



PRACTICAL GUIDE

HOW TO IMPLEMENT THE FINOPS FRAMEWORK

A COMPREHENSIVE APPROACH

SECURE | WELL-ARCHITECTED | OPTIMIZED CLOUD COST AND CONSUMPTION

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3 IMPLEMENTATION PHASES

INFORM

OPTIMIZE

OPERATE

Executive Summary

In a datacenter-based organization IT cost management will not bring huge cost cutting results as spending is fixed and optimizations are cumbersome, often requiring costly hardware. But the cloud world is a whole different ball game. FinOps and cloud cost management in general is a new hype with a reason - it can bring serious cost cut up to 70%. Why? Because the cloud costs are variable and thus micro-optimizations throughout the company add up.

Not an easy road to take - you need to start with an organizational mindset shift. It is not about having one central team anymore who is managing costs and addressing overspending on a regular base. It is about the conscious, everyday actions of people throughout teams who understand their roles in cloud spending.

Without having a clear cloud management platform in place, teams are in the blind with their spending. Procurement is negotiating about cloud rates without historical data on their hands, product managers set up prices without having a view on the full cost structure, engineering teams are basically dealing with cloud providers instead of procurement because of their technical skills in this rapidly changing environment, while executives have no overview of a significant portion of company costs and therefore no understanding of where over- or underspending is coming from.

Beside the human aspect, another important element of cloud cost optimization is the technical optimization - architecture and security. A solid architecture is the foundation of cloud cost optimization. It brings operational excellence which

leads to minimized cloud consumption to still bring you higher value. **At the end of the day, it is all about adjusting resources based on demand. Don't consume and pay for resources that are not in use at the moment.** It is a bit like turning off the lights in the areas where there is no one at the moment - it is not effecting your quality of life, but saves you energy and cost. Monitoring that manually would be a rather time-consuming exercise though. Luckily, technology is there to help you - intelligent monitoring systems, automatic, smart optimization advisory solutions.

Once you have a solid architecture and operational excellence, add security as a top layer before starting with a cloud cost management platform. **Cybersecurity breaches can cost a lot of money to any organization** and current studies are not promising a bright future - attacks are getting more sophisticated and frequent. **Another angle of a se-**

cure IT infrastructure is the cost saving on security products and services. Azure Security Center, for example, reduces the cost of third-party security tools and services from consolidation by over \$200,000 annually - as a Forrester Consulting TEI Study found ([read more here](#)).



THE FINOPS FRAMEWORK

CLOUD COST MANAGEMENT



FINOPS

FinOps is the operating model for the cloud — a combination of systems, best practices, and culture to increase an organization's ability to understand cloud costs and make tradeoffs.



INFORM

Gives you the visibility for allocation and for creating shared accountability to show teams why they're spending.

OPTIMIZE

Empowers your teams to identify and measure efficiency optimizations, then make goals based on those opportunities.

OPERATE

Defines and executes processes which enable the goal of Technology, Finance and Business to be achieved.

source:

<https://www.finops.org/introduction/what-is-finops/>

PRINCIPLES

Teams need to collaborate

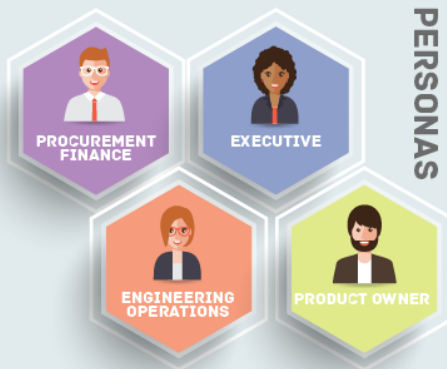
Business value of cloud drives decisions

Everyone takes ownership of their cloud usage

FinOps reports should be accessible and timely

A centralized team drives FinOps

Take advantage of the variable cost model of cloud



THE DEXMACH PILLARS



DOMAINS

Understanding Cloud Usage and Cost

Performance Tracking & Benchmarking

Real-Time Decision Making

Cloud Rate Optimization

Cloud Usage Optimization

Organizational Alignment

A FULLY OPTIMIZED, SUSTAINABLE BUSINESS

The 3 Phases of FinOps

FinOps is an organizational mindset, a company culture that can drive serious progress in cost optimization by promoting ownership and accountability over cloud spend. While today an increasing number of organizations are cloud-first, cloud consumption and cost stays hidden for most teams. That's what the FinOps approach changes - it shifts the responsibility over cloud costs from finance or any other dedicated team to everyone throughout the company with the help of a dedicated FinOps team with members from various teams. It also promotes sustainability as it optimizes resource consumption.

