# FinOps: how to keep cloud costs under control

EY
Building a better working world

**Creating a brighter future** for financial services

At EY, we are focused on building a stronger, fairer and more sustainable financial services industry. The strength of our EY teams lies in the proven power of our people and technology and the way they converge to reframe the future. This is how our EY professionals are helping to build long-term value for financial services clients.

ey.com/fs

# Contents

# Executive summary

The rise of cloud computing has been one of the most important innovations in technology during the last 10-15 years. In fact, 87% of financial services firms have invested in the cloud, according to EY research.[1]

Banks, insurers and wealth and asset managers expected huge returns on these investments, starting with lower IT costs. More than 69% of organisations built their business case around reduced operational costs.[2] But, in reality, the financial benefits have not materialised in most cases.

In an EY survey, 57% of IT leaders said they have overspent their annual cloud budgets, some by 50% or more.[3] As a result, almost three-quarters, 72%, have moved at least one enterprise application back on premise.[4]

With total cloud spending exceeding £300 billion by 2021 (up more than 23% in just a year)[5] and up to 30% of that spend going to waste,[6] business executives and IT leaders can no longer rely on traditional finance and procurement methods or leave the management of cloud spending to technical teams. The stakes are simply too high.

To better manage costs and boost return on investment (ROI), many companies have turned to FinOps, a holistic approach to governing and operating large-scale cloud environments. FinOps has produced strong outcomes for organisations across the global industry, delivering the value companies thought they were going to get when they first ventured into the cloud.

This report explores the reasons behind high cloud computing costs and examines the key elements and principles behind FinOps. Further, it describes how FinOps enables financial services firms to reduce their cloud computing costs, manage their cloud resources more effectively, and enhance the overall governance of their cloud environments.

Source1: EY, UK Banking Public Cloud Adoption Survey
Source2: EY, UK Banking Public Cloud Adoption Survey
Source3:- Techrepublic Cloud Spend Survey
Source4: - Virtana survey, State of Hybrid Cloud and Migration

Source5: Gartner, Gartner Forecasts Worldwide Public Cloud
Source6: Flexera, Flexera State of Cloud Report 2022, Cloud Migration Stats - 2022 Flexera State of the Cloud Report

# Why cloud costs get out of control

Running applications on cloud can significantly reduce IT costs because it allows companies to:

- Consume resources as needed, scaling up or scaling down in line with demand
- Leverage out of the box capabilities to establish granular and real-time consumption cost insights
- Shift operational activities and costs to an external provider
- More effectively manage resilience and disaster recovery requirements across regions

But while these objectives are sound in theory, in order to realise them, it requires a different mindset. It also requires overhaul of outdated budgeting and accounting processes that appropriate management of the  full cloud spend, addressing the lack of alignment between finance, procurement and IT, and insufficient expertise to analyse and optimise cloud costs.

When business users & engineering teams can provision their own applications within a controlled environment and overall IT management is more efficient, the costs go up unless strong governance controls are in place to prevent budget overruns. As many businesses have learnt, costs can spiral quickly out of control if usage is not measured, monitored and optimised continuously.

Other specific complications include:

- The rush to exit data centre contracts meant cloud-native or platform-as-a-service (PaaS) capabilities were not adopted and workloads were lifted and shifted into the cloud.
- When product and engineering teams can self-commission their own cloud capabilities, they typically run more frequent "test and learn" cycles, using more development resources, which in many cases remain on the bill even when they are no longer needed (usually because users simply forget to turn them off).
- Cost-aware cloud architecture skills are difficult to onboard, leaving many cloud solutions with technical debts (e.g., orphaned resources, ineffective resource allocations) and leading to higher costs over time.
- Lack of insight into current spending, ongoing deployment activities and future requirements not only leads to surprise budget overruns, but also makes it nearly impossible to forecast future needs.
- On-point focus on the tools and products selection, rather than the wider cultural shift toward a more comprehensive approach across the organisation.

Business pressures are another factor. When new functionality and faster releases are the top priorities, cost effectiveness can be an afterthought for development teams during the design and delivery phases. Finance teams, on the other hand, aren't cloud-savvy enough to effectively monitor rising costs or know when to step in to prevent cost crises.

Thus, it's common for expenses to reach a tipping point or cause a single, high-cost incident that fully captures the attention of leadership. These "spending crises" typically lead to an instant drive for accountability, controls and lower expenses, as well as frustration with limited insight into which resources drive which line items on the overall bill.

The resulting "cost optimisation" or "cost remediation" activities force many companies to make ad-hoc investments to bring costs down, such as a short-term analysis and engineering remediation. While these may deliver temporary cost relief, they usually need to be repeated when the same challenges re-emerge after a few months. But managing a cost-effective and high-value cloud platform for the long term is not something a single initiative or cost optimisation software can do on its own.

