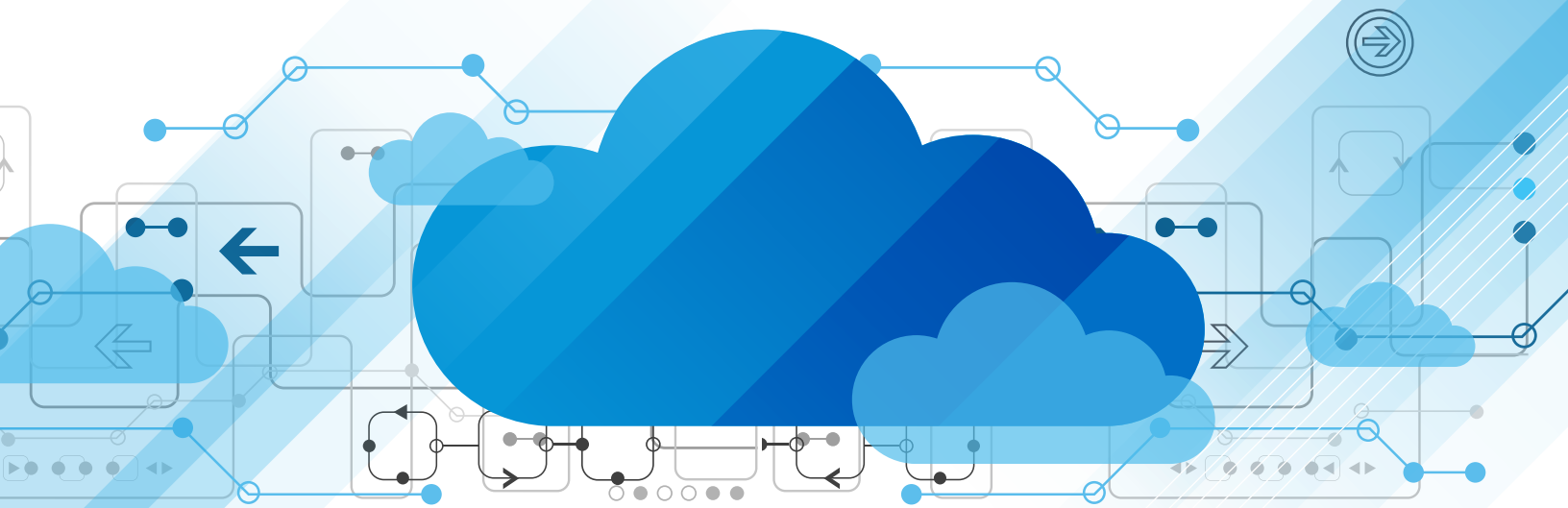




NATIONAL CENTER FOR
THE MIDDLE MARKET

Google Cloud



A SPECIAL REPORT BY THE NATIONAL CENTER
FOR THE MIDDLE MARKET AND GOOGLE CLOUD

CLOUD TECHNOLOGY IN THE MIDDLE MARKET

How Strategic Use of Cloud Services
Helps Accelerate Digital Transformation,
Business Performance, and Growth

IN COLLABORATION WITH



CHUBB®

VISA

The cloud is fundamental to digital transformation.

In an era of digital transformation accelerated by trends in remote working and contactless transactions, the cloud plays an increasingly important and growing role in corporate digital strategy. According to the National Institute of Standards and Technology (NIST), “Cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.” The middle market segment of the economy—which includes more than 1/3 of U.S. private sector jobs—has a clear use case for cloud, as these companies continue on a digital transformation journey and look to invest in capabilities that make their businesses more productive, secure, and collaborative.

To better understand the current state of cloud technology in the middle market, the National Center for the Middle Market, in partnership with Google Cloud, surveyed a group of cloud users in key industries. We explored drivers of cloud usage, benefits, the migration process, and challenges and headwinds to cloud adoption.

We found that the cloud is considered a pillar of digital transformation and that companies are prioritizing and leveraging a range of cloud services and realizing multiple benefits in return. Primarily, the middle market is turning to major cloud services providers including Google Cloud, Microsoft Azure and Office 365, and Amazon Web Services (AWS) to meet their cloud-related needs.

While the benefits of cloud usage far outweigh the negatives, according to respondents, some headwinds and drawbacks do exist. Chief concerns include security and increased expenses. However, the proportion of companies viewing improved security (49%) and cost savings (40%) as positive outcomes of cloud usage is significantly greater than the proportion that put these same issues in the negative column (22% and 30% respectively).

A correlation also appears to exist between heavier cloud usage and faster rates of revenue growth. Among current middle market cloud users, those companies experiencing year-over-year revenue growth of 10% or more allocate a greater proportion of their IT budget to the cloud, are more fully integrated in the cloud, and more likely than slower growing cloud users to innovate in the cloud space versus simply migrating over and/or maintaining current applications.