To enable that shift in mindset, an organizational transformation is needed through 3 phases: first inform all teams of cloud usage and ownership, then optimize it, finally operate and make it a continuous exercise, an organizational mindset.

The 6 Principles of FinOps

To facilitate that organization mindset, FinOps has 6 basic principles:

1. Teams need to **collaborate**.
2. Data and reports should be **accessible and timely** to bring all teams to the same level.
3. Everyone takes **ownership** for their cloud usage and therefore, for their optimization actions.
4. A **centralized team** consisting of people from various disciplines drives FinOps to drive skill-up throughout the organization and accelerate consumption and cost optimization.
5. Decisions are driven by **business value of cloud** to maximize cloud value.
6. Take **advantage of the variable cost model** of the cloud to lead rate negotiations and to bring procurement to the speed of engineering when it comes to cloud rate.

The 6 Domains of FinOps

These principles then drill down into 6 knowledge domains:

1. **Understanding cloud usage and cost** through access to quality historical data, clear cost allocation and visuals.
2. **Performance tracking & benchmarking** through budget setting and accurate forecasting.
3. **Real-time decision making** through easy access to data and data-analytics tools.
4. **Cloud rate optimization** through increasingly accurate forecasting based on historical data and data analytics.
5. **Cloud usage optimization** through both human and technical led rightsizing.
6. **Organizational alignment** by action and automation.

The 4 Basic Personas

There are 4 basic personas in the FinOps concept:

1. **Executives**, such as a VP/Head of Infrastructure, CTO, or CIO, focus driving accountability and building transparency
2. **Business and Product Owners**, such as a Cloud Analyst, or Business Operations Manager deliver innovative solutions cost effectively.
3. **Engineering and Ops** team members, such as Lead Software Engineers, Cloud Architects, Service Delivery Managers build and support services for the organization.
4. **Finance and procurement** team members, including Global Technology Procurement, Financial Planning and Analyst Managers, focus on accounting, forecasting and rate optimization.

The FinOps framework section is based on <https://www.finops.org/introduction/what-is-finops/> by the FinOps Foundation.

The 3 DexMach Pillars

We built a unique, comprehensive approach with 3 pillars to FinOps to fully optimize any organization:

1. **Solid Architecture** to drive operational excellence so that you only use and pay for the resources you need at the moment.
2. **Maximized Security** to eliminate security breaches and decrease spend on security tools and services.
3. **Cloud Cost Management Platform**, our Smart Cloud Cost FinOps Accelerator platform enables the FinOps framework with clear dashboards, custom tagging and reporting and smart functions.

In the next section we give a detailed overview on these 3 pillars how they drive progress in consumption and cost optimization.




HOW TO IMPLEMENT FINOPS?

