FinOps and ITAM: Improve your cloud ROI with software license compliance

Flexera One with IBM Observability

Agenda

- FinOps: What is it?
- ITAM: What is it and why does it matter to FinOps?
- Software licensing and compliance: The move to the Cloud
- FinOps and ITAM collaboration
- Next steps for FinOps and ITAM practitioners
- Q&A

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FinOps: What is it?

FinOps is the evolution of Cloud Cost Management and Optimization

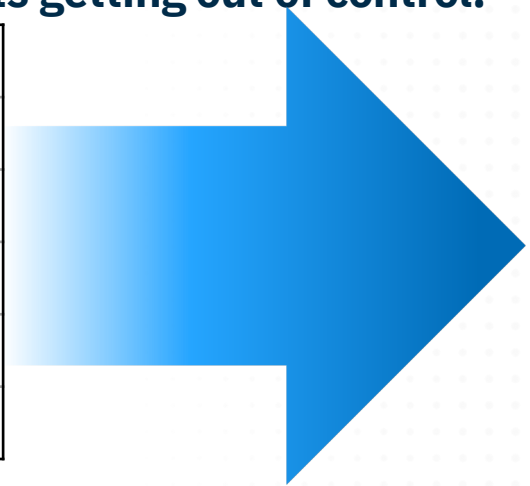
The FinOps Foundation (finops.org) defines FinOps as:

> *"FinOps is an evolving cloud financial management **discipline and cultural practice** that enables organizations to get maximum business value by helping engineering, finance, technology and business teams to collaborate on data-driven spending decisions."*

The Need for Cloud Financial Management

Cloud (virtual infrastructure) costs getting out of control:

--->	Hard to predict
--->	Rapidly increasing
--->	Complex & changing pricing
--->	Difficult to analyze
--->	Lacking a control process
--->	Unclear business value



Cloud Financial Management to help maximize ROI in cloud

Cloud Financial Management

80%

Say that **poor cloud financial management** has had **a negative impact** on their business

Cloud Budget

69%

Overspend their cloud budget **by at least 25%**

Cost Management

57%

Worry daily about **cloud cost management**

Source: Microsoft

Beyond Saving Cloud Costs

Moving from saving money to making money in the cloud

Maximize value in your cloud investment

- Based on business volumes and costs:
  - What you'll gain from a single unit of doing business and the cost associated with servicing it
- Understand the business value of your Cloud/Hybrid spend:
  - E.g. divide account open service hosting costs by number of accounts opened each month to get infrastructure costs of opening an account

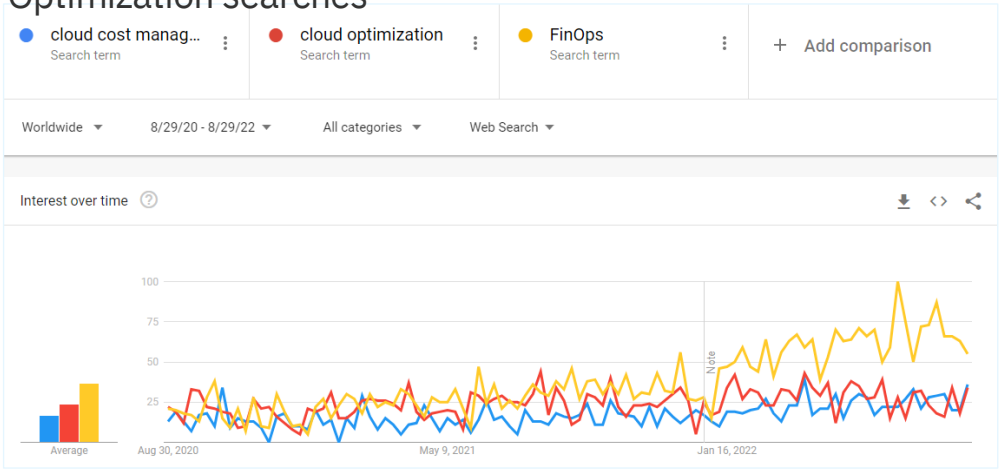
FinOps Principle: Decisions are driven by business value of cloud

