RESEARCH REPORT

March 2018

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2018 State of DevOps

As adoption of DevOps practices increases, organizations are focusing their efforts and expectations on releasing better-quality applications at a much faster rate and using specialized tools to do so.

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Cynthia Harvey is a freelance writer and editor based in the Detroit area. She has been covering the technology industry for more than 15 years.

EXECUTIVE SUMMARY

DevOps practices encourage closer collaboration between developers and IT operations personnel. This approach relies heavily on automation to speed the development and deployment of applications, while improving overall efficiency, decreasing outages, and allowing organizations to recover from failures more quickly.

This second-annual survey asked 150 business technology decision makers about their use of DevOps and the impact those practices have had on their organizations. It revealed big changes between 2017 and 2018, including the following:

- DevOps is now widespread. A third of respondents said they have already implemented the approach (up from 18% last year), and another 35% plan to adopt the methodology before the year is up.
- Organizations need speed, with 53% reporting that the pressure to release applications more quickly was driving their DevOps adoption, up from 29% last year.
- Respondents are realizing increased speed as a key benefit of DevOps, with 69% saying DevOps has increased the speed and frequency of application deployment, compared to 39% last year.
- As a result of DevOps, 80% of respondents have seen either "significant" or "moderate" improvement in time spent fixing and maintaining applications.
- Of those surveyed, 76% said their developers were using agile methodologies.
- Docker, Slack, and GitHub are among the most popular tools used by DevOps teams.

ABOUT US

Interop ITX

Interop ITX is the industry's most trusted independent conference focused on Full Stack IT education for technology leaders. The event continues the 30 years Interop has dedicated to providing IT professionals with a trusted environment to learn, collaborate, and uncover new strategies and solutions they need to lead their businesses through constant change and disruption. Interop ITX offers both breadth and depth of content to a broad IT audience across core areas: Cloud, Data & Analytics, DevOps, Government, Infrastructure, Leadership & Professional Development, and Security. For more information, visit InteropITX.com.

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RESEARCH SYNOPSIS

Survey Name: Interop ITX and InformationWeek 2018 State of DevOps

Survey Date: February 2018

Region: North America

Respondent base: 150 technology professionals involved in purchasing technology for their employers. The margin of error for the total respondent base (N=150) is +/- 7.9 percentage points.

Methodology: Interop ITX and InformationWeek surveyed business technology decision makers at North American companies on DevOps-related topics. The survey was conducted online, and respondents were recruited via an email invitation containing an embedded link to the survey. The email invitation was sent to a select group of UBM's audience. More than four out of 10 of the resulting respondents (43%) work in an IT management role, and more than a third (34%) work in application development. Nearly half (49%) were from enterprises with more than 1,000 employees. UBM was responsible for all programming and data analysis. These procedures were carried out in strict accordance with standard market research practices.

The Big Picture

One of the most important findings in this year's survey is that people now understand what DevOps is all about. This year, 84% of respondents indicated that they were familiar or very familiar with DevOps, compared to 60% who said the same thing last year. The "very familiar" category saw a particularly high spike, climbing from 18% to 47%.

IT pros don't just know about DevOps — more are actually using the practices. A full third said they have already adopted the approach, compared with just 18% who said the same in 2017 **(Figure 1)**. Two-thirds either have already implemented DevOps or plan to do so before the year is up, and only 9% have no DevOps plans.

As DevOps becomes more commonplace, the factors driving adoption have evolved. Last year, the No. 1 driver for the methodology was the need to improve quality and performance of applications (55%), followed by the need to improve the end customer experience (48%) and the need to reduce IT costs (35%) **(Figure 2)**. This year, the desire for better applications seems to have intensified, with 73%

Figure 1

Expected Timeline to Adopt DevOps

What is your expected timeline to adopt DevOps principles in your organization?
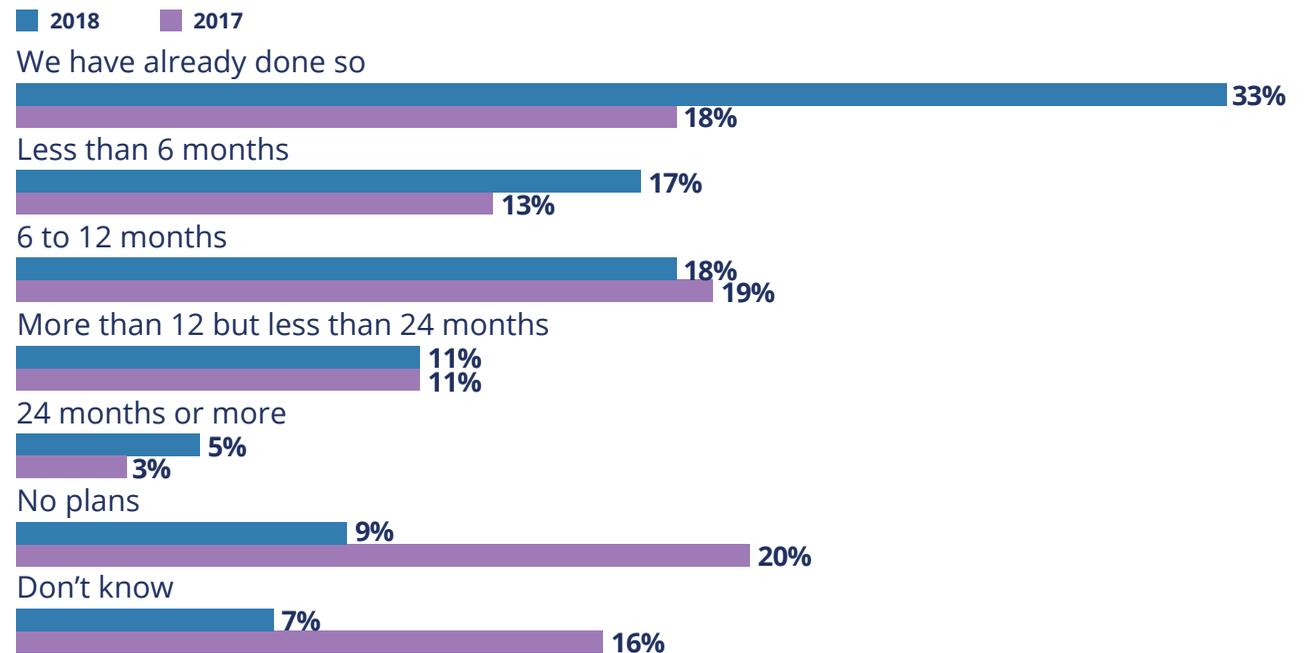
■ 2018   ■ 2017

We have already done so
2018: 33%
2017: 18%

Less than 6 months
2018: 17%
2017: 13%

6 to 12 months
2018: 18%
2017: 19%

More than 12 but less than 24 months
2018: 11%
2017: 11%

24 months or more
2018: 5%
2017: 3%

No plans
2018: 9%
2017: 20%

Don't know
2018: 7%
2017: 16%

Base: 150 respondents in 2018 and 300 in 2017
Data: Interop ITX DevOps survey of technology professionals, February 2018

of people citing this as a key driver for DevOps implementation. But the No. 2 driver, selected by 53% of respondents, was the pressure to release applications more quickly. Throughout the survey, this

need for speed appeared again and again.

The challenges holding back adoption have also morphed a bit. Last year, security and compliance concerns topped the list, followed by a lack of alignment, a lack

of skills, and difficulty justifying return on investment **(Figure 3)**. This year, organizational complexity was the top vote-getter, selected by more than a third of respondents. The lack of alignment and skills continued to be a problem.

Despite these challenges, more organizations are reporting benefits, but again, the types of benefits they are experiencing has changed. Last year, the top benefit was increased collaboration. Today, the top benefit, cited by 69% of respondents, is the increased frequency of deployment, a dramatic increase over the 39% who said the same last year **(Figure 4)**. Another speed-related factor, time-to-market for software/services, came in fourth, selected by nearly half of respondents.

When asked to quantify how much improvement they had seen in various areas as a result of DevOps implementation, the benefit that had the highest number of people citing a "significant" improvement was the reduction in time spent fixing and maintaining applications **(Figure 5)**. Deployment speed was also a very noteworthy change, as 39% called it a "significant"

Figure 2

Driving the Need for DevOps

What is driving the need for DevOps?

■ 2018   ■ 2017

Need to improve quality and performance of the applications
- 73%
- 55%

Pressures to release applications more quickly to meet customer demand or enter new markets
- 53%
- 29%

Need to improve the end customer experience
- 46%
- 48%

The need for greater collaboration between development and operations teams
- 45%
- 26%

Need to reduce IT costs
- 44%
- 35%

A greater need for simultaneous deployment across different platforms
- 41%
- 29%

An increasingly complex IT infrastructure that is part physical, part virtualized, and part cloud
- 35%
- 33%

The increasing need to develop and deploy cloud applications
- 27%
- 20%

The increasing use of mobile devices
- 16%
- 26%

Note: Multiple responses allowed
Base: 128 respondents in 2018 and 237 in 2017 who have adopted or plan to adopt DevOps principles
Data: Interop ITX DevOps survey of technology professionals, February 2018

improvement, and 36% said it was a "moderate" improvement.

On the flip side, the areas where the highest number of organizations saw no improvement included cross-platform availability, revenue, and customer growth. The revenue and customer growth findings, in particular, might be concerning for some business managers, so IT leaders who are pushing for DevOps implementation in their organizations will need to set expectations carefully.

Currently, nearly half of organizations (49%) say they are judging the success of their DevOps initiatives on internal factors, rather than external factors (29%). But a sizable group (22%) aren't sure how to measure success.

Development

The vast majority (86%) of organizations surveyed have in-house developers. And those developers are increasingly adopting a DevOps approach — although the practice still appears restricted to smaller groups within the larger team. Among those surveyed, only 8% said that all their

Figure 3

Major Challenges to Implementing DevOps

What have been the major challenges to implementing DevOps strategy in your organization?

■ 2018   ■ 2017

Organizational complexity — too many people or departments involved, too many interdependencies
36%
22%

Roles and responsibilities across development and operations are not aligned
31%
23%

Lack of the right skills within development and operations
26%
23%

No time/resources available to develop a strategy or plan for DevOps
23%
22%

A lack of understanding of the phases of the entire development life cycle and who is responsible for which step
22%
16%

Security or compliance concerns
21%
27%

Difficult to justify from an ROI standpoint
17%
23%

No support from leadership
14%
8%

No budget or a lack of clarity over whose budget is responsible for what
13%
19%

Finding the proper collaborative tools to enable the different teams to work together
13%
14%

Identifying the right consulting firm with a DevOps practice
6%
14%

Note: Maximum of three responses allowed
Base: 128 respondents in 2018 and 237 in 2017 who have adopted or plan to adopt DevOps principles
Data: Interop ITX DevOps survey of technology professionals, February 2018

developers were utilizing DevOps, and only 14% said the majority of their developers were on board with the approach. But 58% said that up to half of their team had adopted DevOps. Only 20% said that none of their developers were using it, down from 35% last year.

As DevOps takes hold, more developers are using agile processes. For 2018, 76% said that at least some of their in-house team was using agile methodologies **(Figure 6)**. However, respondents were allowed to select more than one answer, and that led to a situation where the number of organizations using waterfall processes, which are definitely not part of a DevOps approach, also increased.

Despite the fact that not everyone is using agile, these methodologies appear to be helping developers work faster. In this year's survey, 55% of those surveyed said they had seen "significant improvement" in this area, up from 36% last year **(Figure 7)**. And only 1% said they had seen no improvement in application development speed.

When development is complete, organizations are also taking less time to move

Figure 4

Benefits of DevOps

What benefits have you seen or do you anticipate seeing from implementing DevOps in your organization?

■ 2018   ■ 2017

Increased frequency of deployments of our software/services
69%
39%

Improved quality and performance of our deployed applications
59%
38%

A reduction in time spent fixing and maintaining applications
58%
39%

Reduced time-to-market for our software/services
48%
30%

Increased collaboration between departments
45%
46%

A reduction in spending on development, testing, or operations
34%
25%

New software/services that would otherwise not be possible/explored
27%
19%

An increase in revenue
26%
20%

Increased numbers of customers using our software/services
23%
18%

Our software/services made available across more platforms
23%
19%

Fewer employees working on developing and deploying our software/services
13%
12%

Note: Multiple responses allowed
Base: 128 respondents in 2018 and 237 in 2017 who have adopted or plan to adopt DevOps principles
Data: Interop ITX DevOps survey of technology professionals, February 2018

applications into production. Last year, only 7% could push out new apps to users in less than an hour, but now 15% have that capability **(Figure 8)**. Nearly a third (32%) can complete deployment in a half-day or less, and 60% can deploy in less than a week.

All that speed is also allowing organizations to update their applications more frequently. Last year, nearly half of organizations (46%) said that they pushed out fewer than 10 upgrades for the entire year. This year, only 28% said the same thing, and 28% said they pushed out 60 or more updates for the year.

Operations

Overall, the number of applications managed by IT is on the rise. Last year, nearly four out of 10 survey respondents managed 10 or fewer applications, but this year, that number dropped to 29% **(Figure 9)**. Now, nearly half of those surveyed (49%) are managing 20 or more applications, with nearly a quarter (23%) managing 60 or more.

In a sign of DevOps maturity, more organizations are relying on monitoring tools

Figure 5

Improvements as a Result of DevOps

How would you quantify the change for each of the following as a result of your DevOps adoption?

