



TRANSFORMING IT SPENDING INTO BUSINESS VALUE



IBM
Platinum Partner

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INTRODUCTION

After a decade or more of getting familiar with the cloud, we've learned that it's great for innovation and agility. But we've also learned that costs can easily get out of control. Recent surveys indicate that up to 30% of cloud spending may be wasted.

What if you could recapture that value and put it to better use?

Today, you can. IT cost management has evolved to the point where organizations can now accurately correlate the business value of a specific technology service to the business service it supports. Because this "FinOps" approach to IT cost management enables businesses to make much more robust, data-driven decisions about how to get the best value from their technology investments, organizations need to adopt FinOps now to make the cloud a financial advantage.



MAKING CLOUD COSTS PREDICTABLE AND CONTROLLABLE

Whenever you adopt new tools or a new way of delivering something with technology, how you measure the costs will change — and not always in predictable or easily understandable ways. When the IT world shifted from mainframes to distributed computing, the cost model shifted with it. The transition to the cloud is similar.

While it's always been very important for organizations to understand the cost of IT to support the business, new tools and processes are now available to help us understand IT costs with more precision by helping organizations:

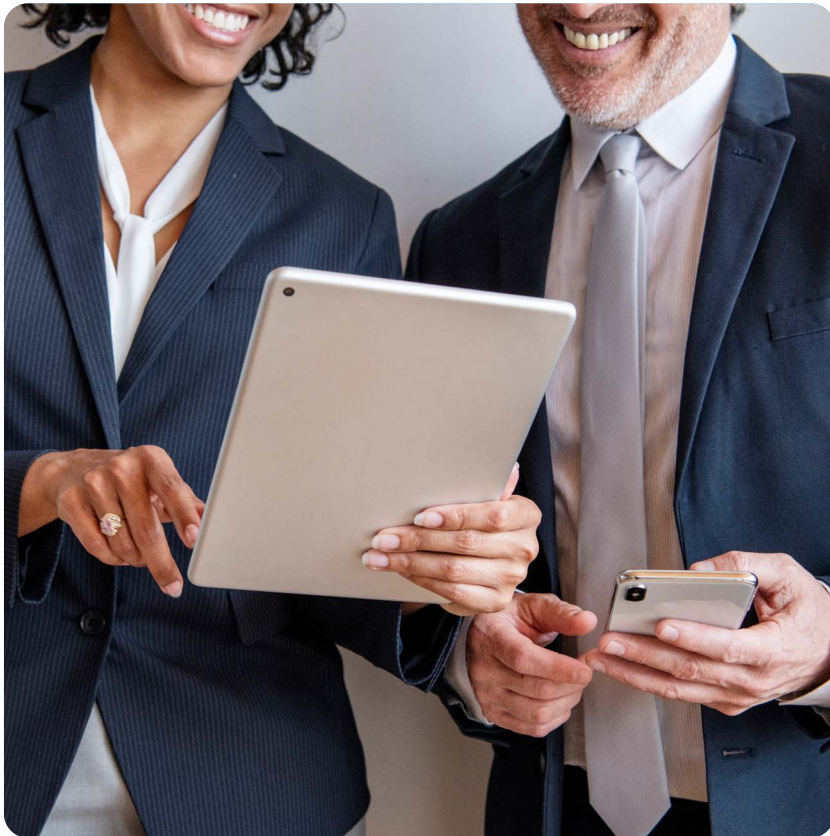
- Find and eliminate waste, such as overprovisioning
- Make data-driven decisions about the best platform for a workload: cloud or on-prem
- Continuously optimize workloads for cost and performance using AI and automation
- Accurately tie the true cost of a workload to a business service
- Make IT and the cloud a competitive advantage

Financial operations — or FinOps — promises to help organizations deliver services at a predictable and controllable cost. If you're running multiple applications for multiple outcomes on multiple platforms, FinOps can help you optimize your spend.





