2020

Red Hat
Global Customer
Tech Outlook

At Red Hat we're constantly speaking and working with a large and diverse set of customers on their IT challenges. As a result, we hear about their priorities, their issues, and their view of the world on a daily basis. However, we also periodically ask them questions more systematically through a survey. This year, we thought it would be useful to share some of our findings more broadly. The results are based on 876 qualified responses from Red Hat customers. Data was collected in August and September 2019. We conducted a **similar survey** last year so we can also share some interesting trends.

Here's what we learned about five key areas.

One

Hybrid was the most common (31%) term they used to describe their cloud strategy.
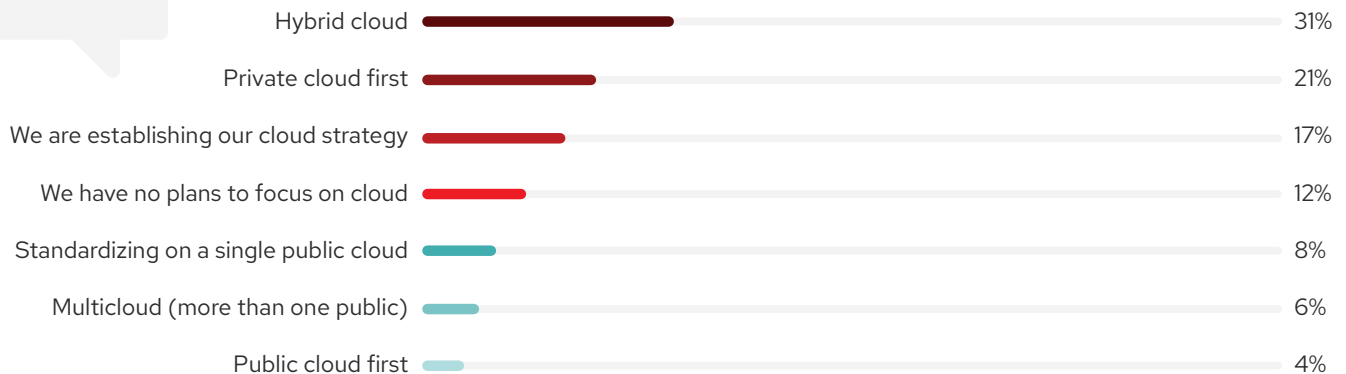
The reasons they gave for having a hybrid cloud strategy were diverse but overall data security, cost benefits, and data integration led the pack. However, given all the talk around hybrid cloud in the market, you might think 31% seems low. Is everyone rushing to turn to a public cloud instead?

That turns out not to be the case. In fact, only 12% described themselves as having either a "public cloud first" strategy or a strategy to standardize on a single public cloud. (6% more described their strategy as multicloud based on multiple public clouds.)

Many of the rest (21%) have a private cloud first strategy. In fact, in EMEA, more respondents described themselves as having a private cloud strategy than a hybrid one.
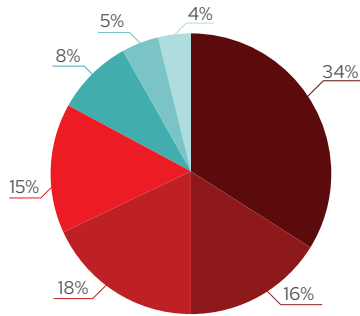
And many of those who answered the survey don't know yet. 17% are working on it but a full 12% have no plans. This is a useful reminder that many organizations around the world have yet to adopt tech trends and technologies that may seem dated to others.

Which of the following best describes your cloud strategy?

Hybrid cloud	31%
Private cloud first	21%
We are establishing our cloud strategy	17%
We have no plans to focus on cloud	12%
Standardizing on a single public cloud	8%
Multicloud (more than one public)	6%
Public cloud first	4%

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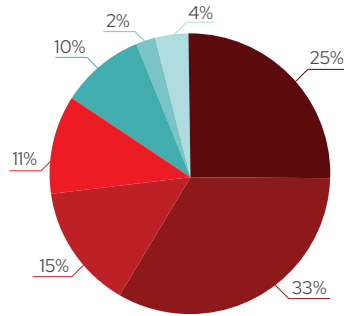
Cloud strategies by region