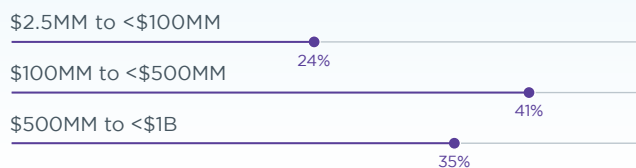
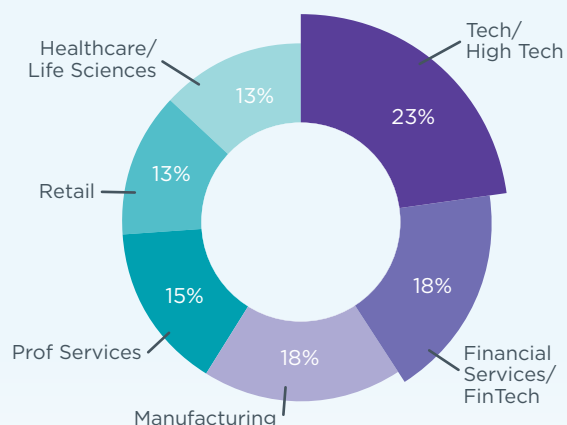
Those middle market companies that are early on in their cloud journeys or not yet leveraging the cloud should consider the experiences of current cloud users and how lessons learned can help inform a successful cloud strategy.

HOW THE RESEARCH WAS CONDUCTED

The Center surveyed 406 technology decision makers from primarily upper middle market companies (annual revenues between \$100 million and \$1 billion) sourced across six key industries. Virtually all survey respondents (403) are current cloud users. Approximately two out of five respondents are considered middle market growth champions or companies experiencing year-over-year revenue growth of 10% or more. Respondents completed a 20-minute self-administered online survey fielded between September 19, 2022, and October 5, 2022.

This report shares the survey findings along with insights and takeaways from the middle market experts at the Center and the cloud experts at Google Cloud.

Survey respondent makeup by industry and size





INSIGHT #1

Cloud technology is critically important to the middle market.

Middle market leaders place high priority on digital strategies in general and cloud usage in particular. Among companies that use the cloud, over three-quarters say cloud usage outranks other business strategies as well as other digital strategies in terms of its importance. The fastest growing middle market companies are even more likely to prioritize the cloud than slower-growing users.

Given the cloud's significance, it is not surprising that middle market companies are viewing the cloud as much more than a basic online storage solution. Companies consider a wide range of cloud services to be very or extremely important, including databases and more advanced technologies such as data analytics, AI, and machine learning.

The perceived importance of the cloud is not driven by its novelty or newness. For most middle market cloud users, the cloud is a tried-and-true strategy. Indeed, 43% of the companies we surveyed are "cloud native," meaning they were born into the cloud and have little to no technical legacy or technical debt that would require them to consider refactoring or migrating from a legacy platform. These companies tend to be tech-forward and are more likely to be early adopters of technology than their non-cloud-native peers. They are also more likely to be fast-growing firms: 55% of the middle market growth champions in our sample identify as cloud-native businesses.

Among the middle market cloud users in our sample that are not cloud native, the majority have been taking advantage of the cloud for three years or longer. Those companies that are newer to the cloud—i.e. they began using it within the past two years—tend to be congregated in the manufacturing and financial services industries. It is possible that for these cloud "hold-outs," pandemic-related shifts in working environments and business transactions provided the final nudge for migration.

87%

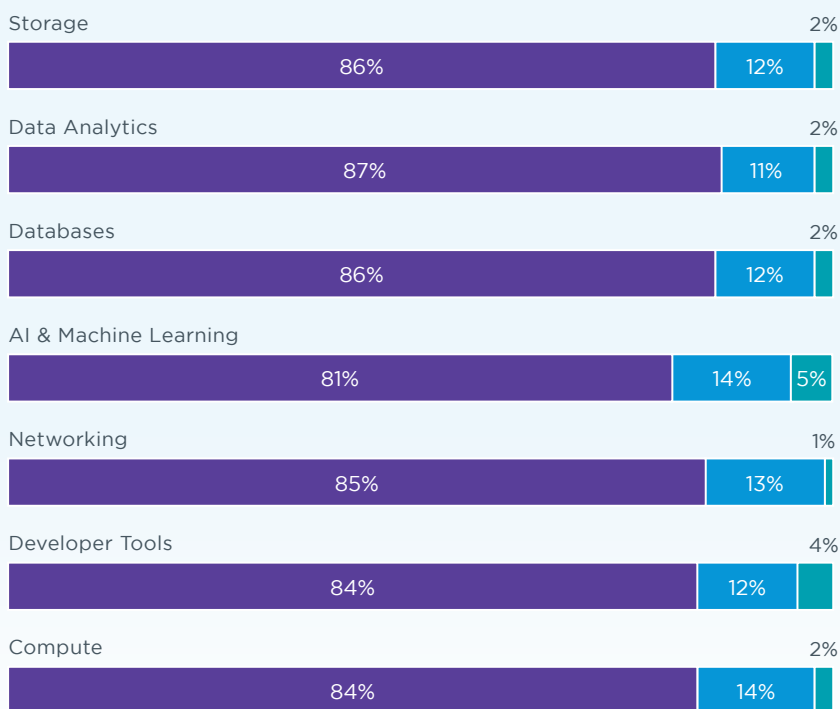
Fast-growing cloud users
(10%+ revenue growth)

