8 west
CONSULTING

NOVEMBER / 2024

FINOPS & COST OPTIMIZATION

INFORMATION SECURITY
ISO/IEC 27001:2022
NSAI Certified

Why FinOps?

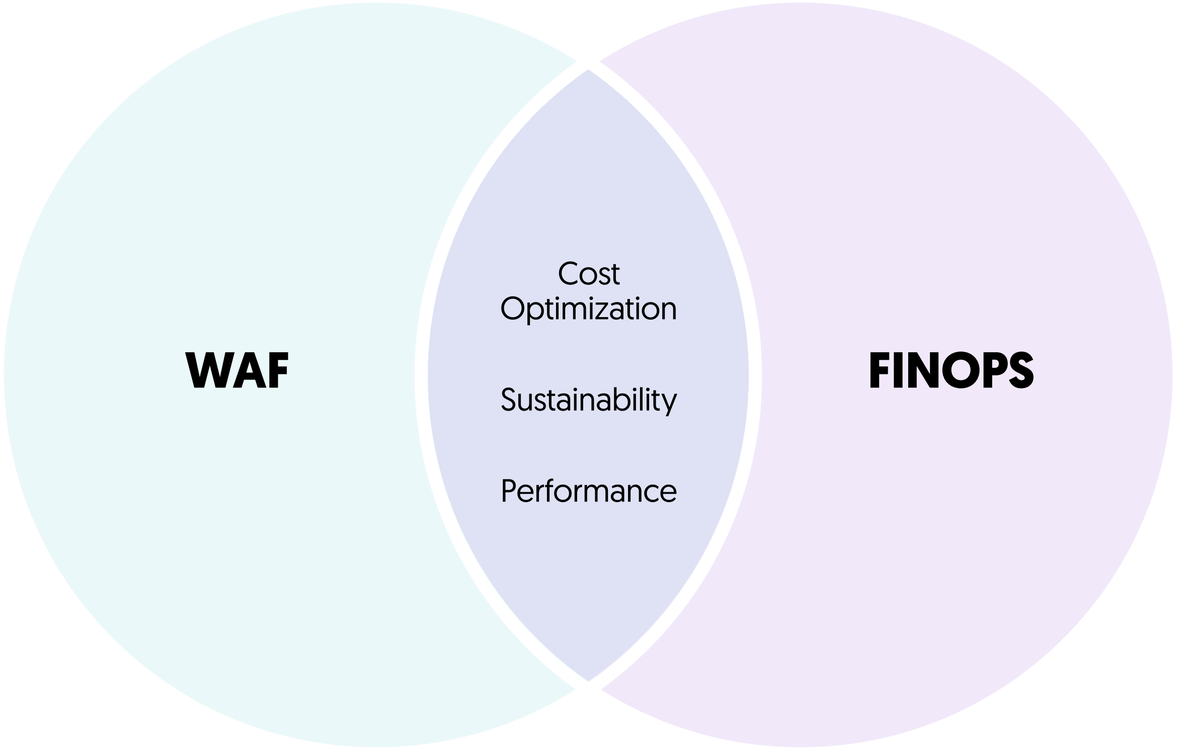
FinOps: A Holistic Approach with Cost Optimization at Its Core

Cost optimization, one of the six pillars of the Well-Architected Framework (WAF), focuses on efficient cloud spend and resource management. However, it's part of a broader FinOps discipline that encompasses financial accountability, cloud governance, and strategic growth planning.

