The five costly mistakes to avoid in cloud FinOps

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Cloud computing continues to revolutionise how businesses innovate and grow in today's hypercompetitive global environment. While the race to the cloud has catapulted businesses into a new realm of speed and agility, few are cashing in on the cloud's promise to drive down costs – and the challenges are mounting amid the proliferation of multi-cloud environments.

But don't blame the technology. The problem is typically a case of too much spending and too little oversight. Businesses are struggling to effectively manage a critical new resource that's vastly different from the legacy environment it replaces, with cloud use decentralised and billing structures that are complex.

There is no question that organisations need a radical new approach to managing their cloud spending. The answer? FinOps.

The term – a play on 'finance' and 'DevOps' – refers to the financial management of cloud resources by cross-functional teams focused on spend accountability and business-value optimisation. With FinOps, teams from IT, finance and business units collaborate on data-driven spending decisions. Transparency is prioritised and everyone takes ownership for their cloud usage.

Simply put, FinOps aligns cloud spending with business objectives and helps to ensure that cross-functional teams work harmoniously to enhance financial control and predictability, reduce friction, and deliver products and services faster in today's consumer-centric digital economy.

This report examines five key mistakes KPMG professionals are witnessing today as businesses increasingly embrace the power of cloud capabilities.

The move to the cloud is well underway.

88%

respondents in KPMG's global tech report 2022 say they are advanced in their adoption of the technology
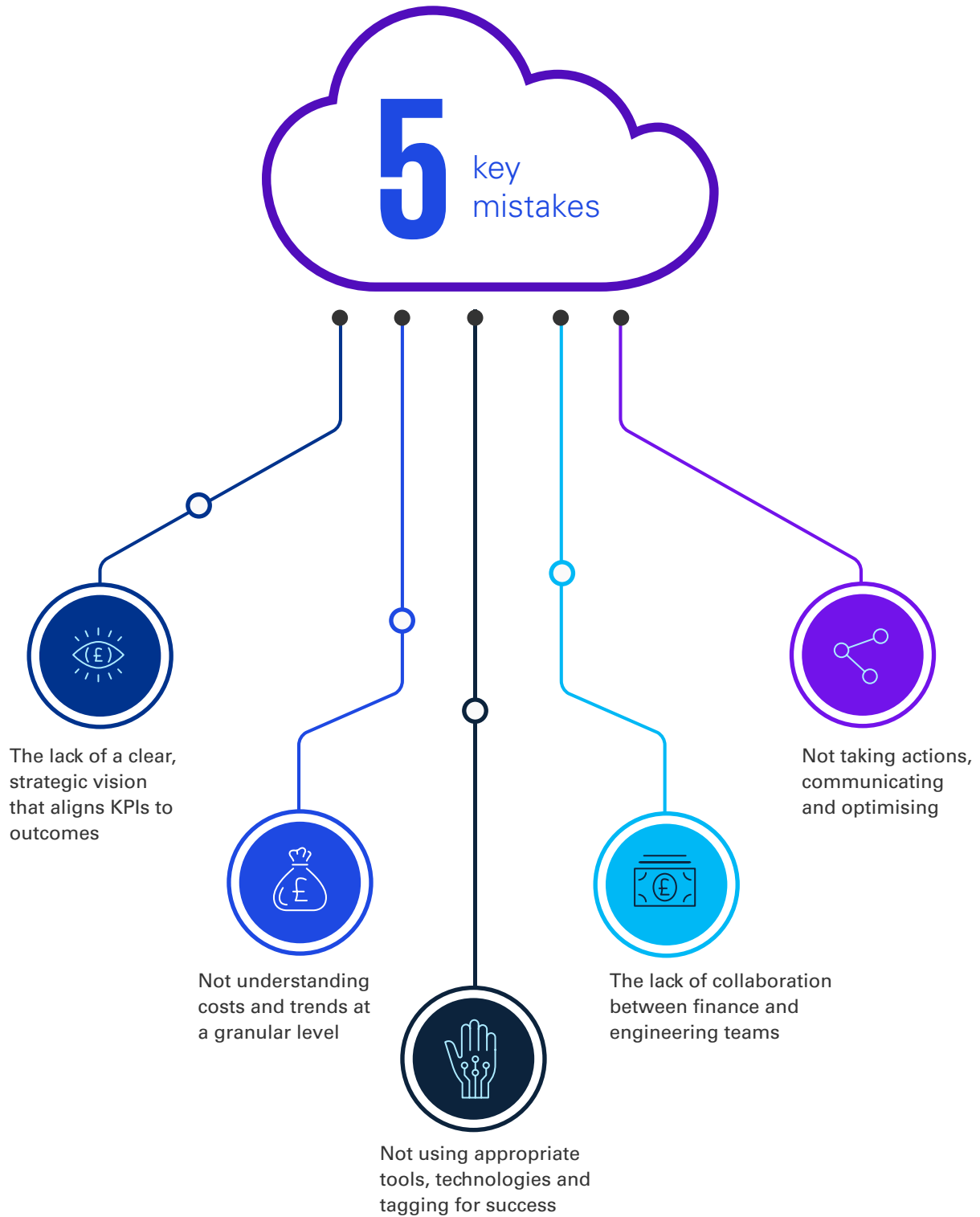
34%