NA

- 34%
- 16%
- 18%
- 15%
- 8%
- 5%
- 4%

EMEA

- 25%
- 33%
- 15%
- 11%
- 10%
- 2%
- 4%

APAC

- 35%
- 19%
- 17%
- 3%
- 9%
- 11%
- 6%

LATAM

- 39%
- 31%
- 8%
- 8%
- 15%
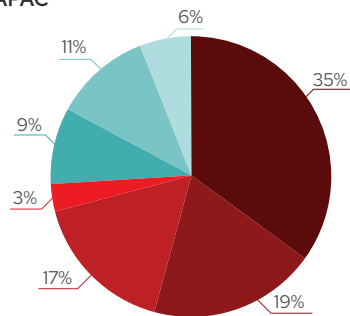
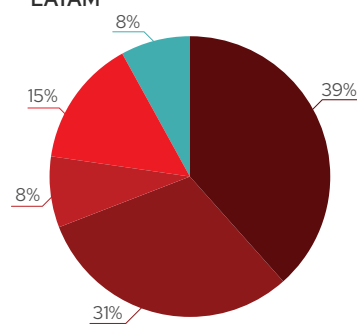**Legend:**
- Hybrid cloud
- Private cloud first
- We are establishing our cloud strategy
- We have no plans to focus on cloud
- Standardizing on a single public cloud
- Multicloud (more than one public)
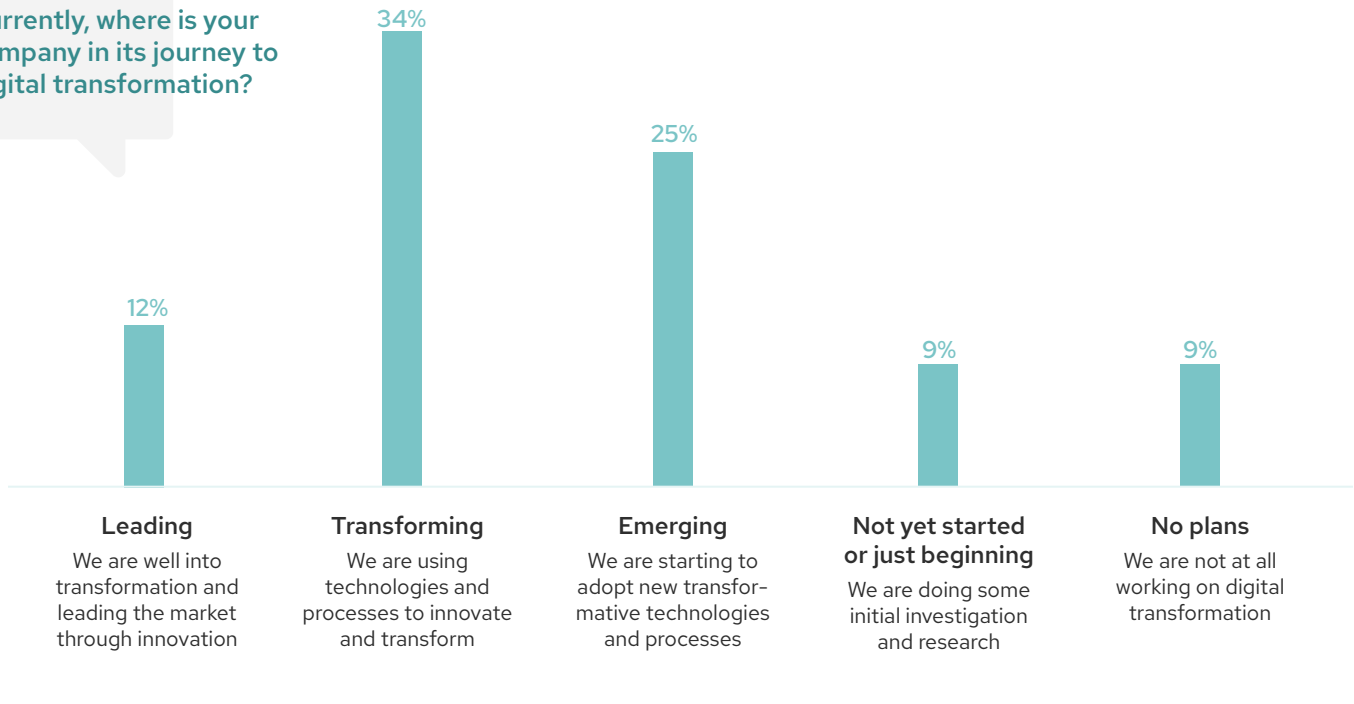- Public cloud first

Two

Digital transformation projects continue to ramp up.