FinOps Foundation

FinOps CERTIFIED Practitioner

aws certified Solutions Architect ASSOCIATE



FinOps Goals

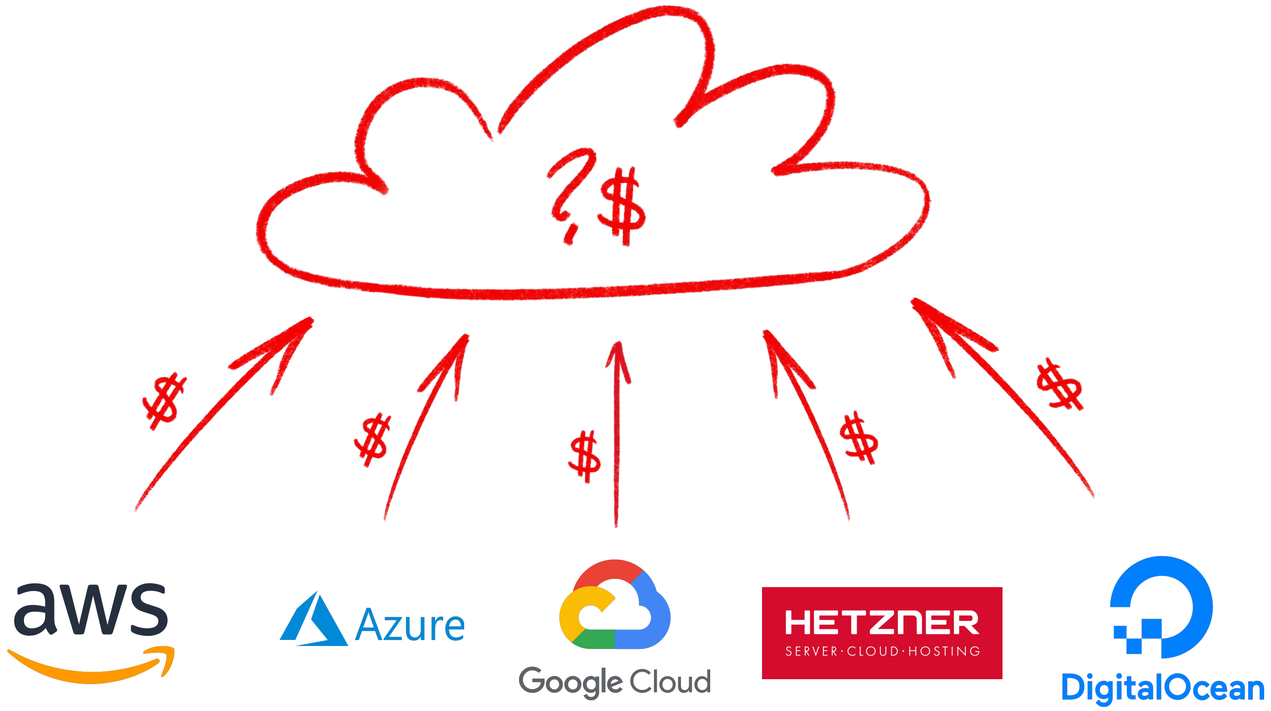
Why an Organization Might Need It

Just as the move to the cloud promoted the concept of DevOps (i.e. shared responsibility between operations and development for stable releases), FinOps presents the idea of accountability for cloud resources and architecture as a shared responsibility across the organization as a whole but with centralized governance.

Sometimes a business will decide to tighten the belt.

Sometimes it'll decide to invest more.

But now teams know why they're making those decisions.



Typical FinOps Challenges

- **CLOUD WASTE**

  Incurring unnecessary cloud costs due to overprovisioning, underutilization, idle or unmanaged resources, or workloads that exceed agreed capacity.

- **LACK OF ACCOUNTABILITY**

  Not having clear roles and responsibilities for cloud financial management or a culture of cost awareness among engineers, developers, or business.

- **LACK OF VISIBILITY**

  Lacking granular visibility into cloud consumption and spending across different services, accounts, teams, projects, or business units.

- **LACK OF EXPERTISE**

  Not having the skills, tools, or processes to effectively manage cloud costs or optimize cloud resources.

- **INCONSISTENCIES BETWEEN PROVIDERS**

  Difficulty in comparing multi provider discount plans, services and tagging conventions.

Typical FinOps Challenges CONT...

SPECIALISED ENVIRONMENTS

AI services which require large amounts of compute and storage due to intense calculations and retraining models can be problematic to estimate and forecast.

Teams need a way to address these challenges including:

- Deep understanding of AI pricing models
- Custom cost estimation models
- Careful resource management
- Training data management
- High performance

Deciding on the optimal architecture e.g. serverless or containers can be difficult to estimate.

The FinOps Foundation Framework

PRINCIPLES

- Teams need to collaborate
- Decisions are driven by business value of cloud
- Everyone takes ownership for their cloud usage
- FinOps data should be accessible and timely
- A centralized team drives FinOps
- Take advantage of the variable cost model of the cloud

DOMAINS & CAPABILITIES

FinOps Foundation

Understand Cloud Usage & Cost

- Data Ingestion
- Allocation
- Reporting & Analytics
- Anomaly Management

Quantify Business Value

- Planning & Estimating
- Forecasting
- Budgeting
- Benchmarking
- Unit Economics

Optimize Cloud Usage & Cost

- Architecting for Cloud
- Rate Optimization
- Workload Optimization
- Cloud Sustainability
- Licensing & SaaS

Manage the FinOps Practice

- FinOps Practice Operations
- Cloud Policy & Governance
- FinOps Assessment
- FinOps Tools & Services
- FinOps Education & Enablement
- Invoicing & Chargeback
- Onboarding Workloads
- Intersecting Disciplines

CORE PERSONAS

- Engineering
- FinOps Practitioner
- Finance
- Leadership
- Procurement
- Product