Percent of cloud users stating that cloud usage is more important than other business strategies

77%

All other respondents
(<9% revenue growth)

Storage, data analytics, and databases are viewed as the most important cloud services



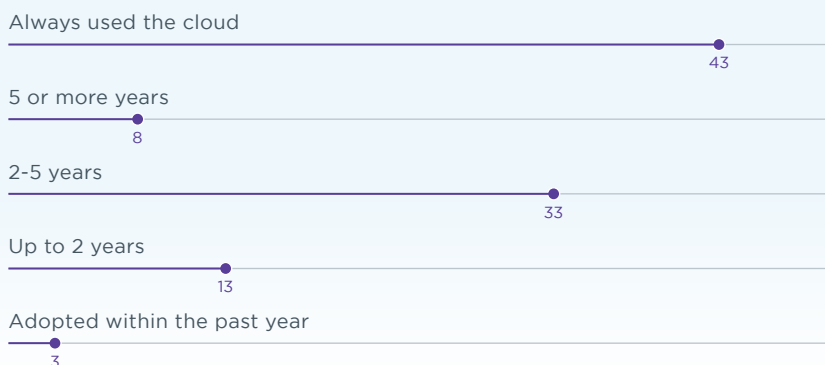
● EXTREMELY/
VERY IMPORTANT

● SOMEWHAT
IMPORTANT

● NOT VERY/
NOT AT ALL IMPORTANT

Nearly half of middle market cloud users are cloud native

Percent of companies using the cloud for different lengths of time

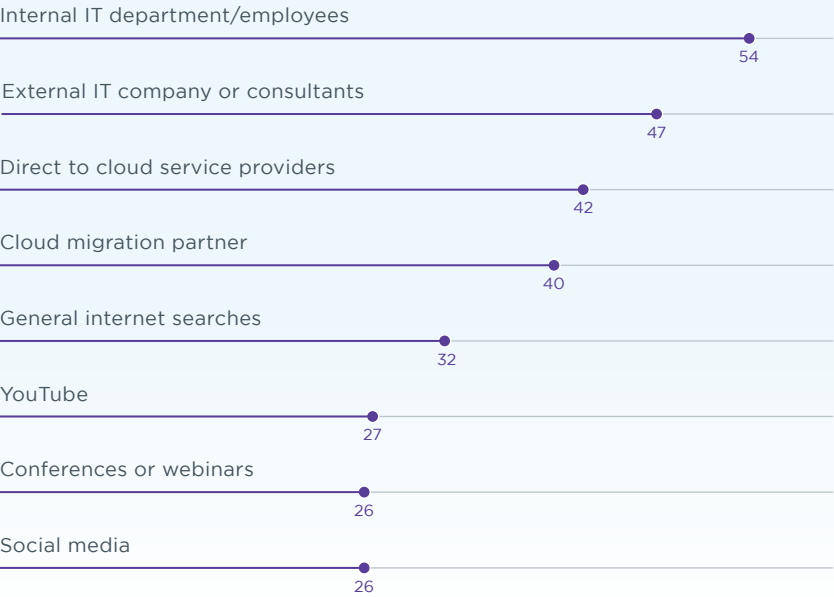


Most non-native cloud users have elected to migrate some systems and processes to the cloud while choosing to continue hosting others elsewhere outside of the cloud. However, 12% of companies have migrated everything while an additional 14% have combined migration with the development of new systems and processes specifically created for the cloud. Just 4% of non-native cloud users have implemented all new systems and processes to support the transition to the cloud.

Regardless of when or to what degree companies have transitioned to the cloud, it is almost always a formalized process. Most middle market businesses leverage both internal and external resources when planning for cloud set up. Ultimately, IT leaders are the most likely to have the final say in the choice of cloud service provider for the business.

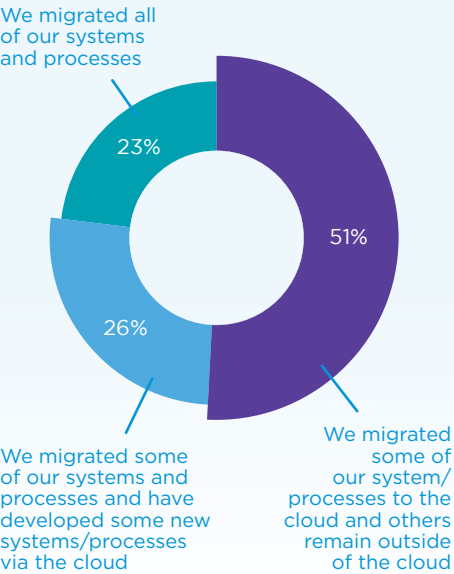
Companies' IT services departments remain a critical resource when setting up cloud

Proportion of companies using various resources during cloud setup



The majority of companies not born only in the cloud have migrated some of their systems and processes

Percent of companies who have migrated at least some of their systems/processes





INSIGHT #2

The cloud is associated with business performance and achieving key business goals.

