To Maximize Your Cloud Benefits, Maximize Training

EXECUTIVE SUMMARY

Cloud continues to play a greater even dominant role across the IT industry as enterprises pivot to leveraging digital as a business strategy. Digital has become a permanent and dynamic fixture for businesses, schools, and governments. In almost all technology markets, the COVID-19 pandemic and related disruptions to the economy and communities have resulted in accelerated cloud adoption. With cloud being the dominant model for delivery of foundational technology services, organizations want to maximize the return on their investment in cloud. For some, the strategy to accelerate adoption and improve return is to provide comprehensive training to their IT and line-of-business (LOB) employees. This strategy works:

- Organizations with the most comprehensive training realized 57% greater improvement in IT operations and 56% greater improvements in customer experience compared with organizations that only narrowly train their employees.

- Organizations with comprehensive training are 60% more likely to advance their cloud strategy.

Even when objectives were difficult to measure, comprehensive training led to impact, including 6x greater influence on leveraging data analytics solutions and 2x greater influence on automating processes.

Some organizations go further and ensure their IT teams have a high concentration of certifications to continually improve performance:

- Certifying the IT organization impacts innovation, IT employee productivity, and business resilience.

- IT decision makers with certified employees have greater confidence in staff's knowledge and ability.

- Certified employees increase the value of cloud infrastructure overall.

Perhaps most urgent, in this era of "the Great Resignation," comprehensive training leads to 133% greater employee retention. Cloud professionals change roles internally and externally very quickly – leveraging LinkedIn data, McKinsey found that only half of the cloud professionals stay in their roles for more than two years. This research shows that when employees are developing skills that are important to the business, they stay longer.

Methodology Overview

For this research, we conducted a web survey in August and September 2021 with more than 900 randomly selected cloud managers and IT leaders in North America, Europe, and Asia. 72% of the responding organizations earned more than half of their 2020 revenue from digital or online services.

All the leading cloud services providers had significant client representation in the survey, including Amazon Web Services (AWS), Google, IBM, Microsoft, Oracle, and Alibaba Cloud.

For this research, we examined the success of organizations that provided employees 8+ hours of training on the organization's cloud objectives, cloud potential, technology use, and methodologies, tailoring the curriculum to the needs of IT professionals, IT teams, and lines-of-business individuals and teams. We call these organizations "comprehensively trained." We compared their performance with "narrow-focused trained" organizations: those that provided 8+ hours of training to only one of those groups of employees.

For more details, see the Methodology section.

BUSINESS IMPACT OF CLOUD TRAINING

IDC research has shown that training matters. The more training organizations provide to a wide audience of employees, the greater the value those organizations gain from their cloud deployments. In light of the pandemic and the increased importance of cloud to many organizations' business strategies, we wanted to reevaluate the additional value organizations generate when they train broadly.

State of Cloud Training

While nearly 90% of organizations provide training for individual team members, only 37% offer comprehensive training to all impacted employees. We found that only 7% or so of respondents trained only one group — either IT professionals or IT teams (see Figure 1).

