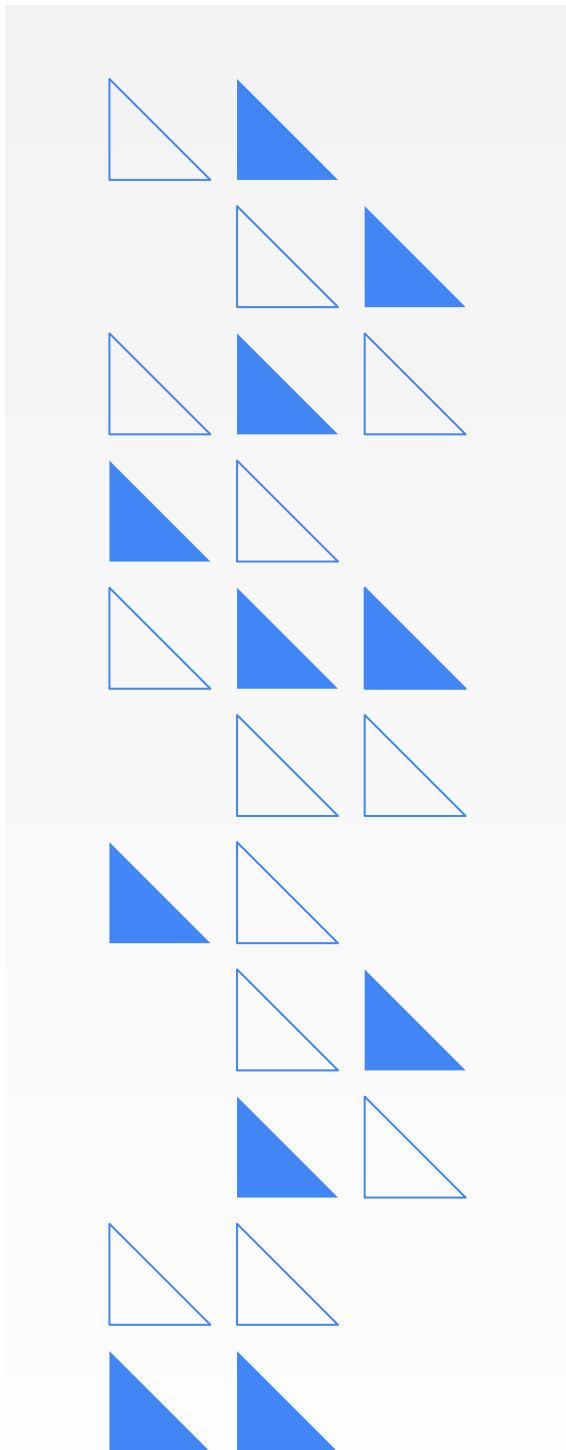


Unlocking the value of cloud FinOps with a new operating model

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Public cloud adoption continues at a torrential pace, with [compound annual growth rates exceeding 16%](#). Not only is this adoption expected to reduce core IT costs, but also is forecasted to create significant value drivers. [McKinsey Digital estimates this value to exceed \\$1 trillion in 2030](#). Despite these trends, [80% of CIOs admit they have yet to achieve their targeted value from cloud migration](#), and estimates reflect that [30% or more of cloud spend is either inefficient or wasted](#). As such, capturing this \$1 trillion value in the cloud has proven frustratingly difficult for many companies.

One of the key reasons for this challenge is that the financial operating model remains stuck in a quagmire of legacy processes, methodologies, and technologies.

Remaining status quo is no longer an option

It's natural for companies that are starting to migrate to the cloud to rely on financial processes used to manage their data center environments, but many find that traditional IT financial controls have limited ability to manage and predict cloud spend effectively.

Figure 1. Common cloud financial governance challenges

Bringing traditional financial processes...		→	Create new challenges in the cloud
	Budget cycle IT budget set during annual planning cycle	→	Dynamic changes to migrations and consumption can challenge static budgets
	Cost ownership Centrally-owned IT budget; BU allocations by revenue or headcount	→	Limited visibility to usage and source of cost overruns
	Spend controls CapEx Budget & Purchase Order Process used to control IT spend	→	Limited ability to effectively control largely OpEx-driven spend; 30+% average wasted spend
	Predictability Quarterly financial forecasts built off of depreciation run-off & trend-based OpEx spend	→	Forecast variances can exceed 25%
	Resource investment Procurement of standard fixed capacity hardware configurations on ~5 year refresh cycle	→	Use of standard data center configurations for cloud resources introduces 30-75% overhead waste

Budget cycle

Companies that use a traditional annual-planning cycle commonly start the planning process six to nine months prior to the new fiscal year. Due to dynamic changes of complex cloud migrations and changing consumption patterns, that long lead time can make it challenging to establish an accurate forecast of cloud costs. For example, a business case may have been established to support the cloud migration decision, along with timing and cloud ramp-up assumptions. The actual migration plan may look quite different, since application dependencies are evaluated and applications are segregated for specific strategies, such as rehosting, refactoring, or replatforming – each of which has specific cost and timeframe implications. For these reasons, it's not uncommon for companies to adopt a more dynamic planning process.