business executives say their organisation's cloud program has lowered its total cost of ownership.

Source: KPMG global tech report 2022

This report examines five key mistakes KPMG professionals are witnessing today as businesses increasingly embrace the power of cloud capabilities.

5 key mistakes

The lack of a clear, strategic vision that aligns KPIs to outcomes

Not understanding costs and trends at a granular level

Not using appropriate tools, technologies and tagging for success

The lack of collaboration between finance and engineering teams

Not taking actions, communicating and optimising

01

The lack of a clear, strategic vision that aligns KPIs to outcomes

Often businesses are struggling to establish clear objectives and key results (OKR), key performance indicators, and achievable outcomes. The goal may be to reduce and optimise annual cloud spending. It could be a shift to off-premises capabilities. Perhaps it is enhancing visibility, insights and forecasting on cloud spending. Or is it all three?

To move forward with OKRs, perhaps your business is pursuing a reduction of cloud-server instance utilisation by 30 percent per customer or application. Excellent. But exactly what does 30 percent mean? Does it apply to all workloads? Is it for compute instances, virtual machines, or GPUs used for machine learning model training? Does it apply to the organisation's high-priority or low-priority workloads? And how will your efforts ultimately align with your business objectives in ways that do not impede growth and agility?

These are significant questions demanding precise answers if you hope to effectively determine and manage your cloud Total Cost of Ownership (TCO). FinOps can help get you there.

For example, cost effective architecture that reduces failure rates can drive down TCO by about 18 percent, while buying futures contracts with cloud providers and negotiating discounts can have a 10 percent impact to lower TCO. Meanwhile, right-sizing efforts – such as buying cheaper reserved instances to cover your base load, or setting thresholds and limits – can have a seven percent effect on total costs, while auto-scaling can bring down costs by about nine percent.[1]

Success on the FinOps journey inevitably requires the ability to measure, report, analyse and optimise cloud spending. There are four core principles to consider when utilising KPIs for FinOps: Instrumenting and automating measurements, setting achievable targets to accompany your strategic business objectives, and being data driven to continuously optimise processes.

Key KPIs to enhance cloud spending visibility include, for example: the percentage of your cloud environment with proper tagging in place, the percentage of billing from untagged resources, the percentage of shared costs allocated, and total spend versus cloud costs per team.

Key cloud optimisation KPIs include: right-sizing savings percentage, effective costs per resource, and the cost of optimisation opportunities that are not implemented. For governance and automation, businesses need to know the percentage of policies that are compliant, the mean time to detect compliance, time saved via policies and the percentage of cloud accounts with an automated clean-up policy.