FIGURE 1

Who Gets Cloud Training

Q.   Which employees have received 8+ hours of training on cloud technologies, procedures, or potential?
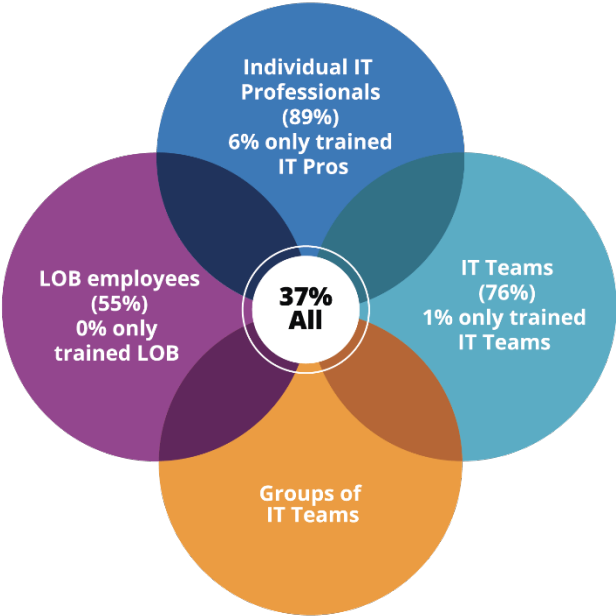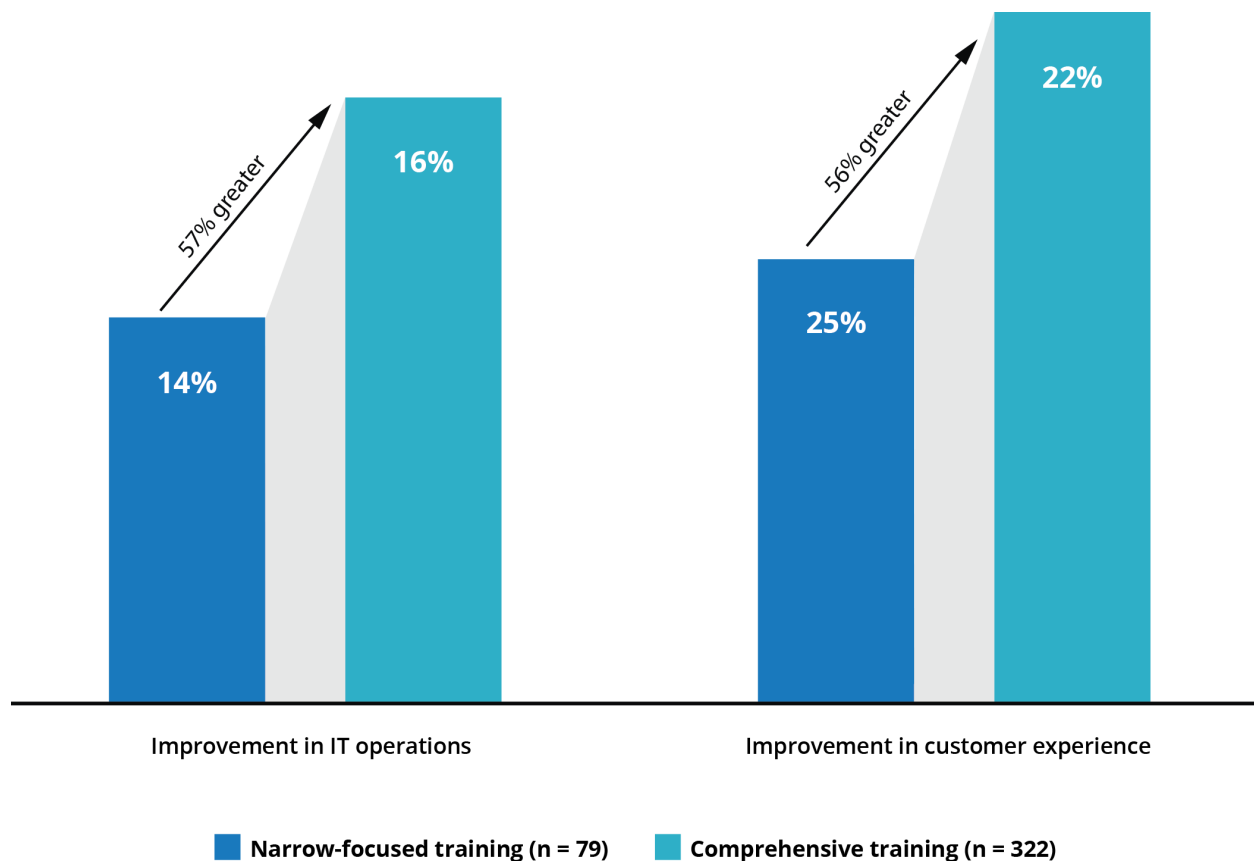

Source: IDC, 2022

Both IT and Lines of Business See Business Improvement

When employees in both IT and lines of business are well trained, organizations see significantly greater improvement in the overarching objectives of IT operational improvement and customer experience (see Figure 2):

- Comprehensively trained organizations typically saw a 16% improvement in IT operations, 57% greater than organizations that had a narrow training focus.
- Comprehensively trained organizations typically saw a 25% improvement in their customer experience scores, 56% more than organizations that had a narrow training focus.

FIGURE 2

Annual Improvement in Business Operations

Source: IDC, 2022

Improvement in other important IT objectives included increasing access to new compute and process capabilities enabled by cloud — where comprehensively trained organizations saw more than 102% greater access compared with narrowly trained organizations.