FinOps Capability: Measuring Unit Costs

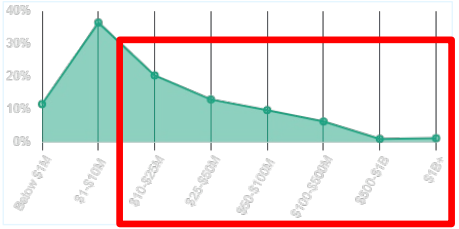
FinOps is Gaining Serious Momentum

FinOps is steadily gaining in popularity and proliferating beyond the early adopters

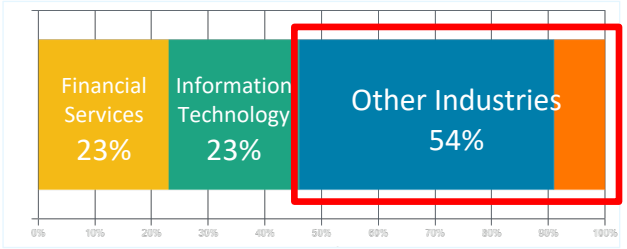
Google trends: FinOps is trending 2x higher for 2022 vs. 2021 and well above Cloud Cost Management or Cloud Optimization searches



The State of FinOps 2022 Report: 50% of respondents have cloud spend over $10M



Majority come from outside of FS and IT



Source: https://data.finops.org/

FinOps Framework

Principles (6)

Teams need to collaborate

Everyone takes ownership for own usage

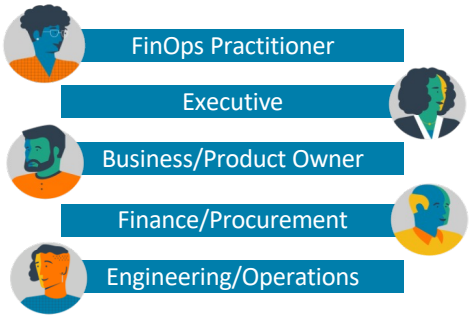
A centralized team drives FinOps

Reports should be accessible and timely

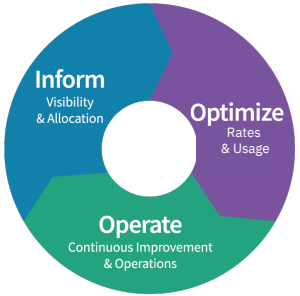
Decisions are driven by business value

Take advantage of the variable cost

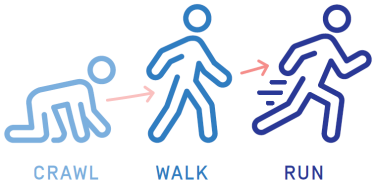
Personas (5)



Phases/Lifecycle (3)



Maturity (3 + 1)



Start small, and grow in scale, scope and complexity

Domains (6)

Domain examples:
Cloud Rate Optimization,
Cloud Usage Optimization

Each domain represents a sphere of activity or knowledge.

Domains consist of Capabilities

Capabilities (18)

Capability examples:
Cost Allocation,
Managing Anomalies,
Budget Management,
Managing Commitment Based Discounts

Each capabilities represent functional areas of tasks or processes that allow one to meet the demands of a FinOps practice

