

CAPCO

FROM STICKER SHOCK TO BILL SHOCK

MANAGING CLOUD COSTS THROUGH THE FINOPS FRAMEWORK



a wipro company

INTRODUCTION

The FinOps Framework allows firms to establish financial accountability for cloud spend. How should firms best approach its implementation, and what specific considerations must they take into account?

Cloud is now omnipresent, and discussions have long moved on from 'should we move to the cloud' to 'which cloud should we consider' or 'this is why multi-cloud is the optimal choice for us'. Most organisations have adopted a cloud-first strategy and operate a hybrid estate, with applications running across multiple cloud service providers.

This has increased levels of spending on cloud infrastructure, which has in turn attracted increased scrutiny of cloud costs and fuelled attempts to monitor, forecast, and optimise those costs – aka **cloud financial management**.

Herein lies a challenge, arising from the fundamentally different expenditure models involved: namely, Capex (in an on-premises world) versus Opex (in the cloud world). This has moved the potential cost impact from 'sticker shock' in the on-premises

world to 'bill shock' in the cloud world. This means that a different approach is required to govern and account for cloud spend.

Moreover, understanding and forecasting cloud costs is not an exact science, as there are many variables to account for: various levels of abstraction in the form of Infrastructure as a Service (IaaS), Platform as a Service (PaaS), Software as a Service (SaaS), Serverless etc.; pricing models, terminologies and transaction units; and their definitions, tiers of services, thresholds and limits.

How then can organisations keep track, manage, and optimise increasing cloud costs in an expanding hybrid/ multi cloud setup? This is where the **FinOps Framework** – the latest framework to categorically address cloud financial management – comes into the picture.

HOW DID ORGANISATIONS TACKLE THIS TRADITIONALLY?

As part of managing their IT budgets, organisations have always had to monitor, forecast, and control the cost of their technology estate. This problem is further exacerbated by the presence of multiple service providers and vendors. As a result, a number of frameworks, standards, and team structures or roles have evolved over the years and were adopted by organisations to manage this.

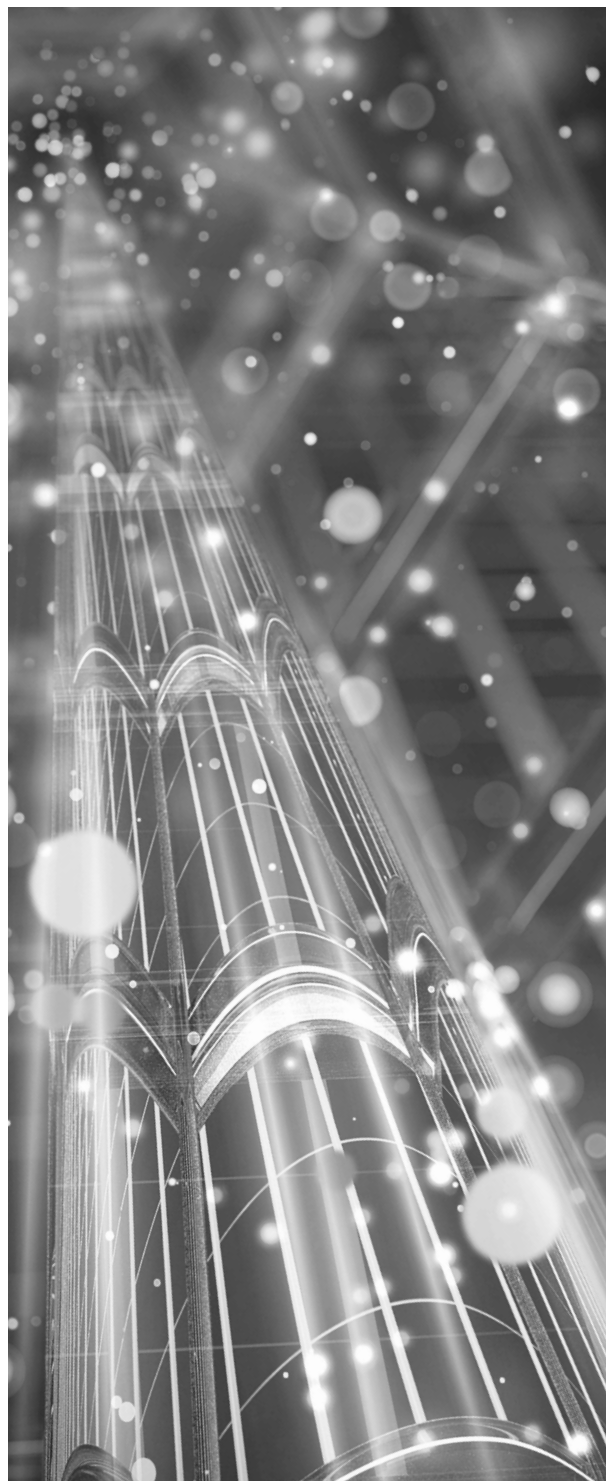
Examples of traditional standards and frameworks are:

- **IT Asset Management (ITAM)**¹: This is a business practice for managing IT assets which has a dedicated sub-process for their financial management. Technology platforms like ServiceNow and BMC Helix (earlier called

Remedy) enabled organisations to adopt and implement these processes (not just ITAM but overall ITSM – IT Service Management suite of processes) in their ecosystem. They also introduced the concept of service catalogues. Similar concepts now exist on cloud as well (e.g. AWS Service Catalogue²) which allows an organisation to catalogue IT services approved for use on a given cloud provider.

- **Software Asset Management (SAM):** Discipline focussing on software assets financial and lifecycle management. In the cloud world, in case of IaaS (e.g. virtual machine) software costs such as operating system are already included in the billing. But you would still need to follow SAM practices for any software installed on end user computing devices like laptops etc. or for any SaaS platforms provided and managed by other 3rd parties.
- **ISO 19770³:** The ISO family of standards for IT asset management addressing hardware and software assets lifecycle management. This discusses the concepts such as 'tagging' the resources which are very much relevant in the cloud world.
- **Service Integration and Management (SIAM):** A framework for managing service levels in a multi-vendor/ supplier setup. One of the aspects in SIAM is to manage costs and contracts in a multi-vendor setup, which can be extended to cloud providers as well.

Though the standards and frameworks mentioned above are not just about financial management of hardware/ software assets, the lifecycle processes described in those standards contribute towards effective financial management. In tune with the time during which these frameworks evolved, they of course didn't specifically address cloud.