A more holistic approach that goes beyond deploying new cost management tools and processes is necessary to more effectively operate and govern large-scale cloud environments. We call such an approach FinOps.

# FinOps: what it is and how it works

Sometimes called “cloud financial management” or “cloud cost management,” FinOps is a method or discipline for managing the cost of cloud environments and cloud-based applications.

Whilst FinOps involves the use of cost optimisation tools and processes, culture change is the key to its success; FinOps stresses coordination between IT, engineering, finance, business teams and all stakeholders involved in the design, use or management of cloud applications.

With a strong FinOps model and team in place, banks, insurers and wealth and asset managers can:

- Establish a **cloud operating model** designed to solve the near-term challenges of cloud adoption but also maintain cost discipline over the long term
- Facilitate coordination between IT, business stakeholders and finance teams to take **joint ownership** of cloud cost management
- Promote a **cost optimisation culture** where expenses are formally considered during architecture design and viewed more holistically

- Gain **real-time cost visibility** and analytical capabilities so overruns can be addressed before they get out of control
- **Apply best practices,** such as cloud resources tagging strategies to easily identify and classify assets, for **cost optimisation**
- Automate management reporting and data access via dashboards for show-backs, charge-backs and other metrics, as well as providing **cost alerts**
- Support compliance with finance-related regulatory requirements and non-financial cloud controls (e.g., identifying unsupported and unapproved services)
- **Execute sustainability agendas** by adopting a greener IT environment
- **Maintain the procurement,** accounting and budgeting policies up to date and fit for the purpose for the cloud

# The foundations for an effective FinOps model

## Organisations that experience the most success with FinOps build a strong foundation based on the following components.

**Executive-level support:** Because FinOps is powered by culture change, senior executives must endorse and drive the necessary shifts. Specifically, they must push for the adoption of cost as a key metric for cloud success; without such advocacy, tools and processes will eventually falter. Executive stakeholders must cascade this approach and promote collaboration between departments and the adoption of best practices that fit with the nature of the cloud.

**Dedicated resources and leadership:** A multidisciplinary FinOps team will ideally operate within a cloud center of excellence (CoE) and take the lead on key FinOps activities, at least in the short term to establish such methodology. Research shows that 43% of organisations have a FinOps team which is part of a greater CoE.[7] For instance, it can validate the accuracy of expenditure data and adopt an objective approach to allocating expenses to relevant technical groups. Establishing core business metrics for cloud investments should be another top priority of FinOps team, largely because it helps establish accountability for spending.

Beyond reducing costs, the FinOps team can help boost return on investment by:

- Ensuring cloud strategies are aligned to core business objectives
- Shortening the time to market for new services
- Driving shared accountability across teams
- Defining and managing key performance indicators (KPIs)

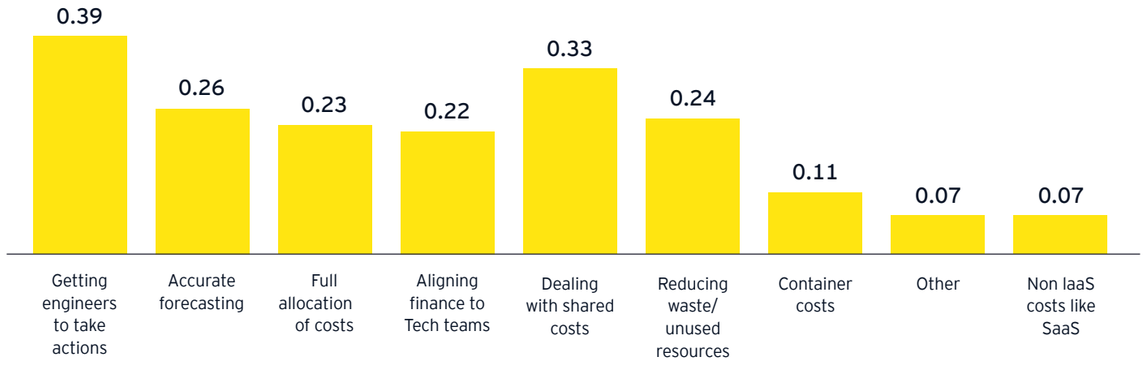
**Strong engagement with engineering teams:** This is another essential element of FinOps success, particularly relative to the issue of cost accountability. A recent survey by Linux Foundation identified "getting engineers to take action" and "dealing with shared costs" as the top two challenges in adopting FinOps.

Based on the idea that "excellent performance saves money," FinOps teams can share performance insights with engineers to demonstrate commitment to common goals. The process starts with closely analysing products and architecture, assessing performance and capacity, and identifying potential optimisation and other challenges (e.g., stability issues). The insights generate a set of alternative options to the engineering team, which provide trade offs as input to the design activity, which would of course need to also account the other critical objectives of the workloads and services.

