The Technology Speaks for Itself
What's Driving Companies to the Cloud

CLOUD FOUNDRY

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Too often, a company's journey to digitization is discussed as a sudden leap into the cloud instead of a gradual shift to an updated business model, a modern culture and a host of cutting-edge technologies selected to meet the company's unique needs. What's missing from that conversation is the context for why a company decides to make this foray into the cloud—and the truly gradual nature of this shift.

What compels companies to move to the cloud? What are the market trends that inform their sudden confidence and the timing of that decision? This report delves into these details.

Our research[1] suggests the leap to the cloud and the journey that follows is, at its heart, a technology story. Business goals may be an incentivizing factor, but they alone do not drive the commitment to move to cloud. Nor are cultural reasons the primary driver—indeed, culture is still an obstacle to many even after they've made the leap.

Rather, our data suggests that cloud adoption is a virtuous cycle—the more companies adopt and then familiarize themselves with cloud technologies, the more they continue to adopt. As companies witness the immediate benefit of using the cloud, they expand their usage.

It is the technology itself that drives this upsurge in adoption. Business value alone is not enough.

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1   ClearPath Strategies conducted this wave of quantitative research as part of the Global Perception Study on behalf of Cloud Foundry Foundation from September 2 to 17, 2018. The survey consisted of 600 interviews of IT professionals and execs, covering 11 geographies (Canada, China, Germany, Hong Kong (SAR), Ireland, India, Japan, Singapore, South Korea, UK, US) and was offered in five languages corresponding to those geographies.

The Dust Has Settled

In December 2018, it is clear we are no longer in the throes of indecision. Companies have settled on cohesive cloud strategies, and the market is coalescing around these choices. As companies move from the evaluation stage and into the adoption of technologies, there is a corresponding trend around commitment to cloud providers. Since November 2017, there has been a 13 point increase in IT decision makers who report they've selected their cloud providers and are beginning to deploy more broadly. For the purposes of this report, "the cloud" is an operating model that includes public clouds and private cloud environments.

Where the Dust Settled

IT decision makers describe their application development environments as much more cloud-based than in our last wave of research in March of 2018. As of September, over 50 percent of IT decision makers report developing 60 percent or more of their applications in the cloud—an increase of 13 points. Additionally, there has been a 17 point increase in public cloud usage (and a six point increase in private cloud usage).

50%+ OF ITDMS DEVELOP **60%+** OF THEIR APPS IN THE CLOUD
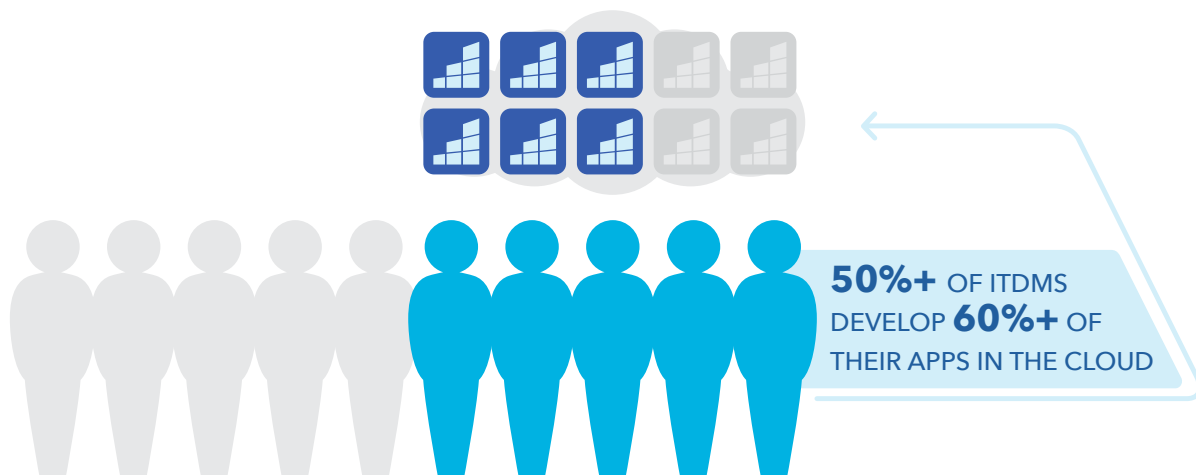
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This practice is not unique to organizations focusing only on the development of new cloud native applications—there is a pronounced push from companies to re-architect and move legacy applications to the cloud. The breakdown may not be what you think. Just 25 percent of IT decision makers report focusing primarily on new cloud native application development, though nearly half report they do at least some new cloud native application development. Almost a third of IT decision makers report doing some lift-and-shift of their legacy apps to the cloud, and 40 percent state they are doing some re-architecting and refactoring legacy apps as part of their application development workflow.

