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BLACK & WHITE PAPER

Cloud Financial Management

Small Changes Can Make Big Impacts

COMMISSIONED BY

aws

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About this paper

A Black & White paper is a study based on primary research survey data that assesses the market dynamics of a key enterprise technology segment through the lens of the "on the ground" experience and opinions of real practitioners — what they are doing, and why they are doing it.

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As Research Vice President, Owen Rogers leads the firm's Digital Economics Unit, which serves to help customers understand the economics behind digital and cloud technologies so they can make informed choices when costing and pricing their own products and services, as well as those from their vendors, suppliers and competitors. Owen is the architect of the Cloud Price Index, 451 Research's benchmark indicator of the costs of public, private and managed clouds, and the Cloud Price Codex, our global survey of cloud pricing methods and mechanisms. Owen is also head of 451 Research's Center of Excellence for Quantum Technologies.

Introduction

A decade ago, it was often said that cloud would be like electricity – plug in and consume what you need, when you need it. With this analogy came the perception of simplicity – one standard power supply for all your devices. Cloud has brought this simplicity in the form of on-demand consumption, with many operational tasks being easily outsourced to a third-party provider. But the number of cloud services and options available to developers has exploded. Why? Because enterprises want to develop applications that are differentiated to add value to their customers and businesses. They want new services that give them greater capability and perform more of the undifferentiated heavy lifting so they can produce applications that add business value. Far from a simple power supply, enterprises are seeking both breadth and depth of capability.

But with increasing sophistication, it's natural for enterprises to lose sight of which services they are using and how much these services cost. This isn't a bad thing in many respects: developers are focusing on development, and operations are focusing on operations. As it should, the IT department is innovating and ensuring the IT estate performs around the clock. But of course, there is a finite budget, and ultimately the CIO has to justify every cent.

Enter cloud financial management (CFM). CFM is a discipline that combines tools, processes and practices to manage and optimize cloud costs while letting enterprises innovate and scale to take advantage of new business opportunities and deliver additional business value. The aim of CFM isn't to squeeze costs but, rather, to let business objectives be met without unnecessary expense.

CFM tools typically include cloud services that allow enterprises to allocate and track budgets, to forecast and optimize future resource requirements and to automate the use of cost-cutting pricing models such as reserved and spot instances. CFM processes and practices define how, when and by whom these tools are used to maximize effectiveness.

But does CFM succeed in these aims? In 2020, Amazon Web Services (AWS) commissioned 451 Research to survey 500 enterprise decision-makers based in the US on their CFM experiences and to understand the impact of CFM on their organizations. More details about the study and respondents can be found in the Methodology section at the end of this report. To ensure an unbiased study, respondents were not told the survey was being conducted for AWS, and AWS was not involved in choosing specific respondents.

Our research found that adopting CFM practices doesn't just lower IT costs. Enterprises that adopted CFM practices also received benefits to wider enterprise objectives including growing revenue through increased business agility, increasing operational resilience to decrease risk, improved profitability and the potential for increased staff productivity. Our recommendation is that enterprises should start using CFM practices now: small changes can have big impacts, and these benefits increase with maturity.