Advancing the people who manage the value of cloud

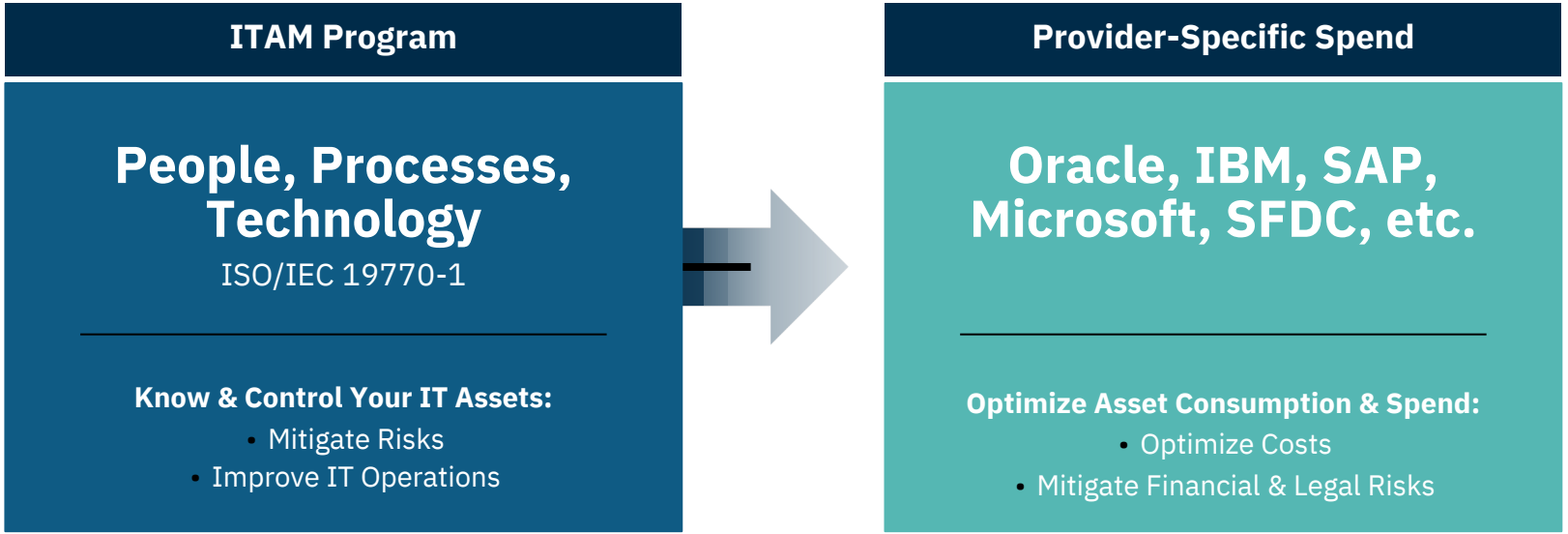
Value = Relationship of Benefits and Costs

- Infrastructure
  - Pay as you Go, Dynamic Changes
- Network
  - Ingress is Free, Egress is a Charge
- Licenses
  - How do your licenses change as your infrastructure changes
- Tooling
  - Provider Services vs. Vender Services
- Security
  - Increasing the attack surface, Ever Changing Workloads, Privilege and Key Management

ITAM: What is it and why does it matter to FinOps?

ITAM Defined

ITAM: *A business practice that involves **managing and optimizing** the purchase, deployment, maintenance, utilization, and disposal of IT Assets within an organization.*



The ITAM Methodology

01. Plan

Create Process Improvement Plan

- Understand needs, objectives and scope
- Secure leadership support, develop policies and define responsibilities
- Develop detailed plan
- Identify support requirements including those related to resources and documentation

04. Act

Adjust Plan Accordingly

- Identify and correct non-conformity when it occurs
- Identify potential for future performance failures and take preventative action
- Continuously improve the ITAM system

Tier 1

Trustworthy Data

The first stage, which is a mandatory part of standard implementation, involves gaining a thorough understanding of the technology you have so you can manage it comprehensively. It begins by assessing the software on the system to enable compliance with software license agreements. This is a foundational element upon which to build, and without which other objectives cannot be achieved. In addition to license management, this tier also enables organizations to develop the processes necessary for change management, data management, and security management.

Tier 2

Life Cycle Integration

The second optional stage builds upon the first, and helps organizations achieve greater efficiency and cost-effectiveness by improving management across the entire IT asset lifecycle – from specification, to acquisition, development, release, deployment, operation and retirement.

Tier 3

Optimization

The third optional stage helps organizations achieve greater efficiency and cost effectiveness by focusing on functional areas like contracts and financial management.