HOW IT DECISION MAKERS ARE DEVELOPING IN THE CLOUD

25% mostly building new cloud native apps

31% do some lift and shift of legacy apps to the cloud

40% do some re-architecting/refactoring legacy apps as part of their app dev workflow

45% do some new cloud native app development
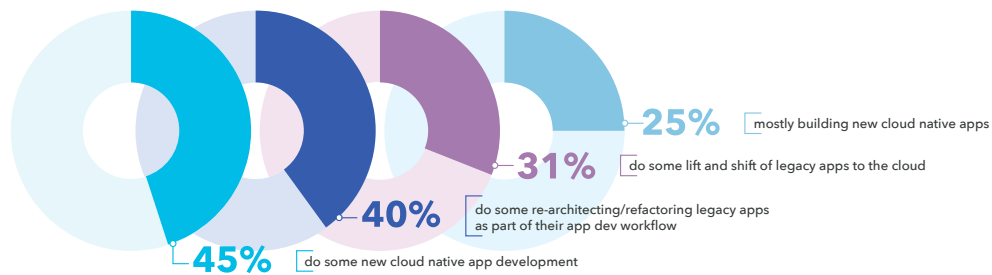
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This demonstrates an unwavering transition to the cloud, regardless of whether companies are developing new cloud native applications or continuing to work with their legacy applications.

Of course, once companies choose a cloud provider or providers, they immediately start searching for the right integrations that enable their platforms to interoperate with existing tooling and legacy applications as well as take advantage of new cloud native application architectures. The data shows a 17 point increase year-on-year of those who report they are now in the process of integrating their new tools into and exploring more features of current, fully developed IaaS and PaaS technologies.

This more advanced engagement with cloud not only instigates a need for integrated solutions— it impels companies to experiment more willingly. In fact, there is a 16 point increase year-on-year of IT decision makers who report experimenting and adopting the latest innovative technology to build on top of existing cloud solutions.

Business Built the Wheel—But Technology is the Driver

The data from the last three years constructs a narrative about this explosion of cloud adoption. In less than two years—from September 2015 to April 2017—there was a profound shift in priorities among IT decision makers. In 2015, IT decision makers were split almost exactly in half when it came to business priorities: 51 percent believed that reducing operating costs and increasing efficiency should be the highest business priority while 49 percent felt agile development and continuous deployment were the highest priorities for business.

But only 18 months later, that had shifted. 57 percent believed agile development and continuous deployment should be the highest business priorities, while 43 percent believed reducing operating costs and increasing efficiency were the highest priorities for business.