NEW OPPORTUNITIES FOR COST CONTAINMENT



Detailed invoicing from cloud service providers has opened a new opportunity to get equally detailed insight into cloud spending and bring that granularity down to on-premises data centers as much as possible for a more complete picture of how IT cost drives business value.

The result is that businesses make better decisions based on knowing what's driving revenue, and IT decision-makers can make better decisions knowing what's driving waste. **By not following a FinOps approach, you're likely to make faulty assumptions based on generalizations and end up paying more than you need to.**



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WHAT FINOPS DOES



The FinOps Foundation defines FinOps as “an operational framework and cultural practice that maximizes the business value of cloud, enables timely data-driven decision-making, and creates financial accountability through collaboration among engineering, finance, and business teams.”

On a more practical level, FinOps is a framework to control spending by reallocating costs or optimizing workloads. The idea is to connect insights derived from visibility into IT spending to your goals for growth and scale that efficiency as the business grows.

FinOps provides visibility into cloud spending as a basis for cost optimization.

Cost Visibility

The promise of lower costs in the cloud hasn't materialized for many organizations and is a huge area of concern. The FinOps framework enables visibility into spending across the organization, so you know exactly where spending is being applied and where it might be reallocated for cost efficiency without negatively impacting performance. Visibility leads to accountability and helps you connect spending to business strategy.

Cost visibility helps identify things like idle resources, overprovisioned workloads, and orphaned resources. Visibility helps you confirm that scaling doesn't cost more than the revenue it generates. And it provides a starting point for cost optimization, which is the ability to take action to cut unnecessary spending.



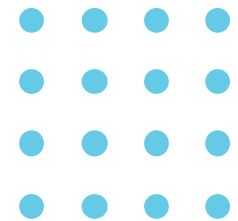
Cost Optimization

Once you have a better understanding of where money is going, you can begin to make adjustments. Cost optimization is the exercise of acting on opportunities for cost savings, either by reducing consumption, negotiating a better price, or both.

Automate FinOps for Continuous Optimization

Once an organization becomes familiar with FinOps, it can automate the process for continuous optimization across the enterprise. Automation can handle hundreds or thousands of cost optimization actions in real time across the entire application stack, infrastructure, and all resource dependencies.

Automation also helps take advantage of cloud elasticity — the ability to dynamically adjust resource configurations so applications get what they need when needed and adjust back when extra resources are no longer needed. This avoids using overprovisioning as a performance insurance strategy.



APPLYING FINOPS TO THE DATA CENTER

We've spent decades optimizing data centers for a financial advantage. Many companies have done TCO or ROI studies that include things like the cost of a network port, headcount, or licensing. As useful as these studies can be, there's a huge fudge factor. For instance, it's difficult to allocate the sunk cost of a data center back to different parts of the organization. So, chargebacks and show-backs for on-premises infrastructure have traditionally been about 70-80% accurate. In a cloud-like environment, you can literally allocate 100% of consumption to a specific workload assuming there's a structure in place to enable that.

FinOps for on-premises data centers isn't as exacting as FinOps in the cloud. But the closer your data center is to using a cloud-native development approach, the more accurate FinOps can be for on-prem. For example, if you're using Kubernetes, the easier it becomes to extend the FinOps approach into a non-public cloud environment or on-premises data center.





WHY FINOPS IS IMPORTANT IN A MODERN OPERATIONS ENVIRONMENT

Modern operations is about making sure your combined public cloud and private environment operate as efficiently as possible in terms of required performance, security, resilience, and access.

So, what's the best way to use the cloud to improve business value? The ability to make more changes faster in the cloud gives it a lot of intrinsic value. It can even be less expensive, but only for certain workloads. So, in many cases, efficiency boils down to determining if a workload is more efficient in the cloud or on-prem.

For example, if you want to spin up 1,000 virtual machines to train an AI model, the cloud can deliver the best value. If you're running a steady-state transactional system like SAP in the cloud that runs all the time using about the same amount of memory, CPU, storage, and other resources, you're paying for overhead to get cloud capabilities you simply don't need. By running a steady-state application in a private data center, the sunk costs of the data center enable you to run steady-state workloads more efficiently than the cloud.