■ Significant improvement ■ Moderate improvement ■ Insignificant improvement ■ No change

A reduction in time spent fixing and maintaining applications
43% | 37% | 12% | 8%

Increased frequency of deployments of our software/services
39% | 36% | 14% | 11%

Improved quality and performance of our deployed applications
35% | 44% | 12% | 9%

Reduced time-to-market for our software/services
31% | 37% | 16% | 16%

Increased collaboration between departments
27% | 48% | 17% | 8%

A reduction in spending on development, testing, or operations
26% | 34% | 19% | 21%

New software/services that would otherwise not be possible/explored
19% | 46% | 18% | 17%

An increase in revenue
15% | 35% | 20% | 30%

Our software/services made available across more platforms
12% | 35% | 22% | 31%

Increased numbers of customers using our software/services
11% | 34% | 26% | 29%

Fewer employees working on developing and deploying our software/services
9% | 39% | 27% | 25%

Data: Interop ITX DevOps survey of 150 technology professionals, February 2018

to let them know when downtime occurs rather than waiting to hear about problems from angry customers. In fact, nearly three-quarters (71%) now have such tools in place **(Figure 10)**.

Unfortunately, however, DevOps hasn't yet let to a notable decrease in the number of outages or in the mean time to recover (MTTR) from those outages. The bulk of IT teams (61%) are still experiencing between one and five application outages per month. And the number of organizations that can recover from a failure in less than 10 minutes actually decreased from 12% to just 6% in 2018 **(Figure 11)**. The good news is that a majority (53%) are reporting an MTTR of an hour or less

On the other hand, organizations are seeing improvements in infrastructure stability. For 2018, half of respondents said they had experienced a "significant improvement" in this area, compared to 31% who said the same thing last year.

Tooling

Organizations' perceptions of the importance of various types of tools has also un-

Figure 6

Methodologies Used by In-House Developers

What methodologies do your in-house app developers use?

■ 2018   ■ 2017
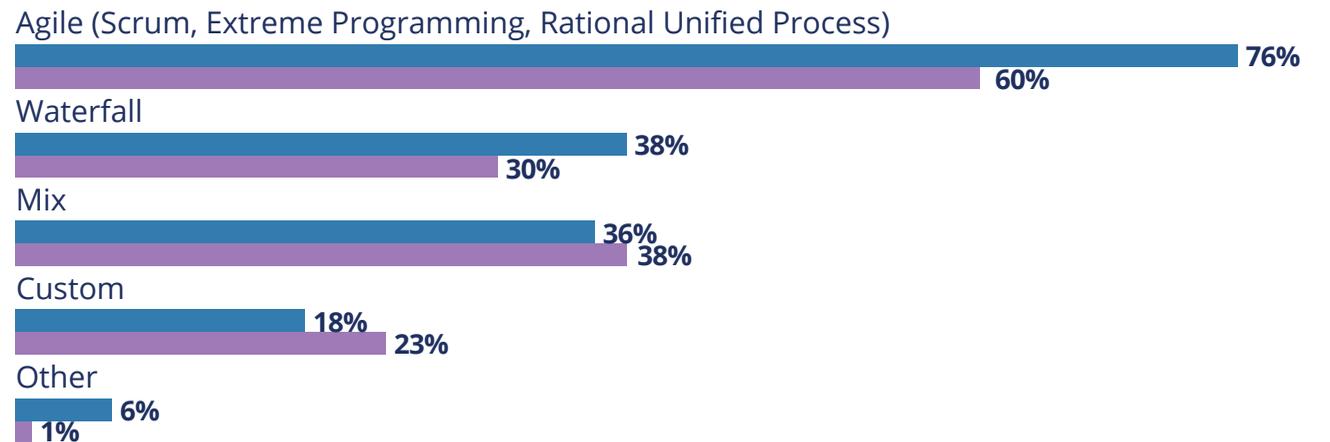
Agile (Scrum, Extreme Programming, Rational Unified Process)
76%
60%

Waterfall
38%
30%

Mix
36%
38%

Custom
18%
23%

Other
6%
1%

Note: Multiple responses allowed
Base: 128 respondents in 2018 and 231 in 2017 at organizations with in-house app developers
Data: Interop ITX DevOps survey of technology professionals, February 2018

dergone a shift. In 2018, nearly half (47%) called release automation tools critical, up from 25% last year **(Figure 12)**. Application performance monitoring and functional testing are still near the top of the chart, while enterprise security and performance testing tools have dropped down.

When it comes to tools that help DevOps teams manage and configure their infrastructure, Docker was the preferred favorite by a wide margin **(Figure 13)**. Puppet, Ansible, and Kubernetes also scored highly, with more than a third of respondents using each.

For collaboration, Slack and GitHub are the preferred choices, with each used by

nearly half of the organizations surveyed **(Figure 14)**. Confluence and Microsoft Teams were used by more than a third.

A majority of respondents were either already running applications in the cloud or planned to do so within six months, so it's not surprising that IT leaders perceive cloud technologies as very important to their DevOps plans. Like DevOps methodologies, cloud services enable greater speed and agility, so enterprises often deploy the two together to compound their benefits. A majority of respondents said that all the types of cloud services included in the survey are "very important" or "moderately important," and fewer than one in 10 said they weren't important at all **(Figure 15)**.

Looking Ahead

As they plan for the future, organizations' priorities for DevOps investment have shifted somewhat. Training and redesigning processes are claiming more budget dollars, while hiring outside consultants and hiring new personnel familiar with the approach are becoming less commonplace **(Figure 16)**.

Figure 7

Improvement in Application Development Speed

What level of improvement in application deployment speed have you gained or do you expect to gain from adopting DevOps?
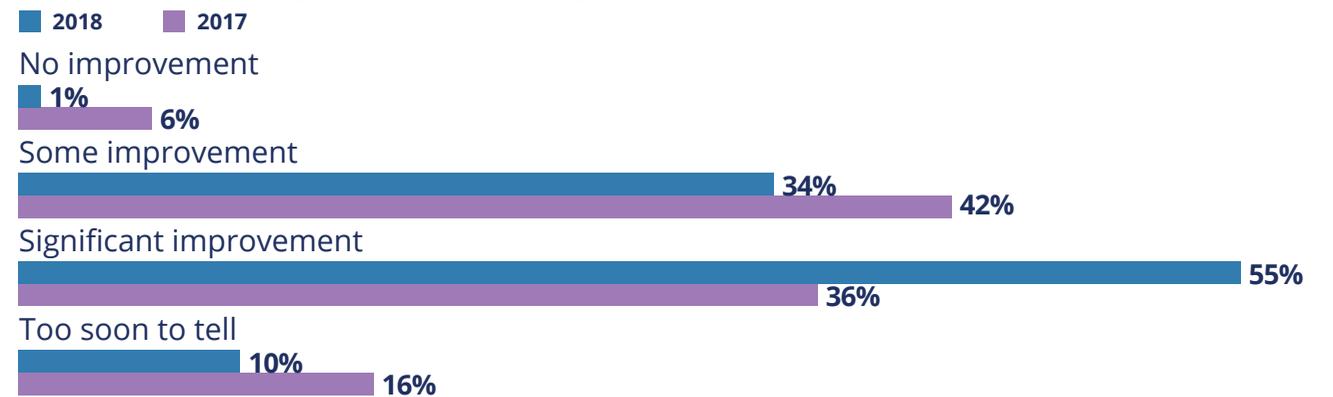
■ 2018   ■ 2017

No improvement
■ 1%
6%

Some improvement
34%
42%

Significant improvement
55%
36%

Too soon to tell
10%
16%

Base: 128 respondents in 2018 and 237 in 2017 who have adopted or plan to adopt DevOps principles
Data: Interop ITX DevOps survey of technology professionals, February 2018

Also, organizations have made a big change in the types of tools they are planning to purchase to support their DevOps projects. Last year, project management and issue-tracking tools topped the list. While these types of tools are very helpful, they aren't exclusive to DevOps. Tools specifically designed to support DevOps, like configuration management tools, release automation tools, and continuous integration tools, were closer to the bottom of the list last year.

This year, project management tools dropped farther down in the stack. Conversely, DevOps tools like configuration management, collaboration, continuous integration, and automated test tools saw significant increases in usage and purchase plans. And as for which tools organizations want to buy, Microsoft and Puppet ranked

among the most popular vendors.

As DevOps continues to mature and variants like DevSecOps become more commonplace, look for organizations to continue shifting their DevOps dollars. Also, trends like cloud computing, mobility, containerization, and the push toward digital transformation seem likely to accelerate the DevOps movement, and that could result in even bigger changes for next year's survey **(Figure 17)**.

Figure 8

Average Time to Move Application into Production

Once an application completes the development process, how long does it take on average to move into production?
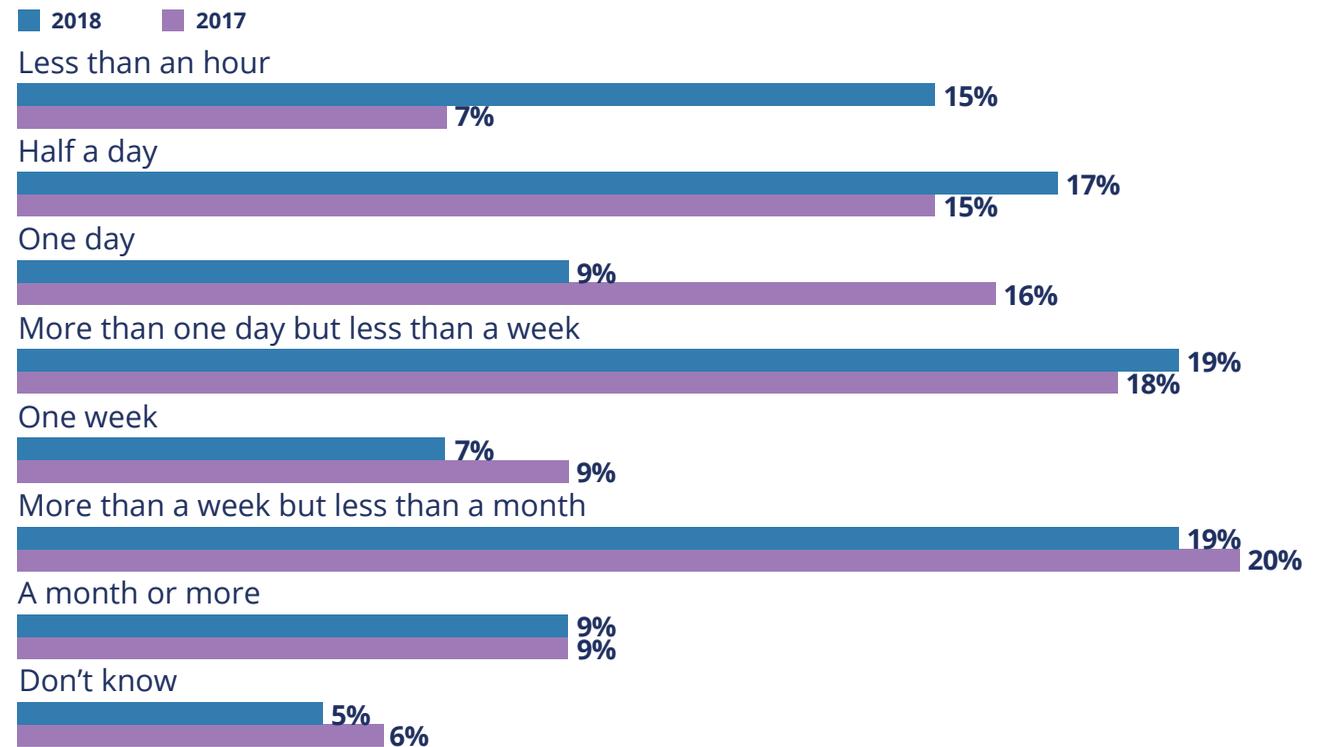
■ 2018   ■ 2017

Less than an hour
- 2018: 15%
- 2017: 7%

Half a day
- 2018: 17%
- 2017: 15%

One day
- 2018: 9%
- 2017: 16%

More than one day but less than a week
- 2018: 19%
- 2017: 18%

One week
- 2018: 7%
- 2017: 9%

More than a week but less than a month
- 2018: 19%
- 2017: 20%

A month or more
- 2018: 9%
- 2017: 9%

Don't know
- 2018: 5%
- 2017: 6%

Base: 150 respondents in 2018 and 300 in 2017
Data: Interop ITX DevOps survey of technology professionals, February 2018

APPENDIX

Figure 9

Applications Managed by IT Team
How many applications does your IT team manage?

■ 2018   ■ 2017

Fewer than 10
- 2018: 29%
- 2017: 39%

10 to 19
- 2018: 22%
- 2017: 23%

20 to 29
- 2018: 17%
- 2017: 12%

30 to 39
- 2018: 5%
- 2017: 10%

40 to 59
- 2018: 4%
- 2017: 4%

60 or more
- 2018: 23%
- 2017: 12%

Base: 150 respondents in 2018 and 300 in 2017
Data: Interop ITX DevOps survey of technology professionals, February 2018

Figure 10

Alerting IT to Application Failures

How is IT alerted to application failures?