Key Findings

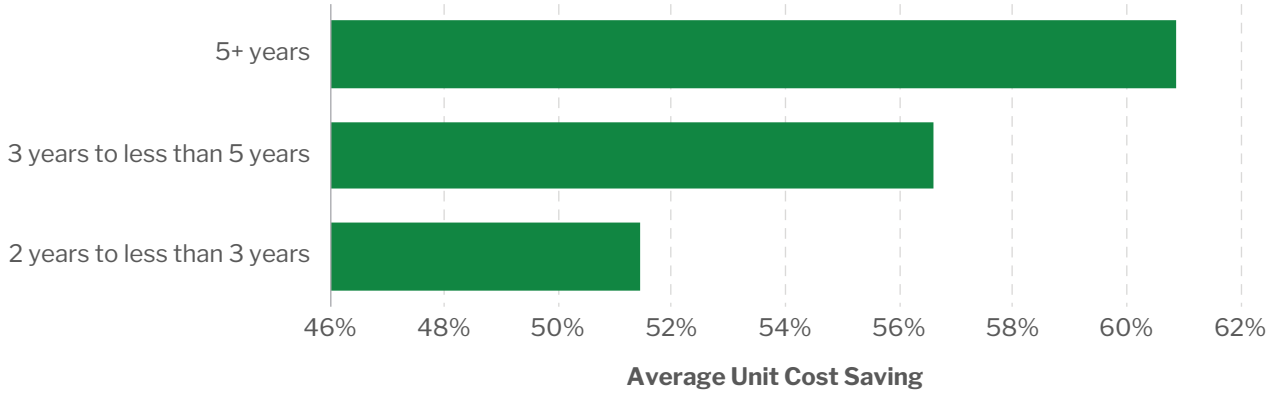
Cost Benefits

The vast majority of respondents surveyed have implemented at least one CFM practice. Nearly all (94%) have a named individual responsible for managing cloud costs, and 93% have a process in place to forecast cloud expenditures. The majority are forecasting on a weekly basis.

Perhaps unsurprisingly, CFM is delivering clear advantages in terms of overall cost reduction. On average, the respondents saved 56% on their cloud costs as a result of using CFM tools, practices and processes. Interestingly, the more mature the enterprise with regard to its AWS adoption, the greater the savings; enterprises that have used AWS for longer than five years attributed a 60% savings on costs as a direct result of implementing CFM. Contrast that to a 51% cost savings experienced by enterprises that have used AWS for two to three years. For clarity, the use of the term *maturity* in this report refers to the length of time an enterprise has been using AWS.

Figure 1: Average unit cost savings attributable to CFM, by maturity

Source: Custom survey of 500 US enterprise decision-makers



Business Agility

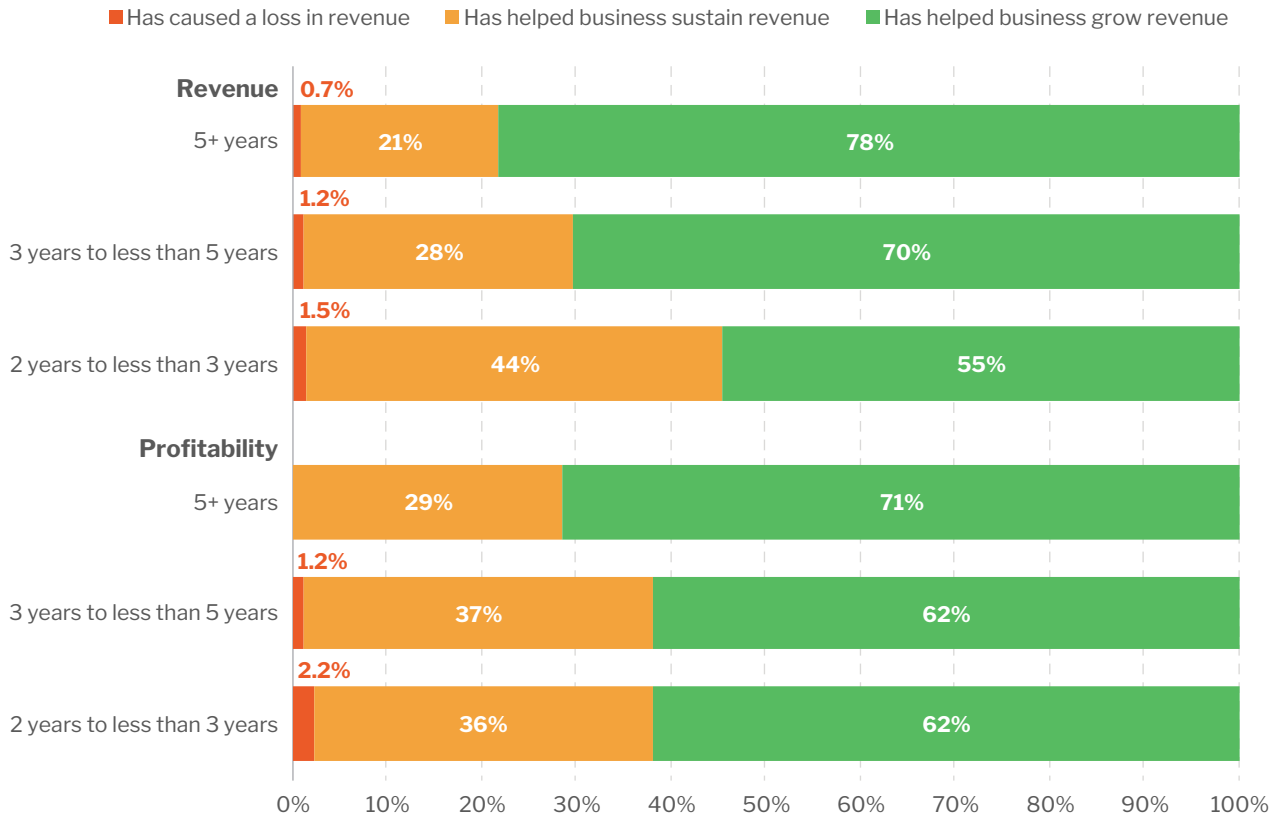
Unsurprisingly the focus on cost management helps to reduce costs. What was surprising was how much value enterprises attributed to CFM in the form of helping to meet business objectives. Across our participants, 67% of enterprises stated that CFM has helped grow revenue, with 31% saying it has sustained revenue; 64% of enterprises stated that CFM has helped profitability, with 35% saying it has sustained it. We attribute much of this to the ability to scale. As one of the enterprise decision-maker participants in our research commented:

"The largest benefit we have realized is instantaneous/responsive scalability. As our organization changes, this dynamic flexibility to scale globally is probably the most critical factor to our success."

As with cost savings, enterprises that are more mature in their use of AWS have more to gain. More than three-quarters (78%) of enterprises with five years of AWS under their belts claimed improvements in revenue as a result of CFM, opposed to 55% of those with two to three years' experience. For profitability, this difference is large, too: 71% vs 62%.

Figure 2: Impact on revenue and profitability attributable to CFM by AWS-maturity of respondents

Source: Custom survey of 500 US enterprise decision-makers



It's likely that implementation of CFM allows developers and operations to focus on the differentiated work they perform to deliver business outcomes and value without being aggressively restricted due to worries about spiraling costs. Developers want to develop – they don't want to build business cases, seek multiple approvals or draw up financial models. They want to quickly and easily take advantage of new capabilities to make improvements. Of course, it is wise to have governance processes and policies in place, but it's a balance. CFM aids this balance by letting the business innovate while expenditures are controlled and optimized in the background. CFM provides the confidence for the CFO to evolve from a 'CF-No.' CFM lets developers build new features, rapidly get products to market and meet unexpected demand without being unduly held back.

Less friction to innovate translates into bottom-line growth as developers and operations are able to push the business forward with less bureaucracy and a focus on value not cost. But this freedom to concentrate on innovation also drives top-line revenue because the CIO can capitalize on new opportunities faster without being held back by cost concerns. The first-to-market advantage of a product launch can make all the difference for revenue and longer-term product success – the enterprise that has developed quicker as a result of smoother CFM has an advantage over the enterprise that is still sitting in the boardroom, debating how to squeeze costs. The CIO that is comfortable letting the e-commerce site scale to meet demand is bound to capture revenue better than the CIO that prevents scaling due to a fear that the business is not cost-efficient.

One respondent in our research commented how cost savings can be a quick win, but business benefits was a bigger goal longer term:

"...there were significant benefits initially due to infrastructure-related sizing. Going forward, we anticipate the benefits will be derived from scalability factors allowing us to grow more rapidly and agile with the needs of the business."

Operational Resilience

CFM is also making enterprises more resilient and protected. Nearly two-thirds (63%) of enterprises said CFM has helped reduce business risk, with 32% saying it has sustained the organization's risk profile. Once again, enterprises that are more mature have more to gain: 69% of enterprises with five years of AWS under their belts claimed improvements in overall business risk as a result of CFM, opposed to 57% of those with 2-3 years' experience.