Across a broad range of important business objectives, comprehensively trained organizations saw greater improvement across a range of business priorities (see Figure 3). Organizations that provided

comprehensive training to their IT staff and impacted LOB personnel consistently report greater business impact in areas such as:

- 133% greater improvement in employee retention
- 47% greater reduction in business risk
- 35% greater improvement in operational efficiency
- 22% greater increase in innovation
- 16% more revenue from new markets, products, and/or customers
- 15% greater improvement in employee productivity
- 6% growth in revenue

FIGURE 3

Annual Improvement in Other Business Objectives

Narrow-focused training (n = 79) Comprehensive training (n = 322)
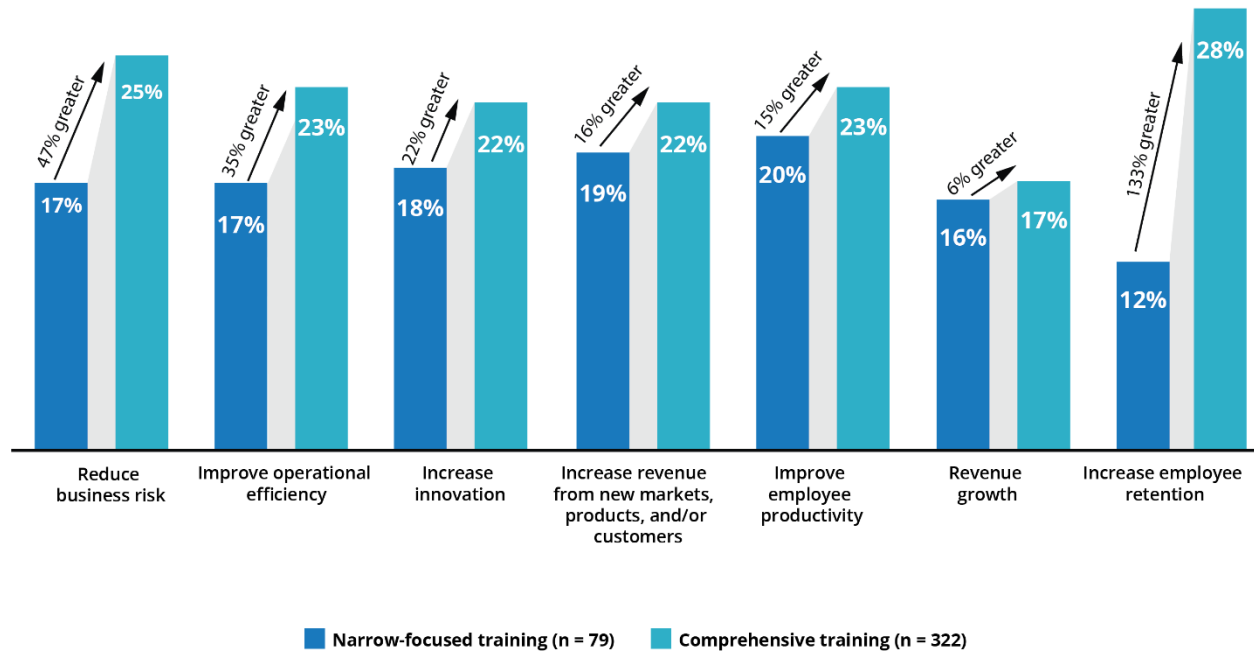
Source: IDC, 2022

IT Employee Retention

In late 2021 and into 2022, organizations have been facing what is being called "the Great Resignation." It labels an increase in the "quit rate" – the share of workers who voluntarily leave their jobs. In September 2021, the U.S. Bureau of Labor Statistics estimated the quit rate at 3% for all nonfarm employees – a record. IT employees have historically been less likely to change jobs – the highest monthly quit rate since 2000 was 2.7% in January 2001. But during 2021, the rate was relatively high; it hovered near 2% for much of the year. In addition, in late 2021, more than 70% of

technology workers were considering quitting their jobs within a year and 40% of tech workers said that limited career progression is making them think of leaving.[1]

When employees leave unexpectedly, projects stall and business objectives are at risk. They must be replaced, often with less experienced staff, who must ramp up on the project before they can be fully productive. For these reasons and others, voluntary departures hurt IT initiatives.