02. Do

Execute the Plan

- Establish framework for operational planning and control of processes
- Implement and operate Tier processes
- Ensure outsourced processes are controlled
- Control mixed-responsibility environments

03. Check

Evaluate Progress

- Define and implement monitoring, measurement, analysis and reporting
- Conduct effective internal audits
- Perform periodic management reviews

ISO/IEC 19770-1

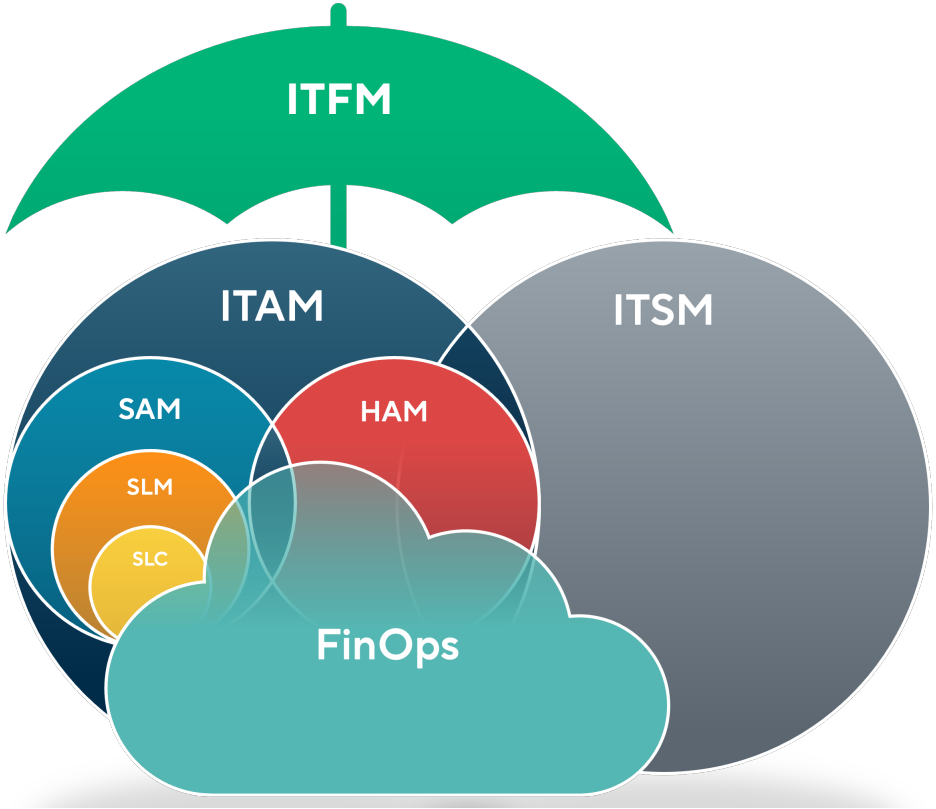
ITAM Objectives

Infrastructure & Operations	Procurement
Disaster Recovery	ITFM / TBM
ITSM	Information Security

ITAM/SAM/FinOps Information

- **Reduce Costs**
- **Mitigate Risks**
- **Improve Operations**

ITAM, FinOps, ITFM and ITSM



Software Licensing and Compliance: The move to the Cloud

How and where you deploy commercial software matters

ORACLE DATABASE

Server	Cloud	VMware	Containers
PowerEdge R250 Pentium G64505T 10 cores .5 Core Factor 5 EE Licenses Needed	10 vCPU Multi Threading EC2 Active Failover BYOSL 10 EE Licenses Needed	10 VDIs VM Ware vCenter 6.0 Two ESXi Hypervisors Not connected to the same shared storage The physical cores of the cores are required to be licensed. Assuming Same 10 EE Licenses Needed	10 vCPUs Pulling Hosts/Rebuilds on a Weekly Basis Every pull/rebuilds requires a license. 4 pulls x 10VCPU's = 40 VCPU's/.5 = 20 x $47,500
$237,500 List	**$475,000**	**$475,000**	**$950,000 List**