ALLIED PERSONAS

- ITAM
- ITFM
- ITSM
- Security
- Sustainability

PHASES

1 / OPTIMIZE

2 / INFORM

3 / OPERATE

MATURITY

Crawl | Walk | Run

FinOps Phases

INFORM

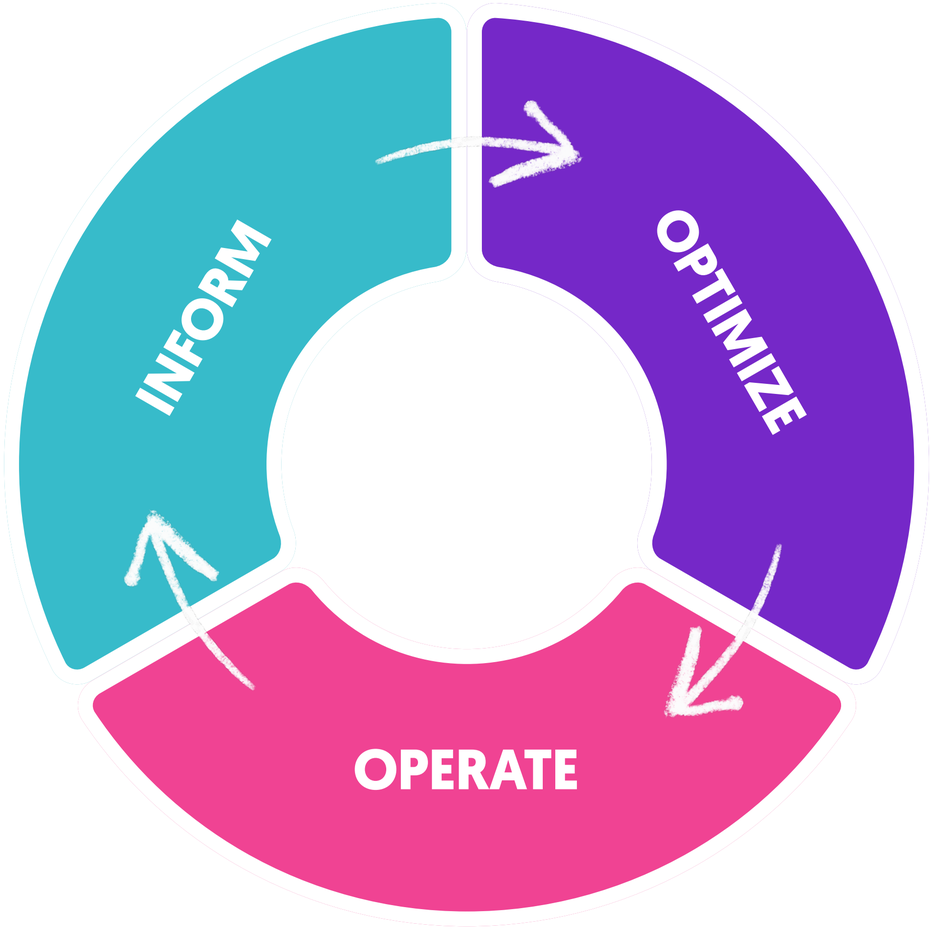
- Analysing data on cloud usage and spending across different dimensions (e.g. service, account, team, project etc)
- Providing relevant and timely insights to stakeholders

OPTIMIZE

- Identifying and implementing opportunities to reduce cloud waste, improve efficiency, and increase value such as:
  - Rightsizing resources
  - Purchasing reserved instances or savings plans
  - Applying tags or labels
  - Automating workflows
  - Leveraging spot instances or containers

OPERATE

- Establishing governance policies, processes, and standards for cloud financial management such as:
  - Setting budgets and alerts
  - Allocating costs and charges
  - Reporting and forecasting spending
  - Creating feedback loops and incentives



Common FinOps KPIs

A key part of the process for long term success is identifying the business value.

This means setting targets using KPI's that are most relevant to the organizations goals and capabilities.

EXAMPLE KPIs	ASSOCIATED CAPABILITY	BENEFIT
% Resource Utilization	Workload Optimization	Less Waste
% Compute Spend Covered by Commitment Discounts	Rate Optimization	Reduced Spending
% Costs Associated with Untagged CSP Cloud Resources	Allocation	Improved Visibility
% Variance of Budgeted vs. Forecasted CSP Cloud Spend	Budgeting	Financial Alignment
Cost per Gigabytes Stored	Unit Economics	Maximized Data Life-Cycle

FinOps Maturity Model

A key part of the process for long term success is identifying the business value.

This means setting targets using KPI's that are most relevant to the organizations goals and capabilities.

CRAWL

- Should be able to allocate at least 50% of spend
- Resource-based commitments discount target coverage of approximately 60%
- Forecast spend to actual spend accuracy variance is 20%

WALK

- Should be able to allocate at least 80%
- Resource-based commitments discount target coverage is approximately 70%
- Forecast spend to actual spend accuracy variance is 15%

RUN

- Greater than 90% of spend can be allocated
- Resource-based commitments discount target coverage is approximately 80% of spend
- Forecast spend to actual spend accuracy variance is 12%

FinOps Maturity Characteristics

CRAWL

Success is measured by simple KPIs, but the capability is not yet widely adopted across all teams.