■ 2018   ■ 2017

Availability monitoring
71%
59%

Irate emails or phone calls
56%
59%

Alerting system to network operations center
54%
46%

Other
8%
9%

Don't know
3%
5%

Note: Multiple responses allowed
Base: 150 respondents in 2018 and 300 in 2017
Data: Interop ITX DevOps survey of technology professionals, February 2018

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Figure 11

Recovery Time

On average, how long does recovery take when an application fails?
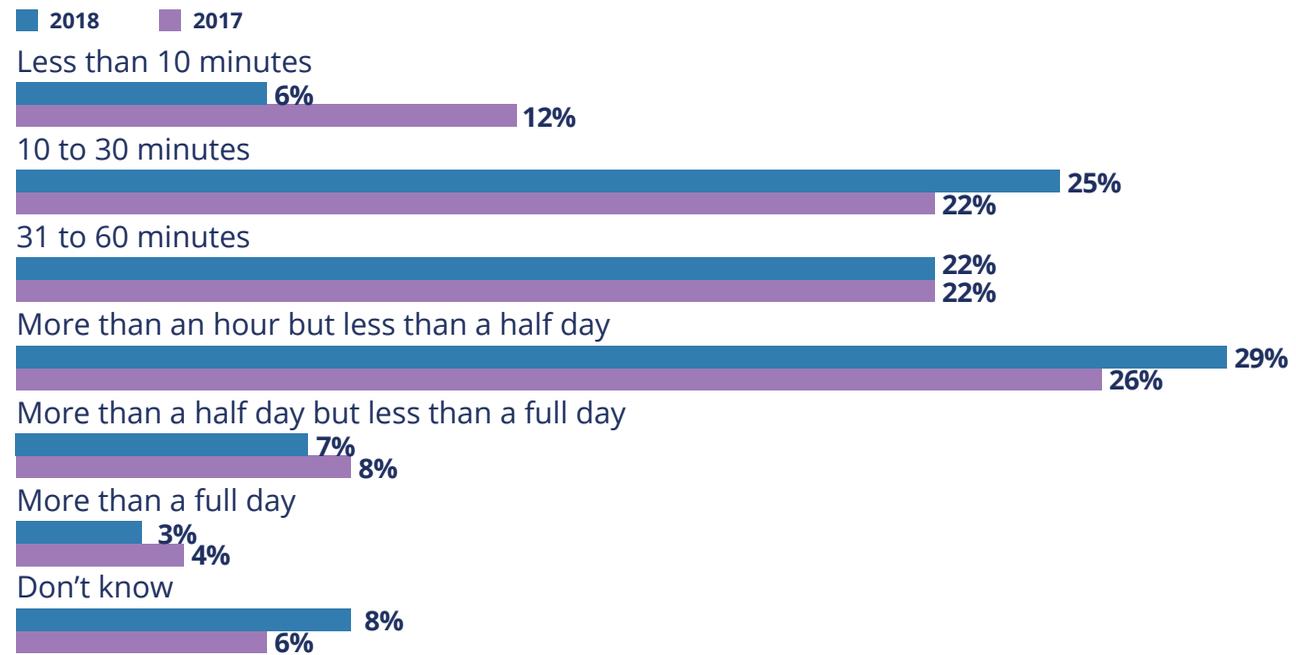
■ 2018   ■ 2017

Less than 10 minutes
6%
12%

10 to 30 minutes
25%
22%

31 to 60 minutes
22%
22%

More than an hour but less than a half day
29%
26%

More than a half day but less than a full day
7%
8%

More than a full day
3%
4%

Don't know
8%
6%

Base: 150 respondents in 2018 and 300 in 2017
Data: Interop ITX DevOps survey of technology professionals, February 2018

Figure 12

Critical Tools to Enable DevOps

Which tools do you consider to be the most critical for enabling DevOps?
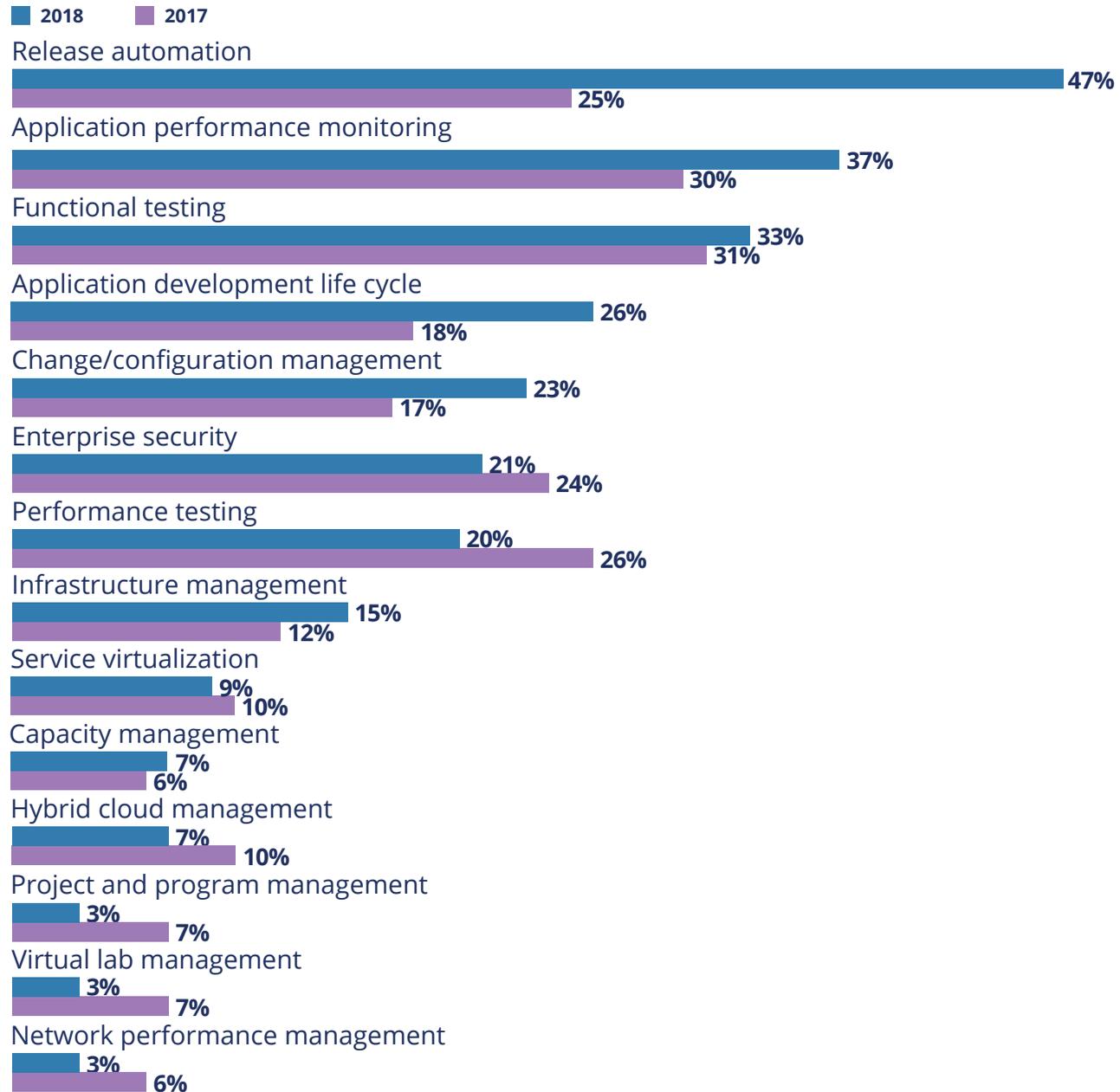
■ 2018 ■ 2017

Release automation
- 2018: 47%
- 2017: 25%

Application performance monitoring
- 2018: 37%
- 2017: 30%

Functional testing
- 2018: 33%
- 2017: 31%

Application development life cycle
- 2018: 26%
- 2017: 18%

Change/configuration management
- 2018: 23%
- 2017: 17%

Enterprise security
- 2018: 21%
- 2017: 24%

Performance testing
- 2018: 20%
- 2017: 26%

Infrastructure management
- 2018: 15%
- 2017: 12%

Service virtualization
- 2018: 9%
- 2017: 10%

Capacity management
- 2018: 7%
- 2017: 6%

Hybrid cloud management
- 2018: 7%
- 2017: 10%

Project and program management
- 2018: 3%
- 2017: 7%

Virtual lab management
- 2018: 3%
- 2017: 7%

Network performance management
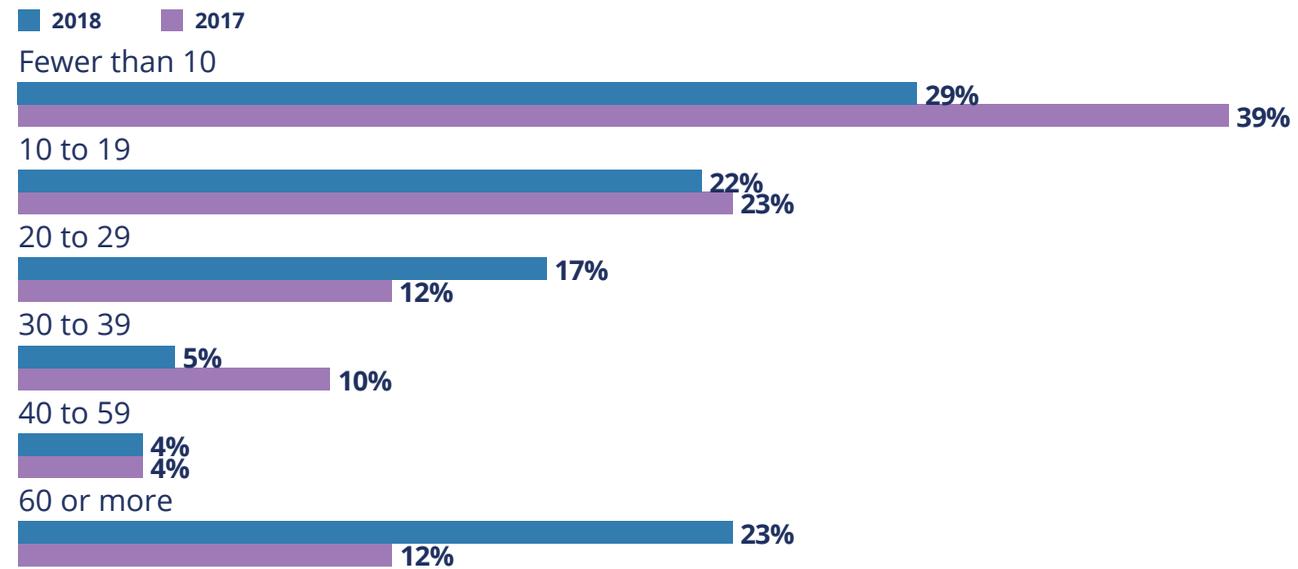- 2018: 3%
- 2017: 6%

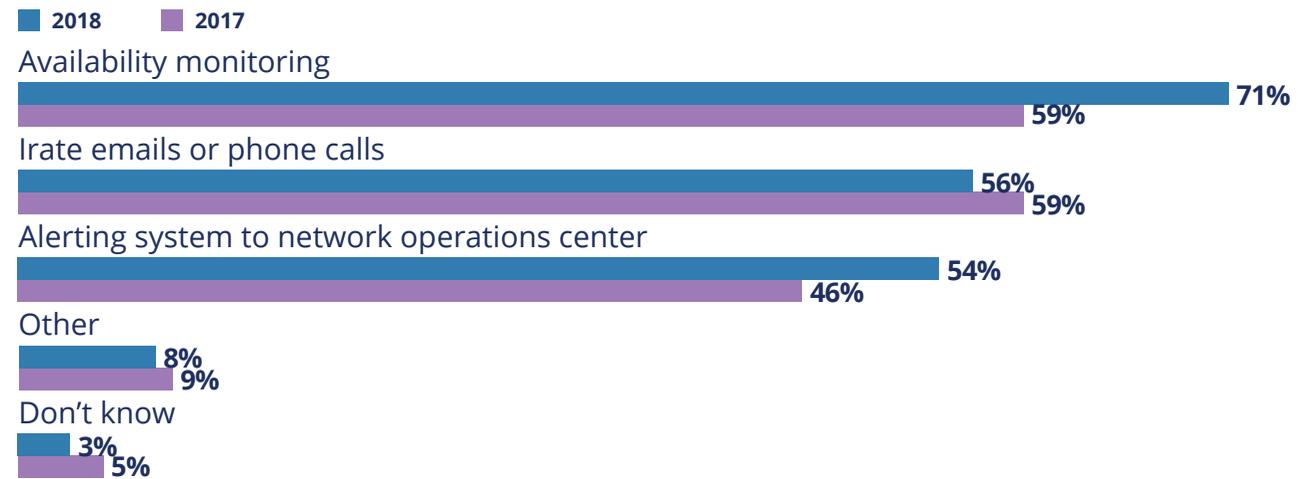Note: Maximum of three responses allowed
Base: 150 respondents in 2018 and 300 in 2017
Data: Interop ITX DevOps survey of technology professionals, February 2018

Figure 13

Implementing Configuration Management Tools

Which of the following configuration management tools are you currently using or planning to implement in the next 12 months?
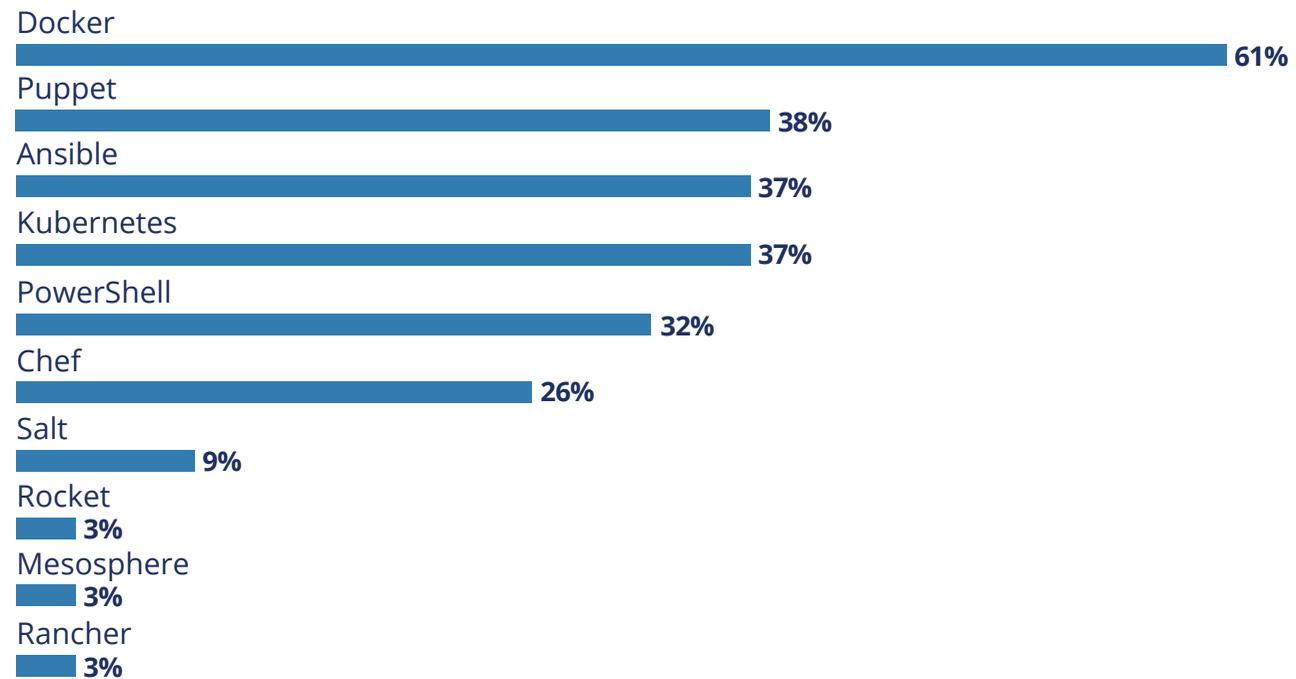
Docker
61%