As a critical digital strategy, cloud services are primarily viewed as strategic or transformational rather than tactical. Few middle market cloud users are simply migrating existing processes and systems to the cloud. Instead, they are giving thoughtful consideration to how the cloud can best benefit their business.

Improved data security and increased efficiency tie as the top drivers for cloud adoption. However, cloud users cite a long list of reasons for leveraging the technology ranging from greater reliability, to enabling business growth, to the ability to better meet both employee and customer needs.

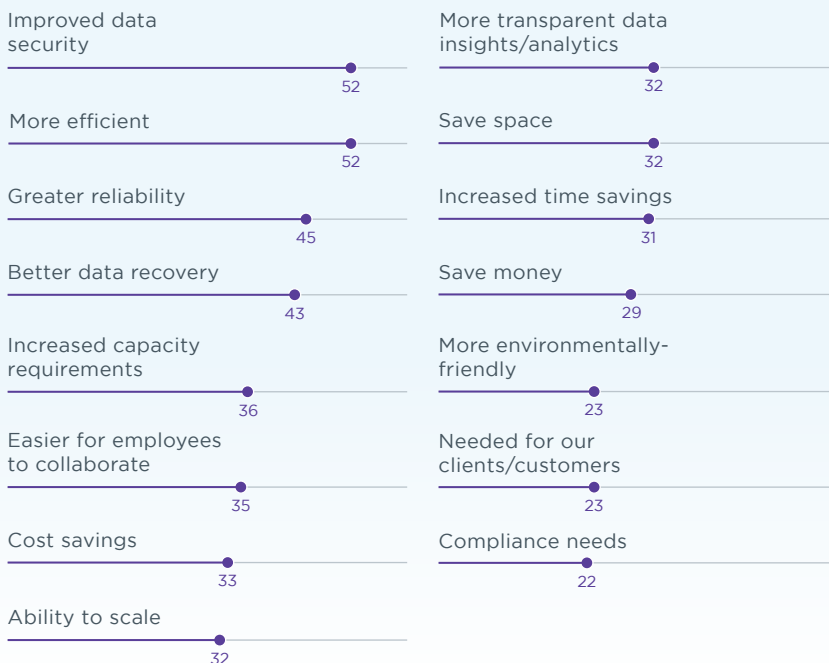
Given the many and varied use cases, it is not surprising that middle market cloud users consider the cloud essential to their business. Half of cloud users describe the cloud as a necessity; an additional two out five middle market businesses look at the technology as a game changer for elevating productivity and efficiency.

The fastest-growing middle market firms are more likely than their slower growing peers to point to time savings as a reason for cloud use as well as the environmental advantages of the cloud. These growth champions are also more driven to the cloud for data-related purposes, including faster data recovery and the ability to glean clearer insights from their data.

The 7% of cloud users who view the cloud as an inhibitor are most likely to cite the lack of an urgent need for cloud or the costs involved.

Security and efficiency are top drivers of cloud usage

Percent of companies citing various reasons for cloud usage



Middle market businesses take a strategic or transformational approach to cloud usage

Strategic
49%

Transformational
35%

Tactical
16%

STRATEGIC - Changing our approach without completely restructuring and redesigning. Increasing the value delivered by our IT organization, requiring more evolution of people and processes.

TRANSFORMATIONAL - Inventing a new approach - taking our business/domain knowledge and combining it with technology to develop new ways of working.

TACTICAL - Taking what we have today and moving it onto the cloud. Reducing cost with quick ROI and minimal disruption to our IT organization.

Nearly all middle market cloud users view the cloud as essential

Necessity
50%

Game changer
42%

Inhibitor
7%

"Cloud technology allows organizations to scale, maintain flexibility, and focus their efforts on business operations, not managing complex IT infrastructure."

"Cloud technology allows us to increase our productivity and efficiency which will lead to increased profits and allows our employees to communicate more efficiently."

"Our company did not have an urgent need for it."
"Cloud technology is not budget-friendly."

Does not equal 100% due to rounding to zero decimal places.



INSIGHT #3

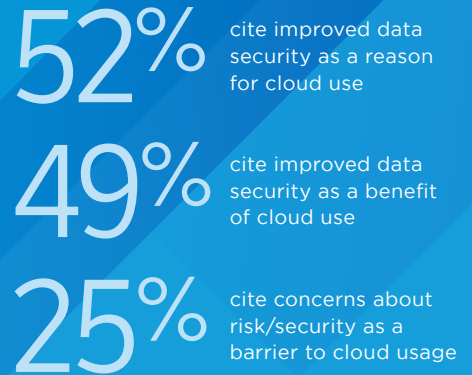
Security is both a reason for cloud use, and a deterrent to it.

The data tells an interesting and somewhat conflicting story about middle market cloud users' perceptions of cloud security. On one hand, improved data security ties with efficiency as the most prevalent reason companies currently use the cloud with 52% of all cloud users citing it as a driver. A similar proportion—49%—say improved data security is a benefit of cloud usage.