Over the past 2 years, we've seen our customers move from having no digital transformation plans (32% in 2018, 14% in 2019, 9% for the current 2020 survey) to implementing new tech and processes (31% in 2018, 50% in 2019, 59% for 2020). That's an 18% increase relative to last year.
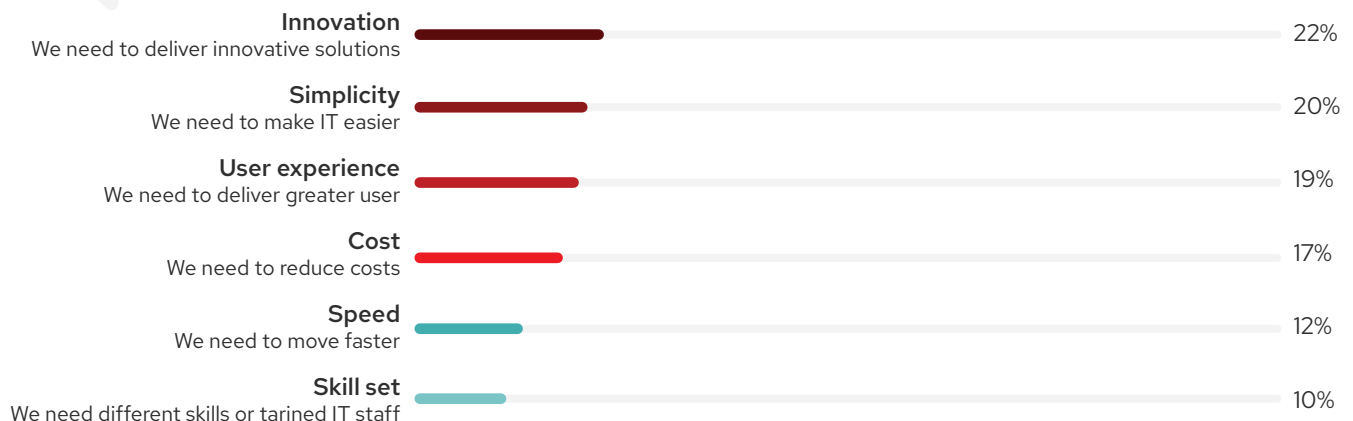
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34%

25%

12%

9%

9%

Leading
We are well into transformation and leading the market through innovation

Transforming
We are using technologies and processes to innovate and transform

Emerging
We are starting to adopt new transformative technologies and processes

Not yet started or just beginning
We are doing some initial investigation and research

No plans
We are not at all working on digital transformation

The drivers for these projects vary. And the drivers also vary by the role of the respondent. System administrators care most about simplicity. IT architects focus on user experience and innovation. For managers, simplicity, user experience, and innovation are all tied for top priority. Developers prioritize innovation—which, overall, was cited as the most important reason to do digital transformation projects.

If you were to characterize your absolute top priority for your company's digital transformation in a single term, which of the following would best fit?

Innovation
We need to deliver innovative solutions
22%

Simplicity
We need to make IT easier
20%

User experience
We need to deliver greater user
19%

Cost
We need to reduce costs
17%

Speed
We need to move faster
12%

Skill set
We need different skills or tarined IT staff
10%

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At first glance, the digital transformation push would seem to run counter to the relative conservatism around cloud infrastructure adoption. But it's useful to put digital transformation in context. Yes, companies are pushing (and being pushed) hard to innovate. But our customers are still working to optimize their existing IT; it's difficult to innovate without getting one's existing IT in order first. In fact, the survey found that optimizing existing IT was the top (18%) single technology funding priority.

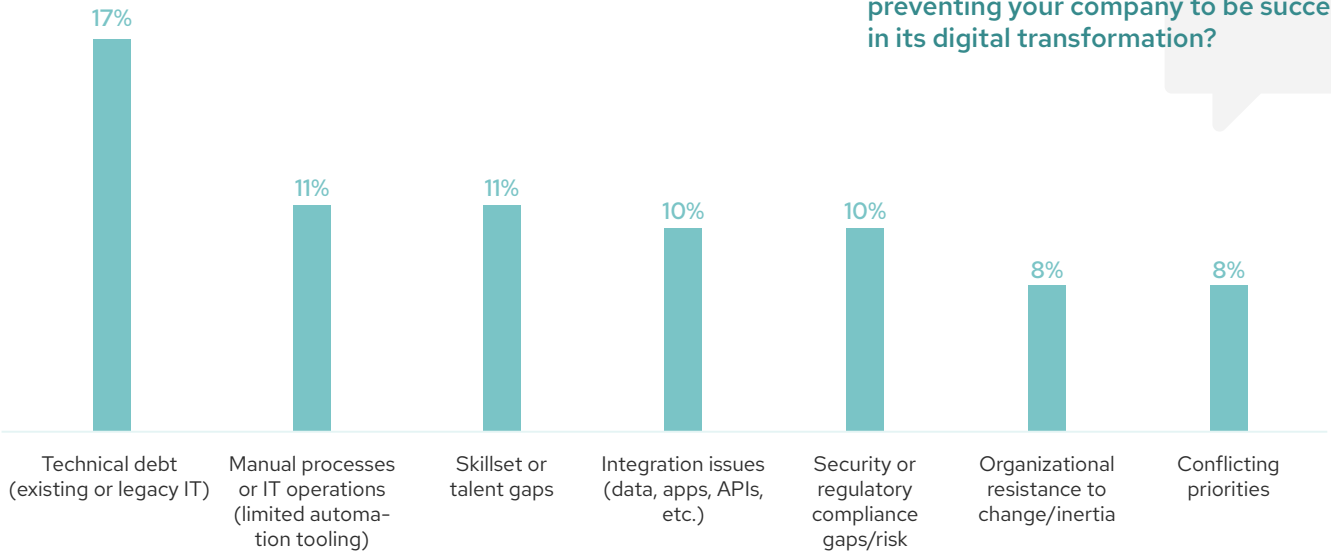**Over the next 12 months, what are your company's top IT technology funding priorities?**