Cost ownership

Many companies operate using a central IT budget, allocating IT and other overhead costs to their business units using factors like revenue and headcount. Simply applying this approach to cloud costs will not provide the necessary visibility into usage and potential source of cost overruns, and it will not reflect the actual consumption of cloud resources by business units. Given the unique capability in the public cloud to provision discrete resources like compute instances, storage buckets, and databases – each of which having specific associated-consumption costs – many companies are developing the ability to attribute cloud costs to their lines of business through either showback or chargeback mechanisms.



Spend controls

Spend controls in traditional environments typically focus on capital expenditure (capex) spend, such as the capex budget and the purchase order process. With public cloud spend being largely an operating expenditure (opex), these controls have no ability to limit spend. Enterprise cloud environments can involve provisioning of tens of thousands of discreet billing resources, many of which can be implemented dynamically. As a result, one-time purchase processes are simply not suited to meeting these business needs.



Predictability

Creation of a data center finance forecast is a relatively straightforward process. Take the depreciation runoff of data center assets, add any new depreciation for capital spend in the period, and then add run-rate opex factors for maintenance, licensing, power and cooling, floor space, labor, and other related costs. These costs are typically stable, and customers commonly achieve 98% or more forecasting accuracy. But forecasting cloud expenses is an entirely different matter. It's common for businesses to start with the same trend-based approach used in their data center, but quickly find forecasting variances that exceed 25%. Not only are companies moving to more detailed forecasting models which employ a combination of trend-based forecasting for stable environments and driver-based forecasting for demand-driven consumption, but they're also including application teams responsible for cloud consumption in the forecasting and variance analysis process.



Resource investment

Traditional data center IT teams operate off of long-term investment cycles, with capacity procurement intended for use over a five year or longer life cycle. Due to the extended life of these assets, equipment is configured with significant overhead to account for growth and uncertainty. In fact, the average data center server utilizes less than 50% of its CPU and memory capacity, resulting in significant underutilized capital. Using the same approach to size public cloud infrastructure can create large amounts of over-provisioned capacity and waste, which can exceed 30% of cloud spend. Given the dynamic nature of cloud infrastructure, it's critical that companies size resources based on their current sizing requirements and enable dynamic provisioning to support workload growth.

In order to address these challenges, companies are establishing cloud FinOps capabilities to not only establish effective cost visibility and control, but also to accelerate the realization of value from cloud investments.

Democratizing of financial accountability

Cloud FinOps is an operational framework and cultural shift that brings technology, finance, and business together to create organizational transparency and shared responsibility to manage cloud costs. It requires a cultural and personal mindset change where financial accountability is shifted to the edge, and it becomes everyone's responsibility to ensure that cloud services are consumed in the most cost-effective manner to drive sustainable business outcomes.

