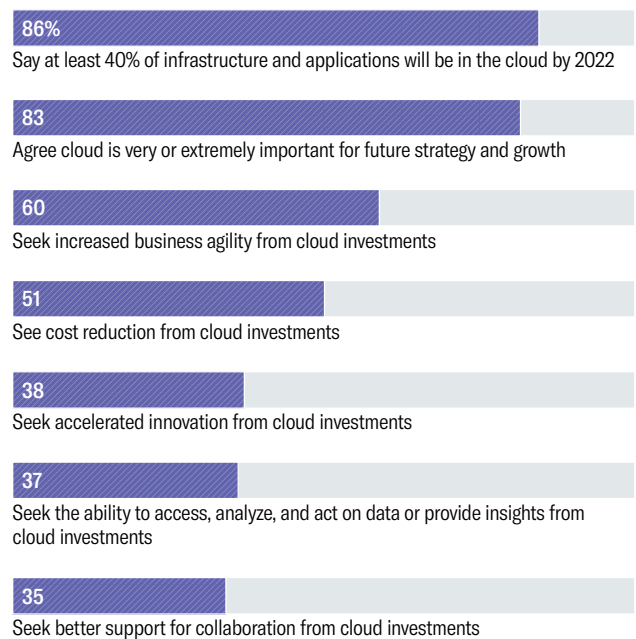
The good news is FinOps can serve as a powerful framework for controlling unwieldy IT costs, provided organizations overcome significant cultural, organizational, and technology obstacles.

Chief among these challenges is facilitating “a shift in mindset” among engineers and developers, according to the

FIGURE 1

The Prioritization of Cloud

Organizations are moving their applications to the cloud for better business outcomes



Source: Harvard Business Review Analytic Services survey, September 2020

FinOps Foundation's Storment. Once focused on speed of delivery and innovation, cloud computing, he says, demands that developers consider more cost-related matters, such as the impact a product enhancement or modification might have on cloud investment.

"FinOps isn't a once-a-year planning exercise in which engineers decide what to purchase next," says Storment. Rather, he says, IT teams must "proactively design software and build systems with costs in mind and be able to tie these costs to business objectives." For example, he adds, developers must be able to weigh the business benefits of adding a new product feature against the costs of any additional compute power it might require. Only then can developers properly make the necessary trade-off decisions.

In addition to cost considerations, Storment says FinOps requires organizations to "bring together disparate teams that don't always work well together." In the same way DevOps, a popular software development movement, encourages greater collaboration between software developers and operations people, Storment says, "[FinOps] brings together engineers who need to understand their role in spending company money; finance people who have to completely change the way they think about the granularity of IT spending in a cloud world where you may have millions of charges per month; and business groups who need to give directional input around where to direct cloud resources."

As if uniting these disparate factions weren't challenging enough, many organizations are struggling to find IT professionals with the FinOps expertise needed to enhance business value from cloud spend. It's a "tricky" task that Storment says the FinOps Foundation aims to address with certification courses that allow individuals to validate their FinOps knowledge and better understand the "hundreds of different pricing models" and "quarter of a million individual SKUs [stock keeping units]" that can appear on a single cloud service provider's bill.

In fact, given the cost and technology complexities of most cloud environments, the global consumer products company executive says FinOps presents more of "a big data challenge" than a technology hurdle as "there's almost an insurmountable amount of data to reconcile across multiple public cloud providers. Every second a cloud service runs, there is a unique line-item charge. In certain cases, a bill might be millions of rows long."

As a result, the executive says organizations need IT professionals with "an analytical mindset—someone who's not afraid to dive into large data sets, reconcile them, and figure out the best path forward."

Certainly, a managed services provider can ease the pressure to find IT professionals with this unique combination of data analytics skills, business acumen, and cloud expertise. Yet according to Storment, even the most experienced third-party



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provider can't fully eliminate the need for organizations to "build muscle internally so that the organization itself changes" to accommodate the cultural and organizational changes brought about by adopting a FinOps practice.

Real-World Best Practices

Reinventing IT roles, uniting disparate teams, and building a FinOps brain trust are challenging goals for any organization but are achievable with the right best practices.

"The first step is building out a core team that can support a FinOps program and identify all of its procedures," says the executive leading the FinOps practice whose core team at the consumer products company is comprised of finance leaders, engineers, and dedicated FinOps practitioners who together form a cloud center of excellence. This cross-functional group is responsible for critical tasks, including calculating costs for operating in the cloud, allocating cloud resources, and negotiating custom pricing with vendors.

As part of the FinOps practice, developers should be held responsible for identifying the cloud resources they're consuming. Doing so not only evenly distributes accountability for cloud spend across the organization but ensures that IT teams recognize the impact of cloud consumption on a company's finances.