Many businesses run mobile applications, which have different usage profiles and performance requirements than a steady-state workload. Mobile applications need a dynamic environment, for which the cloud is particularly well suited. The cloud also offers the ability to innovate often and quickly, which is also highly valuable for a mobile application.

Once it's been determined what the right environment is for a workload, you can begin to optimize the cost. For steady-state applications in the data center, improving resilience may provide the best optimization value. In the cloud, you need to find inexpensive ways to handle spikes — something other than buying reserved instances that may only get used a few days per month.

The ability to optimize cloud spending gives you flexibility to negotiate financial arrangements to align with the business value you're getting from applications running in the cloud.

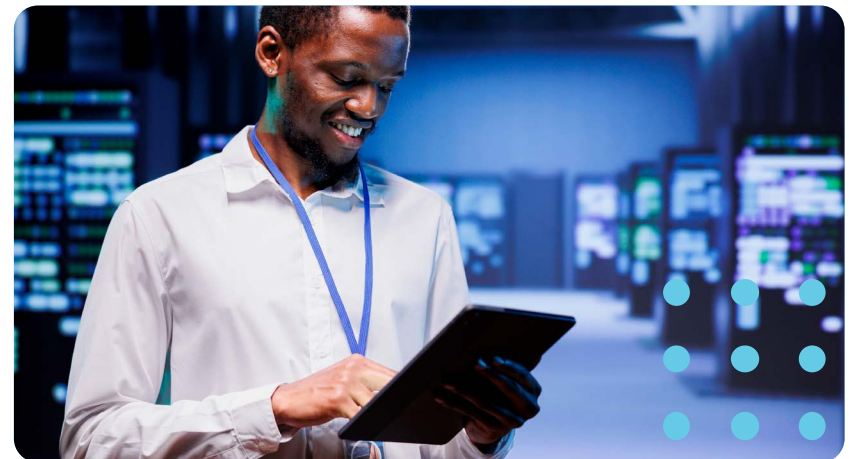
COMMON CHALLENGES IN IMPLEMENTING FINOPS

One of the biggest challenges for implementing FinOps is understanding how the application environment aligns with business services. The IT industry has been talking about this for decades but we're still not very good at it. For example, do you factor in the cost of application development effort? How much does a sprint cost? What does it take to deliver a banking application? If it involves DNS, are you counting the cost of DNS?

The second biggest challenge is properly tooling up to gather the data required for cost optimization. Application performance management (APM) or configuration management database (CMDB) tools can gather much of the required data. Other tools, like IBM Cloudability, can gather quality data to implement FinOps, helping organizations jump common hurdles such as:

- Inconsistent tagging and costing across cloud providers
- Inability to easily detect cloud waste, anomalies, or orphaned or idle resources

- Inability to easily compare multi-cloud discount programs
- Inability to assign or reduce container costs in the cloud
- Inability to determine a complete set of cost drivers or allocate shared costs accurately
- Inability to connect cost and revenue data holistically
- Reliance on overprovisioning to ensure application performance
- Inability to align performance and cost to business requirements





BASIC COMPONENTS OF A FINOPS APPROACH

The maturity journey for FinOps starts with technical optimization, which helps ensure IT efficiency. Once that's accomplished, organizations can progress to engineering IT resources for a financial advantage, followed by business optimization, where organizations can begin to accurately map technical resources to business outcomes.

Technical Optimization — Low Hanging Fruit

While overprovisioning resources has its advantages in terms of resilience and customer experience, it comes at a high cost. The low-hanging fruit for FinOps is technical optimization. It's about right-sizing resources for the workload. For example, have you provisioned too much storage? Do you have more memory than you need? Have you picked a server size twice the number of processors needed to run the workload? Tightening up provisioning can deliver quick wins for a FinOps program.

Once you capture the data and have services correlated to the data being collected, financial and business optimization becomes fairly easy.