Puppet
38%

Ansible
37%

Kubernetes
37%

PowerShell
32%

Chef
26%

Salt
9%

Rocket
3%

Mesosphere
3%

Rancher
3%

Note: Multiple responses allowed
Data: Interop ITX DevOps survey of 150 technology professionals, February 2018

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Figure 14

Implementing Collaboration Tools

Which of the following collaboration tools are you currently using or planning to implement in the next 12 months?
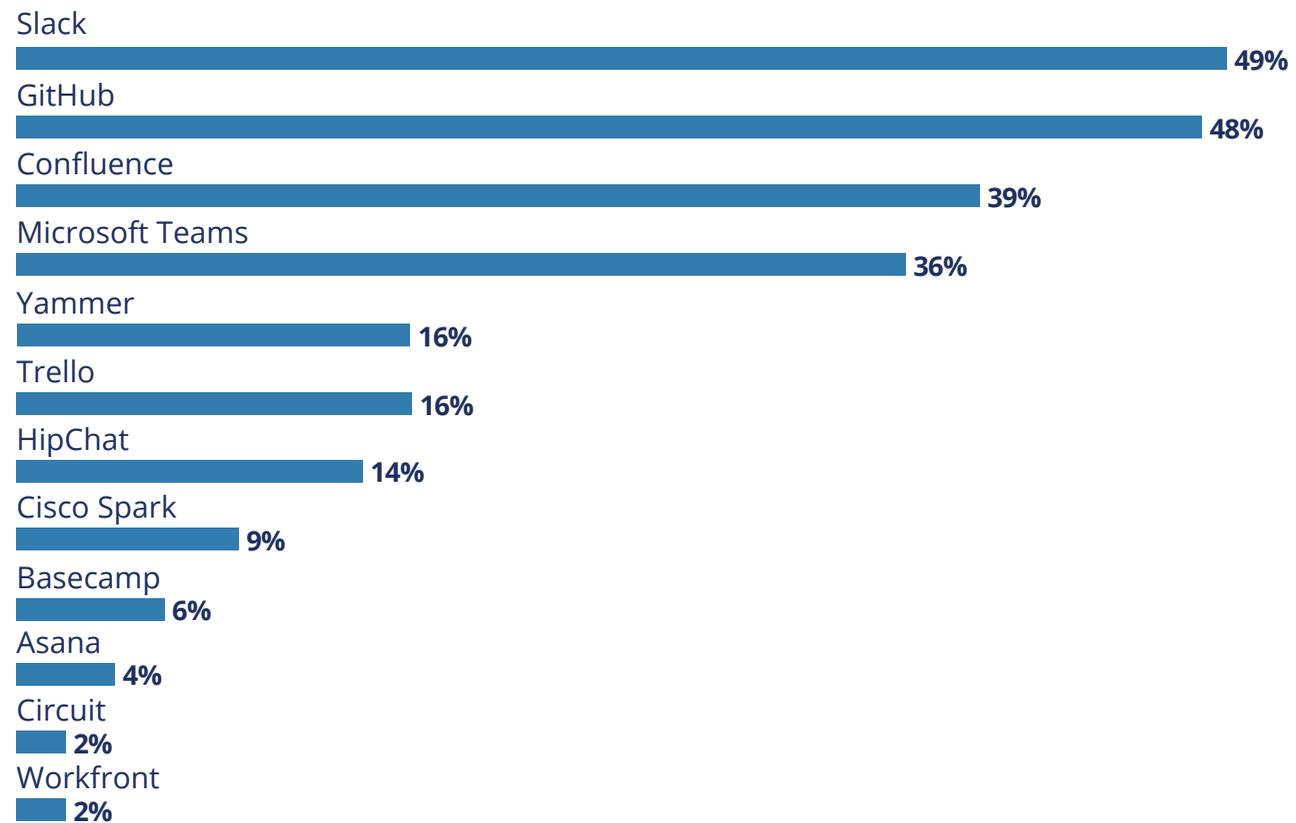
Slack
49%

GitHub
48%

Confluence
39%

Microsoft Teams
36%

Yammer
16%

Trello
16%

HipChat
14%

Cisco Spark
9%

Basecamp
6%

Asana
4%

Circuit
2%

Workfront
2%

Note: Multiple responses allowed
Data: Interop ITX DevOps survey of 150 technology professionals, February 2018

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Figure 15

Importance of Cloud Technologies

How important are the following cloud technologies to your DevOps initiative?

■ Very important   ■ Moderately important   ■ Neutral   ■ Not important   ■ Not at all important

Cloud automation

41%	21%	26%	6%	6%

Cloud management platform

35%	30%	23%	6%	6%

PaaS

34%	22%	29%	7%	8%

IaaS

32%	31%	23%	6%	8%
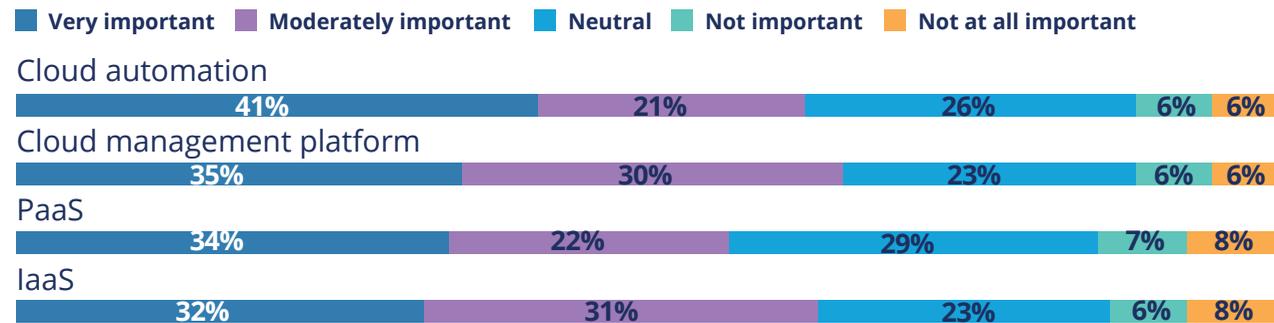
Data: Interop ITX DevOps survey of 150 technology professionals, February 2018

Figure 16

Investments for DevOps Implementation

Which of the following is your organization likely to invest in over the next year as part of your implementation of a DevOps methodology?
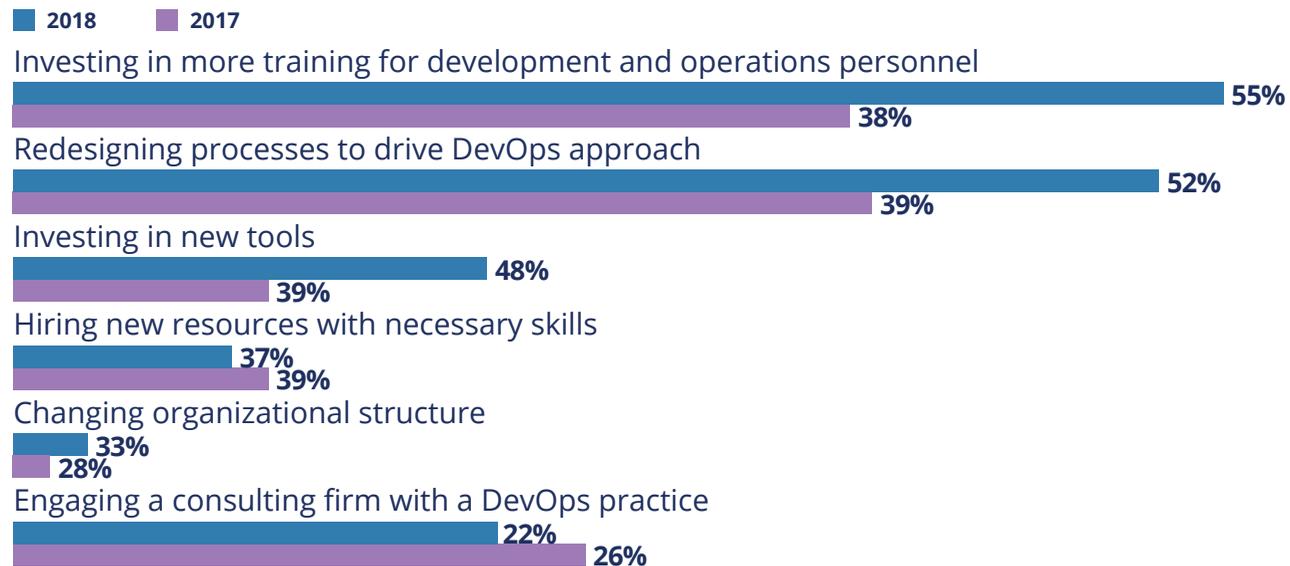
■ 2018   ■ 2017

Investing in more training for development and operations personnel
55%
38%

Redesigning processes to drive DevOps approach
52%
39%

Investing in new tools
48%
39%

Hiring new resources with necessary skills
37%
39%

Changing organizational structure
33%
28%

Engaging a consulting firm with a DevOps practice
22%
26%

Note: Multiple responses allowed
Base: 128 respondents in 2018 and 237 in 2017 who have adopted or plan to adopt DevOps principles
Data: Interop ITX DevOps survey of technology professionals, February 2018

Figure 17

Purchase Plans for DevOps Technologies and Tools

What are your purchasing plans for the following DevOps technologies and tools?

■ Already/currently purchasing ■ Evaluating ■ Plan to purchase in next 12 months
■ Plan to purchase in next 24 months ■ No plans

Source control tools
47% 14% 11% 1% 27%

Issue tracking tools
46% 13% 10% 2% 29%

Configuration management tools
45% 13% 11% 2% 29%

Collaboration and group chat tools
41% 16% 11% 1% 31%

Continuous integration tools
41% 18% 8% 5% 28%

Automated test tools
38% 22% 11% 4% 25%

Project management tools
36% 17% 9% 3% 35%

Application development platforms
32% 23% 7% 3% 35%

Release automation software
30% 20% 12% 4% 34%

DevOps consulting services
19% 14% 9% 4% 54%

Data: Interop ITX DevOps survey of 150 technology professionals, February 2018

Figure 18

Familiarity with DevOps Concept

How familiar are you with the DevOps concept?

■ 2018 ■ 2017

Very familiar; I understand the details

47%

18%

Familiar; I understand the basics

37%

42%

Somewhat familiar; I have a general idea of what it's about

13%

25%

Not at all familiar

3%

15%

Base: 150 respondents in 2018 and 300 in 2017
Data: Interop ITX DevOps survey of technology professionals, February 2018

Figure 19

New Applications Moved into Production

How many new applications are moved into production in a typical year?

■ 2018   ■ 2017

Fewer than 10
57%
63%

10 to 19
22%
21%

20 to 29
9%
9%

30 to 39
4%
4%

40 to 59
3%
1%

60 or more
5%
2%

Base: 150 respondents in 2018 and 300 in 2017
Data: Interop ITX DevOps survey of technology professionals, February 2018

Figure 20

DevOps Approach to Software Development

How would you characterize your company's adoption of a DevOps approach to software development?

■ 2018   ■ 2017

So far, none of our development employs a DevOps strategy, but we're planning to
20%
35%

Less than a quarter of our development employs a DevOps strategy
34%
35%

One-quarter to one-half of our development employs DevOps
24%
16%

More than half of our development employs DevOps
14%
10%

We use DevOps exclusively
8%
4%

Base: 128 respondents in 2018 and 237 in 2017 who have adopted or plan to adopt DevOps principles
Data: Interop ITX DevOps survey of technology professionals, February 2018

Figure 21

Application Upgrades Moved into Production

How many application upgrades are moved into production in a typical year?
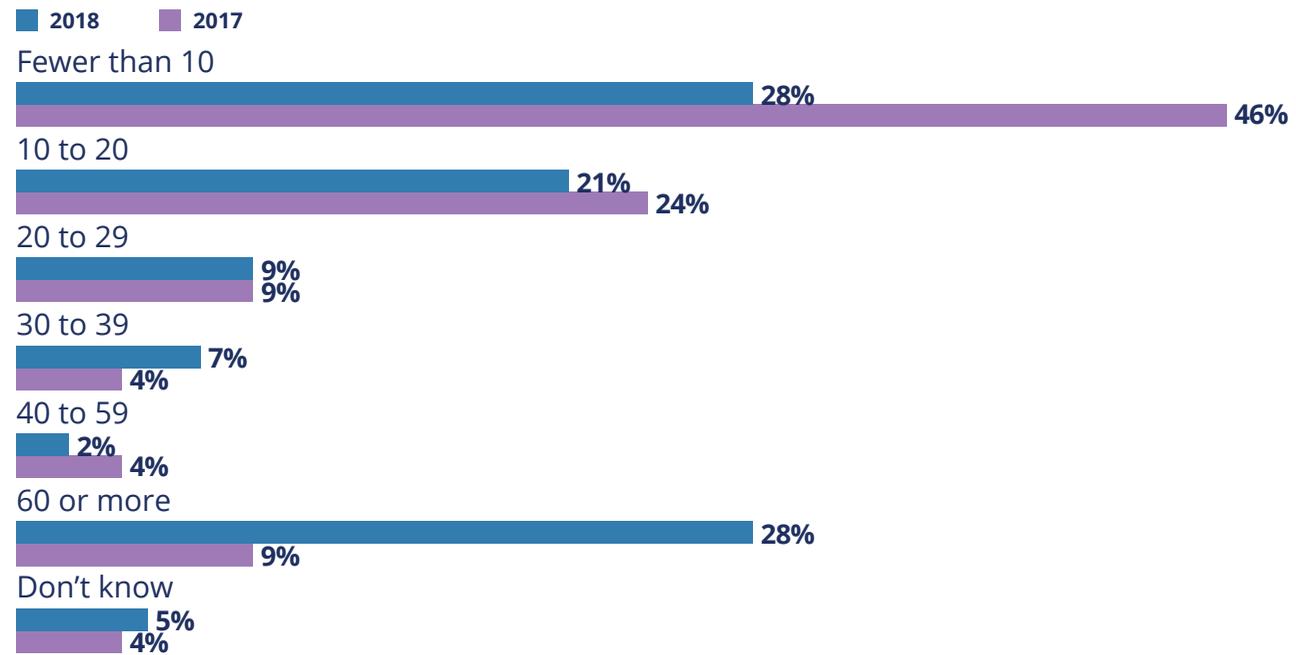
■ 2018   ■ 2017