Leadership is another critical component of a successful FinOps practice. According to the FinOps Foundation's 2021 "The State of FinOps Report," most FinOps practitioners report to a senior-level technical executive.¹ Top responses include the chief technology officer (CTO) (31%) and chief information officer (CIO) (27%), followed by the CFO (12%). The report also reveals that about 33% of FinOps practitioners are part

of dedicated FinOps teams, and 44% report that their FinOps team is a part of a greater cloud center of excellence. **FIGURE 2**

But while C-suite support is a driving force for FinOps, Storment believes “bottom-up champions,” like IT architects and engineers, also play an important part in helping employees develop “deeper connections to making the right software choices for the business need, not just the technical need” by demonstrating how changes in IT infrastructure impact cloud expenditures.

In fact, since educating employees on FinOps and the correlation between cloud consumption and cost, the executive leading the FinOps practice at the consumer products company has managed to “optimize” cloud investments, better identify cloud resources, and avoid “cost anomalies.”

Sharing and updating guidelines with developers using a web-based collaboration tool can also raise awareness of the advantages of FinOps. A monthly newsletter is another way to provide updates and advice on FinOps best practices.

Educational endeavors aside, Storment says not all organizations are clear on FinOps’ most valuable deliverables. “There’s always this misconception that if a company adopts FinOps, it’ll end up spending less on cloud,” he says. “But that’s actually the inverse of what really happens for many who are actually aiming to accelerate migrations and cloud adoption.”

Rather, he says, FinOps provides organizations with confidence to invest in cloud to drive their business via a real-time account of where they are gleaned the greatest value from their cloud investments and where they need to do a better job of optimizing cloud resources. As a result, he says, “cloud consumption patterns become more efficient, resulting in extra consumption tied to revenue generation, digital transformation, or other business objectives—not less cloud.”

In the case of the global consumer products company, cloud usage is on the rise, “but we’re using it more wisely,” says the executive there. For instance, whereas most IT teams purchase additional cloud resources in anticipation of increased demand, with only speculative insight into future requirements, the company’s “CloudOps team deploys cloud resources for what’s needed at that point in time with the understanding that we can scale when needed.”

In addition to these significant efficiency gains, FinOps has helped the company reduce cloud-related costs by nearly “six figures annually”—a savings that it reinvests in business-critical areas such as research and development rather than “throw it into the wind because we’re not paying attention to our cloud spend,” the executive explains.

Endnote

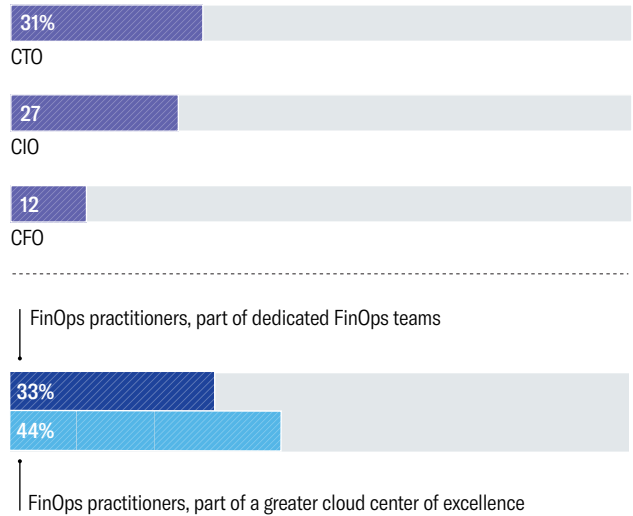
1 FinOps Foundation, “The State of FinOps Report,” 2021. <https://data.finops.org/>.

FIGURE 2

FinOps Leadership

Most FinOps practitioners report to their organizations’ C-suite technical executives, not finance leaders

As a FinOps practitioner, whom do you report to in the organization?



Source: FinOps Foundation, “The State of FinOps Report,” 2021
 Note: Not all responses shown; numbers do not add up to 100%.

Conclusion

As cloud consumption models become more complex and data-rich, the opportunities for FinOps to enhance the quality of cloud consumption and overall business performance only multiply. At base, FinOps allows organizations “to build into applications a way to manage, measure, and control cloud expenses,” says Atelsek.

But the future of FinOps extends beyond cost considerations. For those that focus on garnering grassroots support, establishing data management strategies, and mobilizing skilled talent, FinOps promises to provide a more granular view of the exact costs of cloud usage and the business value these investments are generating.

“The Holy Grail of FinOps is a better understanding of unit economics, such as cost per customer and cost per transaction,” says the FinOps practice executive. From there, “you can really start to make some interesting decisions,” from the kinds of customers the organization should target to how best to strengthen the business by reallocating technology spend in today’s fast-paced digital world.



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