Financial Optimization — Engineering for Cost Reduction

Financial optimization is about financial engineering, for instance, making decisions about buying high-priced reserved instances or low-cost spot instances. Spot Instances offer up to 90% discount but carry the risk of interruption. Reserved Instances offer up to 70% decreased rates with high availability but come with long commitment periods.

Financial optimization is about how you design consumption and negotiate contracts with cloud providers to minimize cost and maximize value. For example, how many reserved instances do you really need? Maybe you can reduce them from 200 to 50 without impacting performance.

You can also implement new technology to automate cloud savings. For instance, sophisticated software can dynamically move workloads to take advantage of spot instances.

Business Optimization — Connect Spend to Value

Business optimization is where you connect the cost of an IT resource to the business value delivered. For example, the ability to show that a particular EC2 node and a particular storage pool tie back to a specific application, or the ability to correlate external IP addresses to an application. Business optimization is the gateway to reallocating IT savings to other areas of the business such as ongoing modernization, marketing, or product innovation.

To accurately correlate IT resources to business outcomes, it's crucial to have a strategy for tagging resources or otherwise identifying resources in an ongoing way. Detailed tagging enables you to see how technology integrates with the business services being delivered and better determine the cost of IT to support a business service.

In addition, organizations need to choose how mature they want to get with FinOps. You can theoretically get 100% visibility, but the time, effort, and resources to do that may be prohibitive. It's important to match your efforts to the amount of value you need. You don't need to overdo FinOps to get value from it.





TOOLS TO SUPPORT FINOPS



Today's FinOps tools focus largely on cost visibility and cost optimization. Cost optimization tools gather IT consumption data for analysis, and when automated, can optimize cloud usage in real time.

IBM Apptio

[IBM Apptio](#) is a technology business management solution that supports cloud financial management, technology financial management, and enterprise agile planning processes connecting IT investments to specific business outcomes to help organizations make technology a competitive advantage.

With Apptio, organizations can create and streamline robust financial and operational processes to make precise, data-driven decisions, particularly for organizations with hybrid and multi-cloud environments. Apptio can be used as a single source of truth for all technology costing, planning, billing, and benchmarking needs.

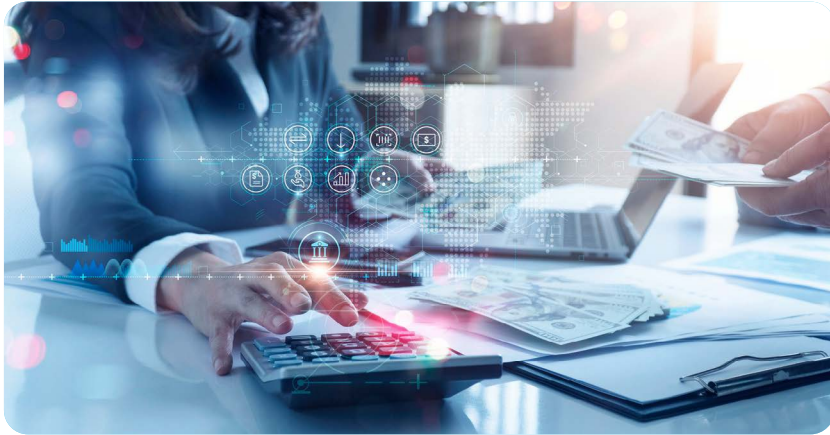
Apptio Costing eliminates the use of error-prone and time-consuming spreadsheets with automated consolidation of your tech costs based on data from systems you already own. It brings financial and operational data into a common, centralized framework based on an industry-standard taxonomy of cost categories and hierarchies.

Apptio Planning helps organizations develop a consistent, repeatable planning and reporting strategy to help you spend less time aggregating and rationalizing data and more time analyzing and optimizing. By replacing cumbersome spreadsheets from multiple systems of record with Apptio Planning, organizations get a collaborative workspace for planning that unifies technology financial data.

Apptio Billing automates and streamlines charge-backs and show-backs by delivering a defensible and predictable invoice to business consumers that communicates IT costs in the language the business understands. By showing the value that IT delivers

and increasing transparency into what makes up the cost of IT, Apptio Billing increases accountability to empower business units to reduce consumption.