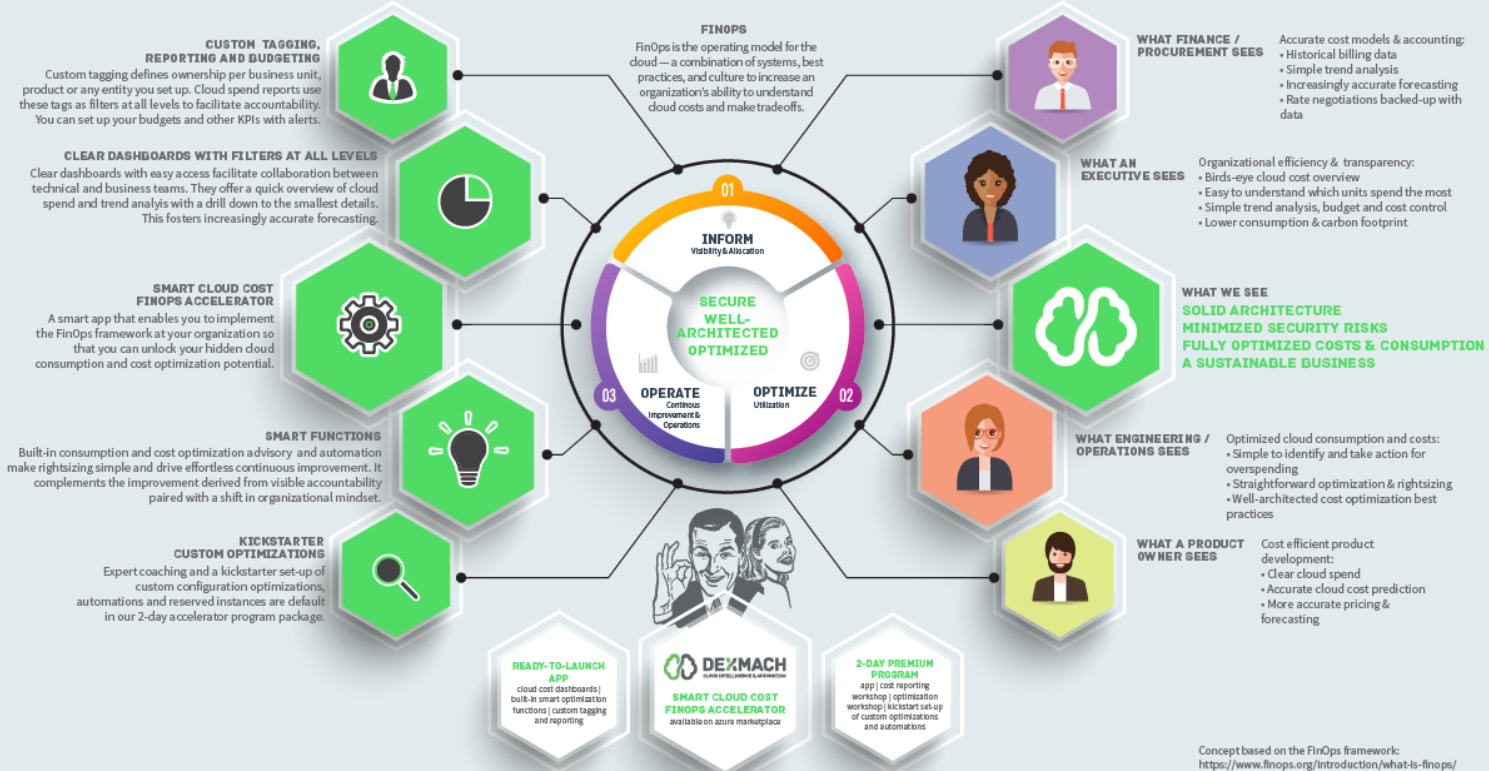
CLOUD COST MANAGEMENT PLATFORM
SECURE & WELL-ARCHITECTED FOUNDATION



CLOUD CONSUMPTION AND COST OPTIMIZATION

WITH  **DEXMACH SMART CLOUD COST FINOPS ACCELERATOR**

Other modules available in **Smart Cloud Insights**: Kubernetes / IaaS / Security



Cloud Cost Management Platform: How the DexMach Smart Cloud Cost FinOps Accelerator can help you to implement the FinOps principles step by step

1. Teams need to collaborate

Clear dashboards with easy access bring technical and business teams to the same page on optimization.

2. Business value of cloud drives decisions

Historical billing data & trend analysis fosters increasingly accurate forecasting.

3. Everyone takes ownership of their cloud usage

Custom tagging defines ownership (business unit, product, application etc).
Cloud spend reports with tag filters at all levels facilitates accountability.

4. FinOps reports should be accessible and timely

Central reporting access in own PowerBI environment

Intelligent monitoring, automatic deployment, built-in optimization advisory to lead rightsizing drive continuous improvement

5. A centralized team drives FinOps

Service evaluations bi-weekly or monthly.

6. Take advantage of the variable cost model of cloud

Reserved instances optimization visualized in report.

Evaluations on yearly or 3 yearly commitments.

Secure & Well-Architected Foundation

If you would like to learn your cloud maturity level score and to get a more holistic view of your security posture after you, one of our Azure security experts runs through an extensive survey.

