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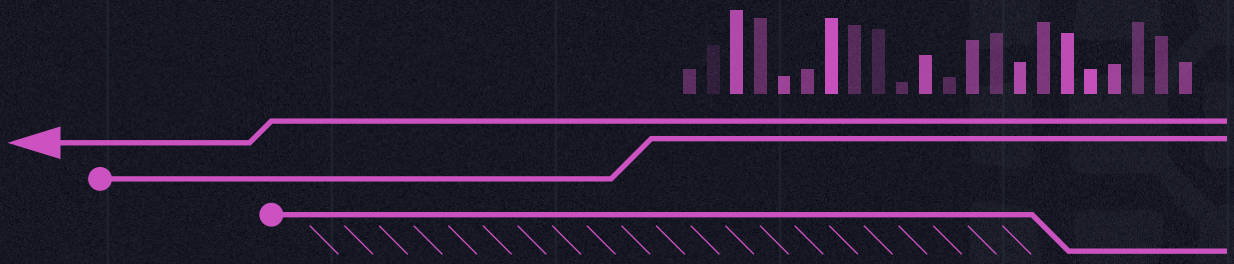
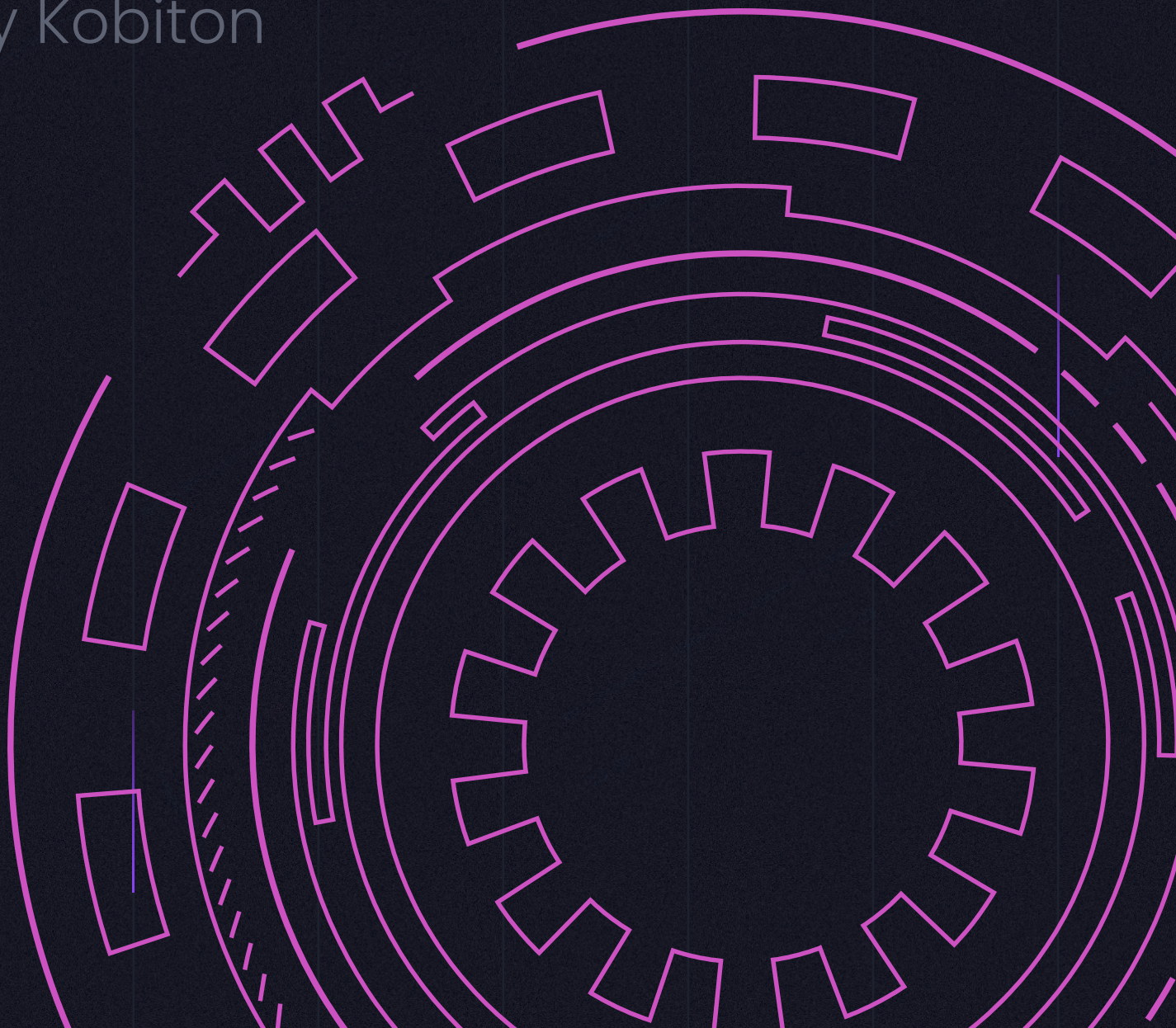


STATE OF TEST AUTOMATION

2020–2021 EDITION

By Kobiton



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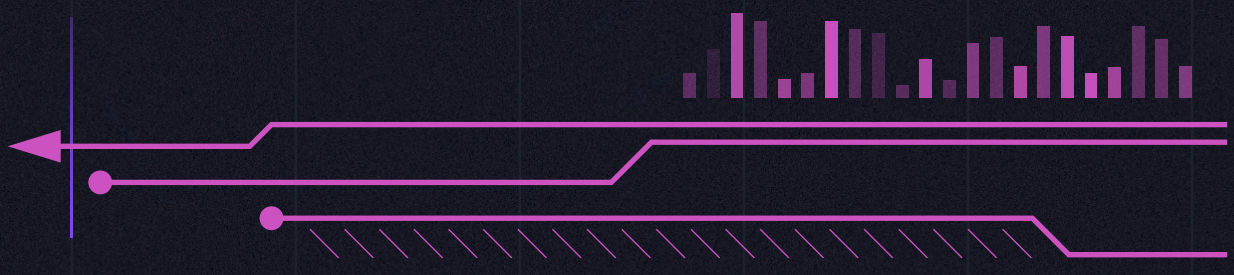