How and where you deploy commercial software matters

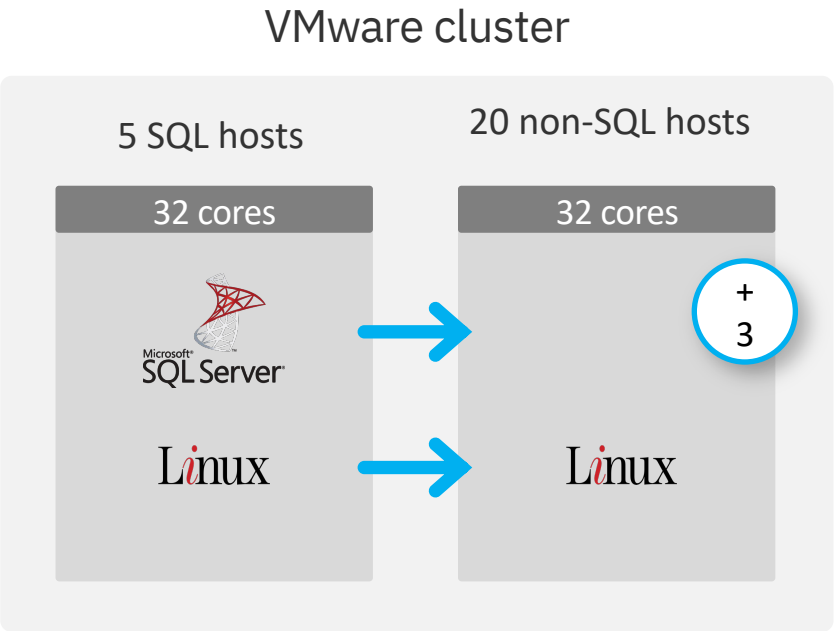
Microsoft SQL Server

Server	Azure or VMWare	Azure Kubernetes Service	AWS RDS for SQL Server
PowerEdge R250 Pentium G64505T 10 cores 5 Enterprise Licenses Needed	10 vCPU Multi Threading Active Geo-replication failover BYOSL 10 Enterprise Licenses Needed	32 vCPUs 2 pools Business Critical tier 100% utilized $21,264.05/months x 12 months	40 vCPUs 2 nodes Large instance (db.m4.10xlarge) 100% utilized $68,309.04/month x 12 months
$66,245 List	**$132,490**	**$255,168**	**$819,708.48**

Load balancing VMs without ITAM license data creates unbudgeted incremental license cost

- 25 ESX hosts
- Need to load-balance cluster for performance and/or cost
- FinOps tool moves some SQL VMs to three unlicensed ESX hosts
- An additional three hosts must now be licensed for SQL Enterprise at a cost of $380K

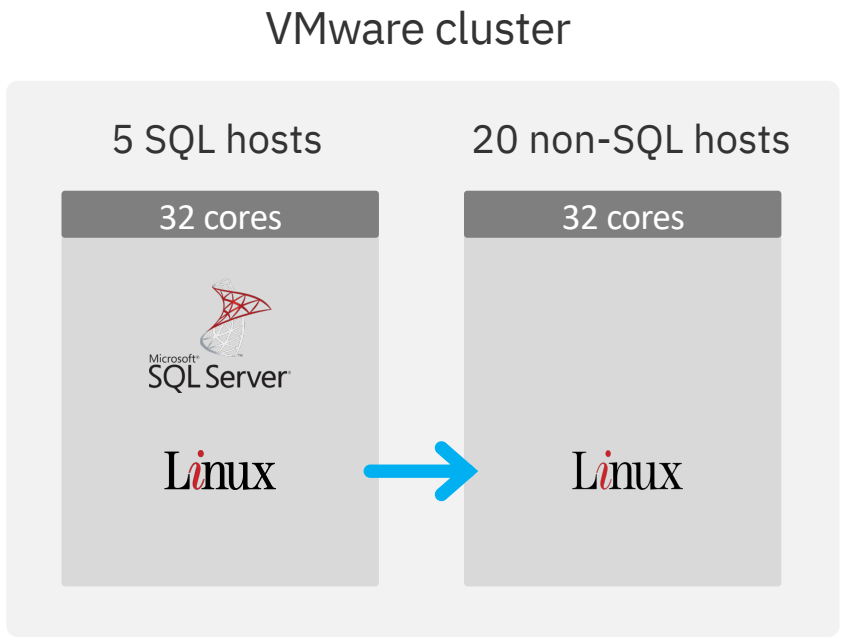
  (32 cores * 3 hosts * $3950)