You will get a list of top priorities to improve your security maturity level score. The survey is complemented with our unique cloud security assessment deep dive scan that will

- give your deep technical insights of your cloud security posture,
- provide a detailed report with risk analysis, risk mitigations & recommendations,
- define quick wins to implement and benefit from direct improvements,
- help you define your security roadmap top priorities,
- reduce the overall risk or impact of a cybersecurity threat.

Being well-architected is critical in this age, not only because it is real and is happening right now. But also because it is visible in every Azure environment.

The value of well-architected workloads in Azure is beyond reducing your expenses. It is also about:

- Truly managing your budget.
- Improving the workloads to protect them from security threats.
- Making sure you have a clear and solid incident response.
- You need to react when something happens, therefore, you need to streamline internal processes when you are working on different scenarios.
- Having a well-architected design avoids costly mistakes and makes sure that you are always delivering the most efficient performance.

Running well-architected workloads has a real implication in managing unexpected expenses and financial losses due to incidents or breaches, and having in some cases to invest, people, resources, and time in fixing the damages caused by low quality workloads. It helps you to maintain your customer's trust with reliable services and excellent customer experiences.

The well-architected framework consists of five pillars:

- Cost Optimization
- Operational Excellence
- Performance Efficiency
- Reliability
- Security

The Well-Architected framework will guide you to reach these 5 well-architected pillars. It will also

help you to address all the potential pain points and risks to ensure your Azure investments are solid and in line with your expectations.

It gives you confidence that you are using best-practices when deploying or optimizing workloads in Azure. These guidance and best-practices are deep technical resources that have been tested and, on top of that, the recommendations can be quite easy to implement.

Also important to know is that it will show you where you need to lay your focus, because there are so many components that are going to distract you from having a good and solid environment. Therefore, you better focus on the components that are having the biggest impact when you want to optimize your workloads.

Data Breaches Cost you - And Your Customers

Customer PII was the most frequently,
and costliest compromised type of record
per latest data breach study*

*<https://www.ibm.com/security/digital-assets/cost-data-breach-report/#/>

\$3.86M Average total cost of a data breach

80% Number of breaches carried out
with customer PII

\$150 Customer PII average cost per
record

\$175 Increased cost per record of
customer PII in breaches caused
by a malicious attack

\$137,000+ Remote workforce impact
on average total cost of data
breaches

The 5 Pillars of Microsoft Azure Well-Architected Framework

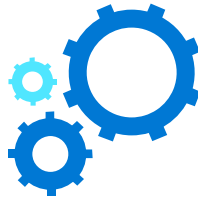
**COST
OPTIMIZATION**



**OPERATIONAL
EXCELLENCE**



**PERFORMANCE
EFFICIENCY**



RELIABILITY



SECURITY



Run Well-Architected cloud workloads—to create business value



Invest in these **actions**:

Manage budget

Improve workload security

Increase incident response

Streamline internal processes

Find costly mistakes

Enhance workload performance



To avoid these **consequences**:



Expenses, losses



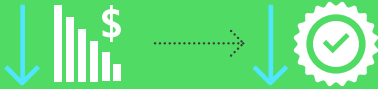
Trust



Damages

Business requirements influence decisions about workload architectures

Development/test workloads



Mission-critical workloads



Securing all workloads



Cost Optimization Categories

ORGANIZATIONAL

ARCHITECTURAL

TACTICAL



Understand and forecast costs



Cost optimize workloads



Control costs



Use alerts to monitor usage and spending



Provide cost savings by auto-scaling policies



Reduce costs with Reserved Instances



Develop a cost model



Capture requirements



Consider cost tradeoffs



Design checklist

Principle: Aim for scalable costs

Consider tradeoffs of cost savings versus security, scalability, resilience, and operability

Choose managed services whenever possible

Compare consumption-based pricing with pre-provisioned costs

Choose an appropriate subscription level

Use proof-of-concept deployments

Optimize data-transfer

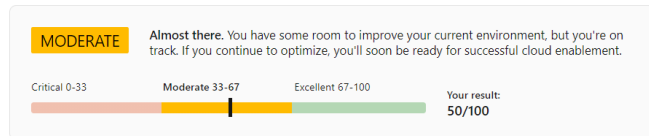
Reduce server load

Azure Well-Architected Review

Assess workloads across all pillars of the Microsoft Azure Well-Architected Framework

Understand the Well-Architected assessment level of workload environments

Your overall results



This assessment asks you directed questions:

- Providing technical guidance across workload operations
- Creating & optimizing workload operational quality

ⓘ Before you get started, consider [Signing in](#) to save your progress.