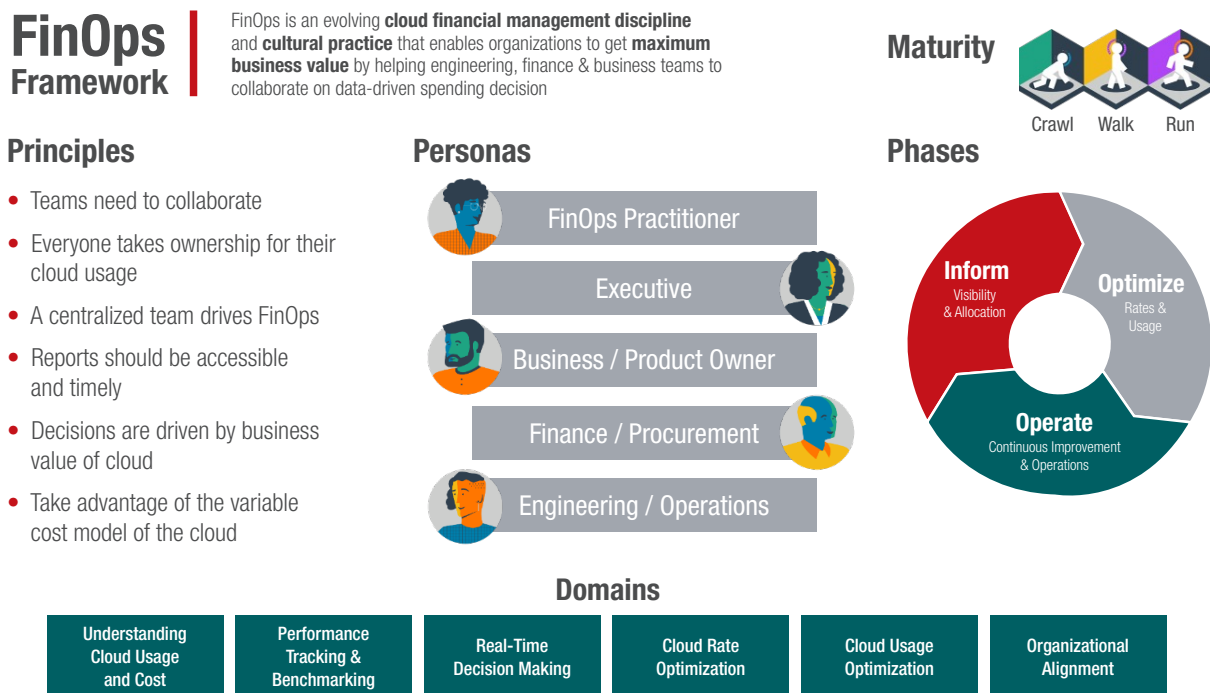


INTRODUCING THE FINOPS FRAMEWORK

The FinOps Framework⁴ developed by the FinOps Foundation⁵ is a framework dedicated to cloud financial management, with FinOps standing for ‘**Finance – DevOps**’ rather than the more generic ‘finance operations’. The Foundation officially defines the Framework as follows:

“*An evolving cloud financial management discipline and cultural practice that enables organisations to get maximum business value by helping engineering, finance, technology, and business teams to collaborate on data-driven spending decisions.*”

The primary objective of the Framework is to establish financial accountability for cloud spend, and not necessarily to reduce cloud costs, and is comprised of multiple components as set out in the diagram below.



The components are defined as:

- **Principles** – the north star that guides the activities of FinOps practice.
- **Personas** – the stakeholders that are to be engaged to gain approval and buy-in, and who are involved in executing FinOps and achieving its goals.
- **Phases** – iterative phases of the FinOps journey.
- **Maturity** – the maturity model determines the state of an organisation’s FinOps capabilities or domains; an assessment framework is currently under development.
- **Domains** – represent a specific sphere of FinOps activities or knowledge; each domain is further comprised of multiple capabilities.
- **Capabilities** – representing the functional areas of activity that support their corresponding FinOps domain, these are tasks or processes that allow the demands of FinOps practice to be met iteratively through FinOps lifecycle phases; each capability demonstrates specific characteristics at each level of the FinOps maturity model.

DOES THE FINOPS FRAMEWORK MAKE OTHER STANDARDS REDUNDANT?

The short answer is no. All the traditional frameworks and standards described above are still relevant and can be extended to cloud, as they have been applied to an on-premise estate. You don't have to give up on your existing investments – tools, processes, people – already committed to establishing and running those frameworks and start from scratch with the FinOps Framework. All the frameworks can co-exist and complement one another – the FinOps Framework acknowledges this, and specifically addresses

it via the 'IT Asset Management Integration'⁶ capability.

Even if you are a cloud-first organisation with no on-premise estate, you would still need other disciplines such as SAM alongside the FinOps Framework to ensure effective financial management. Treat the FinOps Framework like all the other frameworks – as a reference for best practices and adopt and/or adapt to embed it within your existing standards, policies, processes, and team structures.

SO, HOW DO YOU GET STARTED?

Getting the basics right is critical – otherwise any attempt at effective cloud financial management and establishing cloud financial accountability culture is doomed to fail. The following five practices should help lay down a strong foundation for implementation of an effective strategy.