Data security is also the most commonly cited barrier to cloud usage, with a quarter of all cloud users noting concerns about risk and security. Many organizations still consider cloud adoption as another risk to be managed. This is particularly true as organizations grapple with the need to engage in digital transformation. However, successful digital transformation will be profoundly limited, if not impossible, without incorporating the use of the scale, security architecture, and resiliency of the cloud. Risk leaders and enterprise cybersecurity leaders must consider that moving data, digital processes, and priority workloads to the public cloud is a crucial step for meeting the current and future digital needs of the enterprise. Consequently, cloud adoption becomes a necessary component of roadmap discussions and planning as organizations look to reduce overall risk. Going forward, it is likely that digital transformation will include hybrid infrastructure environments composed of a combination of on-premises and cloud solutions.

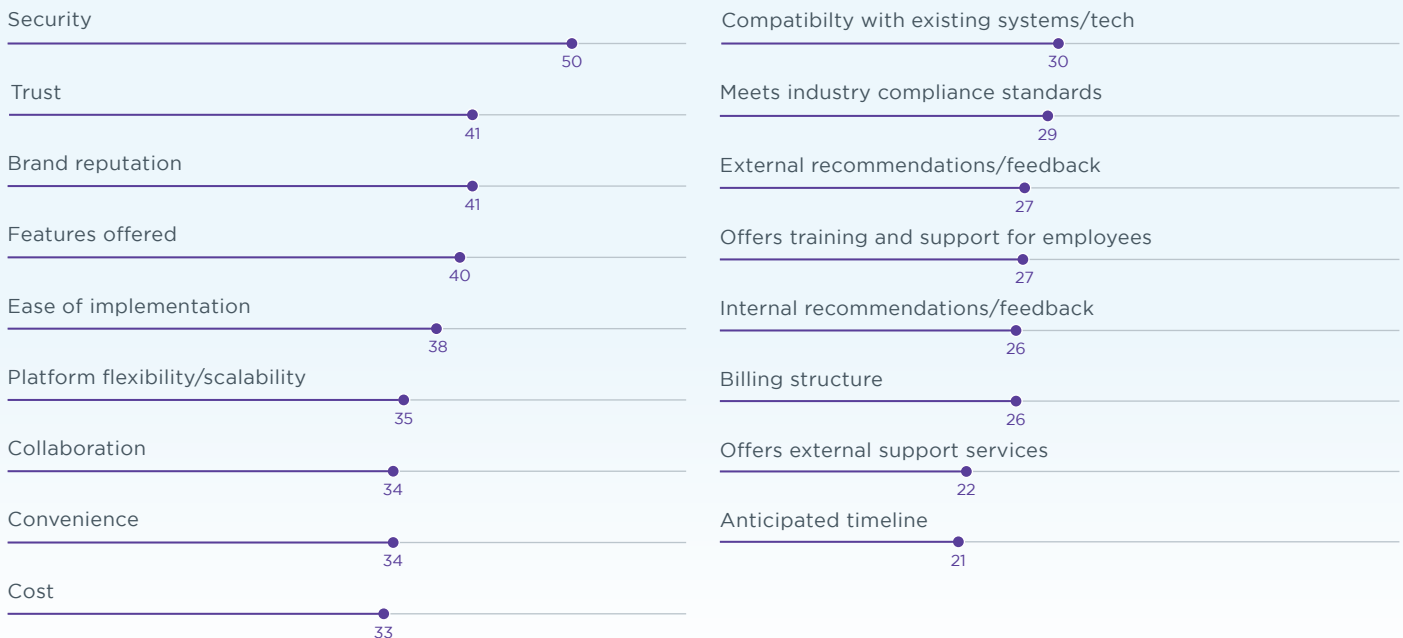
Regardless of which side of the fence a company sits on the issue—benefit or deterrent—security is the most important factor considered when selecting a cloud provider, followed by trust and brand reputation. Criteria such as features offered, ease of implementation, and platform flexibility are considered less frequently. This suggests that for many middle market cloud users, peace of mind is significantly more important than functionality when it comes to the decision to put data, applications, and systems in the cloud.

Among middle market cloud users:



Security is the most important factor considered in choosing a cloud service provider

Percent of companies considering various factors when choosing a cloud provider





INSIGHT #4

Fast-growing middle market cloud users are more likely to be fully integrated into the cloud across business functions.

Among middle market cloud users, the fastest-growing companies are the most likely to place high priority on the cloud and a wide range of cloud services. They tend to be heavier users of the cloud, allocating nearly half (49%) of the overall IT budget to cloud services compared to slower-growing peers who, on average, dedicate 39% of IT spend to the cloud.

As a result, the fastest growers are the most likely to say they are fully integrated in the cloud overall as well as across a number of business functions including administration, operations, HR, computing, and developer tools.

Fast-growing cloud users cite higher degrees of cloud integration

Percent of overall cloud integration



Fast growers are also more innovative in their cloud strategies, directing a greater proportion of the cloud budget to developing and investing in new solutions, while slower-growing cloud users are more likely to spend on supporting existing applications. Specifically, fast-growers are more likely than their peers to innovate versus migrate in the areas of sales, computing, storage, and data analytics.