IT DECISION MAKERS INCREASINGLY PRIORITIZE AGILE DEVELOPMENT

51%

57%
AGILE DEVELOPMENT AND
CONTINUOUS DEPLOYMENT

49%

43%
REDUCING OPERATING COSTS
AND INCREASING EFFICIENCY

2015   2017
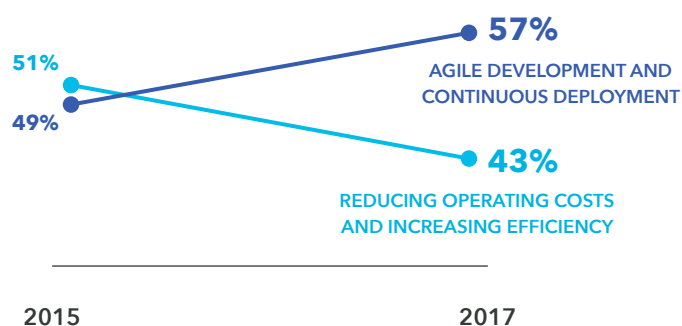
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Nevertheless, companies were not yet crossing the chasm then at the rate they are now, in late 2018. While the business priorities had shifted to concentrate on technical agility, companies still lacked familiarity and comfort with the technology, preventing them from making the move to the cloud.

What Changed?

This leap to the cloud has been driven by increased comfort and subsequent adoption of more sophisticated technologies. As companies began to adopt new technologies, their comfort level deepened—generating a cycle of faster, more willing adoption.

The increased comfort level with technologies and tools at the platform and application development layer of the stack is reflected in the data. Over the course of three years, the research tracks "PaaS" and "containers" as terminology respondents feel they can explain to a colleague—and the data shows the comfort level has grown remarkably during that time.

Since February 2016, there is an increase from 63 percent of respondents who say they can comfortably explain PaaS to a colleague to 74 percent in late 2018. The jump in familiarity around containers is even more rapid, with the numbers rising from 24 percent in February 2016 to 49 percent today.

**IT DECISION MAKERS INCREASINGLY
COMFORTABLE WITH CLOUD TERMINOLOGY**

PAAS

CONTAINERS

11% INCREASE IN COMFORT LEVEL

25% INCREASE IN COMFORT LEVEL
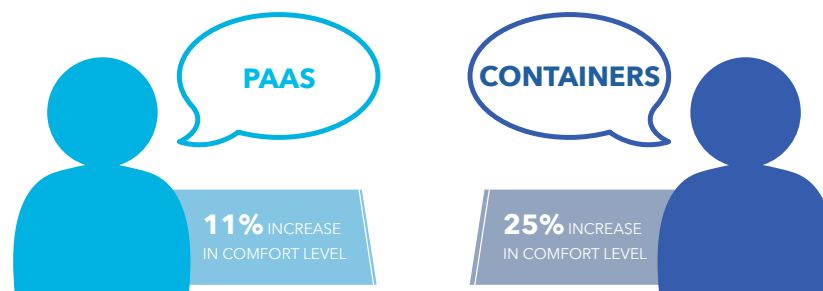
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The Correlation Between Awareness and Adoption

It isn't just that companies are more familiar with these terms—they are demonstrating broader, more sophisticated usage of the technologies.

A plurality (44 percent) of respondents report using a PaaS, and when combined with those saying they are currently evaluating PaaS, 83 percent are either using it in limited deployment, or evaluating it. Only 14 percent report not using a PaaS (and three percent do not know).

Containers are on track for usage to overtake the evaluation/limited deployment stage, with usage at 38 percent and rising eight points between March and September. Non-usage of containers continues to fall precipitously, with only 13 percent reporting they do not use containers.
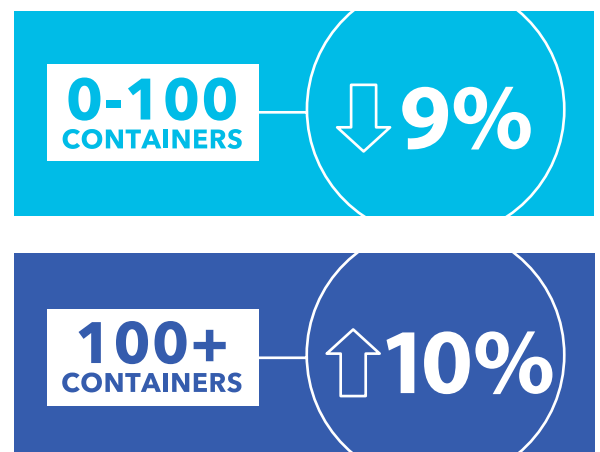
As discussed in our recent report Where PaaS, Containers and Serverless Stand in a Multi-Platform World, containers themselves are "crossing the chasm." There is a big shift over the past two years in how many containers are being deployed by companies using containers. In August 2016, a 51 percent majority reported deploying between 0 and 100 containers and 37 percent reported deploying over 100 containers.