Fewer than 10
28%
46%

10 to 20
21%
24%

20 to 29
9%
9%

30 to 39
7%
4%

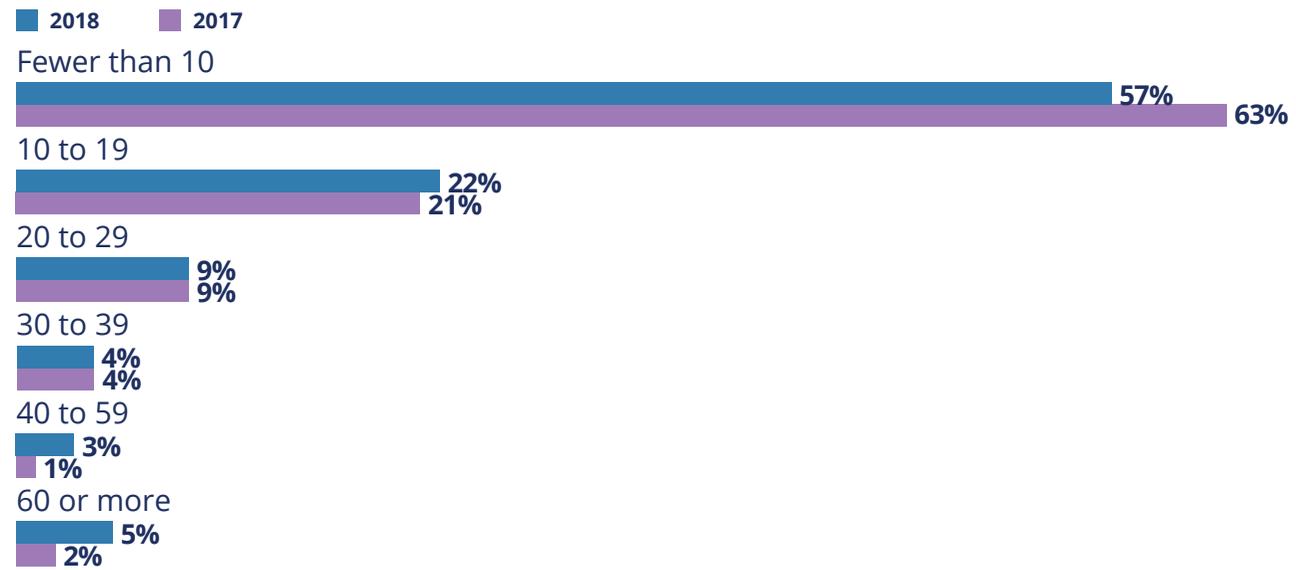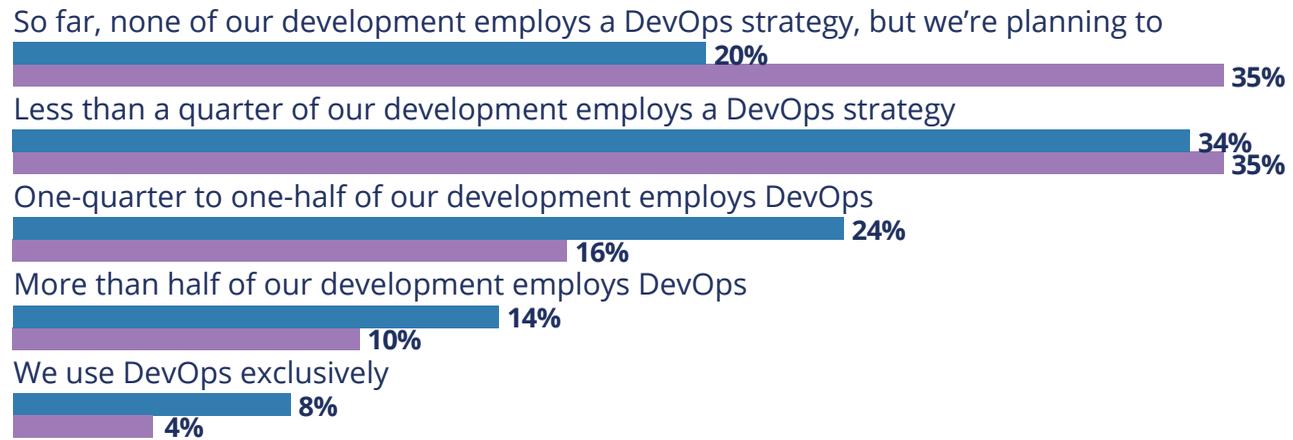**40 to 59**
2%
4%

60 or more
28%
9%

Don't know
5%
4%

Base: 150 respondents in 2018 and 300 in 2017
Data: Interop ITX DevOps survey of technology professionals, February 2018

Figure 22

Testing Recovery Processes

Are recovery processes tested before being pushed live?

■ 2018   ■ 2017

Yes
60%
69%

No
24%
15%

Depends on how angry users are
5%
9%

Don't know
11%
7%

Base: 150 respondents in 2018 and 300 in 2017
Data: Interop ITX DevOps survey of technology professionals, February 2018

Figure 23

Application Failures

How many application failures (resulting in an outage, disruption, or downtime) do you have in a typical month?

■ 2018   ■ 2017

None
13%
27%

1 to 5
61%
52%

6 to 10
13%
7%

More than 10
6%
7%

So many we gave up counting
2%
1%

Don't know
5%
6%

Base: 150 respondents in 2018 and 300 in 2017
Data: Interop ITX DevOps survey of technology professionals, February 2018

Figure 24

Time Taken for Infrastructure Change

How long does a typical infrastructure change take from request to implementation?

■ 2018   ■ 2017

Less than 10 minutes
- 2018: 11%
- 2017: 3%

10 to 30 minutes
- 2018: 4%
- 2017: 9%

31 to 60 minutes
- 2018: 10%
- 2017: 12%

More than an hour but less than a half day
- 2018: 26%
- 2017: 18%

More than a half day but less than a full day
- 2018: 8%
- 2017: 13%

More than a full day
- 2018: 34%
- 2017: 36%

Don't know
- 2018: 7%
- 2017: 9%

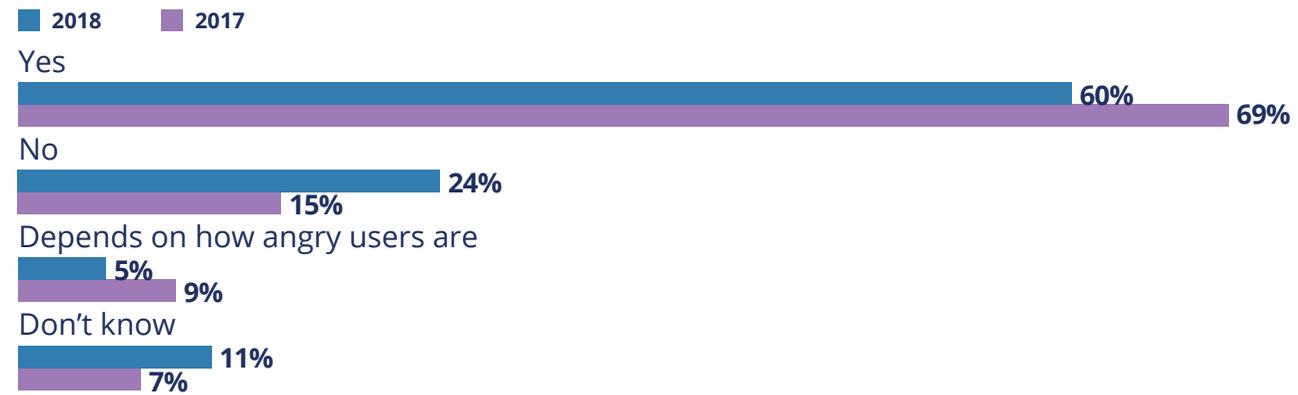Base: 150 respondents in 2018 and 300 in 2017
Data: Interop ITX DevOps survey of technology professionals, February 2018

Figure 25

In-House Developers

Does your organization have in-house app developers?
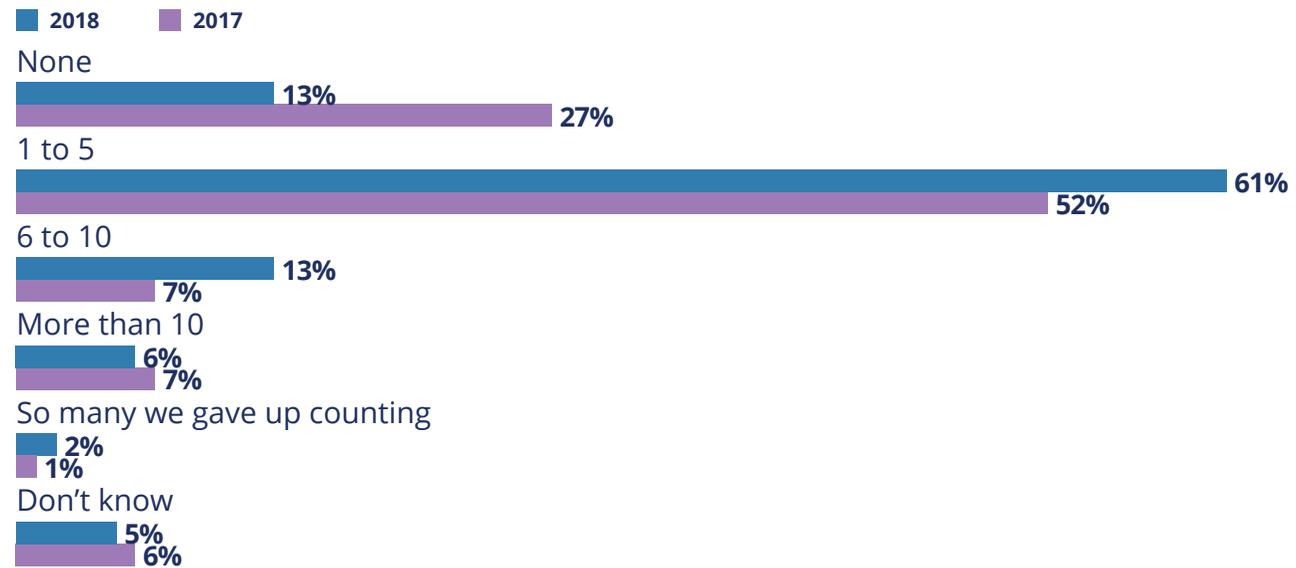
■ 2018   ■ 2017

Yes

86%

79%

No

11%

20%

Don't know

3%

1%

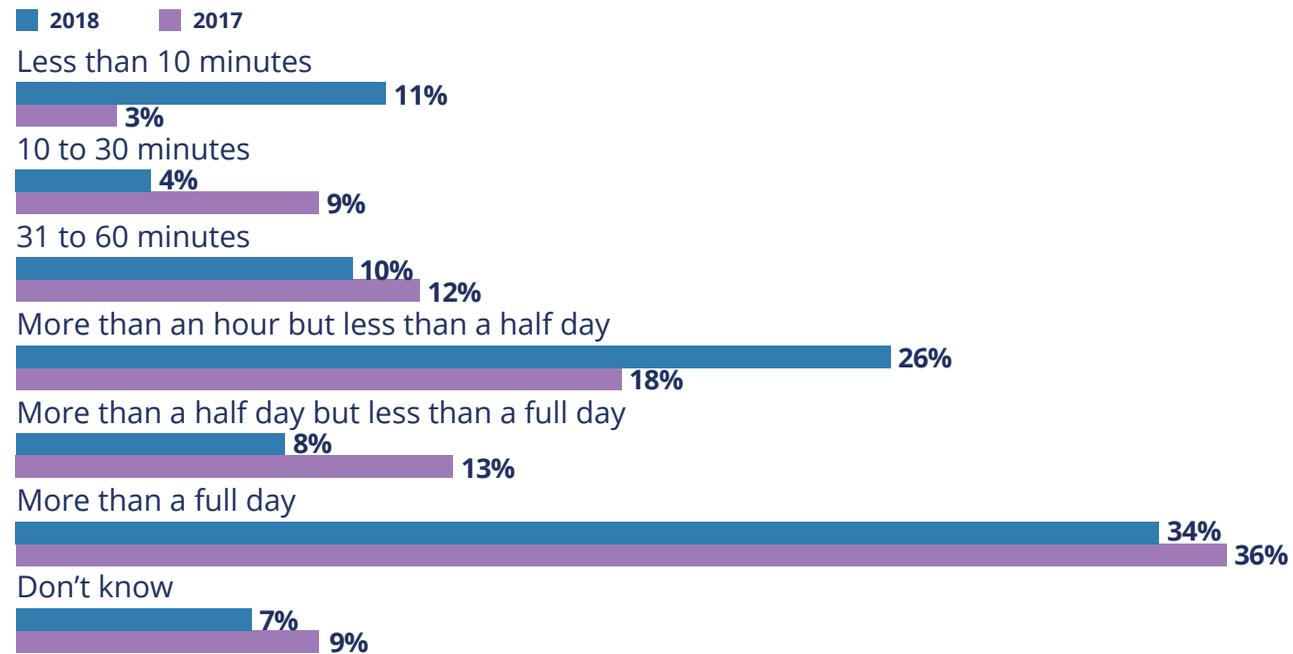Base: 150 respondents in 2018 and 300 in 2017
Data: Interop ITX DevOps survey of technology professionals, February 2018

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Interop ITX | **NETWORK**Computing
InformationWeek | **DARK**Reading

Figure 26

Scripting Languages Used

What scripting languages do your in-house developers use?