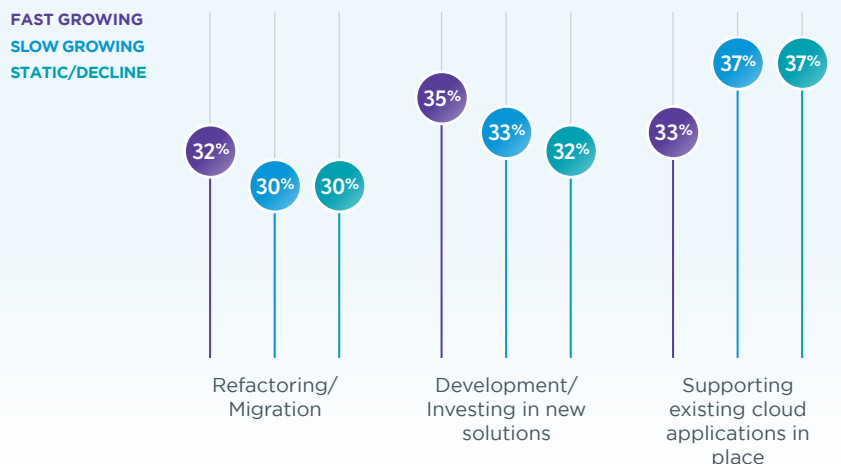
Data analytics, computing, and storage are key functions for full cloud integration

Percent of companies reporting full cloud integration across various business functions

	FAST GROWING COMPANIES	SLOWER GROWING COMPANIES	STATIC/DECLINING GROWTH
Administration	46%	36%	31%
Finance	49%	40%	36%
Operations	51%	36%	27%
Marketing	45%	40%	31%
HR/Talent Management	42%	31%	29%
Sales	38%	38%	35%
Computing	56%	52%	35%
Storage	56%	52%	47%
Data Analytics	58%	53%	49%
AI and Machine Learning	48%	46%	40%
Networking	51%	51%	44%
Developer Tools	50%	39%	44%

Cloud users allocate cloud budget relatively equally across business goals

Percentage of cloud budget allocated to goal





INSIGHT #5

Nearly all middle market companies are highly satisfied with their decision to use the cloud.

In the middle market, it is rare for major business decisions and investments to come without tradeoffs. Cloud usage appears to be somewhat of an exception. More than three-quarters of cloud users describe the cloud experience as better than anticipated, with just 2% saying it fell short of expectations. Seven out of 10 describe the ROI as definitely worth it. Implementation is typically seamless and cloud users point to a wide range of benefits spanning productivity, security, and savings of time and money. Upwards of 90% of cloud users say they are highly satisfied with their cloud services provider, including Google Cloud, Microsoft, and Amazon.

BARRIERS TO CLOUD USAGE

Conversely, barriers to cloud usage and drawbacks are much less common. Security issues are the most frequently cited deterrent, with 25% of companies mentioning security or risk related concerns. (As noted previously, 49% of companies point to improved data security as a benefit of cloud usage). The next most-cited barrier to cloud usage is length of the process; fewer than one in five companies mention this as a potential blocker. Almost a quarter (22%) of cloud users note no barriers to adoption.

BARRIERS TO IMPLEMENTATION

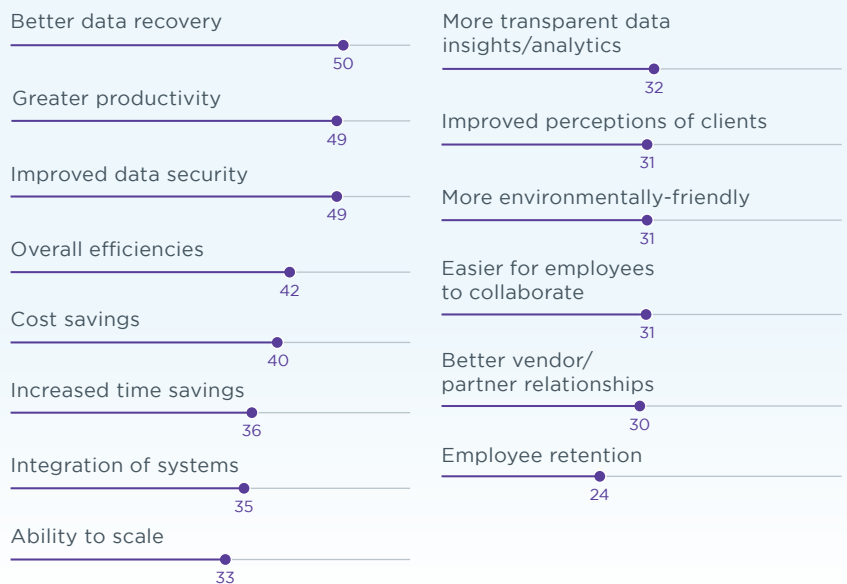
While there is always a cost when making any kind of migration or platform shift, firms that simply lift and shift applications to Internet as a Service (IaaS) environments are going to realize fewer of the benefits that come with more strategic cloud adoption—benefits that offset the costs of migration. Even those that do a partial modernization taking advantage of Platform as a Service (PaaS) solutions—such as application design, development, testing, and hosting services—will only realize a portion of the possible advantages if they don't fully modernize applications, data, and processes as part of the cloud migration effort.

