State of Cloud

How orgs are maturing in the cloud

Executive summary

In 2023, cloud is table stakes for organizations. 94% of leaders use cloud services for their technology initiatives. But there's a difference between using the cloud and driving results with cloud technology.

We blind surveyed more than 1,000 leaders and technologists across industries and throughout the world to find out how organizations leverage cloud computing. The response? **The cloud may be table stakes, but most organizations still don't know how to operationalize cloud computing** as a strategic advantage to accelerate business outcomes and outperform competitors.

This report dives into this data and provides gold standards for transforming cloud into a strategic advantage that drives value for your organization.

Most orgs operate in the cloud **without a defined cloud or cloud skills strategy**

The new cloud trend: **Rapid adoption of cloud & multicloud services**

More than 70% of organizations **struggle to drive customer value** with the cloud
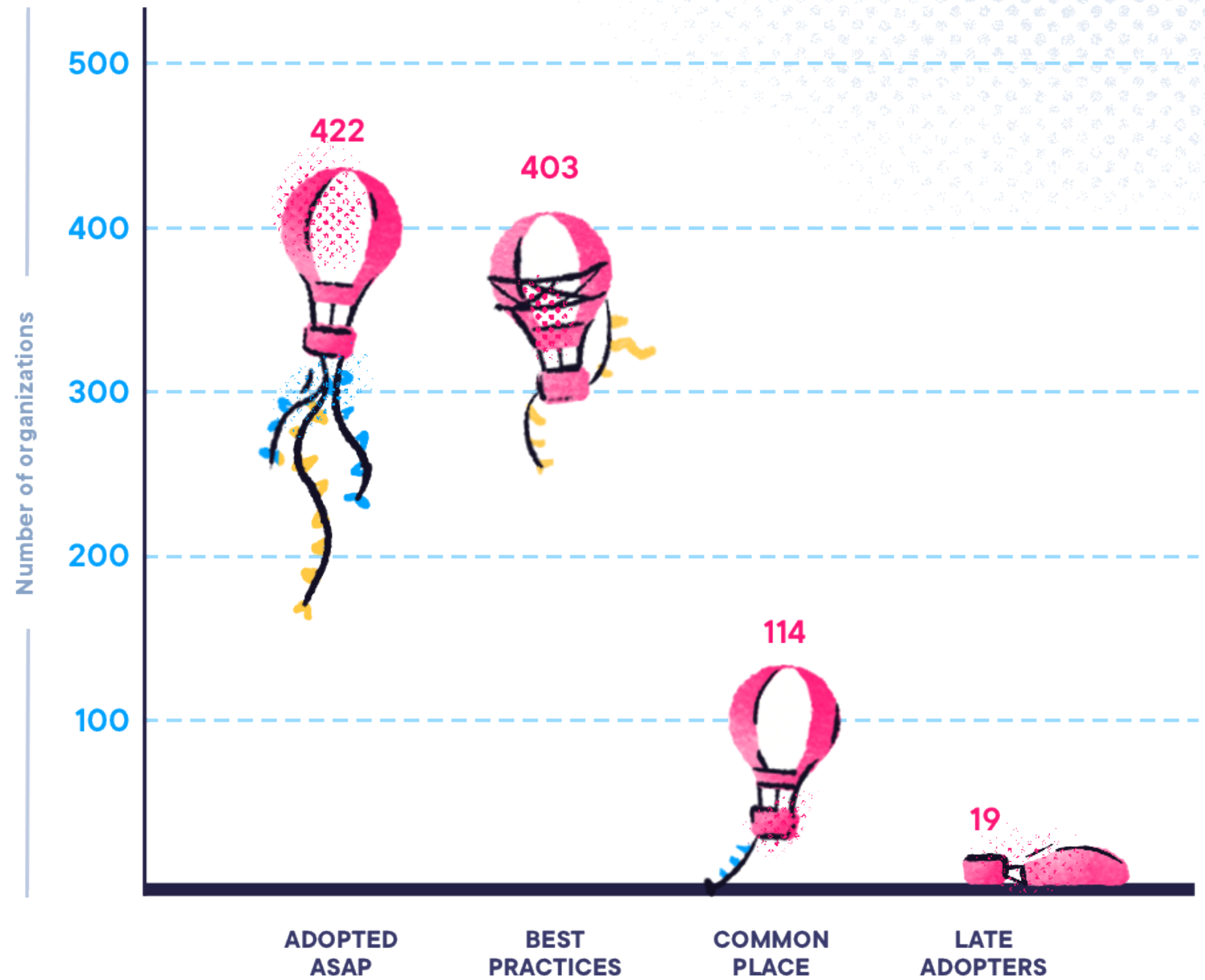
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SECTION ONE

Cloud strategy struggles

Create more value with cloud

Cloud is commonplace. 70% of organizations report more than half of their infrastructure exists in the cloud. And 49% say they're actively moving more of their data to the cloud.

The trend in cloud computing isn't migration anymore. It's the rapid adoption of new cloud services. Nearly half of leaders adopt the latest features and services released by cloud providers as soon as they become available. The next 42% of organizations wait only until best practices for those services are established.