Without a doubt, voluntary attrition hurts organizational performance. Recent research from McKinsey found that top companies ensure their IT employees not only work with the most advanced technologies and tools but also develop the skills and experience their staff needs to help them remain successful in the organization and industry.[2]

In this current research, perhaps the most urgent finding in this era of "the Great Resignation" is that comprehensive training leads to 133% greater employee retention. This research shows that when employees are developing skills that are important to the business and their career, they stay longer , which further accelerates business benefits.
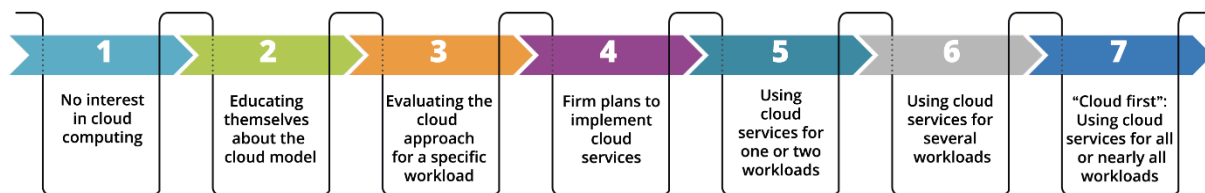
CLOUD ADOPTION

Stages of the Cloud Adoption Journey

We envision the cloud journey to have seven "stages," from "no interest" all the way to "cloud first" (see Figure 4). Organizations pass from one degree of adoption to the next, and only rarely do organizations retreat to an earlier stage or skip a stage altogether. In our recent research, we asked organizations to identify which of the seven stages of cloud adoption they were in and where they expected to be in two years.

FIGURE 4

IDC's Seven Stages of Cloud Adoption

1	2	3	4	5	6	7
No interest in cloud computing	Educating themselves about the cloud model	Evaluating the cloud approach for a specific workload	Firm plans to implement cloud services	Using cloud services for one or two workloads	Using cloud services for several workloads	"Cloud first": Using cloud services for all or nearly all workloads

Source: IDC, 2022

The importance and penetration of cloud have increased remarkably in the past couple of years. In research conducted in 2017, we found that about 5% of organizations had "no interest" in leveraging cloud. Today, less than 1% of organizations worldwide have no interest in cloud computing.

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[1] According to a new survey, 7 in 10 tech workers say they're considering quitting their job within the next year (go to **www.businessinsider.in/tech/news/7-in-10-tech-workers-say-theyre-considering-quitting-their-job-within-the-next-year-in-a-new-survey/articleshow/87140703.cms**).

[2] Reed Doucette and John Parsons, "*The importance of talent and culture in tech-enabled transformations*," McKinsey, February 20, 2020

More importantly, in 2017, we found that about 65% of organizations were using cloud for one or more important business functions or "workloads." Today, that rate is more than 80%, with the remaining share of organizations in the early stages of exploration or adoption.

No matter where organizations are in their journey, most expect to leverage cloud services to support even more workloads in the future. And it seems the rate of cloud adoption is accelerating. In 2017, we found that about 70% of organizations expected to expand their use of cloud. In this research, we found that a whopping 97% of organizations expect to expand their use of cloud in two years.

## Comprehensive Training Accelerates Rate of Cloud Adoption

Most organizations, regardless of whether they invest in training or not, expect to increase their use of cloud in the next two years. However, investment in training impacts how quickly organizations can adopt cloud computing to solve business problems and improve business operations.

Comprehensive training enables organizations to move more quickly through the stages of cloud adoption.

Over the next 24 months, organizations that are only minimally trained on cloud will lag behind comprehensively trained organizations in how much they expand their use of cloud. Comprehensively trained organizations are 60% more likely to "move up" a cloud adoption stage in the next 24 months. In our work a couple of years ago, we found training more dramatically increased the likelihood an organization would expand its use of cloud. However, with the wider adoption of cloud overall, many organizations regardless of training status expect to expand their use of cloud. Figure 5 illustrates the impact comprehensive training has on adoption speed versus minimal training. Even with the greater cloud use and penetration, we found that organizations that are comprehensively trained continue to adopt cloud more quickly and are able to realize greater value from their cloud journey.