Other noted consequences—frequent upgrades, the need for specialized skill sets, and workflow disruptions, for example—are cited by approximately a quarter of cloud users. However, these issues rarely apply to core cloud services and are more likely related to issues with hosted email or Software as a Service (SaaS). Upgrade fatigue, for example, is especially common for companies that lift and shift applications, bringing along legacy processes and/or technology with them to the cloud. When backend system upgrades take place, even very minor ones, business disruption can occur.

Perhaps most telling, 66% of the cloud users surveyed would not have changed anything about the implementation experience. Additionally, 32% claim no drawbacks to usage. Among those organizations that would have changed something, starting sooner, and more employee training are key themes for what could have been done better.

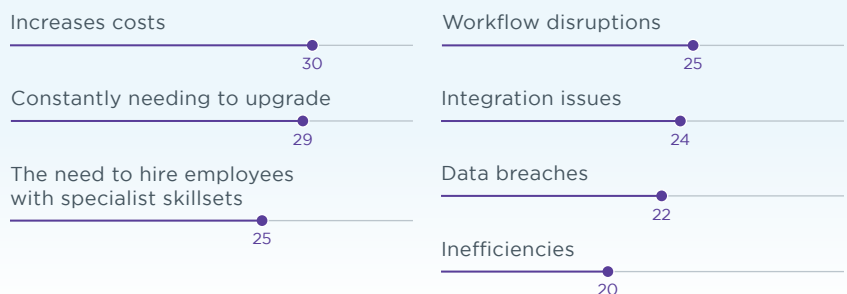
The advantages of cloud usage outweigh the negatives

Percent of companies citing various benefits of cloud usage



Though mostly positive, some drawbacks still exist

Percent of companies citing various drawbacks of cloud usage



What's on the horizon for middle market cloud users?

It is difficult to imagine any path to digital transformation that does not include cloud usage.

The emergence of the public cloud has provided organizations with the ability to cost-effectively build and deploy applications at massive scale globally while aligning the capacity of these applications to unpredictable demand and usage patterns. This allows businesses to align investments and operating expenses to the actual use of technology and results generated from these solutions—a benefit that is particularly critical to middle market companies that face the same daunting technical and business challenges as their larger peers, but often do not have the same volumes of technical resources available to address those concerns.

Going forward, digital transformation will increasingly include hybrid infrastructure (a combination of on-premises and cloud solutions) and multi-cloud environments that give companies of all sizes greater flexibility in accomplishing business goals and solving business challenges with technology in the most efficient ways possible. Our research points to the promise and benefits of such approaches, confirming that wherever middle market companies are in their cloud journey and however they are leveraging cloud services, the experience has been undeniably positive.

While cloud usage appears to be widespread among upper middle market businesses across key industries, smaller companies and those in some sectors may be slower to move to the cloud. Furthermore, leading cloud service providers right now such as Google Cloud contend that the industry is still in the very early days of realizing the power and benefits of cloud computing. These experts predict that cloud computing is entering a new phase more focused on true transformation versus simply focusing on infrastructure services.

Given the advantages many current cloud users are experiencing and the critical role cloud technology plays in ongoing digital transformation, middle market companies should give careful consideration to how they can create or optimize a cloud strategy for the future.



FOR MIDDLE MARKET COMPANIES CONSIDERING THE CLOUD:

- **Thoughtfully define your approach.** A strategic or transformational approach will likely deliver greater benefits than a purely tactical cloud migration. Indeed, cloud service providers note that companies that experience downsides to migration (i.e. costs and upgrade fatigue) are typically those that do not fully embrace the benefits of cloud but choose to do a lift and shift migration or partial move versus a full modernization effort. It makes sense to start by outlining your business reasons or motivations for making the switch to the cloud. Then factor in other potential advantages of cloud usage, such as scalability, data security and compliance, and productivity and collaboration. You may find that a more comprehensive or strategic cloud strategy is well worth the extra investment of resources if it better positions your business for a more digital future and/or helps you sidestep potential drawbacks of cloud adoption, such as business disruptions related to legacy system upgrades.
- **Dive deep into the security question.** One of the most interesting findings from the research is that data security is both a top benefit of a top deterrent to cloud adoption. Security is also the number one consideration in choosing a cloud services provider. As you evaluate your concerns and your options, be sure to carefully consider how data, users, and applications in the cloud will be protected. Will you maintain control over data locations and operations? What local regulations need to be factored into your approach? How are threats from ransomware, account takeovers, bots, phishing, and other types of advanced attacks addressed by the platforms, architecture, and providers you are considering? What are the cloud service provider's roles and responsibilities related to risk management?
- **Leverage the right resources.** For middle market businesses, the cloud is not a DIY experience and shouldn't be. Almost all middle market cloud users access some type of formal external assistance for planning and implementing the cloud migration process. A majority (54%) rely on their internal IT departments to help. However, nearly half (47%) work with external technology consultants. Two out of five companies collaborate directly with a cloud migration partner. The support is clearly beneficial with two-thirds of companies describing the cloud set up process as very to extremely easy and only 7% claiming the process took longer than expected. In most cases, middle market companies turn to industry leaders including Google Cloud, Microsoft, and Amazon for cloud services and nine out of 10 are highly satisfied with these providers. Middle market companies planning a cloud transition can count on—and should take advantage of—dedicated support that will simplify and improve all aspects of the migration.