Number of organizations

500

422

403

400

300

200

114

100

19

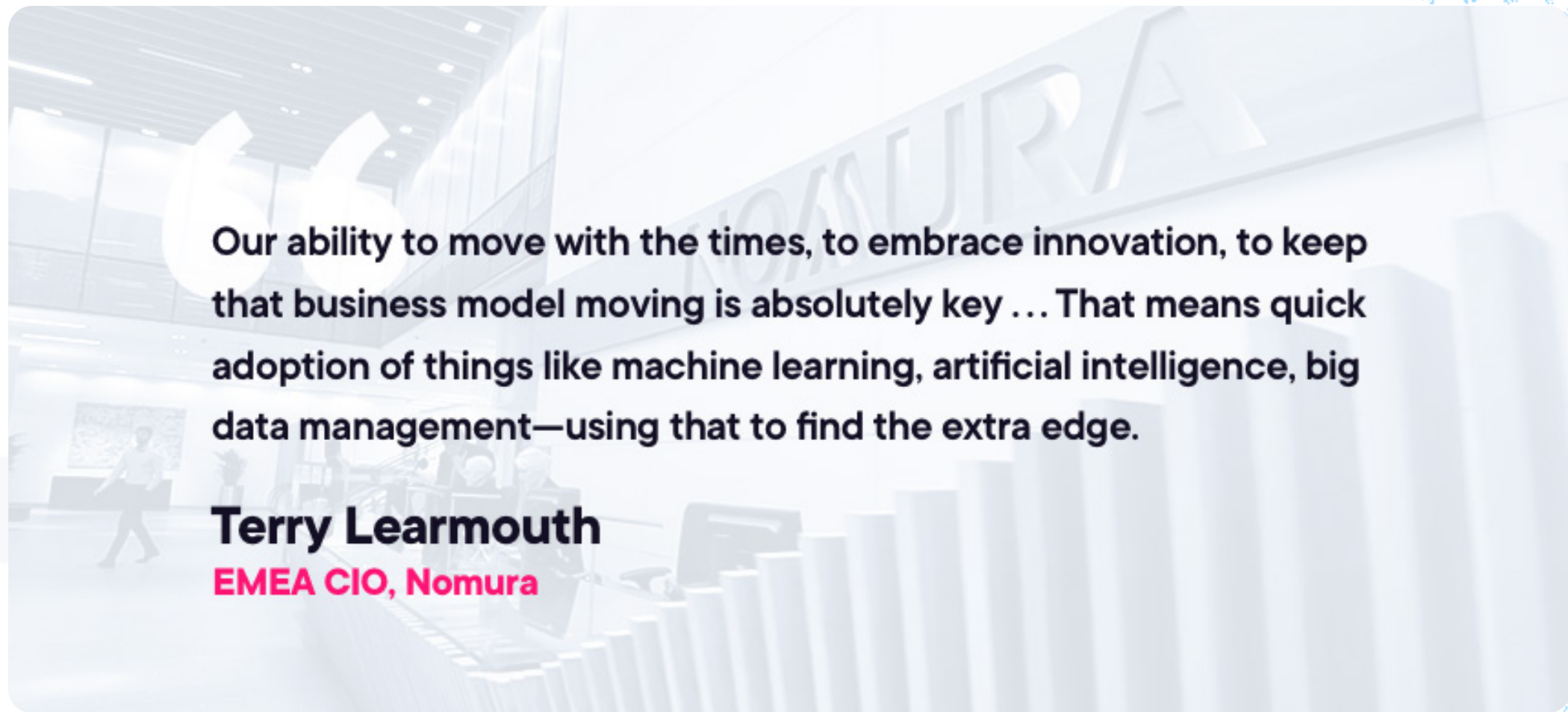ADOPTED ASAP | BEST PRACTICES | COMMON PLACE | LATE ADOPTERS

Orgs need strategy to drive customer value

Why so fast? 51% of leaders say they're investing in cloud technology to develop new ideas, approaches, and methodologies. **But rapid adoption doesn't always translate into results. Only 27% of leaders say their cloud initiatives drive more customer value.**

What we're seeing is leaders equating cloud technology with organizational transformation without doing the work to implement the transformative practices that cloud technology enables. As a matter of fact, **69% of leaders don't have a clearly defined cloud strategy to guide their implementation.**

But there are still a fair number of leaders getting it right and combining the benefits of cloud technology with the organizational changes to drive real, lasting value from their cloud initiatives. Take Nomura, for example:

> Our ability to move with the times, to embrace innovation, to keep that business model moving is absolutely key … That means quick adoption of things like machine learning, artificial intelligence, big data management—using that to find the extra edge.

Terry Learmouth
EMEA CIO, Nomura

At the end of the day, an organization's success or failure at driving value and larger innovation with cloud technology really boils down to their maturity level.

Cloud maturity

Move from tactical to strategic cloud maturity

Cloud maturity isn't a finish line—it's the everyday training regimen that keeps your organization lean and agile. So we set out to determine how many organizations across the globe were prepared for future changes in the cloud marketplace.

We used our own Cloud Maturity Matrix to devise a series of questions that analyzed cloud maturity across three key categories: **engagement, tactics, and outcomes**. Our internal experts then analyzed that data and mapped each of the responses to one of five maturity levels, with one being the least mature and five the most mature, in each category.

Our finding: While most organizations fall within the middle stages of maturity, they still struggle with overarching cloud strategies, budgeting, deployments, and security. Our biggest takeaways:

- Leaders lack a comprehensive cloud and cloud skill development strategy
- The lack of a strong cloud strategy leads to ad hoc tactical plans
- Leaders have been so focused on the tech itself, they deprioritized outcomes

Engagement: Build cloud culture across teams

To determine the level of engagement organizations have in the cloud, we looked at the level of knowledge their technical and non-technical teams have and the types of cloud strategies these organizations operate within.
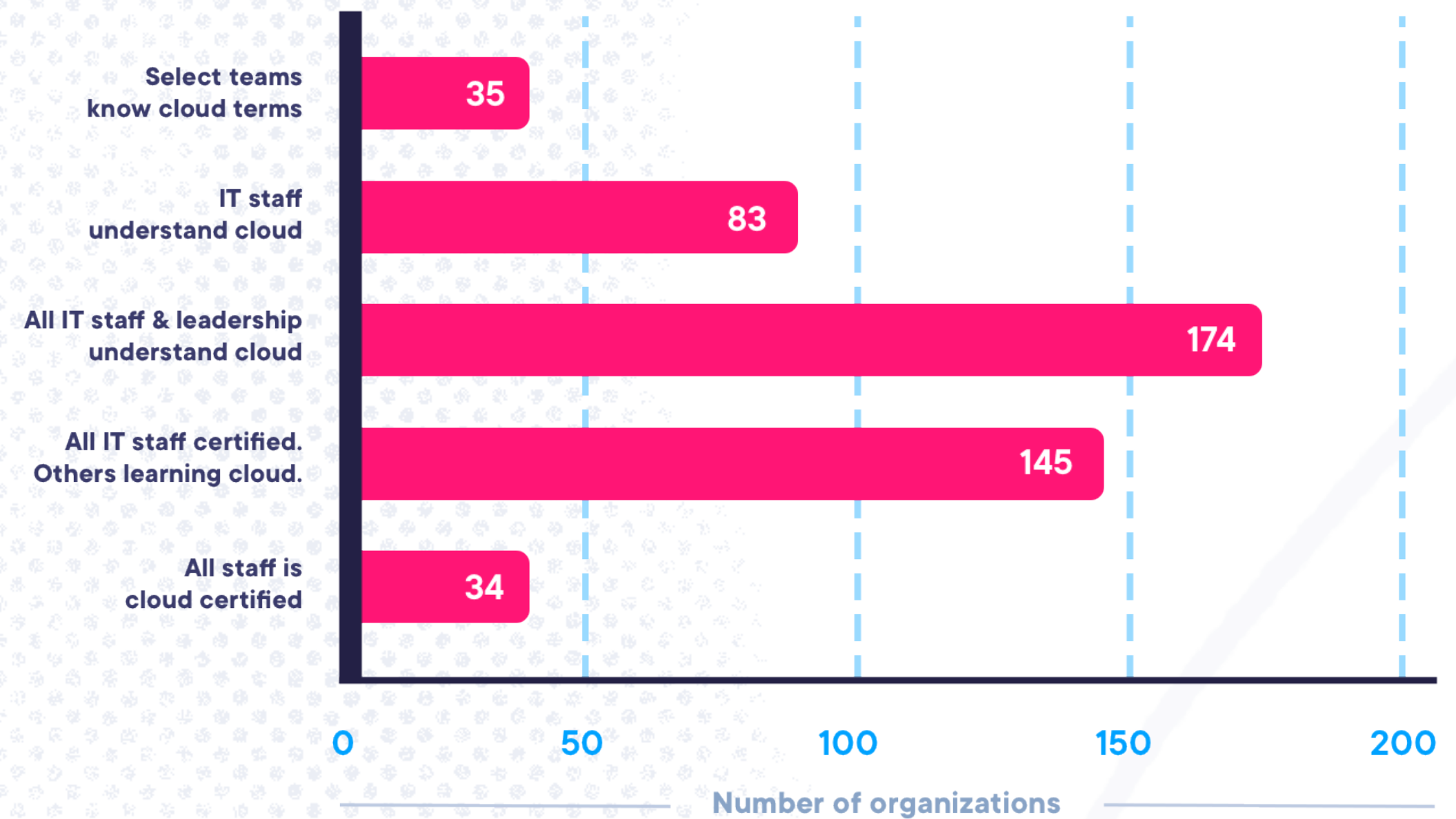
★★ **THE GOLD STANDARD**