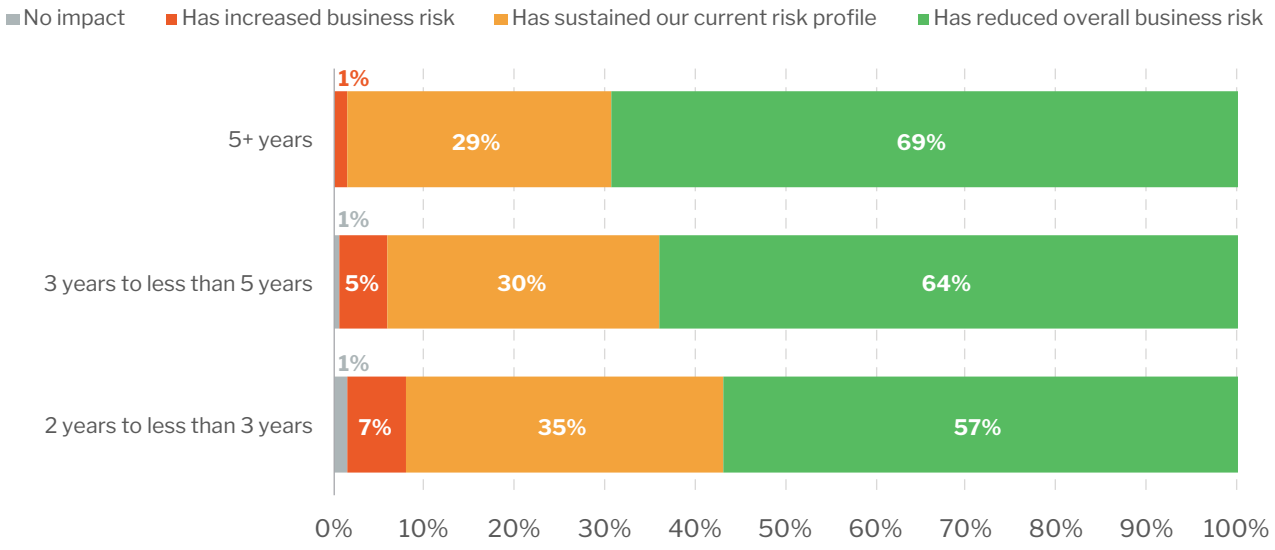
When asked about the specific impact of AWS CFM tools on their organization, one participant noted:

"[CFM] tools build in great visibility and scalability for our infrastructure, which increases uptime."

When unexpected global events occur, keeping applications running can be critically important to the survival of the business.

Figure 3: Business risk impact attributable to CFM, by maturity of respondent

Source: Custom survey of 500 US enterprise decision-makers



Staff Productivity

With developers and operations being able to concentrate on their primary roles instead of dissecting cost-squeeze measures, they inevitably will be able to do more in their working hours. CFM processes that are efficient, automated and embedded in enterprise workflows are likely to save significant time compared to meeting and debating every cost-saving opportunity for every minor development or application change. Enterprises will never be able to get rid of paperwork and bureaucracy altogether, but its impact on efficiency can be reduced by automating as much of it as possible and putting it in the hands of those who understand it. Why take up developers' time with finance? Let developers focus on development and others focus on trimming costs.

Of course, there is a financial benefit in employees being able to do more. Maximizing employees' time translates into cost savings. But the greater benefit of staff productivity comes with freeing up employees to do things that add value to the business. As shown, the benefits of revenue and profitability growth driven by CFM are tied to increased staff productivity. As one of our enterprise decision-maker research participants observed:

"...developer productivity and time to market certainly are way better."

Another commentator appreciated the personnel savings alongside other benefits of a CFM approach:

"The flexibility to scale when needed, experiment without capex is invaluable in addition to the savings on personnel, space, procurement, power, etc. of maintaining physical hardware."

The Benefit of Experience

Across cost savings, revenue, profitability, risk and staff productivity, the effectiveness of CFM increases with cloud maturity. It is likely this effect can be attributed to two factors.