The insights generate a set of alternative options to the engineering team, which provide trade offs as input to the design activity, which would of course need to also account the other critical objectives of the workloads and service.

FinOps teams can also work with engineering colleagues to examine their structure and oversight models. These discussions may identify superfluous activities and unrealistic performance targets, which helps engineers save time, eliminate wasteful consumption and free up capacity. Such collaborative engagement can motivate engineering teams to save money.

### FinOps challenges




Source7: State of FinOps 2021 Report - Linux.com

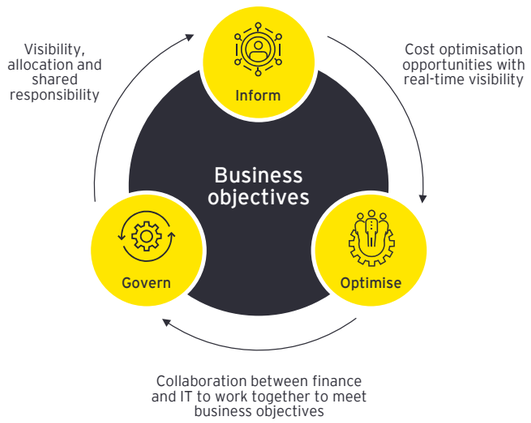
# EY FinOps approach

Our approach is designed to ensure financial services firms adopt an effective FinOps model tailored to the organization and based on their objectives, resources and IT maturity. It incorporates three key phases:

**Inform:** assess the current state and baseline the organisational maturity against standard practices

**Optimise:** perform quick wins to reduce cost immediately, while instilling key components for effective ongoing governance

**Govern:** establish a day-to-day FinOps mechanism for ongoing cost optimisation and control across both technical and non-technical domains




**EY FinOps methodology**

**Inform**

**Understand current consumption**

- Review tooling options for monitoring and visualising cloud costs
- Implement basic cost tagging
- Determine where costs are higher within the cloud environments

**Benchmark performance**

- Create metrics and KPIs
- Benchmark internally against "industry" peers
- Provide forecasting number for applications

**Optimise**

**Enable real-time decision-making**

- Provide real-time consumption dashboarding and IA to inform decisions
- Provide executive consumption reporting

**Optimise cloud consumption**

- Review and optimise consumption
- Introduce automated remediation for standard patterns

**Govern**

**Cloud cost optimisation**

- Review commercials agreement to optimise consumption
- Create projects to address specific areas of high cost in the cloud

**Align plans and business**

- Executive socialisation for strategy and performance against the target

**Inform:**

Determining where you are on your cloud journey and whether you have the right FinOps framework requires asking key questions:

- Do you have the skills internally to implement and maintain a FinOps Model?
- How do we implement and enforce policies across the enterprise?
- How do we get everyone onboard with these changes?
- How do we manage compliance risks?
- How do we manage our costs and capacity in the cloud today?
- How do we upskill our staff with knowledge on best practices?

**Optimise:**

Even as the day-to-day framework is adopted across finance, procurement and operational teams, the cloud CoE can work toward a number of quick wins:

- Establishing a cross-functional FinOps team of financial and technical pros with the knowledge, tools and authority to review cloud expenditures and underutilised resources.
- Identifying resources available to be deployed at lower costs, encouraging smarter cloud resource acquisition and preventing wasteful spending in the first place.
- Automate discovery and remediation processes, an especially important step for large organisations with complex cloud environments.

## Govern:

The optimal governance models bring together traditional IT operations, finance and business leadership to implement best practices with the most visible impacts on cost allocation and accurate forecasting. Cost allocation best practices, such as tagging resources, helps solve common cross-charging and cost-sharing challenges. However, their effectiveness depends on consistent and broad adoption.

Accurate forecasting is dependent on optimised data-gathering and timely review by skilled analysts. Cross-functional FinOps team will be able to discern where controls and proactive monitoring should be implemented. Combined with insight into consumption patterns, forecasting makes it possible to reserve competitively priced resources to match demand.