All staff, including technical and non-technical employees, should understand the language of cloud and operate within a comprehensive cloud strategy that supports new enhancements, projects, and disaster recovery.

Cloud is a culture with its own unique language. Certifications are the base-level literacy test for that language. They ensure individuals understand the terms and concepts that make up cloud conversations and can actively participate in them.

Organizations leading the charge for cloud transformation understand that by expanding cloud literacy among their non-technical employees, their employees interact with their systems more effectively. **But 62% of organizations limit cloud training to their technical teams.** This is a critical miss for organizations striving to be cloud native.

How cloud literate are your teams?

Category	Number of organizations
Select teams know cloud terms	35
IT staff understand cloud	83
All IT staff & leadership understand cloud	174
All IT staff certified. Others learning cloud.	145
All staff is cloud certified	34

Number of organizations

Not only can cloud-literate employees better use your cloud systems, but they also provide more meaningful feedback to your technical teams or cloud centers of excellence (CCoE) for future developments.

Tactics: Strategies need policies to prosper

From a tactics perspective, we asked leaders what kinds of systems they currently operate within, the status of their legacy system migrations, and where they stand relative to cloud security and governance.
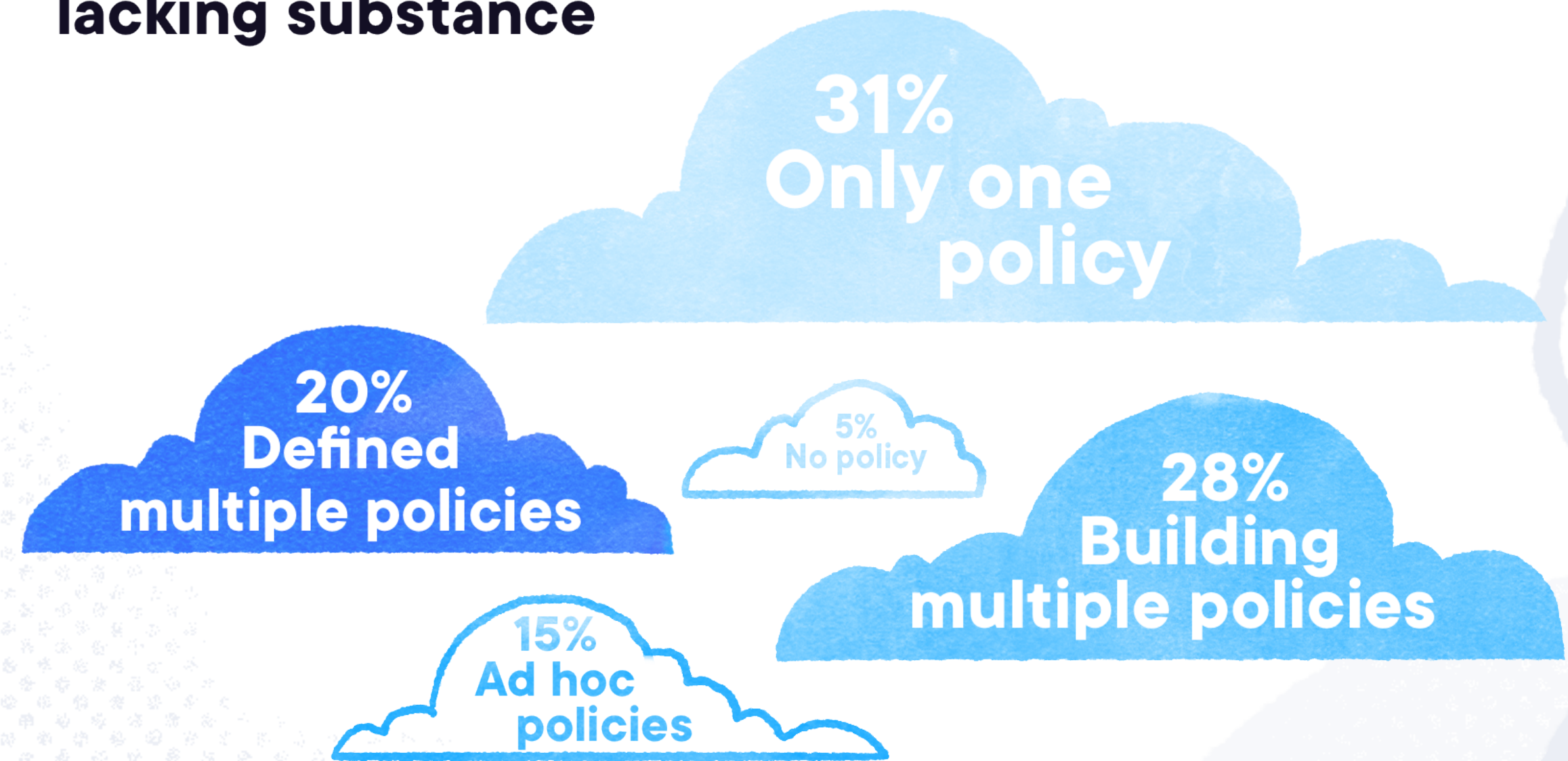
⭐ **THE GOLD STANDARD**

Organizations have migrated and refactored legacy systems with tools to measure and track disaster recovery, SLAs, and business continuity. All cloud security and governance policymakers should also have professional certifications.

Last year, we reported that cloud security was the number-one challenge leaders faced and their biggest skills gap. **In 2023, cloud security still tops both lists. And yet, less than half of leaders stated that they've established comprehensive security policies and practices for the cloud.**

Only 20% of organizations have defined cloud policies, a cloud disaster recovery plan, cloud SLA policies, and cloud governance, while 28% are working to build them. The rest? Only have ad hoc policies, if they have any at all.