Azure Well-Architected Review

Examine your workload through the lenses of reliability, cost management, operational excellence, security and performance efficiency [30 minutes].

Assessment name *

Azure Well-Architected Review - [your project name]

Choose your interests

Cost Optimization

An effective architecture achieves business goals and ROI requirements while keeping costs within the allocated budget.

Operational Excellence

To ensure that your application is running effectively over time, consider multiple perspectives, from both an application and infrastructure angles. Your strategy must include the processes that you implement so that your users are getting the right experience.

Performance Efficiency

Prioritize scalability as you design and implement phases. Scalability leads to lower maintenance costs, better user experience, and higher agility.

Reliability

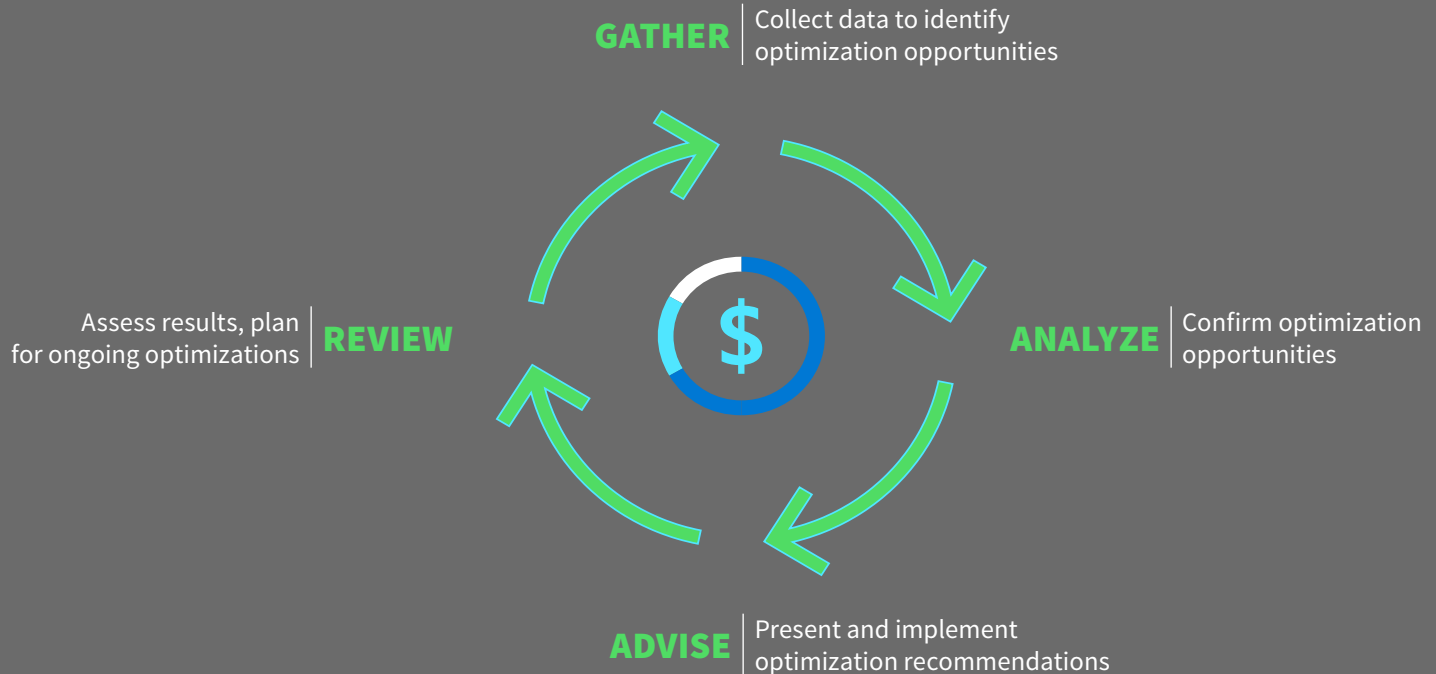
In a cloud environment you scale out rather than buying higher-end hardware to scale up. While it's always desirable to prevent all failure, focus your efforts in minimizing the effects of a single failing component.