- Initial audit of cloud accounts
- Utilization of cloud native tools
- Reporting structure for findings
- Identify key capabilities
- Resource categorization

WALK

Capabilities are understood and followed within the organization. There is better reporting, tooling, and measurement of success

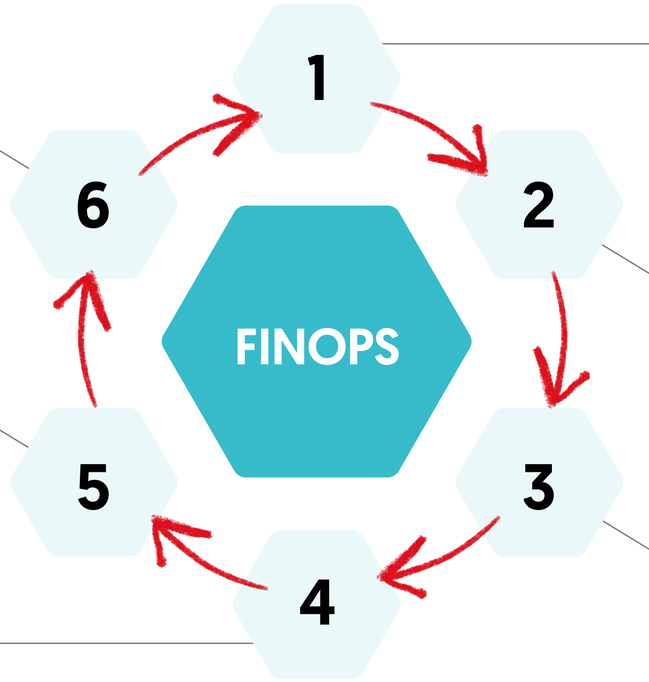
- Monitoring and reporting in place
- Development of advanced toolset
- Automation where possible
- Budgeting and forecasting
- Show back models and resource tagging defined

RUN

Organizations have fully integrated FinOps practices and there is a strong alignment between FinOps activities and business value.

- Organizational awareness
- High utilization and allocation rates
- Discount management optimized
- Accurate forecasting
- Architectural performance optimized
- Advanced automation

FinOps Involvement in the SDLC



REQUIREMENTS ANALYSIS

- Define the metrics used to control costs during the project
- Consider the cost implications of the proposed solution

DESIGN

- Use cloud provider tools to estimate the cost of the proposed architecture

IMPLEMENTATION

- Developers follow best practices for efficient resource usage
- Regular code reviews to identify patterns that may lead to higher cloud costs

TESTING

- Automated tests for resource usage
- Performance testing to help optimize the system

DEPLOYMENT

- Use Infrastructure as Code (IaC) tools to automate the provisioning and deprovisioning of resources