FOR CLOUD USERS LOOKING TO OPTIMIZE THE EXPERIENCE:

- **Focus on full cloud integration in key areas.** The research shows a strong correlation between greater cloud usage and faster revenue growth. Middle market cloud users that are growing year-over-year revenues at 10% or more allocate a greater portion of the IT budget to the cloud and are more likely to be fully integrated across business functions. Companies looking to increase cloud usage and derive the greatest ROI may want to devote attention to the cloud services considered to be the most important in the future, including real-time data analytics and advanced technologies such as artificial intelligence (AI) and machine learning.
- **Move away from reliance on a single cloud.** As companies advance their cloud strategies, relying on a single cloud for everything is becoming less realistic. Instead, companies are looking to the open cloud, which delivers cost and scale advantages, for native workloads that can operate in a hybrid or multi-cloud environment. They need a data cloud to remove silos and enable secure discovery, management, and sharing of their most precious digital asset. And in a world where remote and mobile working are on the rise, a collaboration cloud focused on delivering cloud-native, secure communication and real-time collaboration solutions can empower users and employees to work from any device anywhere in the world.
- **Turn technical debt into new revenue streams.** If your current cloud strategy is focused on migration or support of existing applications, a next step is to do more innovating in the space. This can include fully modernizing and optimizing applications, data, and processes to take advantage of the cloud. It can also involve leveraging containers and microservices or using analytics, AI, machine learning, and visualization to a greater degree.

Most importantly, it can involve updating processes to turn technical debt into new potential revenue streams. For example, customer data has become a liability for many organizations. The cost to store, search and manage years of data has led some companies to use cold storage or even tape systems to take data completely offline. While the cost in dollars is high, the cost in lost productivity is exponentially higher.

With today's cloud capabilities, companies can instead begin bringing in the proper data management architecture, utilizing modern data technology like machine learning to build data models, and applying AI to allow the data to drive decisions autonomously. Next, businesses can take legacy data—on supply chain and order management, as an example—and completely change customers' buying experience through personalization of products and visibility into the buying process from pre-order through order fulfillment.

Advanced technology can transform static data into real-time dashboards, advanced analytics, alerts on critical issues like potential disruptions, and collaboration with both workforce and customers, ultimately creating more brand loyalty, improved customer sentiment and more repeat business.



The National Center for the Middle Market is the leading source of knowledge, leadership and innovative research focused on the U.S. middle market economy. The center provides critical data, analysis, insights and perspectives to help accelerate growth, increase competitiveness and create jobs for companies, policymakers and other key stakeholders in this sector. Stay connected to the center by contacting middlemarketcenter@fisher.osu.edu.



From business as usual to business unusual, Fisher College of Business prepares students to go beyond and make an immediate impact in their careers through top-ranked programs, distinguished faculty and a vast network of partnerships that reaches from the surrounding business community to multinationals, nonprofits and startups across the globe. Our students are uniquely prepared and highly sought, leveraging Fisher's rigorous, experiential learning environment with the resources of The Ohio State University, a premiere research university with 500,000 proud Buckeye alumni.



Chubb is the world's largest, publicly traded P&C insurance company and the largest commercial insurer in the U.S. With operations in 54 countries and territories, Chubb provides commercial and personal property and casualty insurance, personal accident and supplemental health insurance, reinsurance and life insurance to a diverse group of clients. As an underwriting company, Chubb assesses, assumes and manages risk with insight and discipline. Learn more at chubb.com.



Visa is the world's leader in digital payments. Their mission is to connect the world through the most innovative, reliable and secure payment network—enabling individuals, businesses and economies to thrive. Their advanced global processing network, VisaNet, provides secure and reliable payments around the world and is capable of handling more than 65,000 transaction messages per second. The company's relentless focus on innovation is a catalyst for the rapid growth of connected commerce on any device. As the world moves from analog to digital, Visa is applying their brand, products, people, network and scale to reshape the future of commerce. For more information visit usa.visa.com/about-visa.html, usa.visa.com/visa-everywhere/blog.html and [@VisaNews](https://twitter.com/VisaNews).



Google Cloud accelerates every organization's ability to digitally transform its business. Google Cloud deliver enterprise-grade solutions that leverage Google's cutting-edge technology – all on the cleanest cloud in the industry. Customers in more than 200 countries and territories turn to Google Cloud as their trusted partner to enable growth and solve their most critical business problems. Learn more at cloud.google.com.