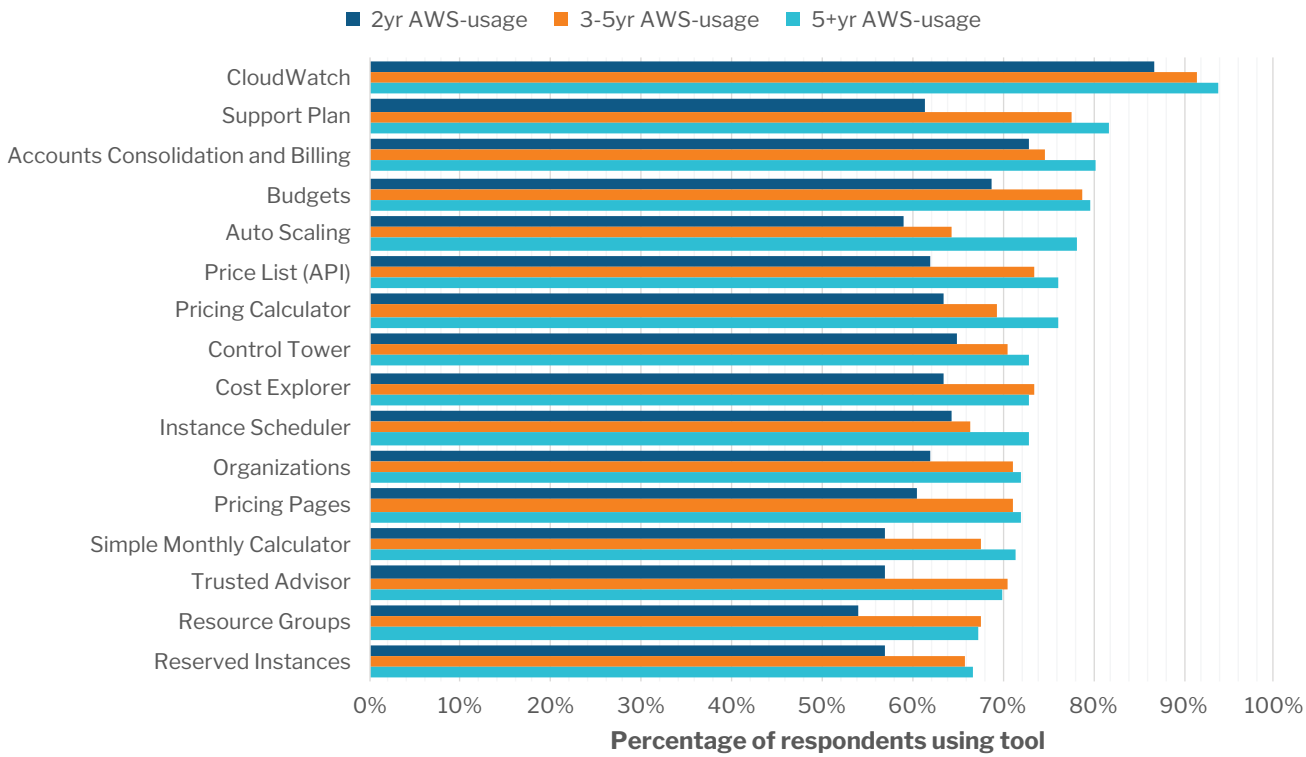
First, as enterprise use of cloud increases, there is a greater incentive to save money by optimizing costs. As time goes on, most enterprises spend more on cloud as they build more applications and scale their applications to address new demands. Essentially, the business case to develop people, processes and tools to optimize costs on an ongoing basis is easier when the cloud spending is large and the potential savings greater. Many CFM tools are free to use, but for some, there are costs in terms of labor to build formalized ongoing use of these tools, as well as continuous organizational processes.

Second, as enterprises and employees become more experienced with CFM practices, CFM becomes second nature. Essentially, the culture of the organization transforms to one that is more cost-aware.

In fact, survey data shows that the more mature enterprises are with regard to AWS usage, the more likely they are to use AWS tools that enable CFM. Of the 24 CFM tools examined in the survey, 16 showed this trend. It appears that use of CFM tools drives lower costs and better business performance.

Figure 4: Use of CFM tools, by maturity (selection for easier readability)