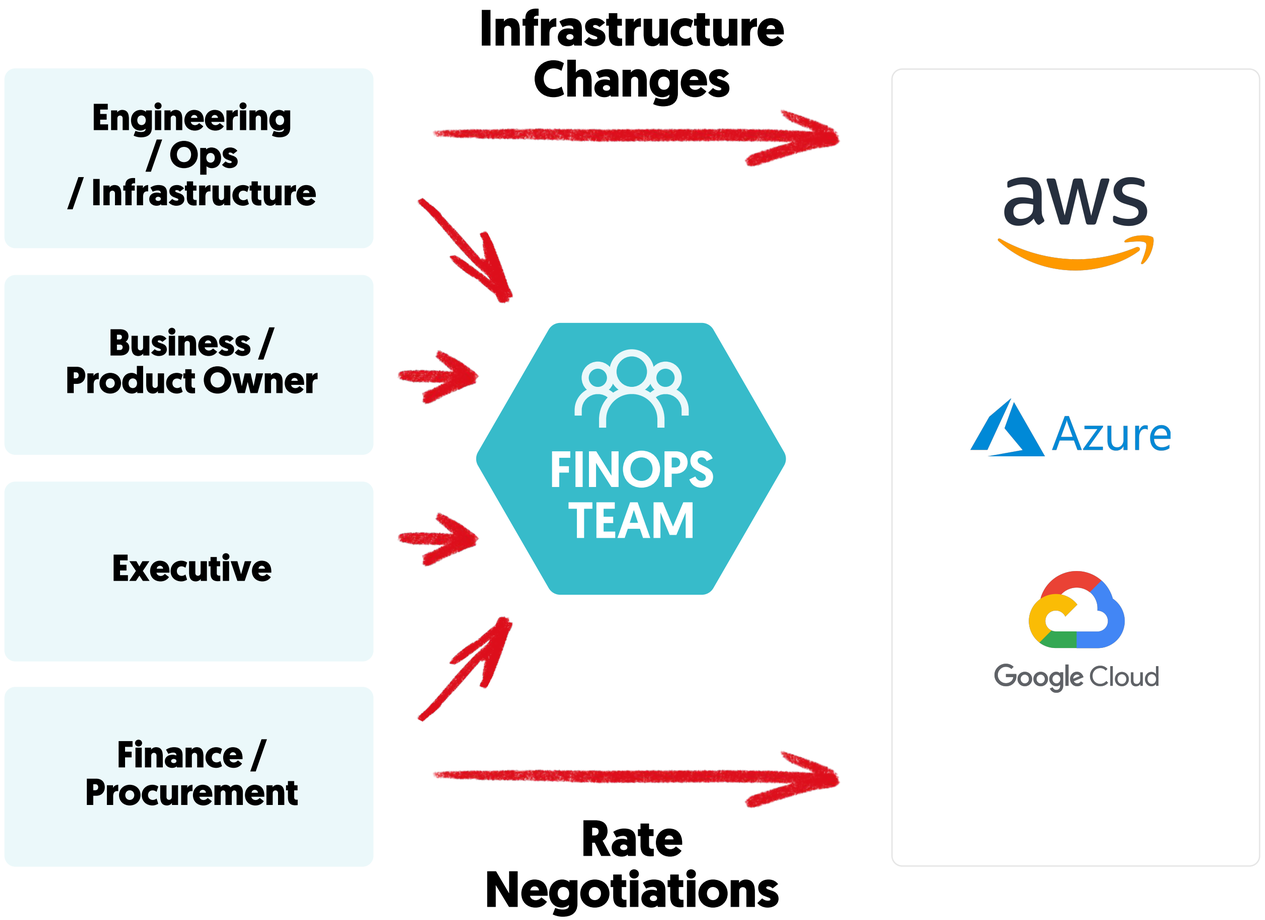
MAINTENANCE AND MONITORING

- Utilize cloud cost optimization tools
- Regular reviews to identify and eliminate wasteful spending

FinOps Within The Organization

In the same way that everyone is responsible for security with a core team enabling best practices (at scale), **FinOps works best when it's pervasive within the organization.**

The size of the team will be dependant on the size of the organization and scale of the cloud accounts. It may be complex enough that support from third parties is necessary or small enough to be fully managed by a handful of people internally.



RACI

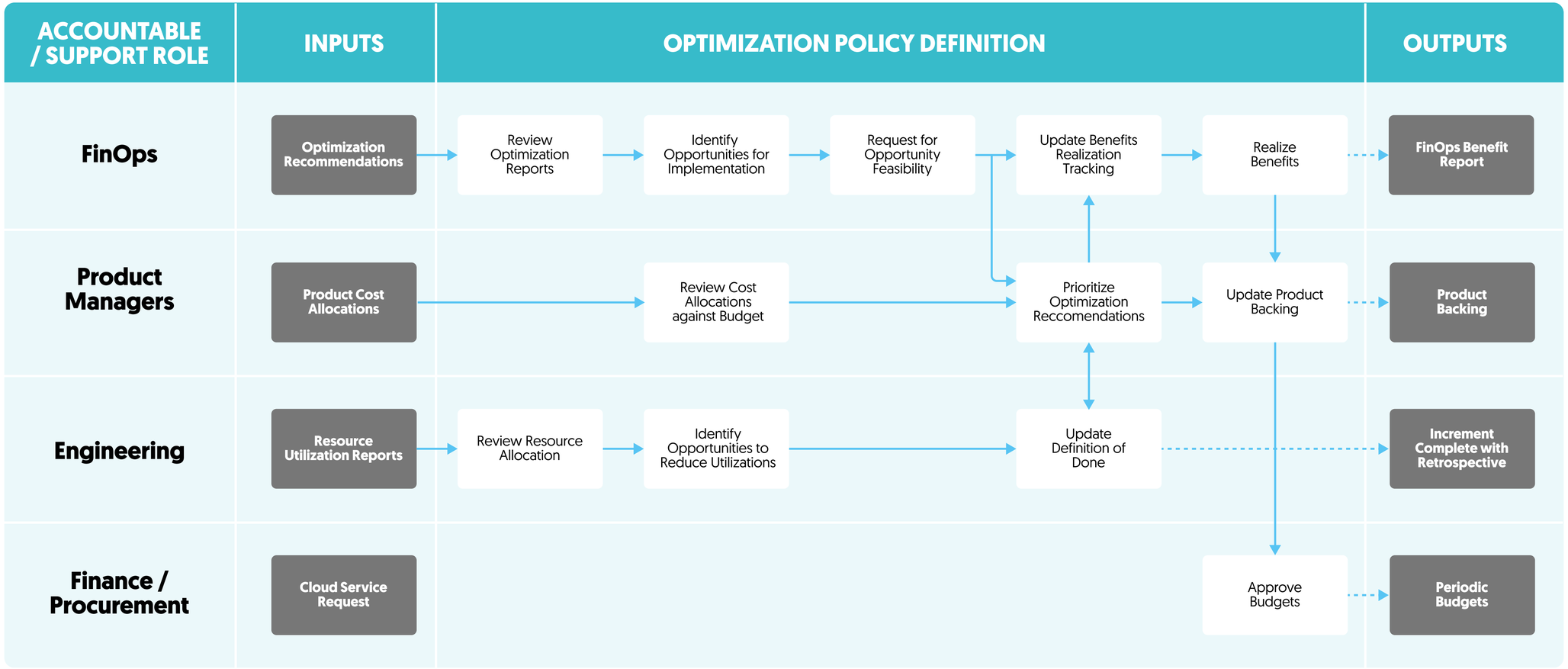
The RACI **(Responsible, Accountable, Consulted, Informed)** matrix opposite can help teams understand how the workload can be shared and organized