Apptio Benchmarking provides self-service peer comparisons of your IT spend over time, enabling an ongoing process for tracking performance, validating decisions, and identifying areas for improvement. Organizations can track their progress over time to identify areas of risk, set targets, and monitor improvement efforts.



IBM Cloudability for Cost Optimization

[IBM® Cloudability®](#) helps DevOps, finance, and IT operations work together to optimize cloud resources for speed, cost, and quality. It does that by creating a granular view of cloud expenses with tools to track, analyze, and optimize cloud spending by user,

business unit, product, subscription, and other units of measure. The software also helps correlate consumption to business services to reveal financial and operational insights that help teams analyze and reduce cloud spending.

Using Cloudability can help organizations accurately allocate all costs, including containers and support charges, to ensure full charge-back of cloud costs to the business. By allocating spending to specific initiatives, delivery teams become accountable for their consumption. You can also add your budgets to Cloudability and monitor spending for proactive management.

Cloudability also makes it easier to implement a tagging strategy, which it uses as a basis to optimize cloud usage by right-sizing workloads to balance cost and performance.

Cloudability helps organizations answer important business questions such as:

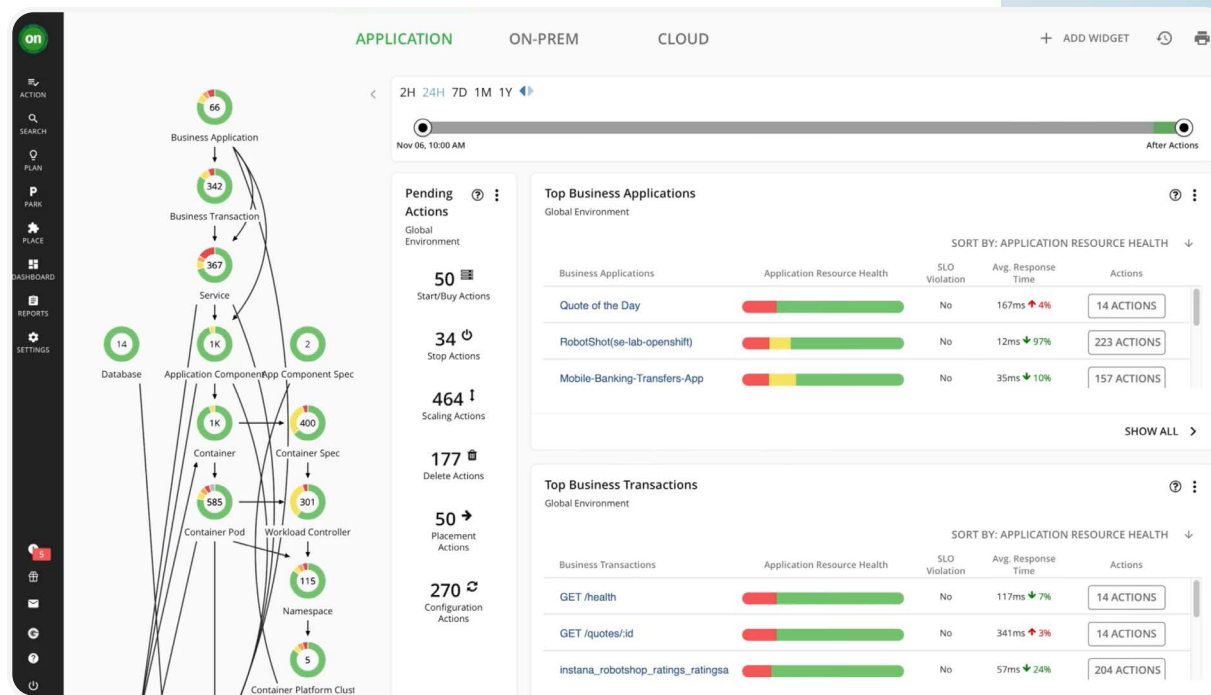
- Does adding a certain feature make financial sense?
- How should we allocate our limited tech resources?
- Are we pricing our products accurately?