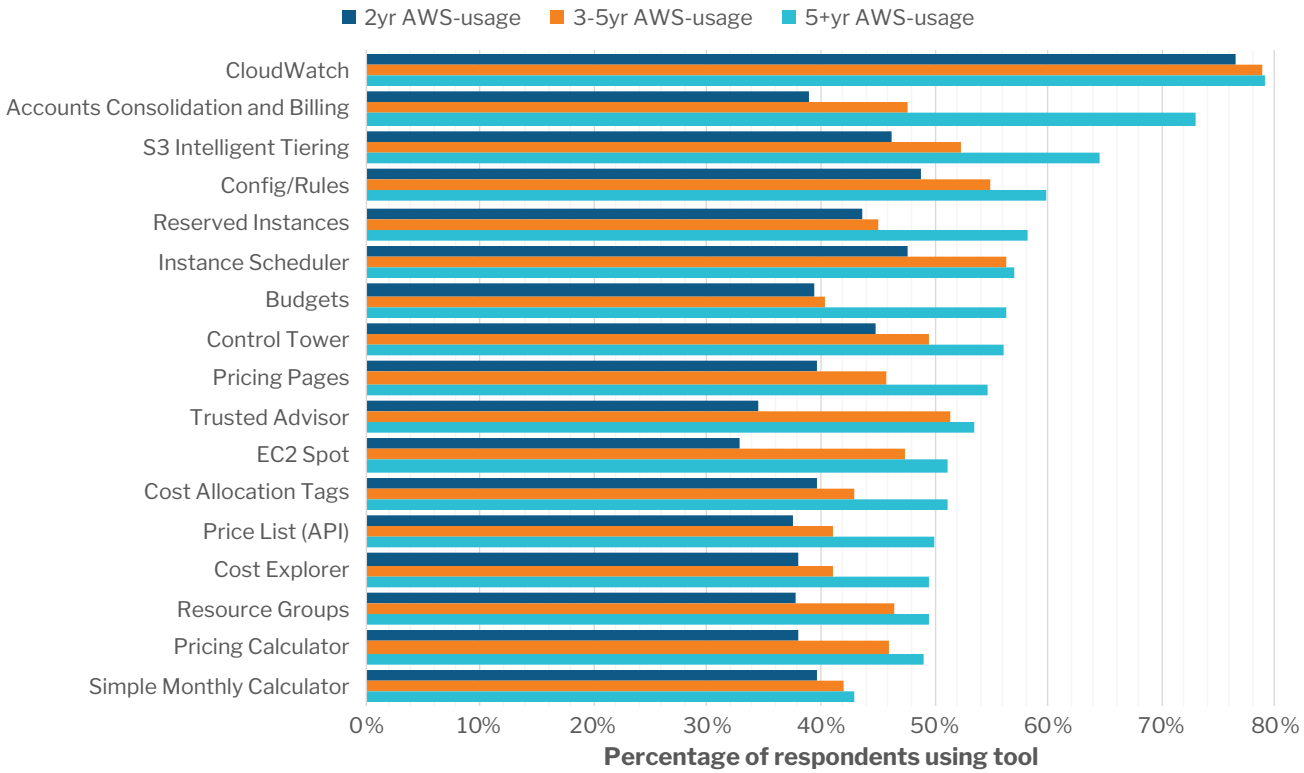
Source: Custom survey of 500 US enterprise decision-makers



There is a similar correlation in terms of frequency of usage of native AWS CFM tools. Companies that are more AWS-mature tend to use tools on a weekly basis, more than their less-mature counterparts. Of the 24 tools investigated, 17 showed this trend.

Figure 5: Percentage of respondents using CFM tools/practices at least weekly, by maturity (selection for easier readability)

Source: Custom survey of 500 US enterprise decision-makers



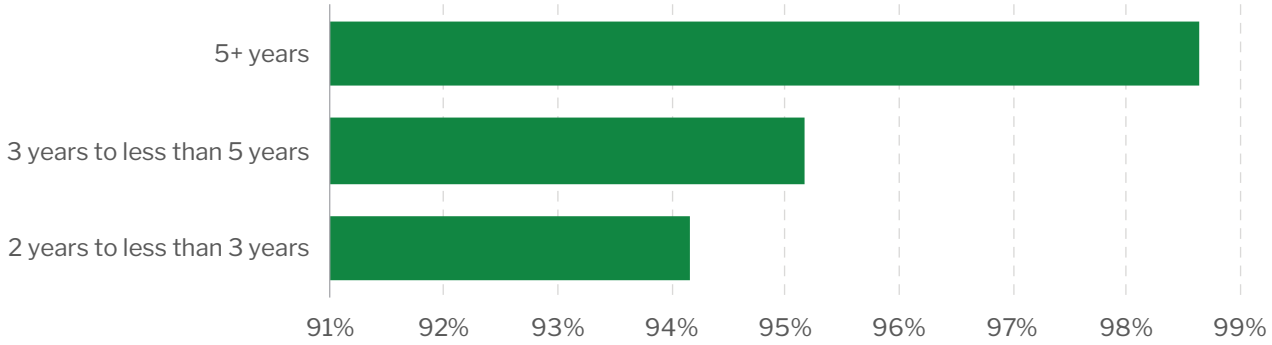
CFM success appears to be a driver of further CFM implementation. Enterprises start using CFM and benefit as a result, so they consume more cloud services and realize even greater CFM benefits. This encourages implementation of CFM practices into processes and culture, including the use of a greater range of tools on a more regular basis.

Together, public cloud use and CFM drive enterprise belief that public cloud is cheaper than an equivalent on-premises environment. Of course, our survey respondents were already using AWS, so it was highly likely they would deem public cloud cheaper. But the fact that more mature enterprises are more likely to see public cloud as cheaper further emphasizes how CFM tools contribute to the overall concept of value. Scalability, in particular, was seen as a big benefit of public cloud compared to on-prem. When asked about IT Infrastructure total cost of ownership, one ITDM observed:

"The on-demand capabilities – scaling up or down – is substantially more efficient than using on-prem."