Optimizing existing IT	18%
Cloud infrastructure	13%
IT security	12%
IT operations automation	11%
Enterprise integration	10%
Application development	9%
IT/cloud management	7%
Analytics/big data	6%
Automating business processes	6%
Storage	6%
Other	2%
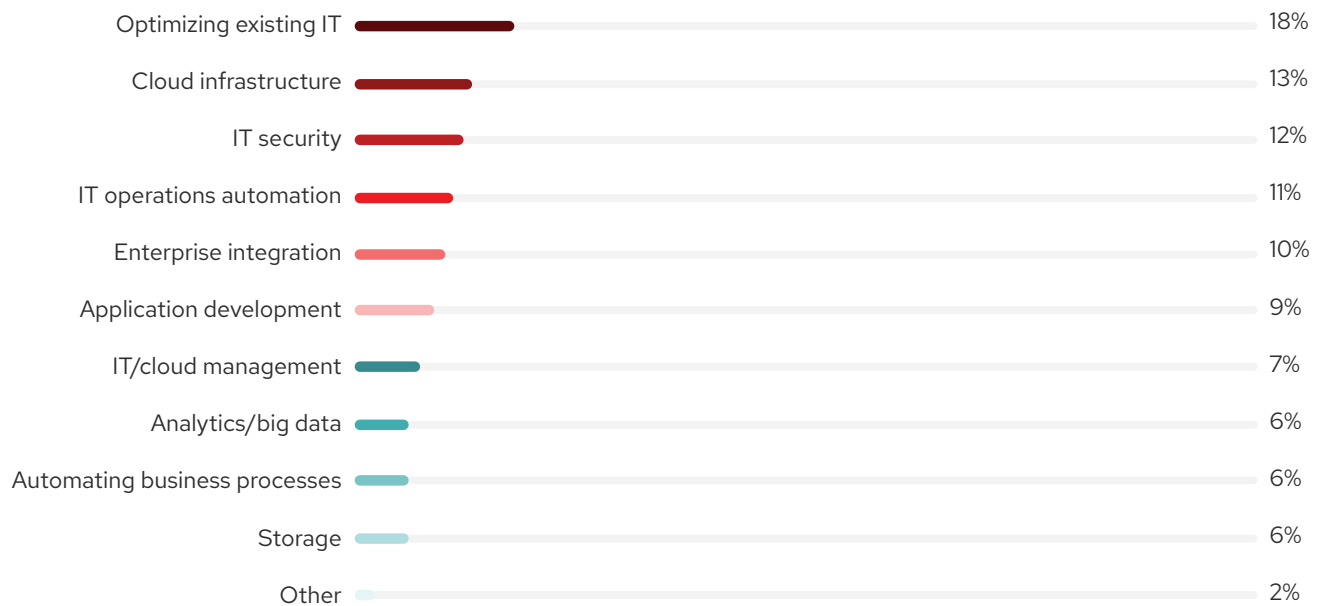
Three

But technical skills are a challenge.