Taking a strategic approach to FinOps ultimately means keeping objectives and KPIs front and center at all times – continuously revisiting, adjusting and evolving them as required. FinOps is a journey – not a destination. Businesses should monitor and respond to new business data and make changes, particularly in today's fast-evolving environment, where the rapid pace of change continues to accelerate. Occasionally businesses abandon their FinOps initiatives after a few short years of productive results. This is a big mistake in today's dynamic cloud environment.

1.   ITTOM Guidance for FinOps, KPMG in the US, 2022

02 🪙

Not understanding costs and trends at a granular level

You can't measure what you can't see, making a precise, granular view of cloud costs and trends critical to your business. It's not enough to simply know what your cloud spend is at any moment – positioning your business to continually manage and reduce costs is essential.

Amid a lack of data that continually delivers timely cloud spend and usage insights, businesses often make significant cloud investments while unsure of what they are accomplishing or how to manage costs. KPMG professionals have seen cloud initiatives temporarily put on hold as costs spiral out of control – a disruptive situation to be in for sure.

Observability is essential to success – gaining visibility into where your cloud spend is going, monitoring activity at a granular level, and responding as needed as workloads and objectives change. Today's modern observability tools gather data from all available sources and analyse that data for precise visibility into cloud processes, trends, issues and areas requiring improvement.

For example, your business sets a baseline hourly cost of running a server instance or a container and advises all teams to comply with that objective. How will you tightly monitor results, allocate spending and strive to ensure that your goal is being met over time? Meanwhile, how will you identify and measure key areas such as the percentage of oversized instances, orphaned resources or usage during weekdays versus weekends?

It's crucial to measure every aspect of your cloud environment with precision and in context. Aiming to ensure observability can empower your data teams with visibility, precise allocation, real-time budgeting information and accurate forecasting for cost governance.

The future is data driven and success demands that you make FinOps a permanent feature of your business in order to effectively drill down on various aspects of cloud use and spend.

03

Not using appropriate tools, technologies and tagging for success

FinOps success, apart from instrumenting and gathering timely data, also requires visibility of assets through IT asset management and the use of appropriate tools, technologies and tagging, including automation capabilities.

Unfortunately, there are many examples of businesses with multi-cloud environments that are using tools and capabilities provided by their cloud vendors with little to no success. Improper and inconsistent tagging of resources and a lack of appropriate automation can hinder success. Tagging and inventorying assets is essential for allocation, as well as downstream automation of tasks to manage costs.

Trend-based forecasting helps answer questions like 'What would monthly cloud spend be in a future month given the spending trend observed to date?' Trend-based forecasting is an appropriate method for simpler situations in which past trends are likely to continue. For example, if 50 percent of total enterprise workloads have been in the cloud for the past year and exhibit some cost growth – and workloads are going up 10 percent with similar growth expectations – then past cost growth can be applied to expected workload volume to produce a reliable forecast. Different techniques like Moving Average[2], Exponential[3] Smoothing[4], or ARIMA[5], can generate this forecast.

2.   https://exceltable.com/en/analyses-reports/calculation-moving-average
3.   https://www.educba.com/exponential-smoothing-in-excel/
4.   https://www.educba.com/exponential-smoothing-in-excel/
5.   https://help.xlstat.com/6753-fit-arima-model-time-series-excel

Trend-based versus what-if forecasting

However, if more variables and probabilities cannot be captured by trend-based forecasting, what-if forecasting can be used. This approach can help answer complex questions like 'What will monthly spend be if some user traffic increases by 25 percent, or if some provisioned compute instances decrease by five percent?' It's important to note that while most teams will pick one trend during trend-based forecasts (high, mid, low results), what-if analysis can compound a number of possible outcomes, leaving finance and engineering teams to select which outcome – or outcomes – they deem most likely.

What do you do if costs exceed what you've observed in recent months? How do you handle destruction of non-confirming and untagged resources? How do you investigate the percentage of resources that are untagged and contributing to spend? How will corrective actions be taken to address wrongly or untagged resources?

Businesses need visibility of assets through IT asset management and, second, instrumenting tools to accurately calculate the spectrum of costs and the influencing factors that should be managed. Third is observability regarding what the business needs to do to rectify problems.