■ 2018   ■ 2017

Command line
67%
57%

Python
60%
45%

PowerShell
45%
41%

Node
33%
16%

Ruby
32%
27%

PERL
26%
40%

Other
16%
16%

Note: Multiple responses allowed
Base: 128 respondents in 2018 and 231 in 2017 at organizations with in-house app developers
Data: Interop ITX DevOps survey of technology professionals, February 2018

Figure 27

Enabling Integration with APIs

Does your IT operations team have personnel who can write and maintain scripts that enable integration with the APIs used to automate deployments?
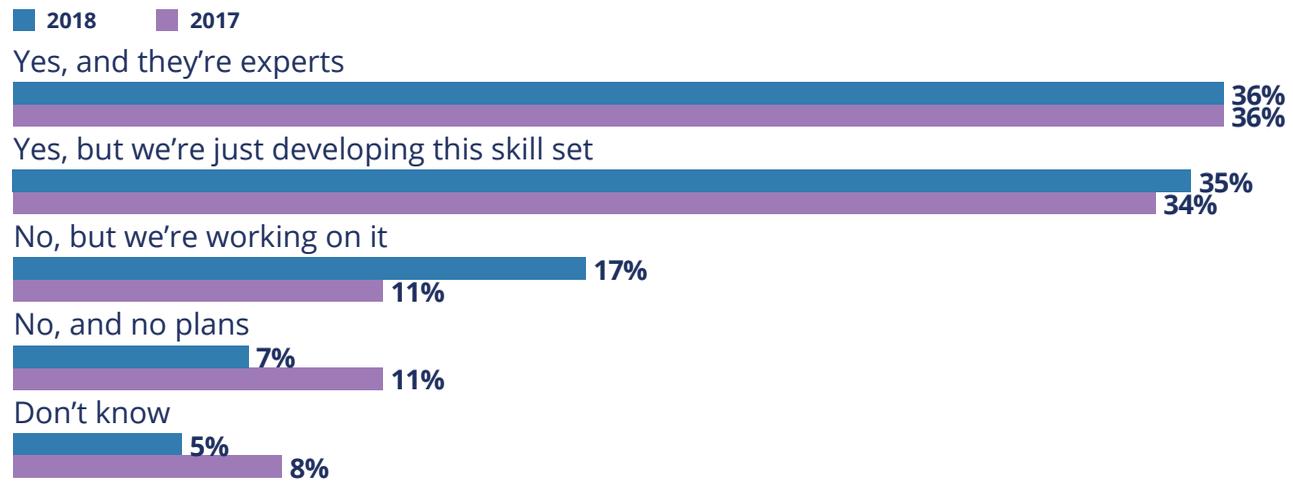
■ 2018   ■ 2017

Yes, and they're experts
- 2018: 36%
- 2017: 36%

Yes, but we're just developing this skill set
- 2018: 35%
- 2017: 34%

No, but we're working on it
- 2018: 17%
- 2017: 11%

No, and no plans
- 2018: 7%
- 2017: 11%

Don't know
- 2018: 5%
- 2017: 8%

Base: 150 respondents in 2018 and 300 in 2017
Data: Interop ITX DevOps survey of technology professionals, February 2018
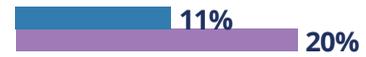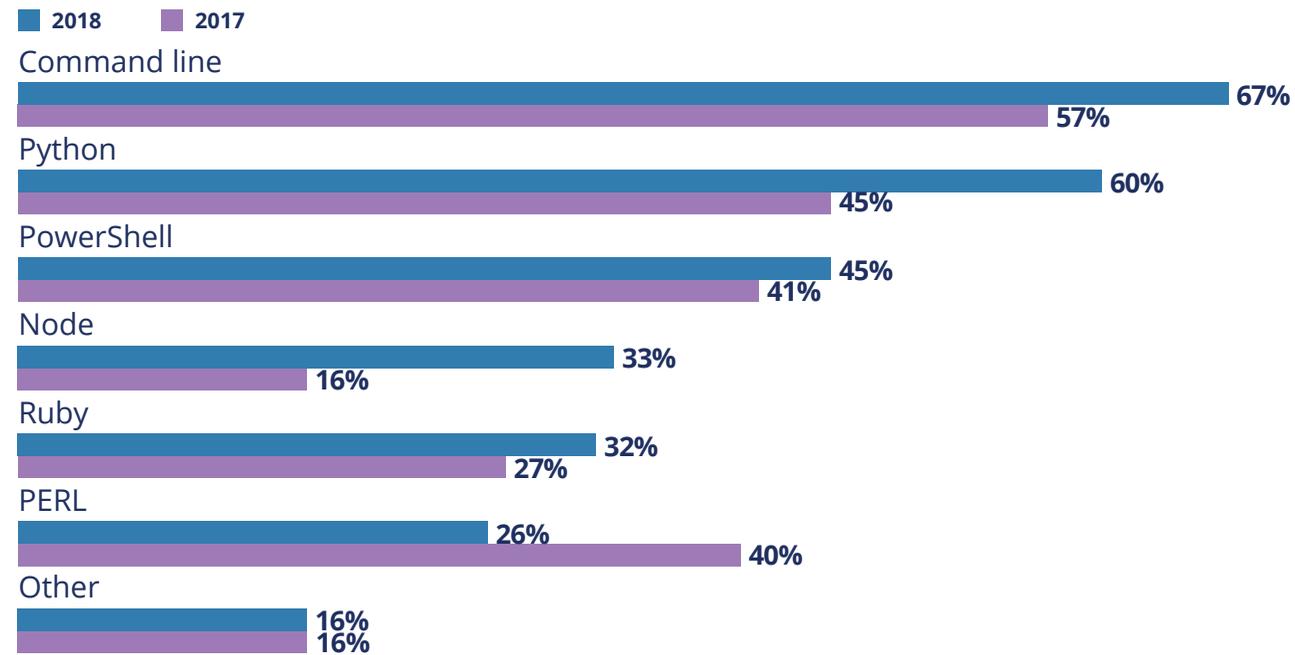
Figure 28

Top Reasons for Not Adopting DevOps Methodology

What are the top reasons your organization won't adopt a DevOps methodology or tools?

Other technology or business priorities take precedence
38%

Confusion and lack of definition around the overall concept
34%

Lack of resources to implement
30%

Immaturity of tools and methodologies
22%

Lack of willingness by both development and operations teams to cooperate
22%

Lack of resources to evaluate
19%

No demand from the business for what DevOps promises
16%

Lack of willingness by operations to cooperate
12%

Lack of willingness by developers to cooperate
10%

We don't have the expertise
10%

We don't see the value
6%

Note: Maximum of three responses allowed
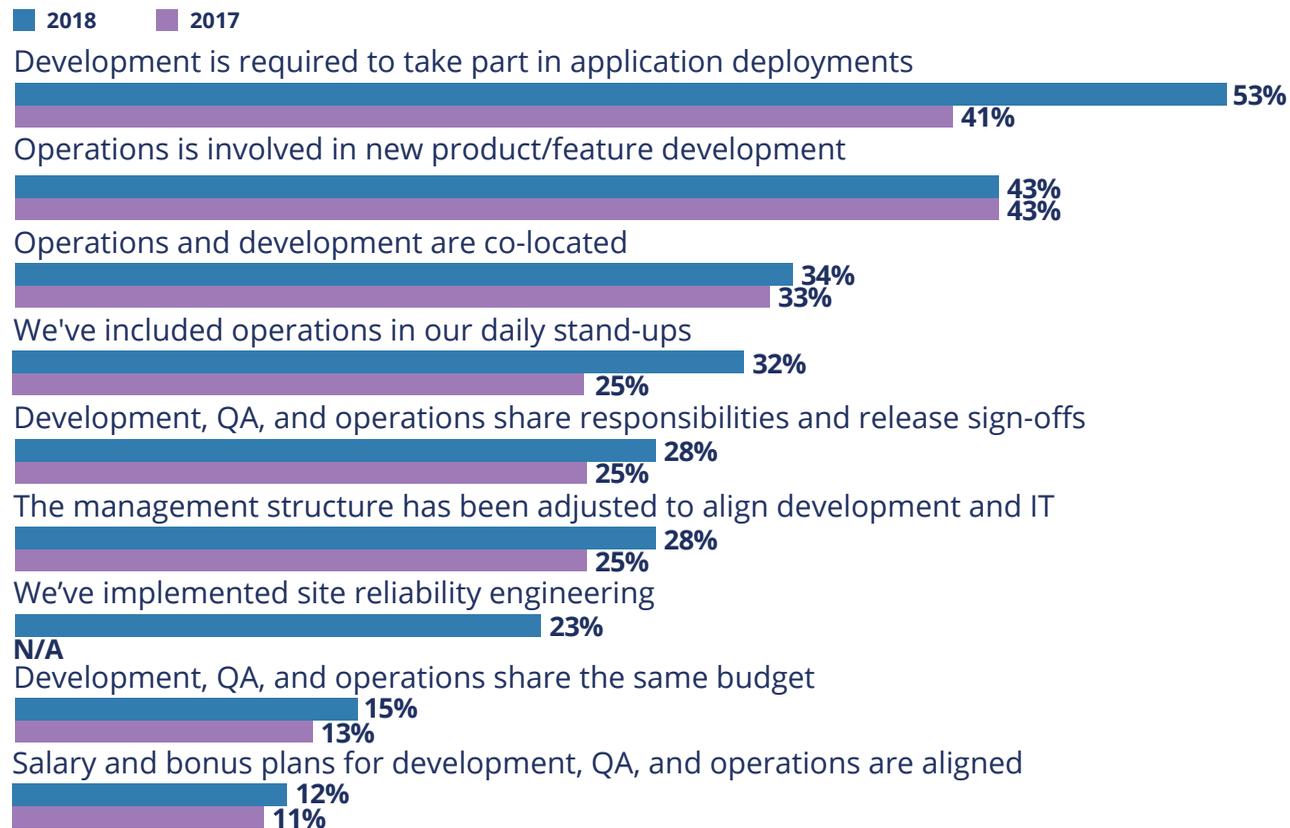Data: Interop ITX DevOps survey of 150 technology professionals, February 2018

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Figure 29

Cultural Changes as a Result of DevOps

What cultural changes has DevOps and its collaboration required in your organization?

■ 2018   ■ 2017

Development is required to take part in application deployments
- 2018: **53%**
- 2017: **41%**

Operations is involved in new product/feature development
- 2018: **43%**
- 2017: **43%**

Operations and development are co-located
- 2018: **34%**
- 2017: **33%**

We've included operations in our daily stand-ups
- 2018: **32%**
- 2017: **25%**

Development, QA, and operations share responsibilities and release sign-offs
- 2018: **28%**
- 2017: **25%**

The management structure has been adjusted to align development and IT
- 2018: **28%**
- 2017: **25%**

We've implemented site reliability engineering
- 2018: **23%**
- 2017: **N/A**

Development, QA, and operations share the same budget
- 2018: **15%**
- 2017: **13%**

Salary and bonus plans for development, QA, and operations are aligned
- 2018: **12%**
- 2017: **11%**

Note: Multiple responses allowed
Base: 128 respondents in 2018 and 237 in 2017 who have adopted or plan to adopt DevOps principles
Data: Interop ITX DevOps survey of technology professionals, February 2018

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Figure 30

Improvement in IT Infrastructure Stability

What level of improvement in IT infrastructure stability have you gained or do you expect to gain from adopting DevOps?

■ 2018   ■ 2017

No improvement
6%
6%

Some improvement
35%
48%

Significant improvement
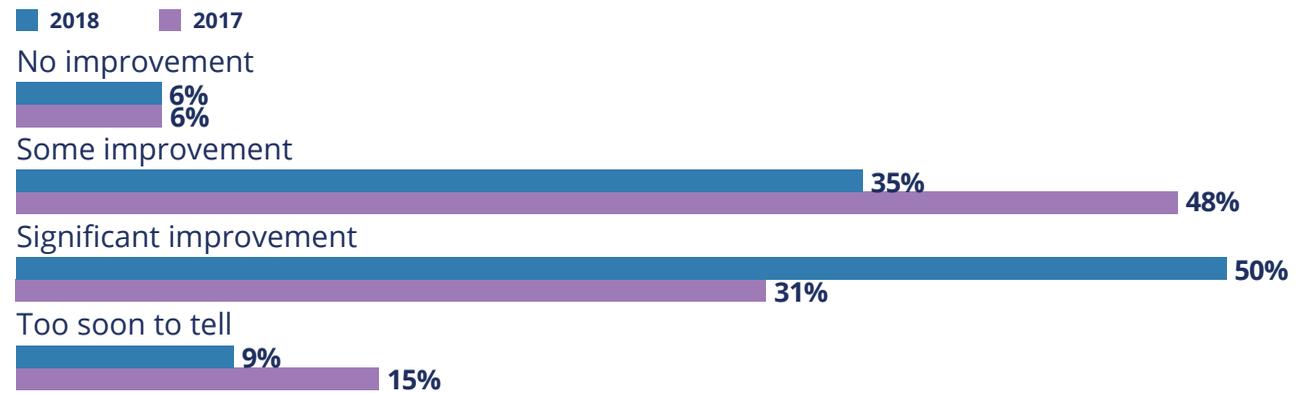50%
31%

Too soon to tell
9%
15%

Base: 128 respondents in 2018 and 237 in 2017 who have adopted or plan to adopt DevOps principles
Data: Interop ITX DevOps survey of technology professionals, February 2018

Figure 31

Impact on Security of Production Systems

What impact will DevOps have on the security of production systems?