11% of our customers said they are facing skillset and talent gaps when it comes to transforming their businesses. At first glance, that may not sound so bad. But consider that another 17% cited challenges around technical debt and still another 11% said that they didn't have enough automation in place—much of which comes down to not having enough of the right skills to deal with these barriers.
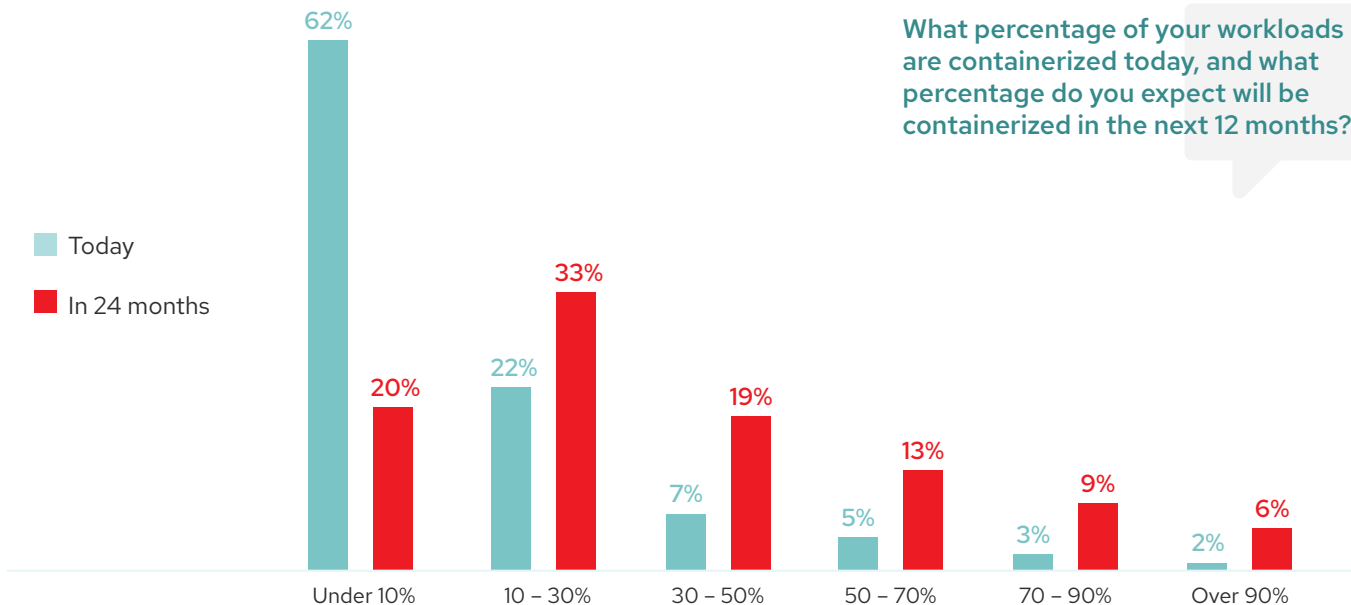
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2020 Red Hat Global Customer Tech Outlook

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What do you think are the top barriers preventing your company to be successful in its digital transformation?

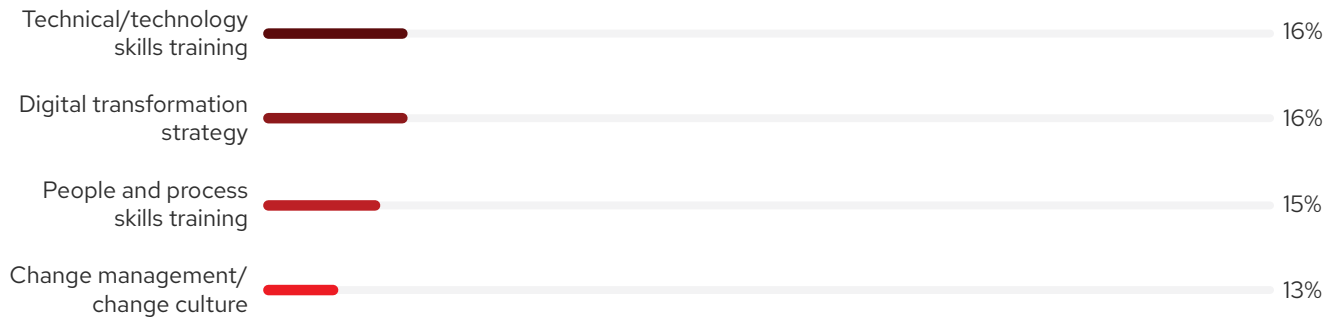| Barrier	%
Technical debt (existing or legacy IT)	17%
Manual processes or IT operations (limited automation tooling)	11%
Skillset or talent gaps	11%
Integration issues (data, apps, APIs, etc.)	10%
Security or regulatory compliance gaps/risk	10%
Organizational resistance to change/inertia	8%
Conflicting priorities	8%

The shortage of appropriate skills is only exacerbated by the number of new technologies coming on board. Container use continues to increase. 62% of respondents say they have minimal (less than 10%) container use today but only 20% say that will still be the case in 24 months. Meanwhile, the percentage with more than half their workloads containerized is expected to almost triple—to 28%—over the same period. Increases in the number of different public cloud providers used can also put a strain on staff resources.

What percentage of your workloads are containerized today, and what percentage do you expect will be containerized in the next 12 months?

	Today	In 24 months
Under 10%	62%	20%
10 – 30%	22%	33%
30 – 50%	7%	19%
50 – 70%	5%	13%
70 – 90%	3%	9%
Over 90%	2%	6%

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Companies do recognize the importance of building up technical skills. When asked to choose their top non-IT funding priorities, customers chose both technical skills training (16%) and a digital transformation strategy (16%).

Over the next 12 months, what are your company's top funding priorities outside of IT technology products or solutions?