FinOps.org more information

	FINOPS TEAM	APPS TEAM	IT DOMAINS	FINANCE	SOURCING	BUSINESS
Establishing cloud cost control guardrails	A	I	C	C	-	-
Cloud cost tagging standards & compliance	A	R	C	R	C	-
Cloud cost allocations keys	A	R	C	R	-	-
Synchronizing actual & planned cloud spend with official budgets & plans	A	I	C	-	R	C
Helping Application teams identify work-load level cost efficiency targets	A	R	I	-	-	C
Workload-level cost efficiency realization	C	A	I	-	-	C
Optimize enterprise-level costs through right-sizing; resource decom; etc.	A	R	C	I	-	-
Lead buying strategy to capture savings via reserved instances; VM spot pricing; etc.	A	C	C	-	R	C
IT Planning, forecasting & budgeting	C	R	A	R	-	C
Bottom-up planning & forecasting	C	R	A	R	-	C
Business Unit Economics	C	R	A	R	-	A

FinOps Optimization Process Flow

Based on Agile Development Scrums



How 8 West Can Help

STRATEGY

Establishing who will take ownership of cloud financial management can be difficult. Is it someone from finance, engineering or executive level?

If your cloud environment is complex and the cost considerable then this is not an easy solution to get right for long term success, and this is why FinOps personas or teams are crucial.

How 8 West Can Help CONT...

STRATEGY

8West have a cloud engineering team comprised of **certified cloud architects, FinOps practitioners and other specialists** that cover all the pillars of the well architected framework.

We can provide the centralized hub that communicates across your company divisions to drive best practices and successful governance.

- Dedicated specialists to engage with teams, drive collaboration and provide regular monitoring and reports
- Carefully curated tool suites where we have partnered with the best providers to deliver visibility and transparency
- Management of automated processes and AI tooling that will save time and money
- The implementation of a roadmap for long-term success
- Incremental establishment of FinOps best practices and training so that cost and usage optimization becomes an embedded and simplified process which returns business value

Step 1 - Onboarding

ENGAGEMENT

After initial meetups and team introductions, the first practical step we take is to install our partners premium insights tools to gain centralized visibility into the accounts (Insights, CID), these tools need read only permissions. This will help with:

- Mapping existing usage
- Cost analysis and categorization
- Resource utilization analysis
- Tagging and show back investigation
- Automation opportunities

OUTPUT

The aim would be to find a minimum of an initial 10% savings, but more importantly we would aim to establish better visibility and reporting mechanisms that progress the maturity of the organizations FinOps journey. Savings are the first realization, streamlined processes and business value the end goal.

TIMELINE - 1 WEEK

Step 2 - Optimization

ENGAGEMENT

Using the report compiled from step 1 we conduct a triage meeting with stakeholders from finance and engineering

This meeting is to discuss the initial optimization opportunity's, identify unit economics, show back models and discuss the implementation of any automation opportunities that have been discovered.

OUTPUT

- Clear roadmap for optimization opportunities and FinOps best practices
- Establish goals and KPI's
- Plan and implement automated solutions POV

TIMELINE - 2 WEEKS

Step 3 - Commitment

ENGAGEMENT

By this stage we will have discovered even more savings and proven the benefits provided by the FinOps engagement, insights tooling and automated cost optimization solutions.

To progress from POC to the realization of these benefits you would enter into a quarterly contract with 8west to continue providing the services, tooling and support on an ongoing basis.

The tooling and access to the cloud engineering team would be included in a monthly rate which is determined by both your cloud spend and the amount which we save you.

OUTPUT

- High level weekly report on cost optimization savings
- Monthly report on resource utilization, cost analysis, KPI targets and budget, architectural recommendations
- Management of the tool suite
- Managed system for tracking the ticketing and implementation of engineering improvements
- Systematic adoption of FinOps best practices as laid out in the roadmap from step 2

TIMELINE - ONGOING QUARTERLY MAINTENANCE

Solutions

SOME MORE DETAIL ON HOW WE DO IT...

Native tools provide visibility on cloud spend and generate recommendations on how to optimize, but with more complex environments additional tooling is beneficial for managing budgets, observability and automating processes.