Cloud security policies lacking substance

31% Only one policy

20% Defined multiple policies

5% No policy

28% Building multiple policies

15% Ad hoc policies

To make matters worse, 51% of organizations are still trying to understand their on-premises environments while they actively migrate their legacy systems to the cloud. Only 13% of organizations have successfully migrated and refactored all their legacy systems.

When it comes to tactics, organizations say they're concerned about security but lack security policies. **Until this disconnect is resolved, leaders will struggle to leverage the cloud's benefits.**

Outcomes: Leaders need to lean into the bigger picture

The marker of a cloud-mature organization is its ability to measure and report on performance-based outcomes like scalability and agility, deployment schedules, time and cost efficiency, and overall return from their cloud solutions.
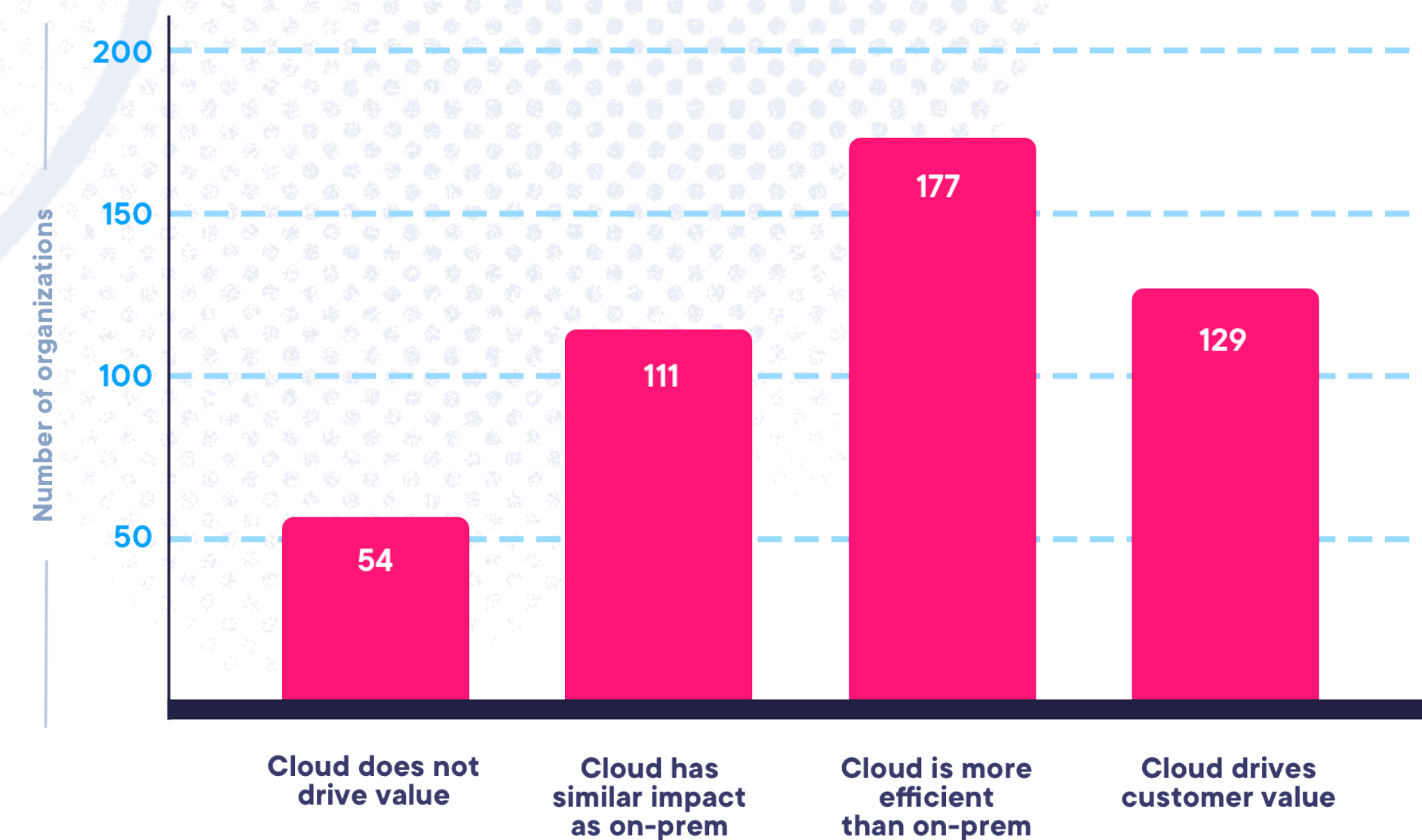
⭐ **THE GOLD STANDARD**

Organizations utilize automation and monitoring tools to deploy new code on demand, scale systems based on user demand, and monitor the return on cloud investments.

Many organizations are leveling up their cloud maturity with basic engagement and tactical plans, but 80% struggle to improve performance and measurement of cloud systems. Why? **Because they crafted cloud strategies around short-term migration goals instead of long-term organizational outcomes.**

But customers don't care about your migration. They care about your ability to quickly, securely, and accurately respond to their needs. With only 61% of organizations able to push out new code to consumers more than once per month, though, it's no surprise only 27% of leaders succeed in driving consumer value with their cloud solutions.

Current strategies drive internal efficiency but not external value

Number of organizations

Cloud does not drive value	Cloud has similar impact as on-prem	Cloud is more efficient than on-prem	Cloud drives customer value
54	111	177	129

The bottom line: Leaders aren't seeing their cloud strategies perform as they'd hoped. And it's because they're not thinking big enough.

Organizations need to move from consuming cloud services to creating value with them. And that requires a cloud strategy that's based on organizational outcomes.

Technologists are starving for skills

Orgs have a strategy problem, not a skills problem

Leaders have long lamented their lack of cloud skills. But by focusing so heavily on recruitment, they've forgotten about their biggest opportunity: developing their in-house talent.

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Just as organizations move from consuming cloud services to creating value with them, leaders should also shift from consuming cloud talent to creating that talent with the teams they already have.

Not only is investing in workforce development good for your cloud strategy, but technologists are actively seeking out new cloud skills. It's an easy no brainer for tech leaders and their L&D counterparts.

In the short term, developing cloud skills builds literacy across an organization, mitigating the 99% of cloud security failures that **Gartner®** reports are consumers' fault. In the long term, a cloud skill development strategy provides technologists the resources to grow their skills according to their organization's overall cloud strategy.

And you don't have to twist their arms to get technologists on board. **In 2022 alone, we recorded a 2,367% increase in the consumption of cloud courses, labs, and sandboxes across our product.** When asked why they choose to develop their cloud skills, technologists say the top three reasons are to stay up to date in their current job, to gain skills for a specific project, or to find new roles.

The fact of the matter is that leaders' lack of strategy and direction are the biggest impediment to technologists' upskilling.