Technical/technology skills training ●————————————————————— 16%

Digital transformation strategy ●————————————————————— 16%

People and process skills training ●————————————————————— 15%

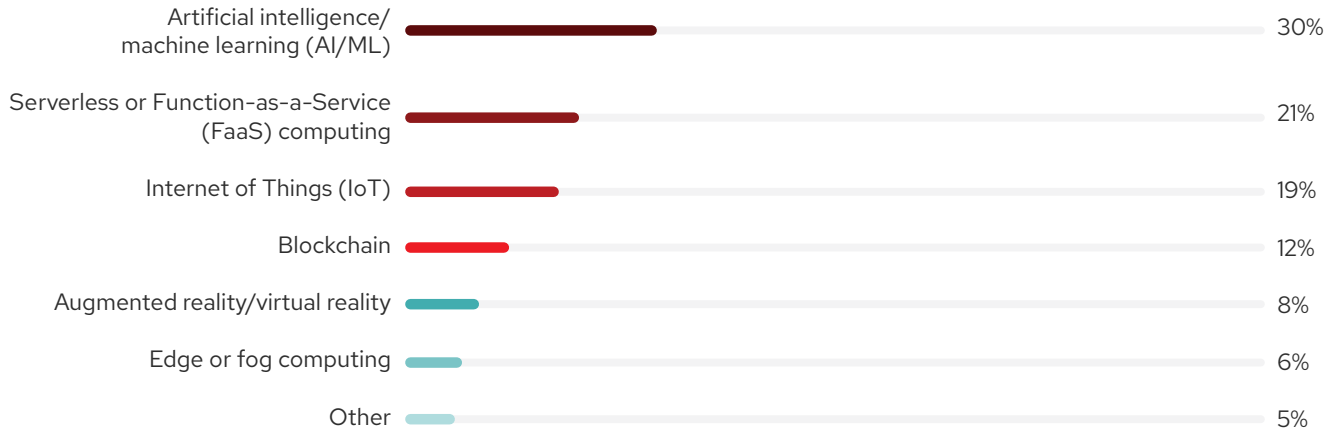Change management/ change culture ●————————————————————— 13%

Four

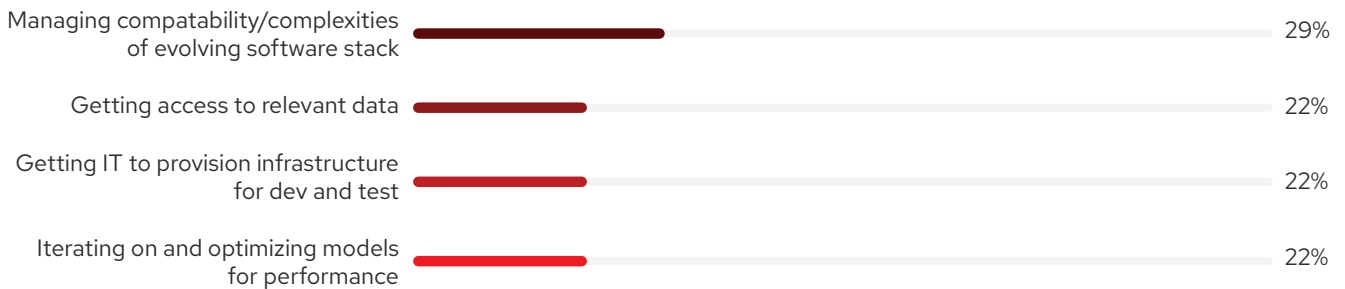# Artificial intelligence/machine learning (AI/ML) is a priority.

This year, AI/ML has leaped to the front of the line when our customers choose to implement emerging tech workloads. 30% plan to be using AI/ML over the next 12 months if they aren't already doing so. This is a fairly dramatic departure from last year when blockchain was at the top of the list and AI/ML wasn't even in the top three. (12% still plan to adopt blockchain but that puts it quite a way below both serverless at 21% and a combination of Internet of Things and fog/edge computing at 25%.)

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What emerging technology workloads are you most likely to consider using in the next 12 months (or are currently planning on using)?

Artificial intelligence/ machine learning (AI/ML)	30%
Serverless or Function-as-a-Service (FaaS) computing	21%
Internet of Things (IoT)	19%
Blockchain	12%
Augmented reality/virtual reality	8%
Edge or fog computing	6%
Other	5%

But adopting AI/ML isn't without its challenges. Managing compatibility and complexity as technology was the biggest barrier cited (29%). But getting access to relevant data, provisioning infrastructure, and optimizing models for performance were all cited by 22%. The data aspect in particular is something that we often see overlooked; obtaining relevant data and cleansing or transforming it in ways that it's a useful input for models can be one of the most challenging aspects of an AI project.

What are your top challenges to get an artificial intelligence/machine learning project up and running?