Security

Security is one of the most important aspects of any architecture. It provides confidentiality, integrity, and availability assurances against deliberate attacks and abuse of your valuable data and systems. Losing these assurances can negatively impact your business operations and revenue, as well as your organization's reputation in the marketplace. In the following series of articles, we'll discuss key architectural considerations and principles for security and how they apply to Azure.

Next →

Cost optimization process



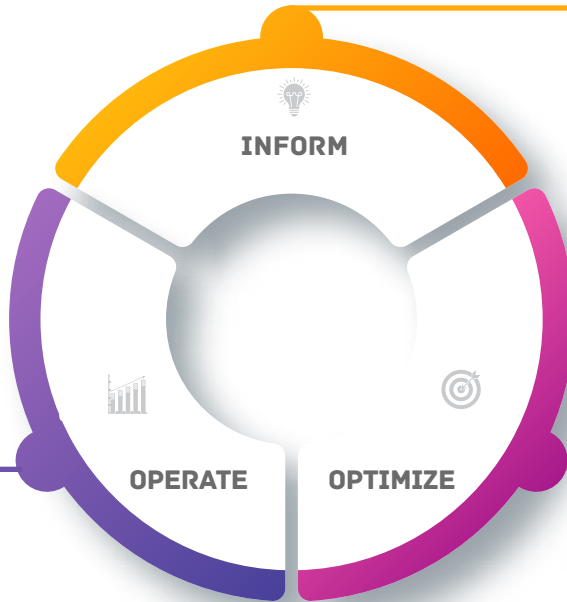
IMPLEMENTATION PHASES

INFORM, OPTIMIZE, OPERATE



Keep optimizing

1. Continuous scan
2. Reporting & optimization consultancy on demand
3. Optimizations & list to prioritize:
 - Configuration optimizations
 - Automations
 - Reserved Instances



1. Scan cost & configuration compliance
2. Clear reports & dashboards with filters at all levels
3. Prioritize actionable items
4. Create roadmap

1. Reporting & optimization workshop
2. Implement optimizations
 - Configuration optimizations
 - Automations
 - Reserved Instances
3. Attestation scan to validate optimizations

Inform

In the inform phase of FinOps you have to bring awareness through data and data visualization to all stakeholders in the company. The DexMach cloud cost management approach has 3 pillars - security, solid architecture and a cloud cost management platform. To facilitate organizational awareness and full optimization through these 3 pillars, there are four main elements you need to have on overview on:

- **Clear reports & dashboards with filters at all levels** with eventual KPIs and budgets, so that you can have a full understanding of your cloud spend structure
- **Configuration optimizations** that can help to decrease your cloud consumption by establishing operational excellence and using only the resources you need

- **Automations** to enhance operational excellence and to avoid manual run through of resources that are not in use
- **Reserved Instances** to get you the lowest cloud rate. Reserved instances are a bit like a parking garage - you can pay high fees for one-time use, but can get discounts if you opt for a year card.

To provide this overview, we first do two **scans** on your cost & configuration compliance and set up **tagging customized** to your organization. This allows us to create clear reports & dashboards with filters to drill down at all levels. Additionally, it provides us with a list of possible configuration optimizations, automations and reserved instances. Based on that, together with you and with our experience we can identify **priority actionable items** that bring quick big wins and **create roadmap** for further steps and phases.

Optimize

In the optimize phase we focus on implementation and knowledge transfer. Based on the results of the scan, during the reporting and optimization workshop we implement the prioritized configuration optimizations, automations and reserved Instances. Additionally, our experts coach you to have a full understanding of FinOps approach, so that you can keep on optimizing on your own.

Operate

The operate phase is a handover phase. It is all about keeping up the optimization work with continuous scanning, identifying and deploying new optimization and automation possibilities paired with consultations on demand to make sure you get a steady grasp at your cloud cost management.



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SESSION (5-DAY)**

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