Without clearly defined cloud strategies to inform the types of talent they need in-house, leaders are playing a game of "Where's Waldo?" without knowing what Waldo even looks like.
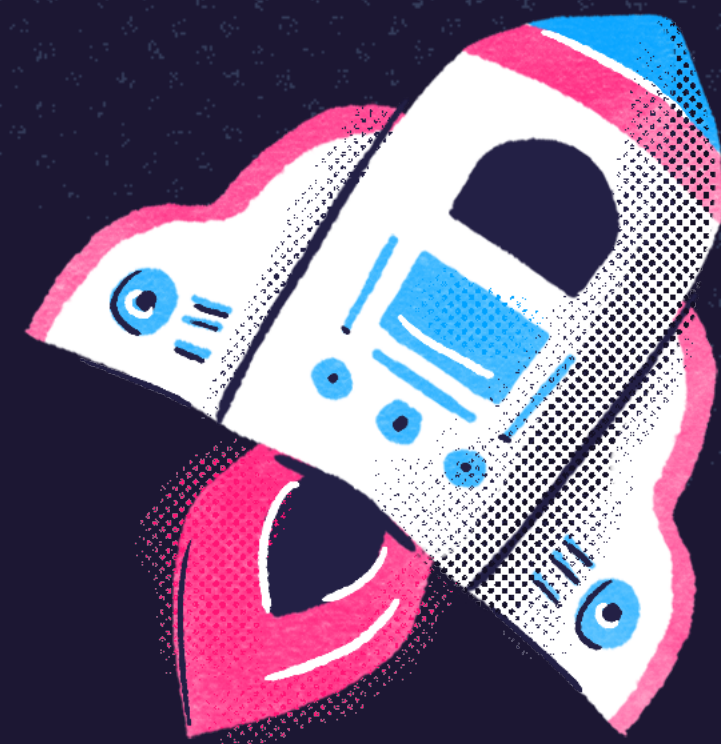
# Top 3 reasons technologists want to upskill

Stay up to date in their roles

Cloud providers launch thousands of new services and product improvements each year. Though **58% of technologists say they have significant experience in the cloud**, cloud tech changes so quickly that even the experts need training to manage the environments they helped build.

Complete a specific project

More than **40% of organizations report their cloud strategies are project-based**. Leaders lack the strategic narrative to help technologists understand the tools, skills, and resources they need to be successful long term instead of just upskilling in reaction to projects.
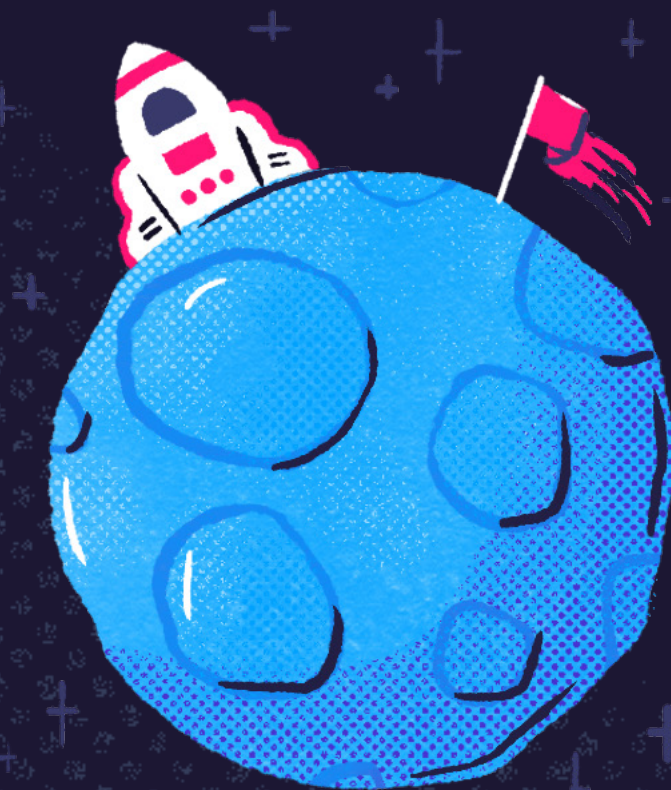
Find new roles

According to Pluralsight's State of Upskilling report, **74% of technologists plan to leave their current organization within the year.** 47% claim they're leaving to grow their responsibilities and skill sets. If they're not growing in your organization, they're probably looking elsewhere.

Doing more with less

Leaders expect to lose cloud roles in next 12 months

As if the pandemic wasn't a big enough obstacle to driving value with cloud tech, the current economic conditions are now creating a longer tail of uncertainty. In the past 12 months, 43% of organizations experienced a layoff, with another 42% saying one is in planning stages for the next 12 months. **The scariest finding? Of those orgs who already experienced a layoff, 66% are planning another.**

Experienced a layoff

Not experienced a layoff

Planning for a layoff

Not planning for a layoff

66% of orgs that *already had layoffs* are *planning another*

Number of organizations

300   200   100   100   200   300

296   223

302   217
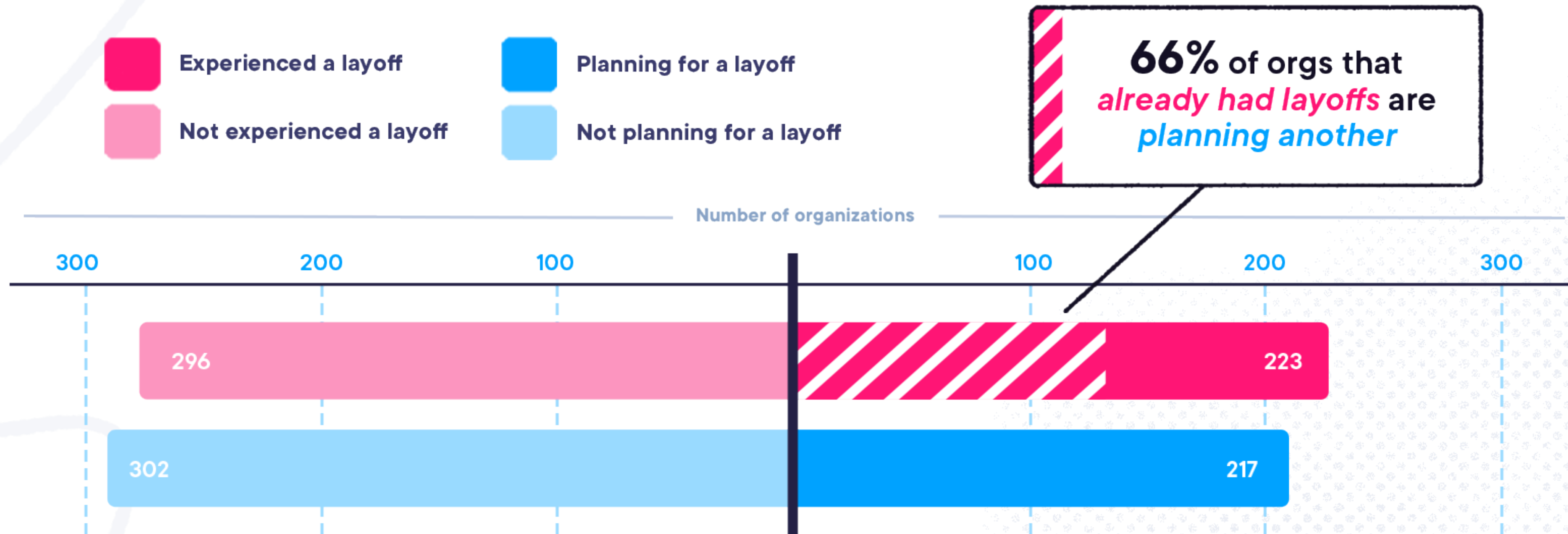
Layoffs impacting roles, not budgets