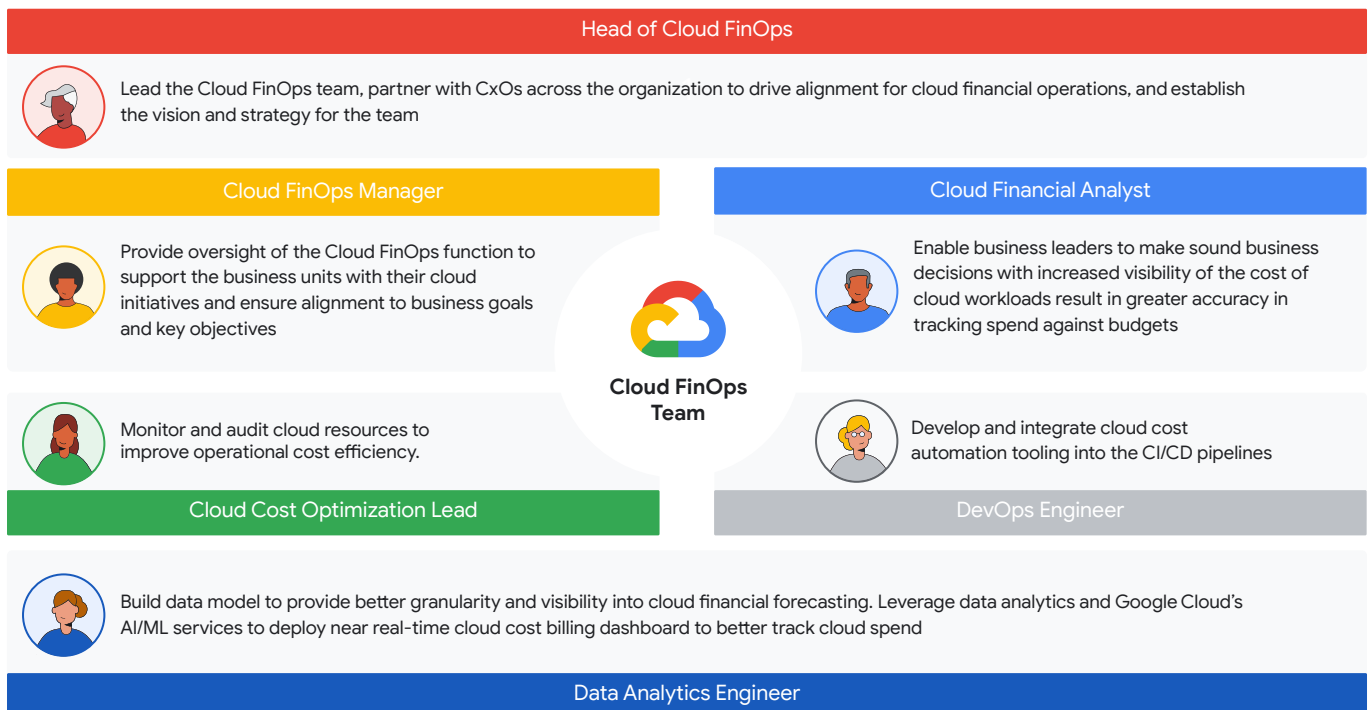
Varying roles within the cloud FinOps team

Some of the best FinOps teams are staffed by individuals from a variety of functions within the organization who have skills that are relevant to FinOps – some or all of whom only serve part-time on the FinOps team while still maintaining a day job. However, it's increasingly common to find one or more full-time FinOps practitioners within these teams who have transitioned from a prior role in the organization or have joined the organization specifically to serve as a FinOps practitioner. Finance practitioners are among the most common to fulfill FinOps duties, typically with a Financial Planning & Analysis background, although accounting or related backgrounds are also valuable. Every FinOps team should also have at least one practitioner with a technical background to help translate technical concepts across these highly cross-functional teams.

As a FinOps team is initially established, it's common for team members to serve multiple roles. Small cloud FinOps teams consisting of just one or two practitioners, for example, will have members fulfilling a few of these roles at once. The primary FinOps roles can be organized into head of cloud FinOps, cloud FinOps manager, cloud financial analyst, cloud cost optimization lead, DevOps engineer, and data analytics engineer.

Figure 2. Cloud FinOps team

A dedicated and cross-functional team of finance professional, cost optimization specialist, devops engineer and data engineer is critical to the success of driving end-to-end accountability



Role	Position summary	Key responsibilities
Head of Cloud FinOps 	Leads the cloud FinOps team, partners with Chief Officers (CxO)s across the organization to drive alignment for cloud financial operations, and establishes the vision and strategy for the team	<ul style="list-style-type: none"> • Drives alignment with key executive leaders across the organization • Defines the overall vision and strategy for the team • Establishes success metrics and Key Performance Indicators (KPIs)
Cloud FinOps Manager 	Provides oversight of the cloud FinOps function to support the business units with cloud initiatives, ensuring alignment to business goals and key objectives	<ul style="list-style-type: none"> • Oversees the governance of the cloud FinOps team, tracks metrics and KPIs for cloud, and maintains a comprehensive dashboard for reporting • Manages and coordinates business demands for cloud consumption • Tracks and manages cloud financial forecasting and budgeting
Cloud Financial Analyst 	Enables business leaders to make sound business decisions with increased visibility into the cost of cloud workloads, resulting in greater accuracy in tracking spend against budgets	<ul style="list-style-type: none"> • Works with stakeholders across the organization to help build business cases, return-on-investment calculations, and financial analysis frameworks for cloud services • Partners with the finance team to develop cloud financial forecasting and budgeting for cloud spend • Reviews cloud billing, invoicing, and various pricing models, and identifies opportunities to leverage committed-use discounts and sustained-use discounts
Cloud Cost Optimization Lead 	Monitors and audits cloud resources to improve operational cost efficiency	<ul style="list-style-type: none"> • Works continuously with engineering and architecture teams to build cost-aware architecture blueprints for cloud applications that can be leveraged across the enterprise • Fosters the adoption of cloud cost optimization activities and collaboration across the organization • Proactively reviews metrics to identify the optimal size and configurations of cloud computing resources
DevOps Engineer 	Develops and integrates cloud cost automation tooling into the continuous integration and delivery pipelines	<ul style="list-style-type: none"> • Integrates tagging or labeling compliance tooling into the cloud resource management • Sets up cloud cost alerts and notifications for key stakeholders based on budget thresholds • Drives automation for cloud cost optimization techniques
Data Analytics Engineer 	Builds and integrates data analytics for cloud financial modeling and reporting	<ul style="list-style-type: none"> • Leverages data analytics and cloud AI and machine learning services to deploy a near real-time cloud cost billing dashboard to better track cloud spend • Builds data models to provide better granularity and visibility into cloud financial forecasting