04

The lack of collaboration between finance and engineering teams

A successful cloud journey relies on FinOps and the engineering team working closely together. While FinOps can manage processes and budgeting, all of this will likely not prove successful if engineering doesn't agree to take the right actions. And the problem of course becomes significant in a multi-cloud organisation with hundreds of engineers, versus a few people in IT finance.

Finance teams do not always have the technical acumen to provide cost-savings and allocation recommendations to engineering teams, while engineering's responsibilities do not always require its specialists to 'think financially.' For example, how would an engineer understand the nuances of provisioning a cloud resource using an on-demand spot pricing model versus a negotiated long-term discount?

Empowering engineering specialists with new skills on the cost-management front is essential for their role to evolve as needed. Ultimately, finance and engineering teams need to be speaking the same language to help ensure FinOps success. KPMG professionals' experience, however, has shown that businesses still have considerable ground to cover to close the cost-management gap that prevails between finance and engineering.

Cross-training of teams and organisational change management to create a highly collaborative approach among diverse teams is critical for FinOps to deliver ongoing value.

05

Not taking actions, communicating and optimising

Your business may have the necessary metrics, tools and technologies in place for a successful FinOps journey and be well positioned to identify problems as they arise. But will you know exactly what to do when problems inevitably emerge? For example, you discover that the HR department's cloud-usage costs are running high on a consistent basis. What next? Or what will you do when compute instances are temporarily idle, or elastic IPs are not released?

Do you know what immediate actions are needed to gain accurate and timely visibility into a problem? How will you communicate the issue to all of the stakeholders involved? And what will you do to quickly resolve the issue and optimise the process and costs going forward?

A strategic action plan is essential, one that provides appropriate guidelines that bring the required players together to understand the problem and its implications, manage the issue and set the course for a future strategy that can optimise processes and costs. A smart approach is to manage by the numbers. These are the components required to help build a governance program that positions you to do so:

Reports and dashboards: Ensure all stakeholders have access to reporting and dashboards that are appropriate for their role and that provide rapid, at-a-glance views into current cost trends and forecasts.

Resource hierarchy: Structure cloud resources in a resource hierarchy that is granular enough for management and cost allocation using folders, projects, tags, labels, etc.

Budget alerts: Set budget notifications that are triggered automatically when resources or costs ramp up beyond a predetermined threshold, in order to help prevent unexpected activity that impacts budgeted spending.

Automated actions: Configure automated actions to throttle resources or cap costs in order to help prevent unwanted activity and overspending.

Standard reviews: Establish standard review cadences between IT and finance to review historical spend and develop recommendations for future actions.
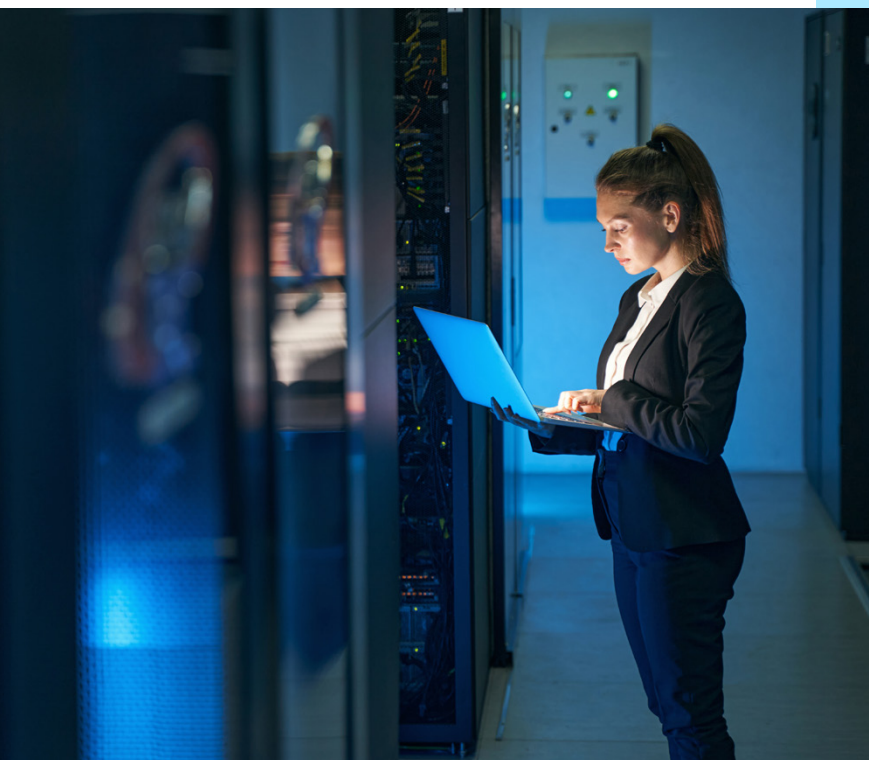
Moving forward