Load balancing a cluster with ITAM license data prevents incremental license cost

- 25 ESX hosts
- Need to load-balance cluster for performance and/or cost
- ITAM knows which Hosts are not licensed for SQL Server Enterprise and passes this information to FinOps tool
- Only Linux VMs moved, load balanced without any addition SQL licensing costs

ITAM license data



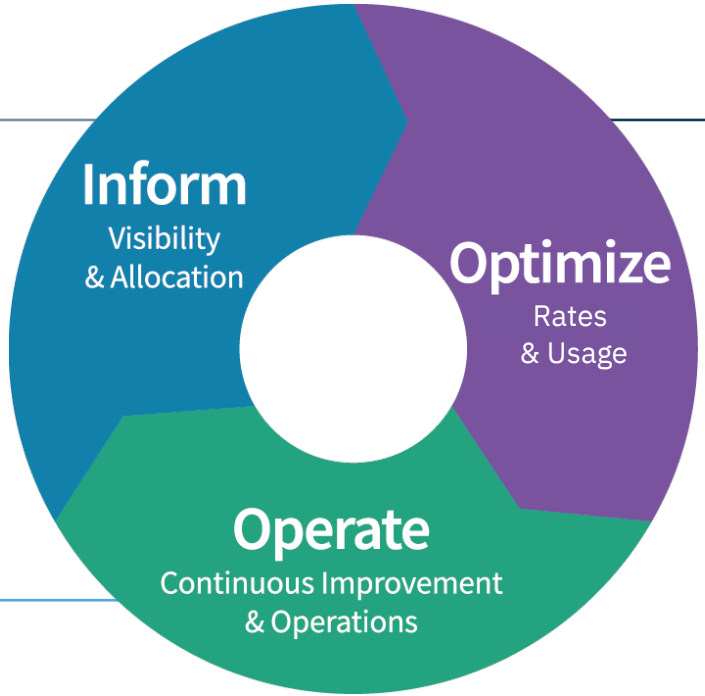
Why does this matter to FinOps practitioners?

Vendor	Potential License Considerations
Amazon Web Services	• Dedicated hosts (BYOL) • EC2 (software assurance and license mobility) • RDS for Oracle • Bare Metal Infrastructure • Marketplace
Microsoft Azure	• Hybrid use benefit (BYOL) for Windows Server, SQL Server and Managed SQL • Red Hat and SUSE Linux • Bare Metal Infrastructure • Marketplace
Google Cloud Platform	• Sole Tenant Nodes • Custom Images • Bare Metal Infrastructure • Marketplace
Containers (EKS, AKS, GKS, Docker, Kubernetes)	• IBM Cloud Paks • CPU allocation considerations (requests and limits)

FinOps and ITAM collaboration

FinOps & ITAM Share Similar 3-Phase Approach

- Trustworthy Data in ITAM (ISO 19770-1)



- Optimization in ITAM (ISO 19770-1)

- Lifecycle Integration in ITAM (ISO 19770-1)

FinOps & ITAM Share Similar Principles

FinOps	ITAM
Teams need to collaborate	Teams need to collaborate
Everyone takes ownership for their cloud usage	Everyone takes ownership for their **IT Asset** usage
A centralized team drives FinOps	A centralized team drives **ITAM**
Reports should be accessible and timely	Reports should be accessible and timely
Decisions are driven by business value of cloud	Decisions are driven by business value of **IT Assets**
Take advantage of the variable cost model of the cloud	Take advantage of the variable cost model of **IT Assets (where it exists)**