FIGURE 5

Comprehensive Training Accelerates Cloud Adoption
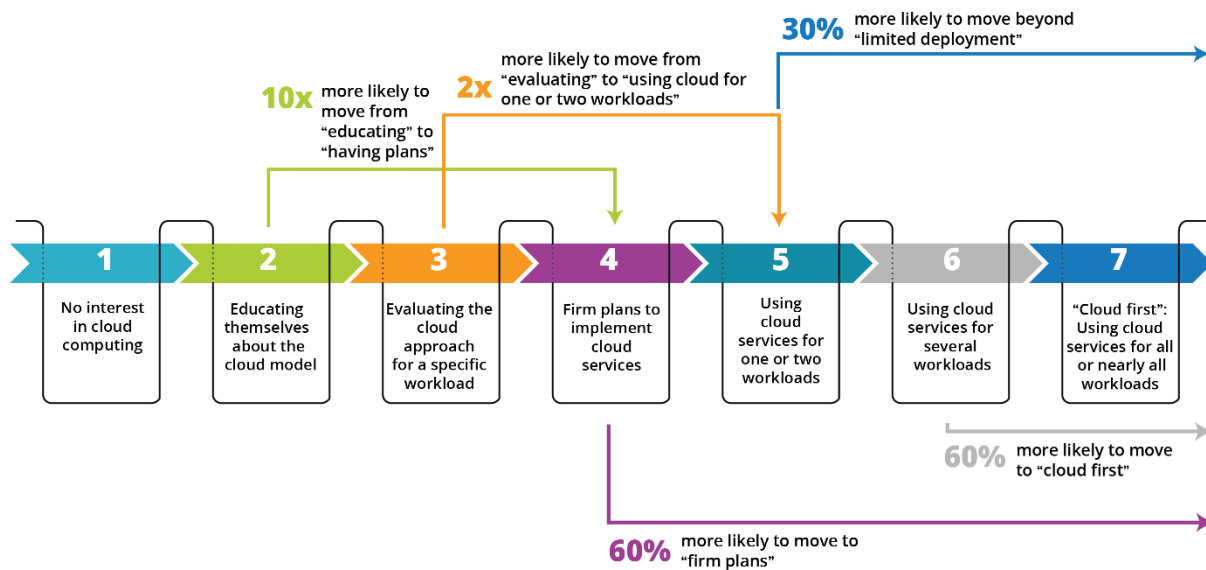
Source: IDC, 2022

The increased rate of adoption for comprehensively trained organizations depends on where the organization is on its cloud adoption journey, but training helps at every stage of adoption:

- Comprehensively trained organizations that are currently educating themselves on cloud are 10x more likely to have firm plans to implement cloud within two years, compared with narrowly trained organizations.
- Comprehensively trained organizations that are evaluating the use of cloud are 2x as likely to be using cloud for one or two workloads in two years, compared with narrowly trained organizations.
- Comprehensively trained organizations that are using cloud for one or two workloads are 30% more likely to be using cloud for several workloads or go "cloud first," compared with narrowly trained organizations.

This accelerated adoption means that comprehensively trained organizations reduce the time to value of their cloud journey and often get greater return on their cloud investment.

We found across a broad range of areas, organizations that comprehensively train their staff — by training IT professionals and line-of-business workers on the use of cloud — report that training has a significant impact on the benefits they receive, including:

- 93% say training has a significant impact on leveraging analytics.
- 89% say training has a significant impact on protecting data.
- 85% say training has a significant impact on global reach.
- 93% say training has a significant impact on automating processes.
- 93% say training has a significant impact on collaboration.
- 86% say training has a significant impact on using machine learning.
- 88% say training has a significant impact on jump-starting innovation.
- 91% say training has a significant impact on new ways to work.
- 90% say training has a significant impact on resource utilization.
- 88% say training has a significant impact on data insights.

Only about half of the organizations that don't comprehensively train report that training has a significant impact across these benefits. This suggests that when organizations broadly train, they are more likely to see the correlation between training and business improvements. Therefore, the more organizations train, the more performance improves *and* the clearer the link between training and performance.

CERTIFICATIONS

An important consideration for organizations and individual IT professionals and line-of-business staff is whether it is beneficial to validate skills with a vendor-sponsored certification. This research suggests there are additional benefits organizations may derive from leveraging professional certifications to accelerate innovation and increase the value of cloud.

Generally, IT decision makers have confidence that certified staff can improve operational performance. About 75% of IT decision makers report that certification increases their confidence in IT staff's knowledge and ability. This leads to increased value of cloud and innovation:

- 74% believe that having a certified team increases the likelihood that a project will be completed on time.

- 76% say that certified IT staff helps increase the value of cloud infrastructure.
- 77% think that certified staff helps jump-start innovation to support business objectives.

Our research demonstrates that impact. When IT organizations have a high percentage of their team certified in cloud, we found several areas where they report greater operational performance overall. Specifically, compared with organizations with fewer than 50% of the cloud team certified, organizations that have more than 90% of their cloud team certified report:

- 1.3x greater innovation
- 1.2x greater employee productivity
- 1.2x greater business resilience

Also, leveraging high-quality certifications can help during the onboarding process: IT decision makers believe new employees or team members that have a relevant cloud certification ramp-up faster on new projects:

- 77% of IT decision makers say they have greater confidence in job candidates who hold a certification.
- 75% of IT decision makers report that certified employees reach full productivity more quickly on new projects.