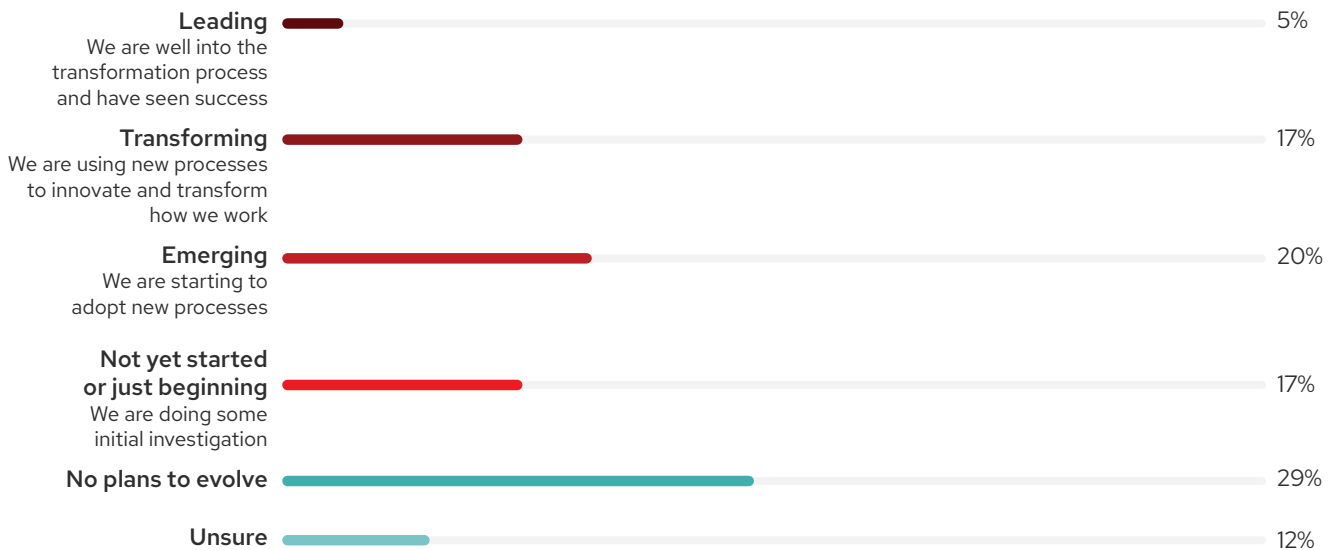|	
Managing compatability/complexities of evolving software stack	29%
Getting access to relevant data	22%
Getting IT to provision infrastructure for dev and test	22%
Iterating on and optimizing models for performance	22%

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Five

It's not just about the technology.

As we've seen, more and more organizations are pursuing digital transformation projects. But fewer have reached the same stage when it comes to organizational changes to improve collaboration and transparency. In fact, only 5% describe themselves as leaders who are well into the process and 29% have no plans to evolve to an open organizational culture at all.
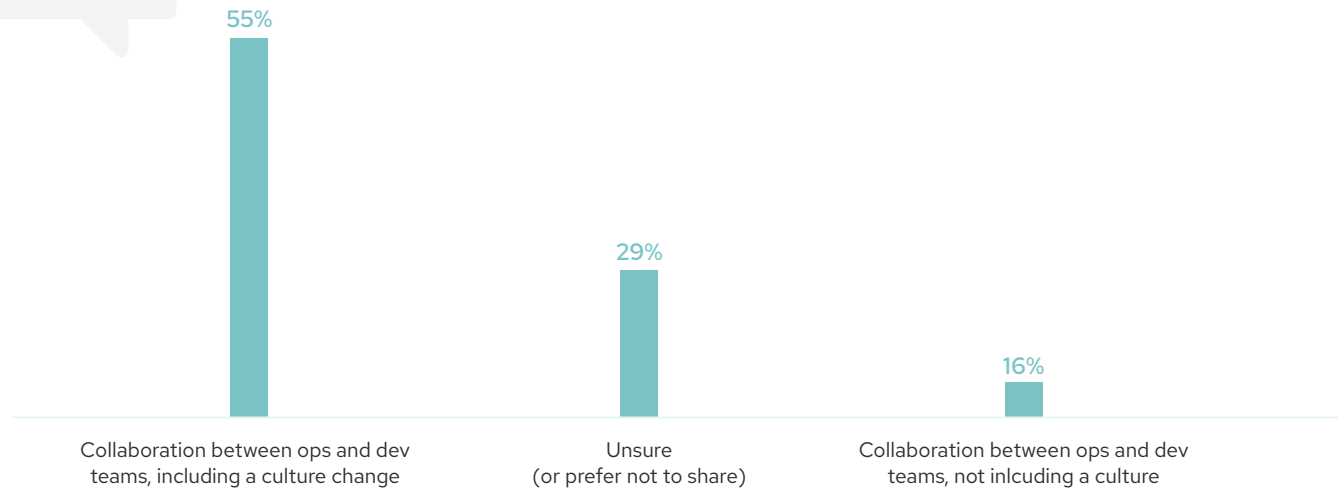
How would you characterize your company's status in evolving to an open organization culture?