- 1. Adopt cloud provider recommended best practices** to define, rollout and govern your cloud estate. This way, your cloud workloads can be managed and accounted for in a structured way. But be aware, the objective here is not to replicate your organisation structure AS-IS in the cloud. This will enable you to tie back cloud costs to specific units within your organisation (teams, apps, platforms, environments etc.) For examples and references see: AWS control tower⁷, Azure landing zone⁸, Google cloud organisation and resource hierarchy⁹
- 2. Apply controls and policies at appropriate cloud resource level** to govern who can do what in your cloud estate (for example, to control which type of resources can be deployed and to which locations). Consider using a service catalogue to present approved list of services that

can be provisioned in the cloud (e.g., AWS Service Catalogue²)

- 3. Use metadata/tagging at each cloud resource level** to your advantage. This will help you derive multiple views of your cloud estate, for instance by owner or cost centre. This can also be enforced via policies at an organisation level.
- 4. Use billing dashboards, billing projection and billing threshold alert capabilities** provided by your cloud provider. These alerts can help trigger any necessary investigations or actions to respond to scenarios such as billing spiking beyond a threshold due to unexpected scaling behaviour.
- 5. Familiarise yourselves with pricing calculators** provided by cloud providers^(10,11,12). As stated earlier, it's not an exact science and you might not always have full visibility of all the services you are going to need or use, but it's a good way to get to know different tiers, and other variables that contribute towards cloud costs.

If you are a multi-cloud organisation, there are tools and or platforms that you can deploy. Cloud management platforms acting as single pane across a multi-cloud estate have been around for some time. Traditionally they played role in provisioning and management of cloud infrastructure, but now have extended their capabilities to cover the financial management aspects. Examples include: Nordcloud Klarity Core¹³, Flexera One cloud cost optimisation platform¹⁴, VMware CloudHealth¹⁵, Apptio Cloudability¹⁶.

Once the basics are in place, you can kickstart your FinOps journey. If you are a large organisation, you could begin by engaging existing ITAM, SAM functions and cloud CoE's. Form a cross-functional team (as per the personas¹⁷ recommended by the FinOps Framework) drawing upon representatives from existing teams to first become familiar with the framework and from there to define and drive your own charter. The objective should be to embed FinOps practices into your BAU processes – design, delivery, support, service management etc – rather than driving it as a decoupled exercise.

BEYOND FINOPS

A clear understanding of the environmental impact of the technology estate is increasingly becoming as important as financial accountability and reporting.

Currently most organisations have some form of ESG initiatives and reporting – but sustainability reporting is currently a fragmented across several frameworks. The International Sustainability Standards Board (ISSB) – set up under the auspices of the International Financial Reporting Standards (IFRS) announced at the 2021 UN Climate Change Conference (COP26) – is a step in the right direction. The ISSB seeks to define sustainability related disclosure standards, like they exist for financial reporting, which hopefully will see a convergence of environmental impact and reporting discussions with financial performance and reporting, instead of ESG being a decoupled initiative.

There are many variables to account for when assessing the environmental impact of your overall organisation. For cloud estate, you can use carbon trackers made available by major cloud services providers. Microsoft has a emissions impact dashboard¹⁸, AWS has a customer carbon footprint tool¹⁹, Google cloud also has a similar capability²⁰ which organisations can start using to track their cloud carbon footprint.

It is to be hoped that future third party FinOps tools and platforms will start pulling in carbon tracking details along with cost details and help organisations manage 'Environmental Ops' in tandem with FinOps.

At Capco, we have helped multiple organisations on their cloud adoption journey. We can help you get the basics right and work with you to assess and set up an effective cloud financial management strategy for your organisation. If you would like to know more, please get in touch with us.

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Capco, a Wipro company, is a global technology and management consultancy specializing in driving digital transformation in the financial services industry. With a growing client portfolio comprising of over 100 global organizations, Capco operates at the intersection of business and technology by combining innovative thinking with unrivalled industry knowledge to deliver end-to-end data-driven solutions and fast-track digital initiatives for banking and payments, capital markets, wealth and asset management, insurance, and the energy sector. Capco's cutting-edge ingenuity is brought to life through its Innovation Labs and award-winning Be Yourself At Work culture and diverse talent.

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