So organizations that leverage cloud certifications in hiring and team selection are more likely to see increased innovation and value of their cloud investment and are more likely to see projects completed on time.

Training and Certifications

As one may expect, our findings suggest there is a strong link between training and certification for cloud skills. We found that about 70% of IT professionals that were recently trained in cloud and cloud-related skills were either pursuing or had completed a cloud-related certification. When we consider that 90% of organizations plan to expand their use of cloud, the increased prevalence of certification suggests IT professionals believe cloud will continue to be a dominant IT platform.

Combining certification with training objectives to support improved performance and IT professional development seems to resonate with IT leaders. For several core topics, IT leaders and managers think the combination of training and certifications will result in the most benefit, especially for:

- Machine learning and artificial intelligence (AI)
- Cloud infrastructure
- Cloud migration
- Cloud networking
- Cloud security

That's because the topics are "known" enough that there is an established body of knowledge that will result in specific performance improvement to be worth the training and certification effort.

Interestingly, these are also the same topics that IT leaders believe will be the greatest opportunities for ongoing training in their organizations to get greater value from their cloud infrastructure.

By continuing to train IT and line-of-business staff, these organizations expect to continue to accelerate their adoption of cloud and increase the impact that cloud has on their business and IT operations.

ESSENTIAL GUIDANCE

This research discovered that training matters. Even during a pandemic and with rapid adoption of cloud and other digital technologies, organizations must train their staff to get the most value out of their technology.

As you consider implementing Google Cloud for your important workloads or processes – how you engage with customers, how you build or sell new products, and how you manage or operate your business – well-trained employees are the key to your success. Organizations that train more broadly and more comprehensively get more value out of their cloud infrastructure, and they expand their use of cloud more quickly.

IDC believes that to be most successful with your Google Cloud initiatives, organizations should:

- Deeply and thoroughly train IT staff, impacted lines-of-business employees, and business leaders on the potential use of cloud, cloud methodologies, and the specific technologies the organization is deploying.
- Leverage certifications for the IT staff to help set high standards of skill and to increase innovation, cloud value, and on-time delivery of cloud resources.
- Ensure that lines-of-business personnel who leverage cloud infrastructure or cloud-based tools understand those tools well enough to identify areas where continued expansion of cloud makes sense to the organization.

By comprehensively training, organizations will enjoy greater employee retention, reduced business risk, and greater operational improvement, all while accelerating their cloud adoption.

For organizations where cloud delivery is becoming the foundation for technology services, organizations can maximize the return on their investment in cloud by providing comprehensive training to their IT and line-of-business employees.

Additional Findings

Table 1 and Figure 6 provide additional findings.

TABLE 1

Improvement in Important Business Objectives: Narrow Training Versus Comprehensive Training (%)