FinOps success demands that you bring engineering and finance stakeholders together to plan, measure, report, analyse and optimise costs. It's not enough to simply implement new tools, communicate a few expectations and occasionally meet for updates. A holistic operating model should be designed, implemented, orchestrated and evolve as new tools, techniques, ways of working and other factors emerge with time.

If you are thinking about standing up and readying your organisation for FinOps, here is a simple framework that can guide you on your journey:

1

Plan - laying the groundwork

- Tools: Determine tool requirements – examine if existing tools are fit-for-purpose
- Organisation: Identify the "home" of the FinOps function
- Reporting: Identify initial KPIs

2

Socialise - get buy-in

- Communication: Host FinOps conversations with impacted teams
- People: Define initial resources to be part of day-1 FinOps team
- Reporting: Create a reporting & KPIs roadmap

4

Launch - engage stakeholders

- Tools: Deploy initial dashboards and integrate allocations with IFTM cost models
- People: Broad communications & change management
- Reporting: Begin feedback process on reporting and KPIs

3

Prepare - ready the organisation

- Governance: Define tags, metadata, and organisational taxonomy
- Tools: Configure and deploy tools
- Automation: Define initial usage and spend threshold

All of these actions may strike you as big steps to reach, so you may be thinking 'Where do I start?' or 'Where am I in the journey?.' Here are some actions you can take:

Establish foundational capabilities like a virtual cross-functional cloud finance function to begin working on consolidated billing, picking appropriate tools, and creating financial principles for funding and expense management.

Create 'routine' transparency and governance where the cross-functional cloud finance function shifts to maintaining and iterating things like automated reporting, chargebacks, and detailed roles and responsibilities across the organisation.

Predict and optimise spend from a depth of established and trusted historical data, custom models and stakeholder feedback.

Contact a local KPMG professional to help you get it right.

A FinOps success story in Life Sciences

A major global pharmaceutical firm was rapidly shifting to the cloud but was exceeding cloud-spend targets across three cloud providers. The client needed to quickly supplement their existing team and develop sustainable FinOps capabilities to better manage and allocate cloud costs, identify areas for usage optimisation, and spearhead rate optimisation.

KPMG in the US responded with a strategic plan that included the following key elements:

A charge-back model for allocation of shared cloud services to end customers

A modern dashboard for cloud-cost transparency as a single 'source of truth' on costs

Analysis and forecasting of annual cloud spend across three providers

Enhancement and automation of current FinOps capabilities, including development of a new charge-back process, improved KPI tracking and enhanced optimisation flow

A roadmap for the future of FinOps around core pillars of transparency, cost optimisation and efficient design

The result? The client not only reduced cloud costs, they gained a precise new view of its cost environment, with the automated dashboard providing crucial new insights across the enterprise. The charge-back process has been optimised and codified for clarity, in addition to creating a net new charge-back for shared services.

The efficiency of repetitive FinOps tasks has been improved, allowing teams to focus on value-adding activities. And the client's comprehensive new roadmap provides a clear path toward development of the FinOps function to mature capabilities and heighten efficiency.

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