More mature enterprises that have better implemented CFM practices are more likely to be achieving public cloud cost savings than those that are less mature. As a result, mature enterprises are more confident they are making net savings over equivalent on-prem deployments.

Figure 6: Percentage of respondents indicating public cloud cheaper than equivalent on-prem deployment, by maturity
Source: Custom survey of 500 US enterprise decision-makers



Conclusions

There is very little to lose – if anything – from taking advantage of CFM practices. Most tools that are used to implement CFM practices are free, and even early adopters can reduce costs as a result. Even using a single tool can have an impact. But cost isn't the only benefit – the freedom to let employees concentrate on their jobs rather than obsess about costs means the business can innovate and scale with increased productivity. As our respondents show, outcomes associated with CFM include increased revenue and profitability with reduced business risk. CFM can help transition IT departments to be enablers of business growth rather than just traditional cost centers.

With that said, there is no need to plan big CFM projects and integrations from day one of cloud adoption. Even dipping your toe in the water can make significant improvements to business and cost benefits. The earlier you adopt CFM, the faster it can accelerate business value and cost benefit realization. Longer term, look to use more CFM practices and build them into your organization's processes and culture, leveraging tools on a regular basis. Cloud providers have a wealth of information online about best practices, how to use tools and who to contact for help. As use of cloud services increases, it's more important to take advantage of CFM tools.

Methodology

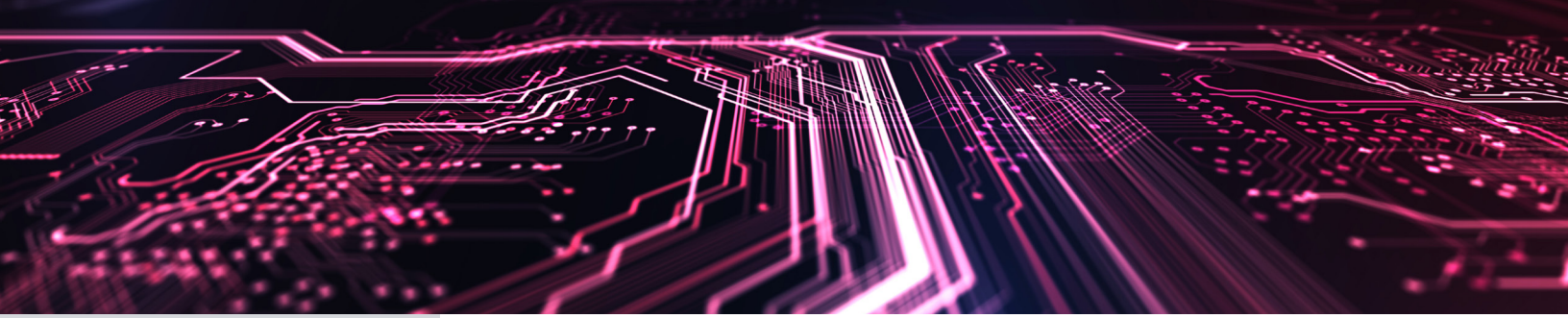
In Q1 2020, AWS commissioned 451 Research to survey 500 decision-makers based in the US on their experiences with CFM. The decision-makers were required to be familiar with public cloud technologies and to be knowledgeable about how their company uses/procures the public cloud. All respondents worked for organizations that had been using AWS for at least one year, had AWS spending of at least $100,000 per annum, and had at least 1,000 employees.

There were 29 industry categories represented in the sample. The 10 largest industries in descending order were software and internet, financial services, telecommunications, automotive, manufacturing, engineering, retail, professional services, healthcare and other, which together represented 87% of the respondents.

To ensure an unbiased study, respondents were not told the survey was being conducted for AWS, and AWS was not involved in choosing specific respondents.

The survey was designed to better understand the opinions and preferences regarding various CFM topics and infrastructure. We asked a wide range of questions about CFM practices, benefits, tools and capabilities, as well as budgeting/forecasting.

Respondents were screened for qualification as described earlier and asked to provide responses to a web-based questionnaire. The survey was supplemented by qualitative interactions with eight interactive discussion-board participants screened for their role in CFM leadership similar to the screenings applied to the survey.



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