Cloud roles were relatively secure from the first rounds of layoffs—**only 34% of organizations say more than half of their impacted roles were cloud related.** But we're seeing leaders report that cloud roles are at greater risk in future planned layoffs.
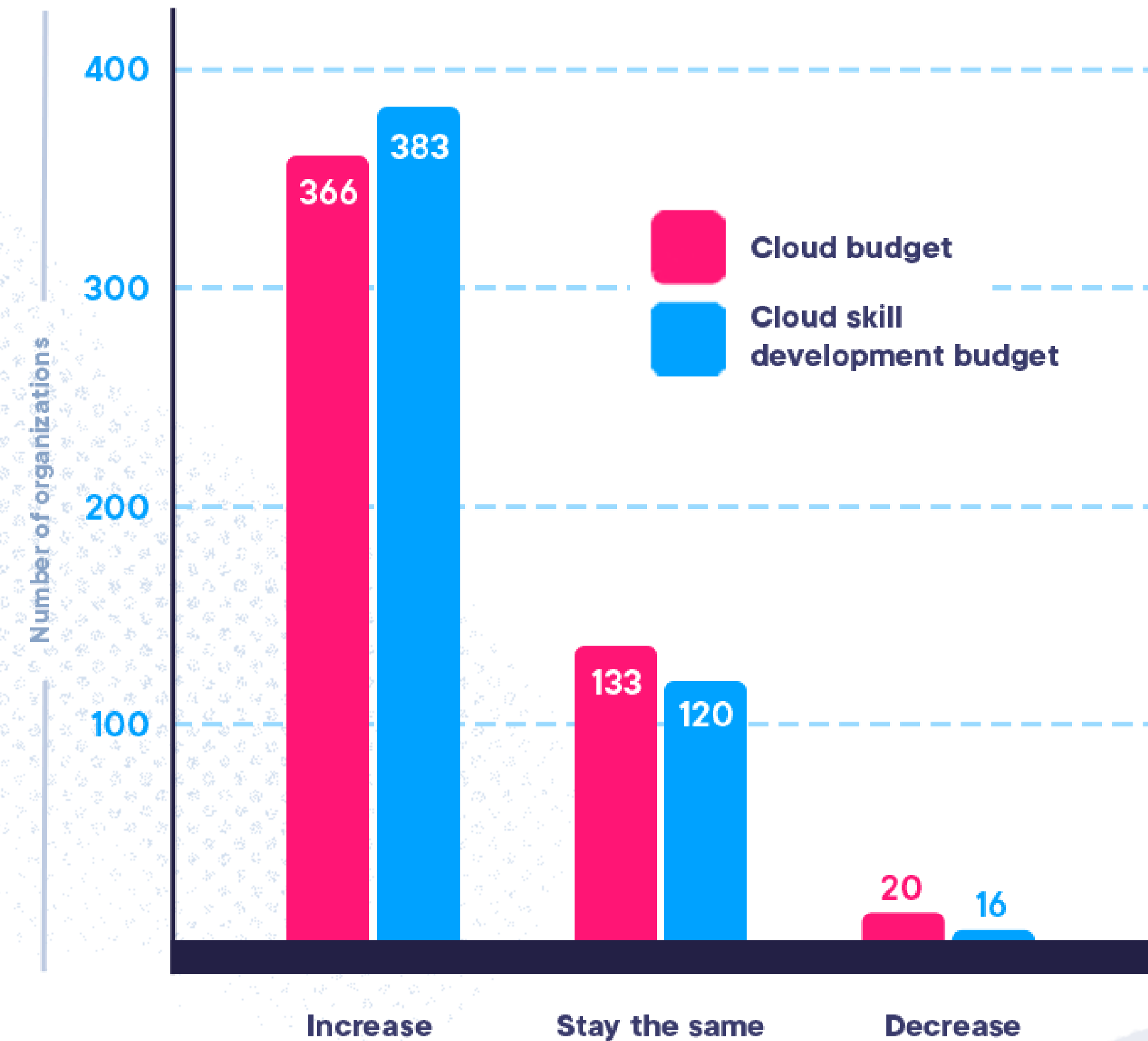
2/3 orgs say less than half of their impacted roles were cloud related

Despite the shadow of current economic climates, Gartner reports organizations will increase their spend on application modernization and cloud platforms by more than 40%, bringing their overall end-user spend projections for public cloud services to nearly $1.2 trillion by 2027.

Our respondents validated these predictions, with 71% of leaders saying their cloud budgets will increase over the next 12 months. And that's not all. 74% of leaders also expect their cloud skill development budgets to increase.

Cloud budgets rise despite economic uncertainty

Number of organizations

- Cloud budget
- Cloud skill development budget

	Increase	Stay the same	Decrease
Cloud budget	366	133	20
Cloud skill development budget	383	120	16

Multicloud immaturity

Multicloud complicates driving value

In addition to the rapid adoption of newly released cloud services, organizations are also increasingly complicating their cloud environments with multicloud initiatives. **More than 65% of organizations currently operate within multicloud environments, with 20% saying they're actively pursuing an additional cloud platform for their cloud environment.**

With economic uncertainty, layoffs, and undefined cloud strategies, multicloud can be a dangerous game to play right now. It's especially hazardous since leaders don't have the safety net of a trained workforce, with only 9% of technologists reporting they have extensive experience with more than one cloud provider.

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A successful multicloud solution is less concerned with the platforms leaders use to create it and more concerned with how they and their teams evaluate, implement, and manage that solution.