8West have experimented, licenced and partnered with some of the best providers to manage a suite of tools that cover everything from visibility and governance to automated processes and discount management.

Common Formulas for FinOps Tooling Stack

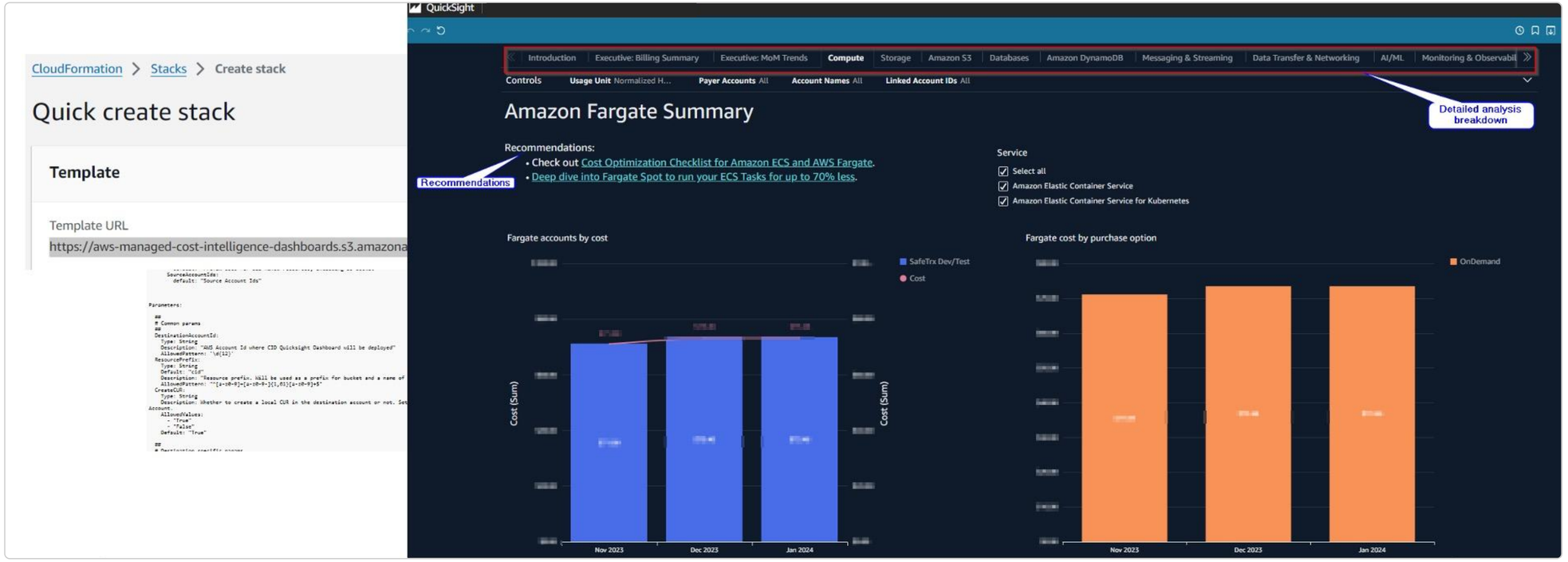
Respondents use an average of **4.1** FinOps Tools

97%	65%	97%	16%
NATIVE TOOL (E.g. AWS Budgets, Azure Cost Management, GCP Intelligent Recommendations)	**PLATFORM** (E.g. Cloud-*, Homegrown, Data Lake)	**OBSERVABILITY** (E.g. Datadog, New Relic)	**SPECIALIST TOOL** (E.g. Zesty, Spot, Analytics Tools)
Managing Anomalies	Forecasting	Resource Utilization & Efficiency	Managing Commitment Based Discount
Budget Management	Managing Shared Cost		Workload Management & Automation
	Measuring Unit Costs		Chargeback & Finance Integration

Platform

CLOUD INTELLIGENCE DASHBOARDS

Multi cloud integration for detailed CUR data exports



Observability

POWERFUL ANALYTICS FOR UNIT ECONOMICS AND RESOURCE MANAGEMENT

If you use more than one cloud provider, there are tools that can centralize and normalize the spend and usage data

- New Relic
- Data Dog

new relic

DATADOG

Specialist - Commitment Managers

AUTOMATE CLOUD SAVINGS PLANS AND DISCOUNTS

Trying to manually manage real time discounts from the secondary markets can be nearly impossible - to get the best possible rate, AI commitment managers do the heavy lifting to create significant savings