FinOps & ITAM Share Similar Domains

FinOps	ITAM
Understanding Cloud Usage and Cost	Understanding **IT Asset** Usage and Cost
Performance Tracking & Benchmarking	Performance Tracking & Benchmarking
Real-Time Decision Making	Real-Time Decision Making
Cloud Rate Optimization	**IT Asset Cost** Optimization
Cloud Usage Optimization	**IT Asset Usage** Optimization
Organizational Alignment	Organizational Alignment

But… FinOps & ITAM Often Don’t Share the Same Focus

	ITAM	FinOps
On-Prem Hardware	✓	✗
Software Licensing/BYOL	✓	✗ (yellow)
SaaS (by SaaS providers)	✓	✗ (yellow)
Risk Management	✓	✗
Enabling Security/Other	✓	✗
Lifecycle Management	✓	✗
Cloud Spend (PxQ)	✗	✓
Collaboration	✗ (yellow)	✓
Agility	✗ (yellow)	✓
Near-Real-Time Reporting	✗ (yellow)	✓
Cost Reporting	✗ (yellow)	✓

- ✓ Typically a focus
- ✗ Typically not a focus
- ✗ (yellow) Should be a focus but typically isn’t

Why Collaborate

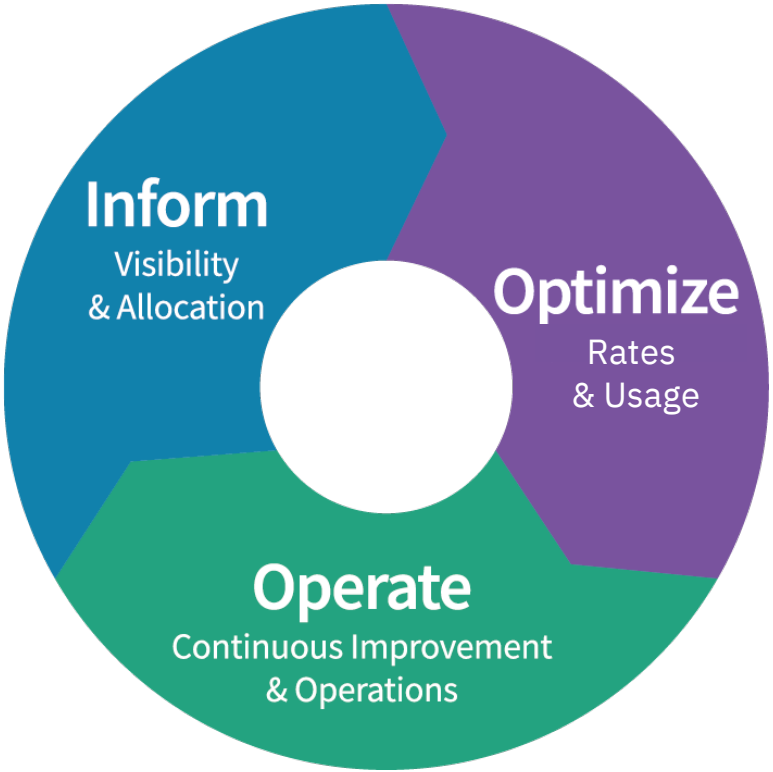
A. One Infrastructure

B. One relationship & contract (e.g. AHB)

C. Bring Your Own License (BYOL)

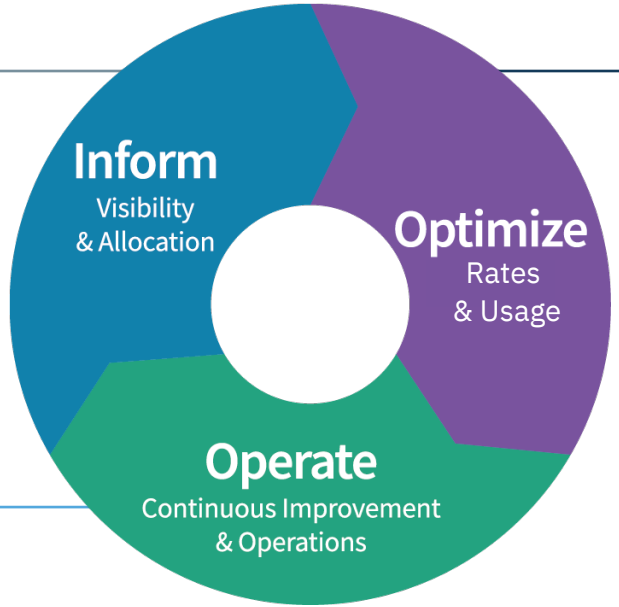
D. Marketplace software

FinOps Framework



Examples within FinOps Framework

- Cost visibility (all clouds)
- Currency conversion
- Chargeback/showback
- Allocation of costs to relevant dimensions (including shared)
- Benchmarking (holistic, per team)
- Budgeting, forecasting and anomaly detection



Cloud cost = usage* rate

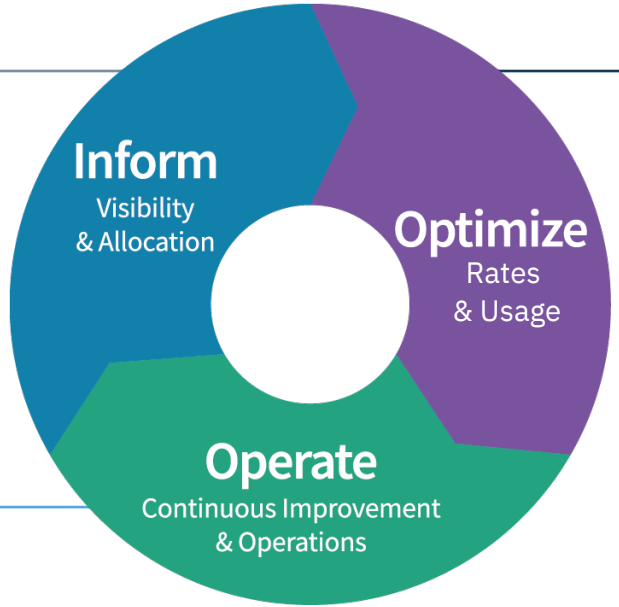
Reduce the **amount** you use
- Rightsizing (VM, DB, PaaS, storage)
- Lights on/off policies
- Zombie infrastructure
- Unused or unattached volumes
- Unused public IP addresses