■ 2018   ■ 2017

Systems will be much more secure
25%
15%

Systems will be somewhat more secure
38%
36%

It will have no impact on security
21%
26%

Systems will be somewhat less secure
3%
4%

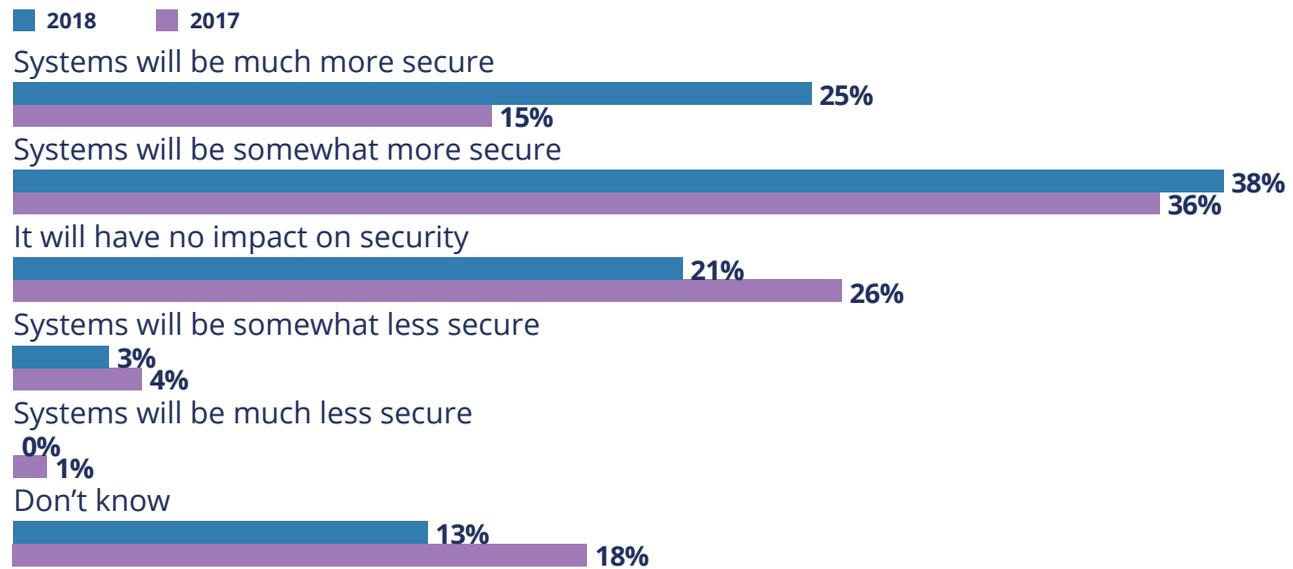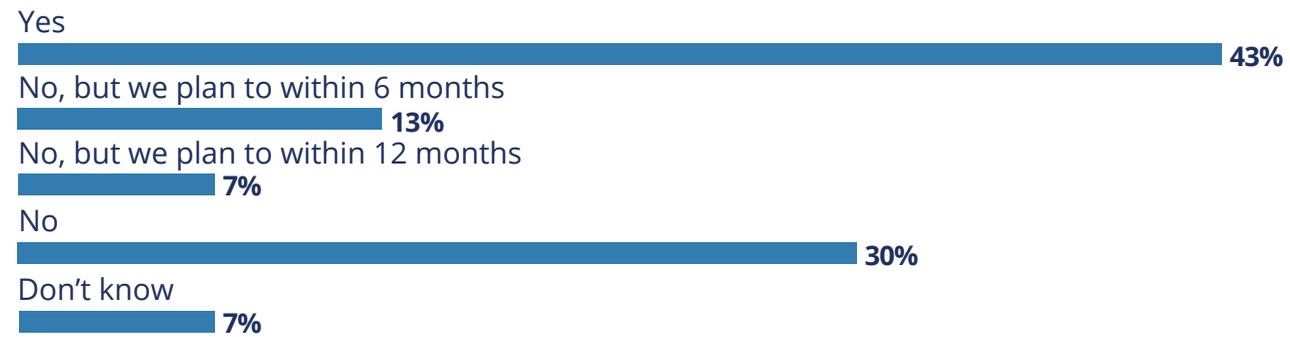Systems will be much less secure
0%
1%

Don't know
13%
18%

Base: 128 respondents in 2018 and 237 in 2017 who have adopted or plan to adopt DevOps principles
Data: Interop ITX DevOps survey of technology professionals, February 2018

Figure 32

Running Production Systems in the Cloud

Does your organization run any production systems on a public PaaS/IaaS service?
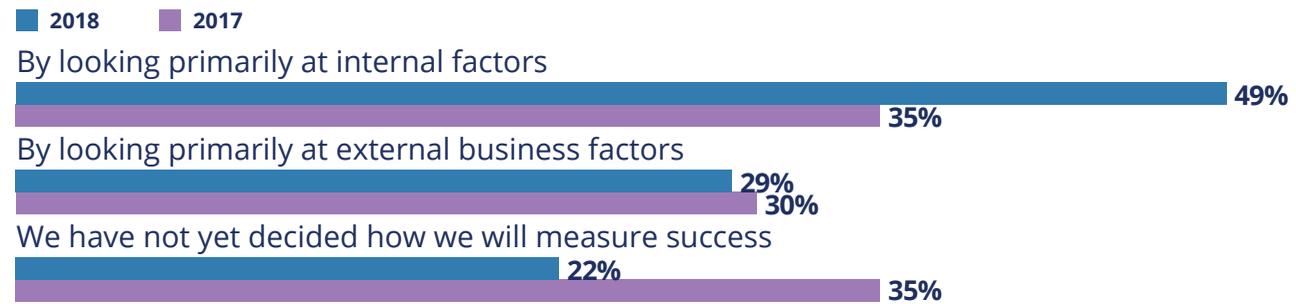
Yes
43%

No, but we plan to within 6 months
13%

No, but we plan to within 12 months
7%

No
30%

Don't know
7%

Data: Interop ITX DevOps survey of 150 technology professionals, February 2018

Figure 33

Measuring Success of DevOps Initiatives

How do you plan to measure the success of your DevOps initiatives?

■ 2018   ■ 2017

By looking primarily at internal factors

49%
35%

By looking primarily at external business factors

29%
30%

We have not yet decided how we will measure success

22%
35%

Base: 128 respondents in 2018 and 237 in 2017 who have adopted or plan to adopt DevOps principles
Data: Interop ITX DevOps survey of technology professionals, February 2018

RESEARCH REPORT
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Figure 34

DevOps Expertise for New Hires

Is DevOps expertise on your list of must-haves for new hires in development and admin roles?
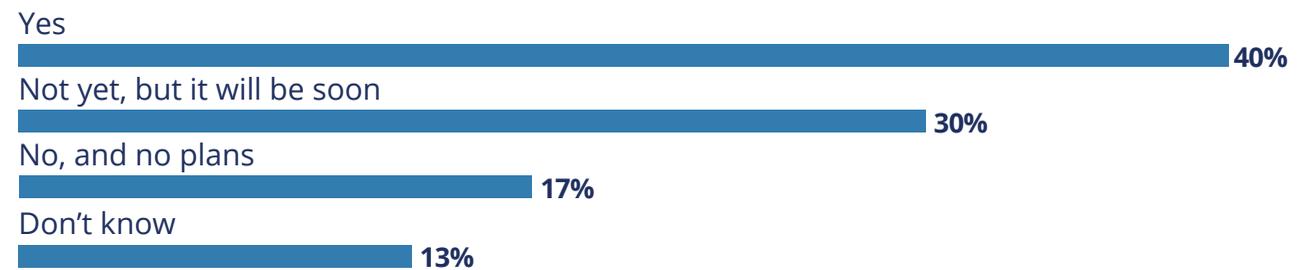
Yes
40%

Not yet, but it will be soon
30%

No, and no plans
17%

Don't know
13%

Data: Interop ITX DevOps survey of 150 technology professionals, February 2018

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Figure 35

Purchase Plans for Release Automation Frameworks

What are your purchasing plans for the following vendors' application release automation frameworks?

■ Already/currently purchasing   ■ Evaluating   ■ Plan to purchase in next 12 months

■ Plan to purchase in next 24 months   ■ No plans

Microsoft
| 30% | 15% | 7% | 3% | 45% |

Puppet
| 23% | 18% | 7% | 1% | 51% |

IBM
| 13% | 14% | 9% | 0% | 64% |

CA Technologies
| 10% | 12% | 6% | 3% | 69% |

Automic
| 7% | 8% | 5% | 1% | 79% |

BMC
| 7% | 7% | 7% | 2% | 77% |

Micro Focus (Serena)
| 5% | 5% | 5% | 1% | 84% |

Electric Cloud
| 5% | 10% | 5% | 2% | 78% |

MidVision
| 4% | 5% | 5% | 0% | 86% |

Clarive Software
| 4% | 5% | 5% | 2% | 84% |

XebiaLabs
| 4% | 13% | 4% | 2% | 77% |

OpenMake Software
| 2% | 8% | 5% | 4% | 81% |

Inedo
| 2% | 5% | 5% | 3% | 85% |

Data: Interop ITX DevOps survey of 150 technology professionals, February 2018

Figure 36

Primary Background Area

What is your primary background area?

■ 2018   ■ 2017

IT management
43%
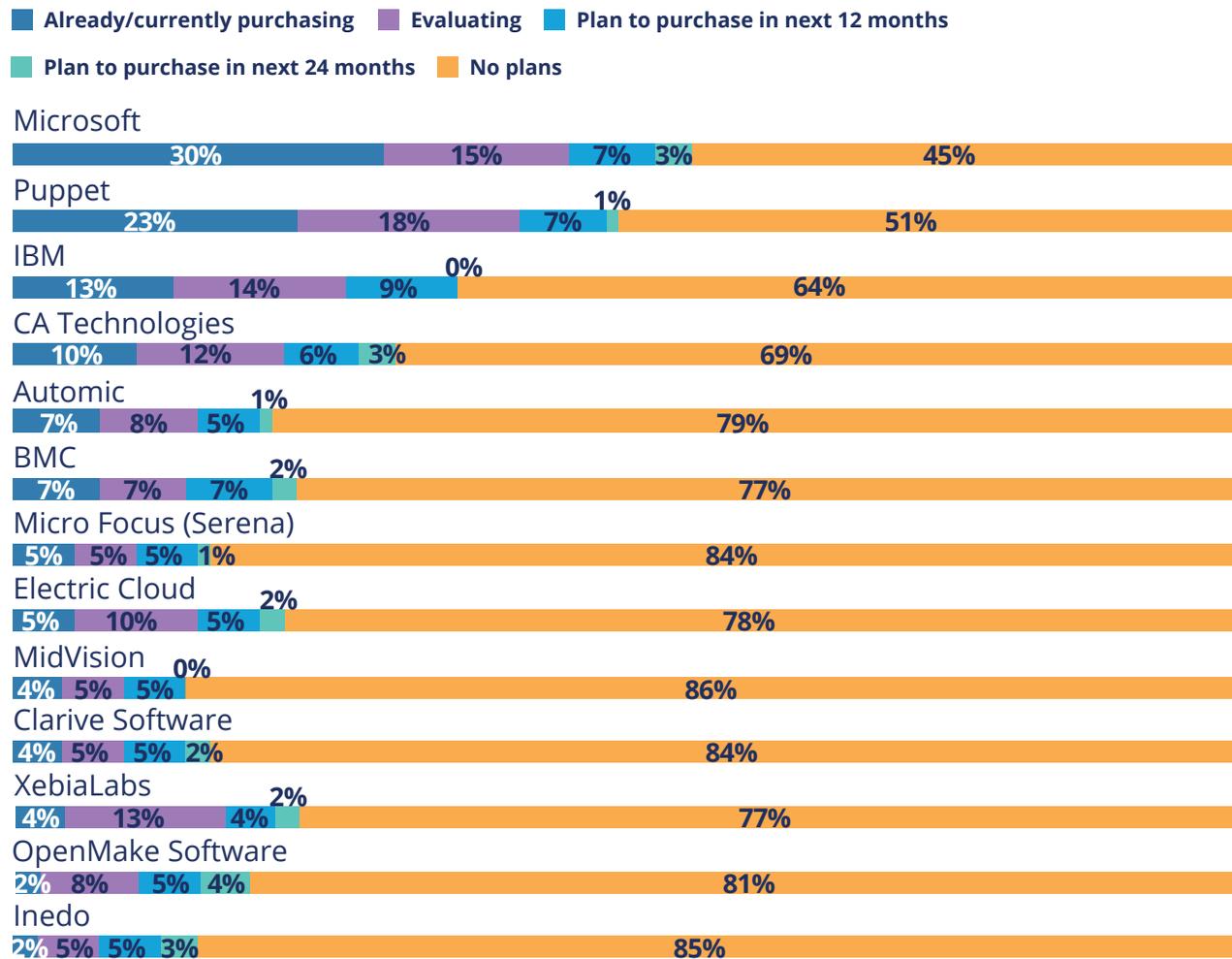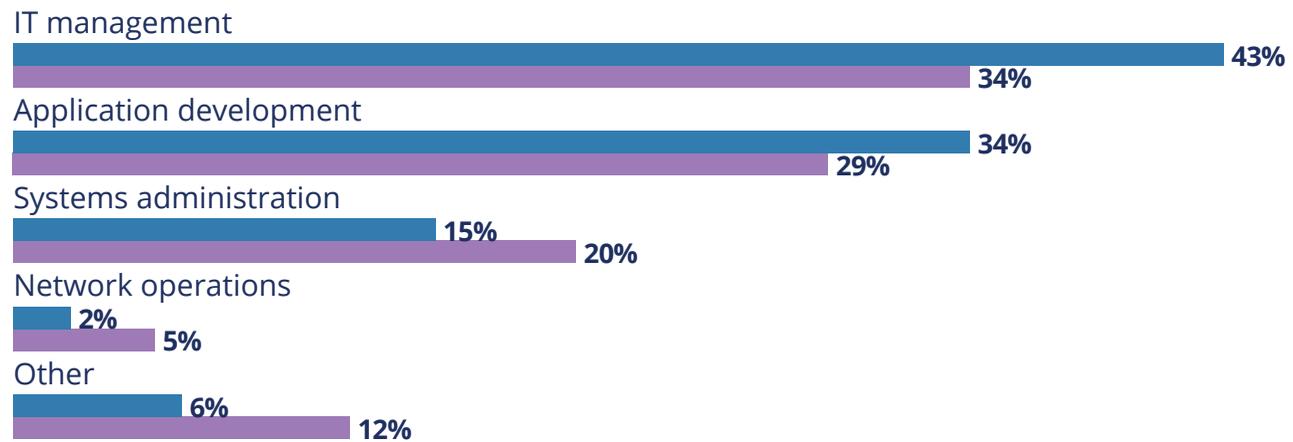34%