Q.   What annual percentage improvement in 2020 did your organization experience in your important business objectives?
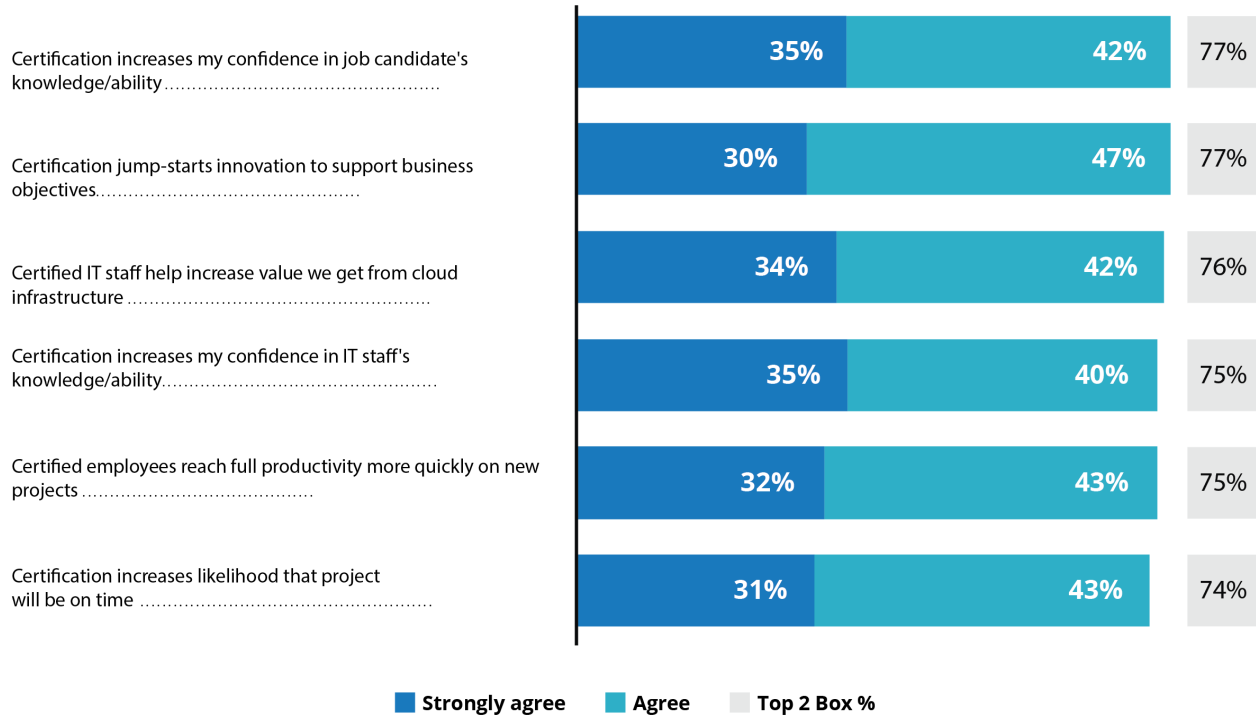
Business Objective	Narrow-Focused Training	Comprehensive Training	Greater Improvement (%)
Increase employee retention	12	28	133
Access to new compute/process capabilities	13	23	77
Improve IT operations	14	22	57
Improve customer experience/customer satisfaction	16	25	56
Reduce business risk	17	25	47
Improve operational efficiency	17	23	35
Accelerate time to market for new products and services	19	25	32
Increase use of machine learning/artificial intelligence (AI)	13	17	31
Increase innovation	18	22	22
Profit growth	12	14	17
Increase revenue from new markets, products, and/or customers	19	22	16
Improve employee productivity	20	23	15
Improve customer retention	17	19	12
Revenue growth	16	17	6

Source: IDC, 2022

FIGURE 6

IT Managers Believe Certifications Are Useful

Q.   Please indicate your level of agreement with each of the following statements.

Statement	Strongly agree	Agree	Top 2 Box %
Certification increases my confidence in job candidate's knowledge/ability	35%	42%	77%
Certification jump-starts innovation to support business objectives	30%	47%	77%
Certified IT staff help increase value we get from cloud infrastructure	34%	42%	76%
Certification increases my confidence in IT staff's knowledge/ability	35%	40%	75%
Certified employees reach full productivity more quickly on new projects	32%	43%	75%
Certification increases likelihood that project will be on time	31%	43%	74%

■ Strongly agree   ■ Agree   ☐ Top 2 Box %

Source: IDC, 2022

Methodology

We conducted a web survey in August and September 2021 and received 912 responses from randomly selected cloud managers and IT leaders in North America, EMEA, and Asia/Pacific, asking about their organization's cloud adoption and training. 100% of respondents were IT directors or above and 71% of respondents worked in organizations with more than 1,000 employees. Interestingly, 72% of respondents worked for organizations that had more than 50% of their revenue derived from digital or online services or products.

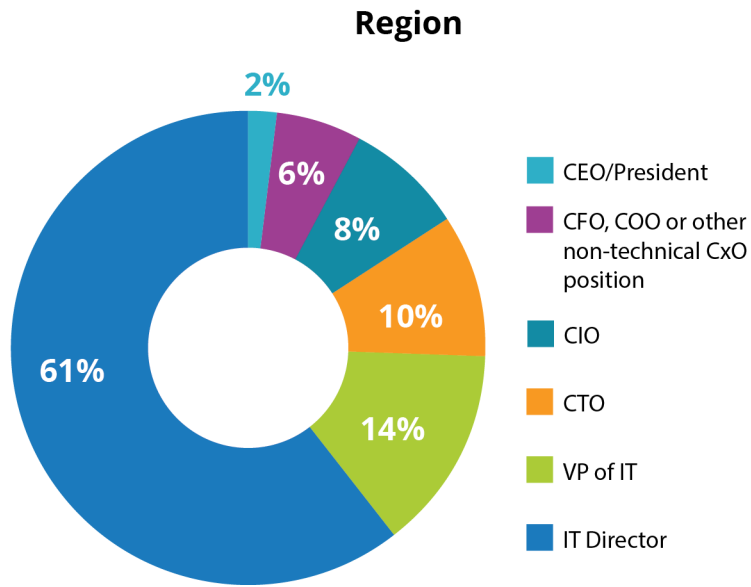Figure 7 provides more demographic details of survey respondents.