Reduce the **price** you pay
- Enterprise discounts
- Committed use discounts (RIs/spot)
- Storage tiers

- Define and execute processes to achieve the optimization goals
- Establish appropriate metrics/KPIs
- Continuous evaluation and measurement
- Automation and integration
- Unit economics

ITAM in the cloud

- Obtain visibility into license usage and entitlements for the cloud
- Include virtual machine, container and PaaS services



- Leverage BYOL to reduce cloud infrastructure cost
- Connect instance lifecycle state with compliance calculation
- Manage risk of compliance based on cloud inventory

- Understanding ever-changing licensing landscape
- Continuous evaluation
- Automation (i.e., apply BYOL)

Next Steps for FinOps and ITAM practitioners

Next steps—FinOps practitioner

Inform

Do I have visibility of what I am consuming with respect to licensing (BYOL, VM, Bare Metal Infrastructure, Containers)?

Optimize

Do I know what entitlements and contracts I have in place that I could leverage to optimize my cloud spend/license position?

Operate

What tooling, processes or automation do I have to manage my license position on an ongoing basis and do I have real-time visibility?

Next steps—ITAM practitioner

Inform

Do I know what's running in cloud/ containers? Do I understand the licensing models available for my on-prem agreements and cloud contracts? (e.g., software assurance/license mobility)

Optimize

How do we make best use of our existing entitlements and ensure compliance?

Operate

How do I do this at scale? How do I do this in near time? How do I measure and report on success?

Q&A