### EY FinOps governance approach

**Cost transparency at every level**

- Enable gathering of costs and usage data from CSPs programmatically
- Real-time and granular data on usage and spend measurement
- Ensure greater visibility on what is being used and for what
- Develop ROI and payback period before deciding to move to cloud
- Adopt a consistent way of arriving at TCO

**What gets measured, gets improved**

**Determine cloud resource tagging taxonomy to chargeback to cost centers**

- Enable chargeback capability
- Establish tags for the cost centers
- Breakdown the costs to each product/ application

**Enable chargeback capability**

**Remove surprises and eliminate waste**

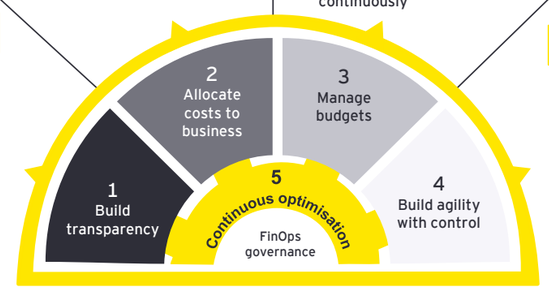
- Establish budgets and quotas for projects, resource groups
- Establish budget thresholds and alerts | Take action on budgets
- Automate weekly waste (underutilised cloud resources) reporting for each team

**Manage expenditures on cloud continuously**

**Enable light touch governance**

- Governance and policy enforcement
- Automate governance compliance and enforcement
- Ensure only approved CSP services are utilized, for solutions based on defined ref. architecture patterns

**Guardrailing the use of cloud while giving required agility**



# The benefits of adopting FinOps

The business case for adopting FinOps is clear and compelling. It starts with cost savings that can reach £1b to £4b for companies that fully optimise their environments.[9]

**Other benefits include:**

1

### Increased visibility of expenditure:

Better visibility pays off in many forms, from more accurate forecasting of financial baselines, to help with capacity planning, to stronger business case development for scaling cloud adoption. More broadly, it informs decisions about cost control, with clearer insight into cost-performance trade-offs.

2

### A more collaborative culture:

By driving increased coordination and engagement among business stakeholders and engineering and development teams, FinOps drives continuous improvement in cloud management and IT operations.

3

### Enhanced sustainability:

FinOps promotes scale and flexibility, as well as transparency into cloud usage. These benefits equate to more efficient use of the cloud and, ultimately, a reduced carbon footprint. Using "green cloud" providers and data centers run with renewable energy are other ways FinOps teams can execute on the sustainability agenda. Some cloud providers even offer tools to measure and manage greenhouse gas and carbon emissions profiles and impacts.

4

### Increased compliance confidence:

Given the intense regulatory scrutiny in financial services, any actions that increase transparency particularly in how the business, IT and finance work together – can lead to more efficient compliance processes. Certainly well-designed and effectively managed cloud environments will help insurers integrate the data they need for IFRS 17 compliance. The same is true for banks looking to satisfy regulatory requirements for Know Your Customer and anti-money laundering.

Source9: United Kingdom Cloud Services Market (trade.gov)



# Conclusion

Improving the cost-effectiveness of IT operations is not usually the top priority when financial services organization make the move to cloud. But that goal becomes imperative when initial cloud ROI targets don't materialise. Optimising consumption reduces operational costs and frees funds that can be redeployed to transformation programs. But it also enables organisations to scale cloud adoption more broadly across the business, which will move them closer to achieving the cloud's highly promising - but mostly as yet unrealised – value proposition.

# Contacts


**Rohit Garg**
UK FS Cloud Leader
Ernst & Young LLP
P: +44 78 2694 0697
E: rohit.garg7@uk.ey.com

**Fabrizio Calisti**
UK FS Cloud Adoption Director
Ernst & Young LLP
P: +44 73 8542 3223
E: fabrizio.calisti@uk.ey.com

**Debraj Dutta**
Digital and Emerging Tech Leader
Ernst & Young LLP
P: +44 77 8992 4584
E: debraj.dutta@uk.ey.com

**Saby Roy**
Partner
Ernst & Young LLP
P: +44 73 8542 3090
E: saby.roy1@uk.ey.com

**Steven Lewis**
Partner, UK Lead FS Finance Consulting
Ernst & Young LLP
P: +44 20 7951 2976
E: slewis1@uk.ey.com

**Alannah Stewart**
UK FS Cloud Adoption Manager
Ernst & Young LLP
E: alannah.stewart@uk.ey.com

**Tanmoy Kar**
UK FS FinOps Manager
Ernst & Young LLP
E: tanmoy.kar@uk.ey.com

EY | Building a better working world

EY exists to build a better working world, helping to create long-term value for clients, people and society and build trust in the capital markets.

Enabled by data and technology, diverse EY teams in over 150 countries provide trust through assurance and help clients grow, transform and operate.

Working across assurance, consulting, law, strategy, tax and transactions, EY teams ask better questions to find new answers for the complex issues facing our world today.



**What makes EY distinctive in financial services**
Over 84,000 EY professionals are dedicated to financial services, serving the banking and capital markets, insurance, and wealth and asset management sectors. We share a single focus — to build a better financial services industry, one that is stronger, fairer and more sustainable.



EYG no. 009782-22Gbl
ED none

In line with EY's commitment to minimize its impact on the environment, this document has been printed on paper with a high recycled content.



**ey.com/fs**