Survey questions were related to current and future use of cloud and cloud services, key benefits achieved, significant obstacles to the adoption of cloud, and characteristics of the training provided to the IT organization and the broader enterprise related to cloud.

We compared benefits, concerns, and current and future cloud adoption strategies between cohorts of respondents based on questions related to training topics and targets of training. Organizations that offered some type of training to their target learners were able to respond to the largest majority of the questions. Organizations that didn't train anyone only completed a small number of sections of the survey.
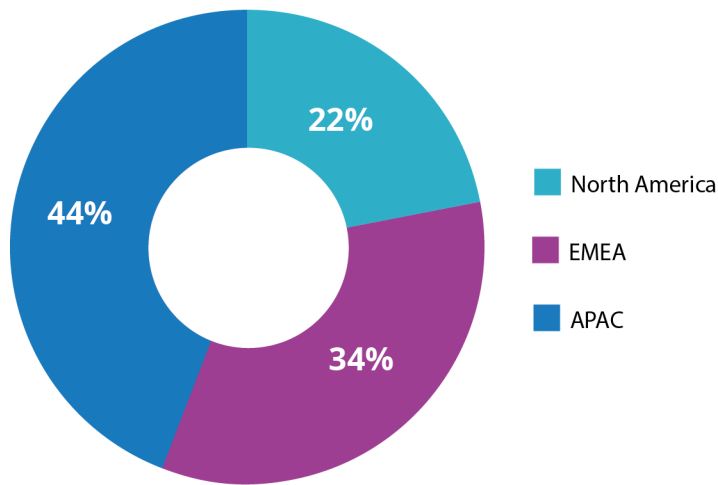
Note: All numbers in this document may not be exact due to rounding.

FIGURE 7

Demographics of Respondents

Region

- 2% CEO/President
- 6%
- 8%
- 10%
- 14%
- 61%

Legend:
- CEO/President
- CFO, COO or other non-technical CxO position
- CIO
- CTO
- VP of IT
- IT Director

Level of Responsibility

- 22%
- 34%
- 44%

Legend:
- North America
- EMEA
- APAC

Source: IDC, 2022

MESSAGE FROM THE SPONSOR

About Google

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Empower Employees. To help provide the workforce development your organization needs, Google Cloud Learning has made it easy to engage with their learning team, or your preferred partner, to assess your organization's learning needs. By working together with Google Cloud Learning, you can create a learning plan that identifies the learning roles and paths that your organization needs to be successful. Google Cloud Learning's comprehensive curriculum caters to all learning styles and is delivered in various formats - on-demand training, hands-on learning, gamified competitions, or virtual and in-person training. The content is developed by a dedicated team of curriculum developers who work closely with the Google Cloud product and engineering teams to stay abreast of upcoming roadmap and technology. Curriculum developers also work with field teams to ensure that best practices are embedded into the business and technical learning offerings.

Provide Practical Application. Google Cloud Learning offers experience through hands-on learning - this can be in sandbox environments, labs, quests, real-world use cases, data sets, gamified learning challenges, skill badges, etc. Hands-on learning allows learners to build their confidence by practicing in a controlled environment and more effectively retain knowledge by using real cloud technology. Google Cloud Learning also offers immersive learning experiences led by Google Cloud machine learning experts in person at their campuses or virtually.

Bridge Organizational Skills Gaps. Google Cloud Learning prepares your organization with the skills needed to be successful and impactful in cloud based roles. They have created role based learning paths - curated collections of content that combine traditional courses with hands-on learning - that not only align to job functions in your organization today, but also define the jobs of the future. Google Cloud Learning prepares individuals within organizations to take on new job roles so that they can build impactful cloud solutions.

Incentivize Employees with Digital Credentials. Google Cloud Learning provides different types of digital credentials, which are awarded incrementally to individuals within your organization as they progress through their learning journeys. Google Cloud Skill Badges are awarded in recognition of an individual's cloud proficiency with Google Cloud products and services and tests their ability to apply that knowledge in an interactive hands-on environment. Google Cloud Certification badges are awarded upon passing a proctored exam, which validates an individual's expertise in a particular cloud role and tests the full set of skills employers expect job candidates/employees to have to successfully build, deploy and manage Google Cloud solutions. Google Cloud Certification exams are available for various cloud roles and range in difficulty level - Fundamental, Associate, Professional, and Fellow.

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