With Cloudability in the IT toolbox, IT teams can get quick wins for FinOps.

IBM Turbonomic for Automation

The magic of FinOps becomes more apparent with automation, which scales cost optimization across the enterprise. [IBM Turbonomic®](#) uses AI-driven analytics to make real-time adjustments that balance performance needs with cost efficiency. Turbonomic's optimization algorithms are good at reducing operational resources while preserving expected outcomes for performance and user experience.

In addition, Evolving Solutions has developed its own tools to evaluate public cloud spending and optimization efforts.





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The biggest benefit of FinOps is the ability to know the total cost of IT ownership and give you the ability to lower TCO through automated cost optimization. By optimizing workloads for cost and performance, you can increase the value of your cloud investments to make cloud a competitive advantage for your organization.

FinOps can help organizations make more informed decisions about developing, delivering, and pricing services and solutions. Accurate show-backs help hold delivery teams accountable, and accurate charge-backs help capture the true cost of delivery.

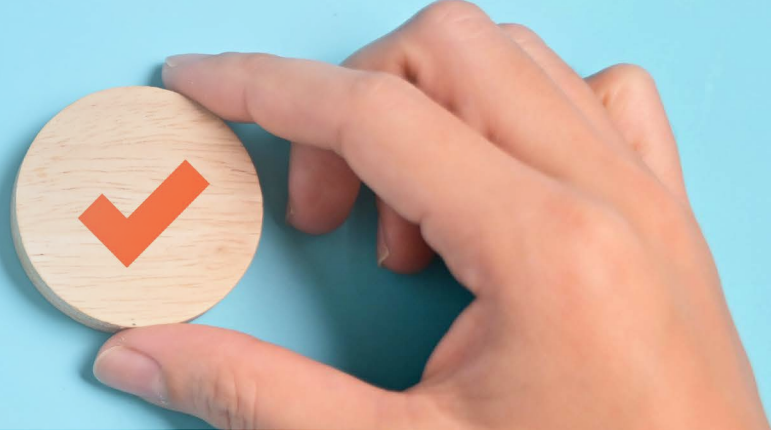
FinOps is also a way to develop a common language for IT financial management across business units such as product managers, IT teams, financial analysts, CIOs, and CFOs, and others. A common language leads to more productive conversations about what costs are important and strategic, and which can be better allocated elsewhere.

Other benefits include the ability to:

- Manage workloads and costs consistently across multiple clouds
- Operate at the lowest cost possible without having to worry about end-user experiences
- Deploy automation that dynamically scales and resizes workloads to optimize resource consumption
- Reduce costs immediately and continuously by ensuring workloads only consume what they need to perform
- Optimize cloud migrations from the start by assessing which workloads are best suited for the cloud for efficient consumption

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HOW EVOLVING SOLUTIONS IS UNIQUELY QUALIFIED TO HELP



Evolving Solutions has spent almost three decades helping organizations optimize their IT spending and correlate that spend back to business value. As cloud and data center operations experts, we understand the whole IT environment. We are uniquely qualified to help organizations optimize their IT operations for business value, including the knowledge and experience to help make judgments about the best environment to run a workload.

As an IBM Platinum Business Partner, Evolving Solutions can help you start and mature a FinOps program in your organization by working with you to identify the business and technical processes that support FinOps, such as identifying and implementing integrations to capture consumption and financial data for analysis. As your FinOps program matures, Evolving Solutions can help you automate the process for continuous dynamic technical optimization.



Uncommon Experience and Empathy

Our team members are among the most experienced in the industry — many have decades of experience working their way up to senior positions in the real world of systems administration, architecture, security, and operations, which gives us a unique empathy for our clients' challenges and opportunities.

About Evolving Solutions

Evolving Solutions helps clients modernize and automate mission-critical applications and infrastructure to support business transformation. We provide consulting services and technical solutions to enable Modern Operations in a hybrid cloud world.



Let us help you get started down the right path to FinOps.