Multicloud is a trend with momentum and isn't likely to slow down anytime soon. **But maybe it should.**
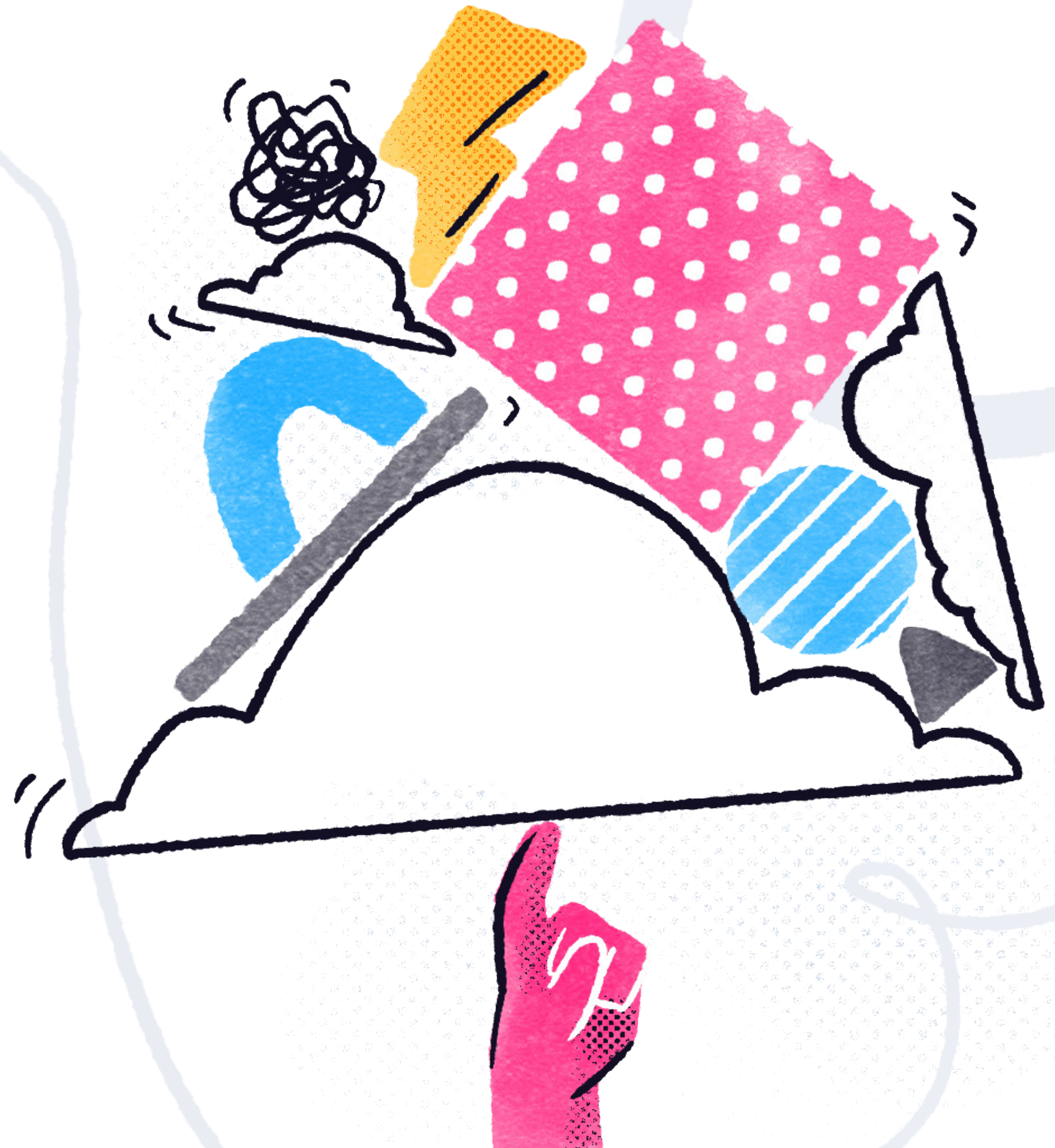
Not all orgs are ready for multicloud

Most organizations are still stuck in the tactical mode of thinking and struggle to reach peak performance with their cloud solutions. Adding another platform to the mix without the right talent, processes, and cloud infrastructure only makes driving that value even harder.

But that's not to say multicloud is a bad idea for all organizations. There are several strategic reasons an organization may choose multicloud, such as to leverage best-of-breed services, enable flexibility, or optimize costs. It's organizations who choose multicloud for tactical reasons that **struggle to scale their challenges the most.**

To enable flexibility at the department, team, or project level

To improve resiliency and business continuity

To leverage "best-of-breed" cloud-native services

Strategic reasons that go the distance

Tactical reasons that hold orgs down

To avoid vendor lock-in and reduce concentration risks

A result of acquisitions, legacy efforts, or organic growth

To reduce or optimize cloud computing costs

Drive value with cloud

The hallmark of a cloud-mature organization

The consumption of cloud services is no longer a differentiator—it's a commodity. The hallmark of a mature organization is how much consumer value they create with their cloud solutions. **The shift from consuming cloud services to creating value with cloud services is what now separates leaders from laggards,** offering speed to market and agility as strategic business advantages.

> **Just as organizations need to create internal cloud skills instead of consuming external talent, leaders should focus on creating value with cloud computing instead of simply consuming cloud services.**

Drew Firment
Chief Cloud Strategist, Pluralsight

But that requires organizations have an operating plan that aligns technology decisions with skill development strategies and desired organizational outcomes.

Top 5 ways orgs create value with cloud tech

1 Develop new ideas, approaches, or methodologies

2 Create new operational processes or workflows

3 Increase agility

4 Reduce or optimize technology costs

5 Expand existing products & services and/or into new markets

Cloud skills should be a part of a cloud strategy

A cloud skill development strategy works hand in hand with your overall cloud strategy. It's how you avoid being one of the **35% of organizations that struggle to tie cloud skills to organizational outcomes or the 32% that don't have clearly defined cloud roles.**