Application development
34%
29%

Systems administration
15%
20%

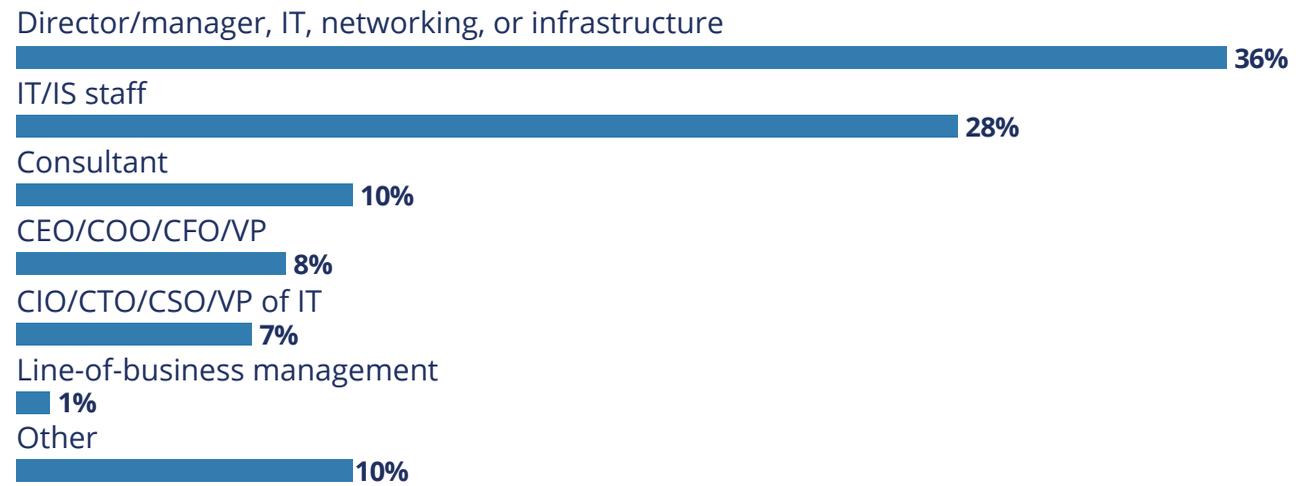Network operations
2%
5%

Other
6%
12%

Base: 150 respondents in 2018 and 300 in 2017
Data: Interop ITX DevOps survey of technology professionals, February 2018

Figure 37

Respondent Job Title

Which of the following best describes your job title?

Director/manager, IT, networking, or infrastructure
36%

IT/IS staff
28%

Consultant
10%

CEO/COO/CFO/VP
8%

CIO/CTO/CSO/VP of IT
7%

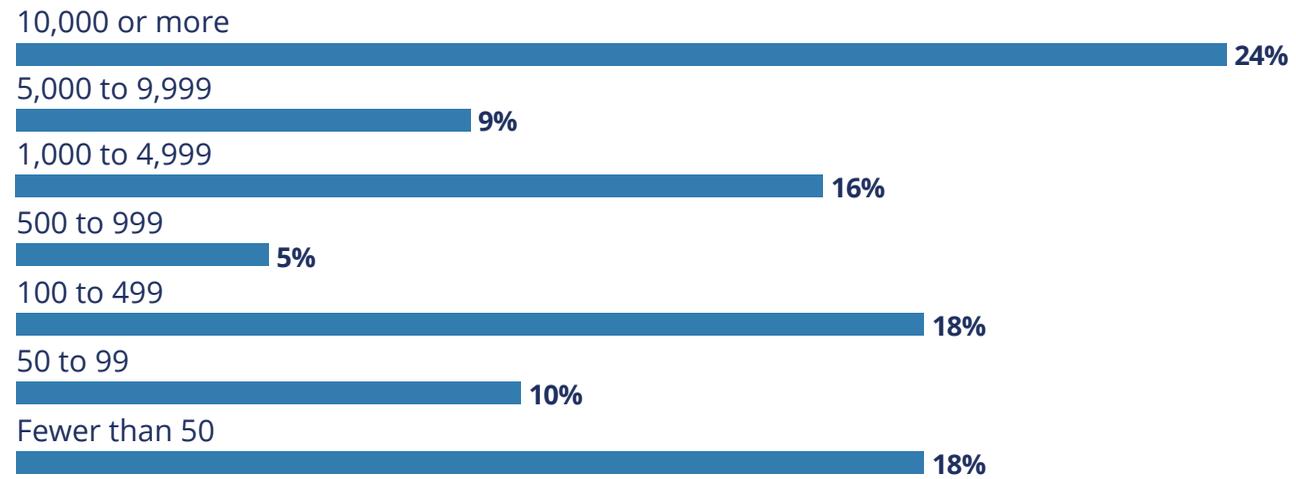Line-of-business management
1%

Other
10%

Data: Interop ITX DevOps survey of 150 technology professionals, February 2018

Figure 38

Respondent Company Size

How many employees are in your organization in total?

10,000 or more
24%

5,000 to 9,999
9%

1,000 to 4,999
16%

500 to 999
5%

100 to 499
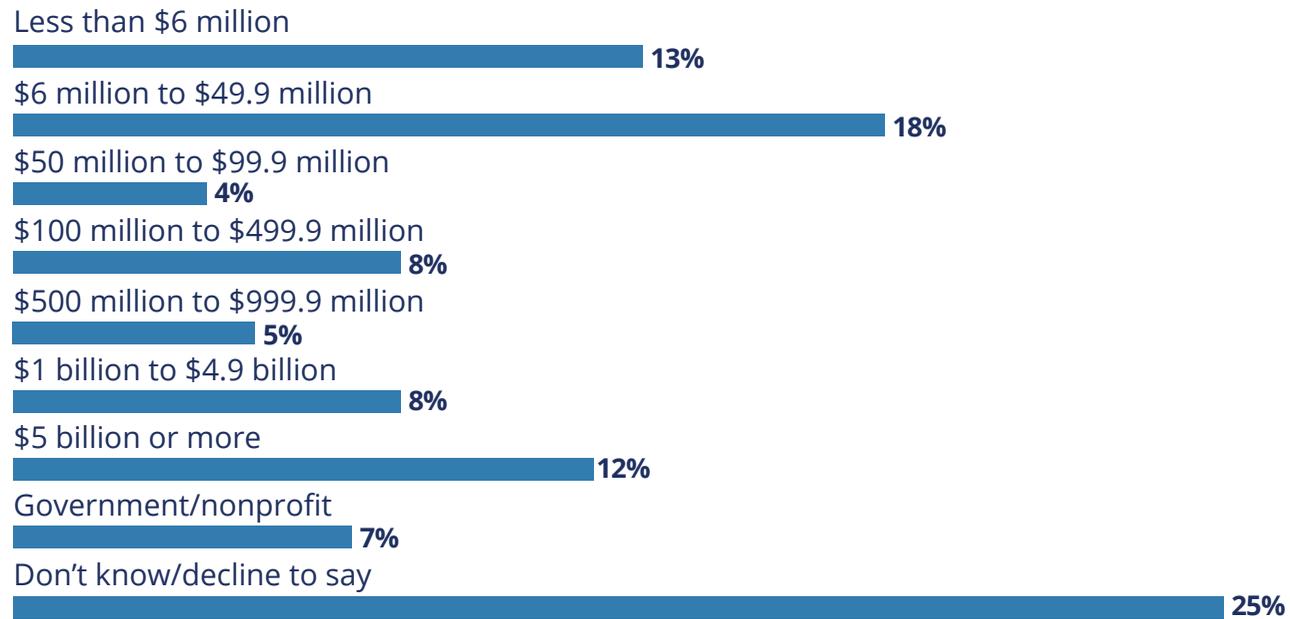**18%**

50 to 99
10%

Fewer than 50
18%

Data: Interop ITX DevOps survey of 150 technology professionals, February 2018

Figure 39

Respondent Company Revenue

Which of the following dollar ranges includes the annual revenue of your entire organization?

Less than $6 million
13%

$6 million to $49.9 million
18%

$50 million to $99.9 million
4%

$100 million to $499.9 million
8%

$500 million to $999.9 million
5%

$1 billion to $4.9 billion
8%

$5 billion or more
12%

Government/nonprofit
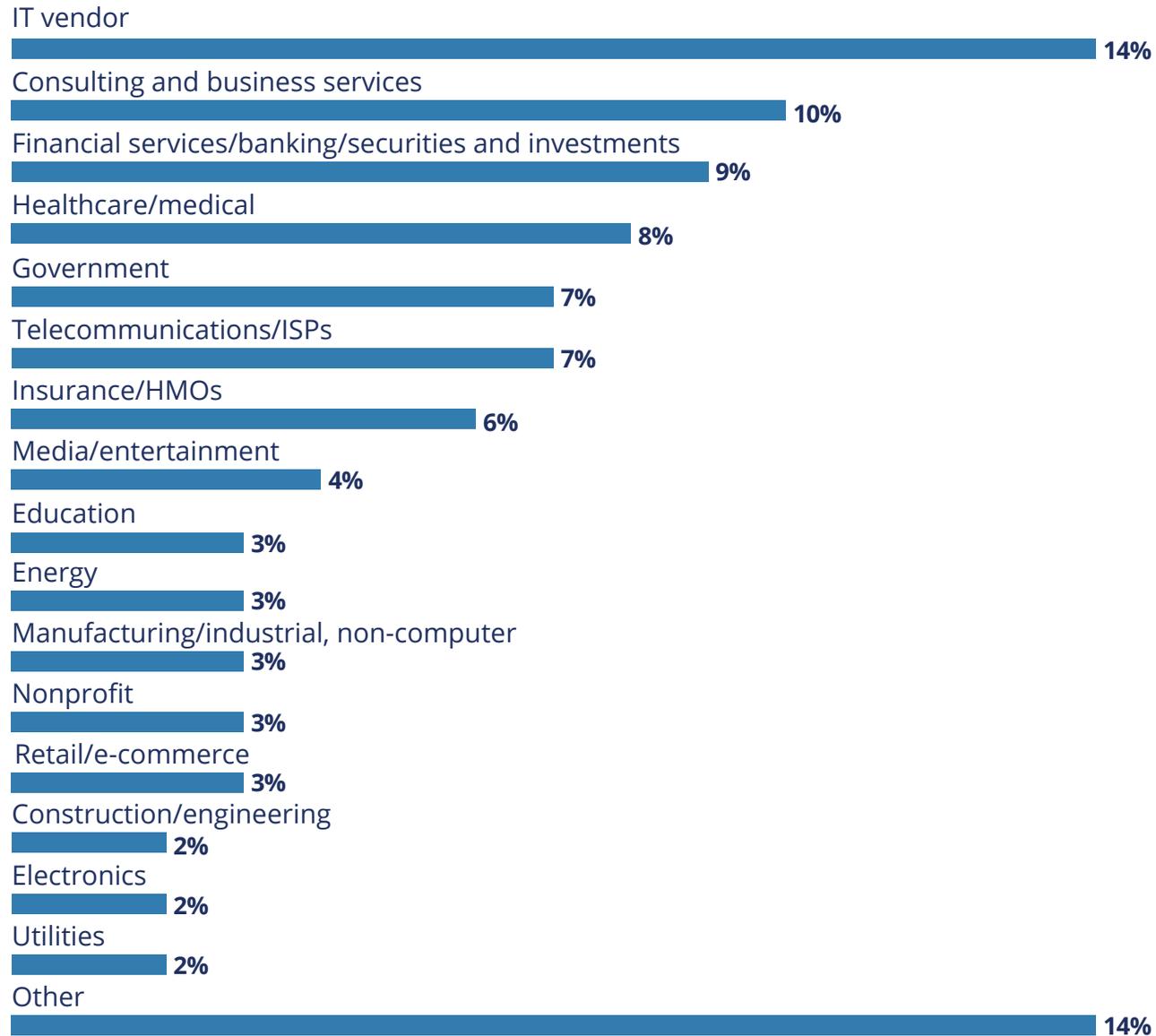**7%**

Don't know/decline to say
25%

Data: Interop ITX DevOps survey of 150 technology professionals, February 2018

Figure 40

Respondent Industry

What is your organization's primary industry?

IT vendor — **14%**

Consulting and business services — **10%**

Financial services/banking/securities and investments — **9%**

Healthcare/medical — **8%**

Government — **7%**

Telecommunications/ISPs — **7%**

Insurance/HMOs — **6%**

Media/entertainment — **4%**

Education — **3%**

Energy — **3%**

Manufacturing/industrial, non-computer — **3%**

Nonprofit — **3%**

Retail/e-commerce — **3%**

Construction/engineering — **2%**

Electronics — **2%**

Utilities — **2%**

Other — **14%**

Data: Interop ITX DevOps survey of 150 technology professionals, February 2018