Becoming a resource for the organization

Having a clear strategy for communication and change management to position the cloud FinOps team across the organization is critical to the team's adoption and success. Their mission should be to partner with management and finance and technical teams, managing their public cloud spend, minimizing waste, and implementing business-value metrics.

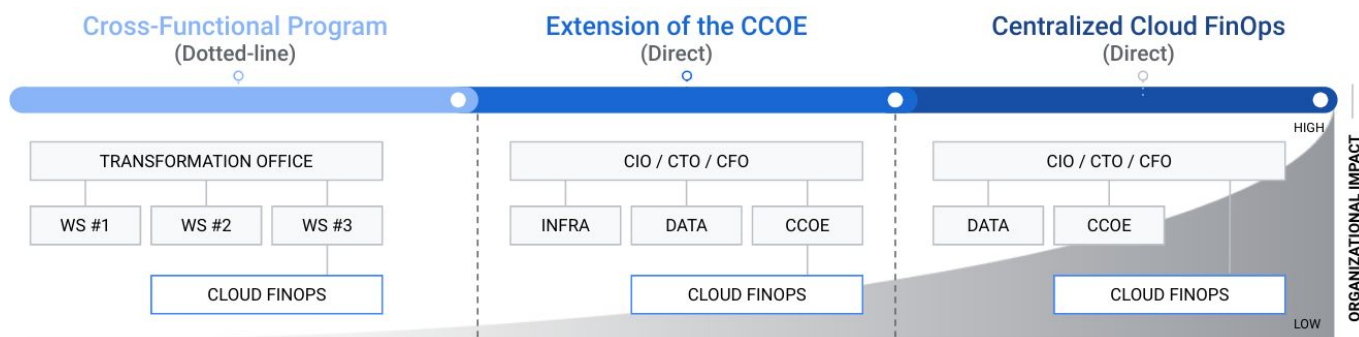
It is critical to avoid a perception that the FinOps team wishes to be solely a policymaking or enforcement body. Cloud FinOps teams are rarely empowered to overturn the decisions of technical teams, and should avoid creating any impressions that they seek to do so. Rather, they should be positioned collaboratively in the organization to help:

- Offer enhanced cost reporting and analytics on cloud spend
- Improve forecasting accuracy
- Create awareness of architectural options that can save money
- Enable real-time visibility to potential savings opportunities
- Provide governance frameworks to technical teams interested in implementing and maintaining their own governance

When generating reports that detail potential savings opportunities, FinOps practitioners should ask technical owners for their input on which opportunities are feasible in light of system performance, as well as associated implementation costs. They should not, by contrast, take the approach of recommending which opportunities should be implemented. This distinction is important in terms of the development teams' greater knowledge of the technical implications of changes to infrastructure. While the FinOps team can quantify the potential savings associated with potential optimizations, only the technical teams can fully understand what the offsetting technical implications might be. By presenting potential optimizations as questions rather than recommendations, the cloud FinOps team can build trust and collaborate with the technical teams in a manner that greatly increases the probability of action being taken on some or all of the savings opportunities.

Aligning cloud FinOps with the rest of the organization

We see a variety of alignments between the FinOps team and the rest of the organization. Initially, a FinOps team often forms without the organization taking any deliberate action at all – usually forming as a small group of finance or technical professionals who are asked to generate reports on cloud spend. Without becoming aware at the time, these individuals often become the first FinOps practitioners in the organization. Once the need for a formal FinOps team is identified, there are several common organizational-structure options that companies can use to implement an official team:



Cross functional

Introducing a cross-functional program team to drive the cloud FinOps discipline is often a good start and requires minimal organization impact. This operating model can be established quickly through a transformation office construct, with multiple work streams (WS), a strong executive sponsorship, and alignment across organizations. The cloud FinOps team is then established with resources who are indirectly or dotted-line reporting into the transformation office and still reside within their own respective function areas.