Today, those numbers are almost flipped, with 47 percent deploying more than 100 containers to only 42 percent deploying 100 or less, a change of 19 points over two years.

CHANGE IN CONTAINER DEPLOYMENT OVER TWO YEAR PERIOD

0-100 CONTAINERS ⬇ **9%**

100+ CONTAINERS ⬆ **10%**

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Serverless is demonstrating even more rapid adoption. In just the past six months, awareness has swelled to the point that it is now in its next phase of adoption, with a plurality evaluating the technology. This finding is analogous to the July 2016 data on containers. While serverless is still considered niche, the data forewarns of serverless making the leap from niche use cases to much broader adoption in the near future—especially as companies become more comfortable with the cloud and seek to abstract more tasks away from their development and DevOps teams.

Again, it's a virtuous cycle—as companies familiarize themselves with a technology, there is an upswing in adoption of that technology at near lightning speed. In a decade, serverless will be as commonplace as PaaS is today.

The technology itself is driving companies to make the leap into cloud. But culture change presents a new kind of challenge that companies must face head-on to ensure productivity once they cross the chasm.

In February 2016, almost 40 percent of respondents reported the technology was a bigger obstacle for their company's efforts to improve its application development productivity. Just 25 percent cited culture as the bigger obstacle, and 37 percent considered both obstacles to productivity.

In 2018, we see that number flipped. Now, 44 percent believe the bigger problem for their company is the need for culture change, compared to only 33 percent who say selecting and integrating the right tools and technologies is the obstacle. A remaining 23 percent are undecided.

**BIGGEST OBSTACLE TO IMPROVING
APPLICATION DEVELOPMENT PRODUCTIVITY**

CULTURE

2016	25%
2018	44%

19% INCREASE
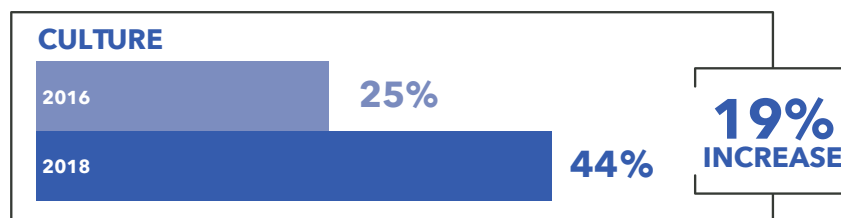
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These findings suggest that a commitment to culture change across the organization is necessary to maximizing the business opportunity of newly adopted technologies. While increasing usage of and comfort with cloud is a virtuous cycle that boosts adoption and familiarity, it isn't enough to make it across the chasm—you have to create a new culture once you're there.

The data from our research over the last three years paints a clear picture: if it weren't for the maturity of the technology, adoption would have tapered off and comfort with the technology never would have occurred. The flexibility and agility of cloud technologies streamlined developers' work, boosted productivity and helped foster the beginnings of a culture comfortable with cloud.

While business priorities have shifted, it is the familiarity that grew out of cloud usage that pushed companies further along their cloud journey—not the business goal itself. We are seeing a massive uptake of cloud technologies that will continue to expand across markets and verticals, globally. This is a direct result of easier-to-use technologies (such as cloud) being used by more experiential-driven people and cultures (such as developers).

This is a virtuous cycle.

When we talk about a company's transition to the cloud, there are three major players: the technology itself, business goals and culture. Culture change remains a priority for companies eager to evolve further down the path on their cloud journey, and is of growing importance for organizations as they forge ahead into the future. As companies move ahead, culture risks falling behind.

Though business goals may be incentives, they alone do not drive the move to cloud. It is the technology itself that spins up the virtuous cycle of adoption among developers. It is, after all, a technology story.