35% of organizations

struggle to tie cloud skills to organizational outcomes

These strategies provide the benchmarks and metrics for technologists to gauge their current state, progress their skills, and provide opportunities for continuous improvement as their organization matures. They also outline the resources like courses, labs, and sandboxes to get your teams from cloud literate to cloud fluent.
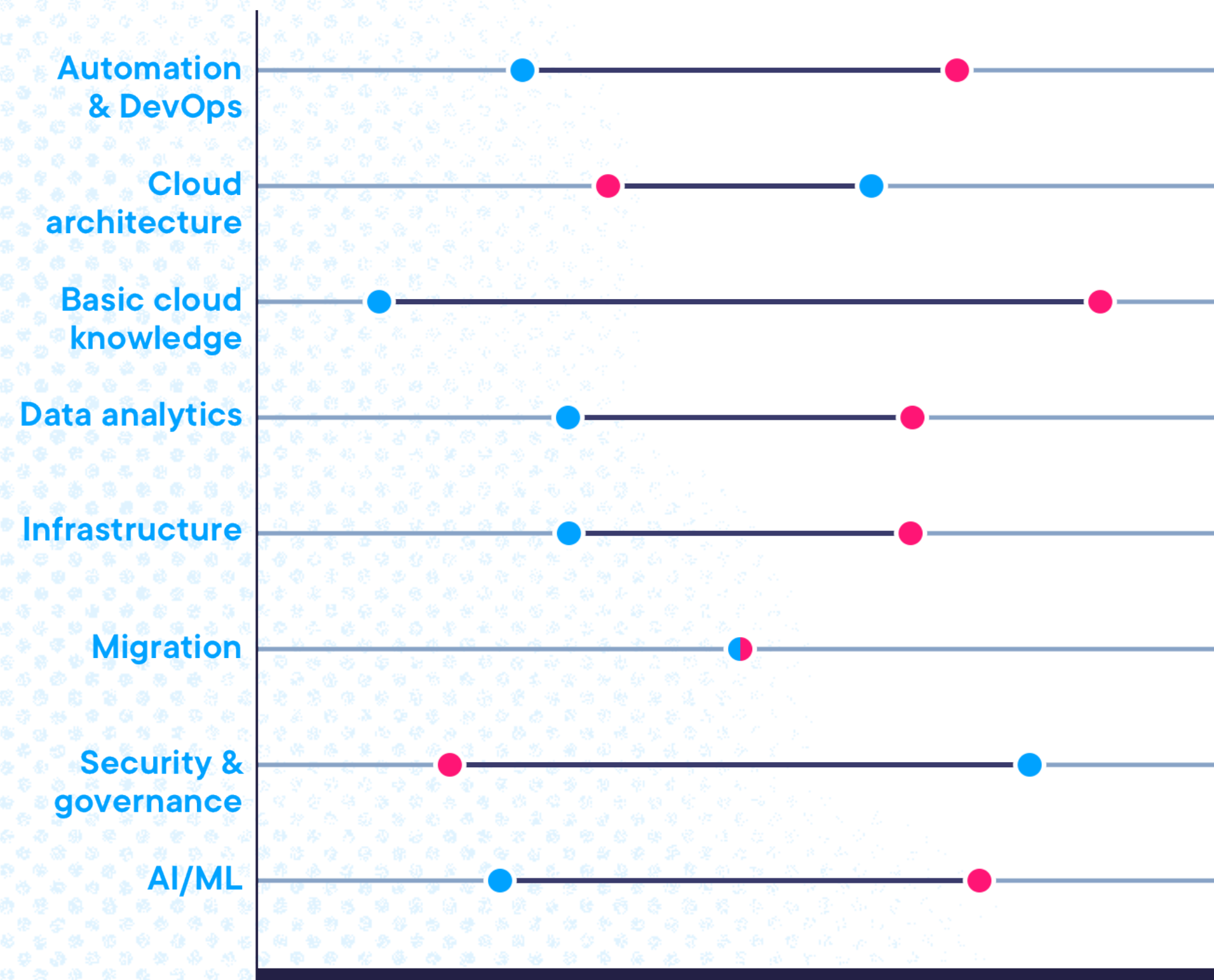
WELLS FARGO +

Leaders at Wells Fargo call their skill development strategy a "Technology College." They built out career and development paths to provide their team benchmarks, offered tools like courses, labs, and sandboxes to assist in learning journeys, and created a network of 36,000 unique learners in their first year. At the beginning of 2022, they put an emphasis on cloud skills and already have 5,000 cloud-certified employees.

A cloud skill development strategy, like Wells Fargo's, creates a critical mass of cloud fluency, offering leaders a strategic advantage for executing their cloud strategy. Because the leaders at Wells Fargo already had their skill development engine built and tuned to the needs of their teams, **all they needed to do was set cloud as the destination and their technologists hit the gas.**

Technologist and leader skill priorities aren't aligned

■ Individuals
■ Orgs

- Automation & DevOps
- Cloud architecture
- Basic cloud knowledge
- Data analytics
- Infrastructure
- Migration
- Security & governance
- AI/ML

Align people, processes, and cloud tech

Organizations are missing out on the benefits of cloud because their teams and leaders aren't on the same page. The easiest example? Cloud security. It's been organizations' top challenge to cloud maturity two years in a row. But when you look at how their leaders and technologists view cloud, it's easy to see why.

Cloud leaders identified security as their top skills gap in 2023, and 79% of them are building (or have built) cloud security policies and procedures. But their technologists aren't nearly as worried. Instead, they identified their top three skills gaps as data (analytics, engineering, and storage), automation and DevOps, and cloud architecture.

Real transformational change happens when leaders and their teams are focused on solving the same problems and driving the same outcomes. Sage is a great example of an organization that aligned their people, processes, and cloud tech to see real results from their cloud systems.

Sage dedicated support, training, and organization to its Security Champion Network to empower their engineering teams and build security capabilities. This network of 180 engineering employees now drives transparency and communication between the security and product teams. **The result? An 82% reduction in time to address security vulnerabilities.**

Orgs need to focus on creating value with cloud tech instead of just consuming it

This year's State of Cloud report finds organizations aren't struggling to implement new cloud products and services. 94% of them are already using cloud technology, and 44% adopt the latest services as soon as they're available.

Their biggest struggle is driving organizational outcomes and creating business value from those cloud services.

When leaders think strategically instead of tactically, invest in cloud skill development, and build a culture of cloud, they establish a new operating model that creates the momentum that drives real, lasting value. It's then that they can start to move their organizations into the transformational stages of cloud maturity.

[Kickstart your cloud transformation.](#)

Methodology

For this report, we set out to answer six main questions to understand the current and future state of cloud computing:

- How do organizations currently (or plan to) operate in the cloud?
- How does the threat of a recession affect the attitudes of cloud leaders and technologists?
- What cloud skills do technologists currently possess and what are they developing?
- What are the best tools, techniques, and strategies to find and develop cloud talent?
- What are the markers of an organization that is winning in the cloud?
- How do organizations move from their current level of cloud maturity to a higher one?

To do that, we blind surveyed more than 1,000 leaders and technologists at every organizational level and across the globe. This report aims to answer these six questions and provide tech leaders actionable insights into how their colleagues think about the cloud, how to use cloud as a differentiator in the market, and, ultimately, how to win in the cloud.

It was impossible to fit all the insights we gleaned into one report, so we've also published all our findings, as well as industry and regional insights.

[View all the findings](#) · [Segment by industry](#) · [Segment by region](#)

Position

Individual contributor	488	48.46%
Manager	312	30.98%
Director/VP	153	15.19%
Executive	54	5.36%

Region

United Kingdom	335	33.20%
India	200	19.82%
Canada	182	18.04%
United States	154	15.26%
Australia	136	13.48%

Industry

Technology	521	51.64%
Financial services	236	23.39%
Healthcare	107	10.60%
Manufacturing	104	10.31%
Government	41	4.06%

About Pluralsight

Pluralsight helps organizations around the globe advance their technology workforce. Because the hardest part of building a business isn't building software and technology. It's building up the people who grow your business. We're the only partner who helps leaders build better teams and better products, all at the same time.

Our upskilling and cloud transformation solutions help you create the talent you need, when you need it. Pluralsight Skills and A Cloud Guru deliver expert-authored courses in the latest technologies paired with unlimited access to hands-on labs, sandboxes, and certification prep. Upskilling your teams with Skills and ACG equips your team to execute on strategic investments that ultimately drive innovation, automation, and efficiency.

Check out our cloud transformation solution

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