Extension of the cloud center of excellence (CoE)

As the cloud FinOps discipline evolves into a core function within the organization, it becomes an extension of an existing centralized cloud team, such as cloud CoE, where there are dedicated resources with a direct reporting-line structure to the head of cloud CoE. This operating model leverages the existing CoE organizational construct and benefits from scale, stability, and synergies from current human capital and resources.



Centralized cloud FinOps

This standalone and centralized cloud FinOps team directly reports to the CxO. As a new function focusing on cloud financial operations, this dedicated team has a direct reporting-line structure to the CxO within the organization. This reporting structure will empower the cloud FinOps team to drive standards and influence across the organization, but it will require human capital to reorganize teams or build from the ground up.

Driving cultural change

By providing increased visibility into cloud spend and opportunities to reduce waste, the cloud FinOps team can spread a culture of accountability beyond management to the operators and architects of the infrastructure. Successful organizations employ various incentive models to drive behavior and to change the mindset and culture across the enterprise.



**Gamification
with leaderboard**



**Organization
core value**



**Embed as leadership
MBO and OKR**

Gamification with leaderboard

One of the many ways to instill a cost-conscious culture is through gamification. Not only can gamification help organizations promote a cost-effective use of cloud resources, but it's also a powerful way to orient the entire team toward a shared understanding of best practices to help drive long-term cultural change.

As an example, organizations can create a leaderboard with scores to track the top-performing teams or individuals who deliver the largest optimization efficiencies or the highest adoption of labeling to tag unlabelled resources. Gamification can be a great opportunity to engage employees and inject some fun into the process.

Organization core value

Organization leaders play a critical role in advancing the cultural shift. They consistently need to articulate the narrative and act as role models, living and breathing the organization's values.

[According to Gartner](#), "companies with strong cultures of continuous cost optimization, [where budget owners consistently optimize costs without finance's intervention,] are more likely to have cross-functional cost optimization teams compared with companies that do not (73% versus 44%, respectively)."

Ultimately, organizations can only drive continuous improvement and sustain the cost-conscious culture if the right behaviors are infused into the organizational DNA, successes are celebrated, and best-in-class behaviors are shared and rewarded.

Embed as leadership MBO and OKR

The most effective way to drive a cost-conscious culture shift across the organization from a top-down perspective is to embed cost-driven management by objectives (MBOs) and objectives and key results (OKRs) into the organization's performance management process. This is the most impactful and sustainable way to implement and ensure that the right behaviors are rewarded, but is often a challenge because executives' bonuses would be impacted.

As an example, we often see highly advanced customers include an OKR that's focused on reducing per-unit costs. From top executives to individual contributors, this type of metric creates an organizational incentive to work as a single team in order to innovate and find new ways to reduce costs. These types of metrics can not only help drive optimization of existing technology, but also help process changes and adoption of new cloud native technology.

Across the leading approaches, we've seen highly advanced organizations use a combination of all three methods, including running a gamification contest, instilling core values throughout an organization, and embedding cost-driven MBOs and OKRs into company performance plans.



Take the next steps

Here are some questions to consider when deciding if your organization needs to establish or significantly expand its cloud FinOps team:

- Do business leaders and technical teams have real-time visibility into cloud spend? Does the cloud billing data support business decision-making, such as product or customer profitability and pricing?
- Is the organization struggling with crisis-mode optimization where costs grow well in excess of the wider business as a result of inadvertent waste that must repeatedly be addressed?
- Are technical teams oriented toward, and skilled in, eliminating waste and rightsizing workloads?
- Are standardized governance tools and processes available to technical teams in order to establish operational guardrails that can help prevent inadvertent spending spikes?

By establishing a cloud FinOps practice, organizations can serve as a centralized resource to put financial governance and cost controls in place.

In this fast-moving digital cloud era, companies that embrace a cost-conscious culture are best positioned to forge ahead confidently with their cloud FinOps strategy. By implementing the prescriptive approaches described throughout, organizations can ensure that they're able to create a sustainable impact and instill a culture of cost consciousness. Establishing real-time cost visibility and a cost-aware culture are critical enablers of business-value realization – both in delivering cost-effective IT and digital transformation.

No matter where you are on your cloud transformation journey, we're here to help you start the conversation and accelerate your path to maximizing business value with the cloud. We're committed to partnering with our customers to accelerate execution through tailored engagements and in-depth collaboration. If you're interested in more information, please [contact us](#) and join the vibrant community of the [FinOps Foundation](#).

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