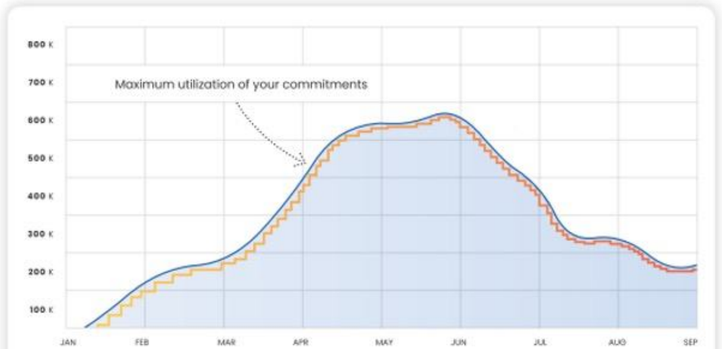
- Zesty
- Spot

zesty

Spot by NetApp

1. Zesty is granted an IAM role
2. Collects your workload usage and patterns
3. Real-time data is analyzed, the algorithm is trained
4. The algorithm reconciles account behavior with discounts on AWS marketplace
5. Zesty purchases and sells RIs based on actual compute usage
6. Commitment Manager gradually ramps-up to almost total coverage
7. Usage metrics continue to be monitored, the algorithm continues to improve

WITHOUT ZESTY



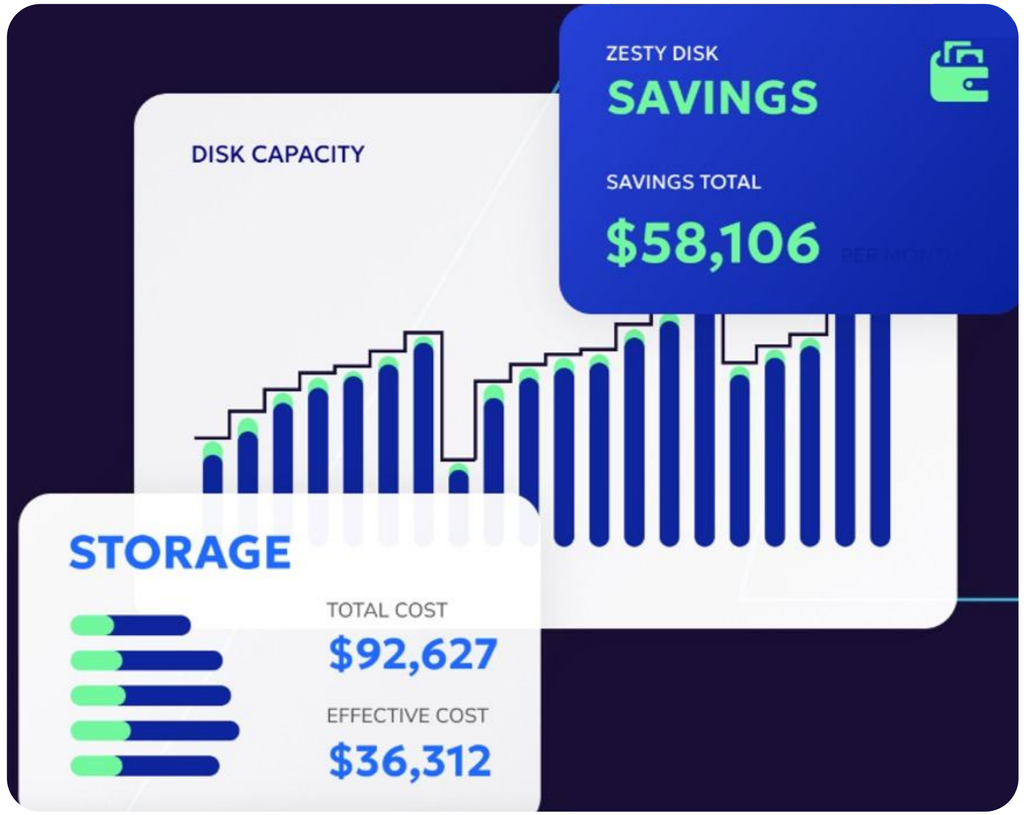
WITH ZESTY

Specialist - Auto-Scalers

OPTIMIZE RESOURCE UTILIZATION

There can be incredible wastage when it comes to storage, reactive automated storage allocation provides the flexibility to up and down scale based on an organizations needs

- Zesty
- Spot



Report Hub

CENTRALIZED CROSS TOOL REPORTING

With multiple providers and multiple management tools both native and third party its hard to keep track of everything!

That's why having the centralized hub that focuses on analysing, updating, budgeting, forecasting and tracking, is essential.

Cloud Platform Management

Total Potential Monthly Savings:	**$44,075.50**
Total Potential Annual Savings:	**$528,906**
Delete Unrequired Infrastructure:	$1,560.68
Right size Remaining Infrastructure:	$15,233.10
Optimise Purchasing:	$19,877.52
Storage Auto-scaler	$7,401.20

Ready To Take The Next Step?

Simply arrange a date and time for your no obligation introductory meeting with our cloud engineering team.

Or request a summary of our services and tech talent rate card.

GET IN TOUCH WITH US

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*The majority of the information and graphics relating to FinOps practices were taken from material contained within and distributed by **the FinOps Foundation**