Leading
We are well into the transformation process and have seen success — 5%

Transforming
We are using new processes to innovate and transform how we work — 17%

Emerging
We are starting to adopt new processes — 20%

Not yet started or just beginning
We are doing some initial investigation — 17%

No plans to evolve — 29%

Unsure — 12%

At the same time, there are signs of change. 37% say that their culture evolution is either emerging or in the process of transforming. Furthermore, 55% recognize that DevOps requires a culture change to, among other things, enable collaboration between developers and operations teams. Only 16% thought that this kind of collaboration doesn't require culture change.
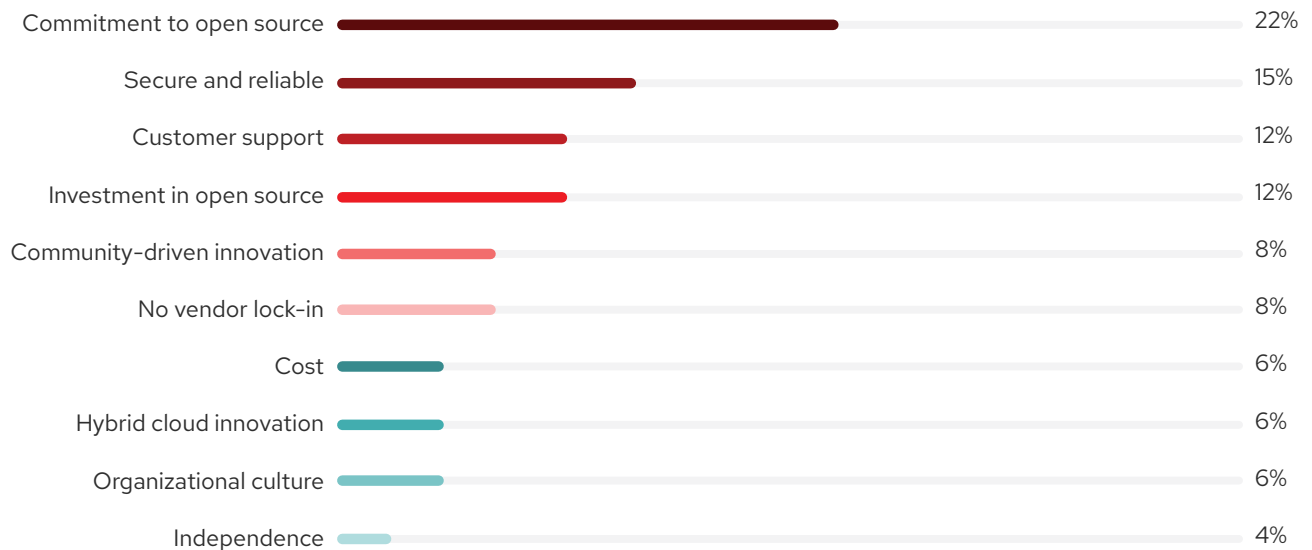
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According to Gartner, DevOps is defined as seeking to improve collaboration between operations and development teams and emphasizes people (and culture). What does DevOps mean at your company?

55%

29%

16%

Collaboration between ops and dev teams, including a culture change

Unsure (or prefer not to share)

Collaboration between ops and dev teams, not inlcuding a culture

We also see the attitude of many customers to openness reflected in other ways in this and other surveys. For example, as you would expect, desirable enterprise software attributes as security/reliability and customer support are among the leading reasons (#2 and #3 respectively) given as the top value of working with Red Hat as a technology provider. But commitment to open source is the top reason at 22% and related answers such as Red Hat open source investments and community-driven innovation also rank highly.

What do you value most in partnering with Red Hat?

Commitment to open source	22%
Secure and reliable	15%
Customer support	12%
Investment in open source	12%
Community-driven innovation	8%
No vendor lock-in	8%
Cost	6%
Hybrid cloud innovation	6%
Organizational culture	6%
Independence	4%

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Conclusion

Digital transformation isn't just a buzzword. It's a change that many organizations are serious about tackling. But the Red Hat Global Customer Tech Outlook 2020 also highlights some of the realities that face many organizations. For many, getting their existing IT infrastructure in order will be a prerequisite to larger digital transformation initiatives. While this is happening, a majority of these organizations are continuing to pursue hybrid cloud, and a lesser but still strong number of organizations are pursuing private cloud-first over those exclusively using public clouds. And you can't forget the people, whether it's upleveling skills or transforming the organization itself.

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