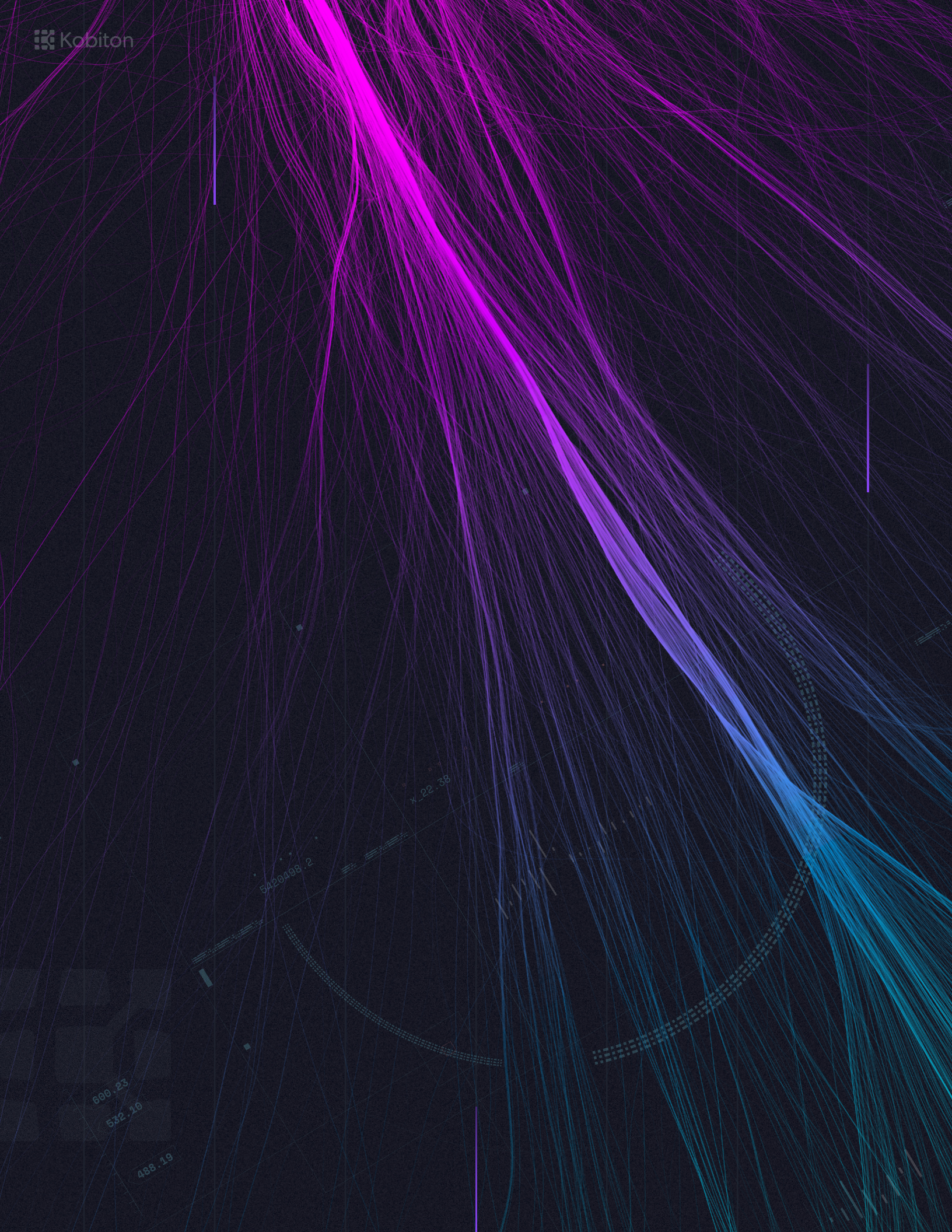
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Kobiton

ALL RESPONDENTS

AGGREGATE DATA

All Respondents

To assist you in finding the results that matter most to you, we've broken down this whitepaper into fairly granular categories so you can jump straight to the section applicable to you (eg. by company size).

In this section we explore the results in the aggregate.

We were pleasantly surprised at the overall mobile test automation maturity levels indicated by respondents. With 42% already using automation and seeing tangible results, this maturity appears to be driven by a need to constantly innovate and release. 34.8% of respondents release apps *weekly*, and 16.5% release *daily*. While 33.9% can only support *monthly* releases, their goal is to reach weekly or daily frequency. Unfortunately, if you're still doing quarterly releases, you are far behind your peers.

Regardless of company size, all organizations agree that the biggest struggle to start test automation is evaluating and choosing the right tools. With new frameworks and products popping up overnight, organizations are in a constant state of analysis-paralysis. The second biggest automation pain is training/acquiring skilled automation engineers, highlighting the inherent complexity in developing test scripts.

Speed of Delivery is cited as the primary success metric of test automation, indicating a widespread need for agility and increased release frequency.

Automation does not come cheap and presents a paradox: Organizations want to release on a weekly or daily basis, yet it takes 1-3 days to initially code test cases, and then anywhere from 1 day to 2 weeks to update automation scripts with each release. This makes daily or weekly releases incredibly challenging. Despite this complexity, the ROI behind automation is compelling. Almost 40% of respondents spend between 30-49% of their entire QA budget on automation, and surprisingly, almost 20% spend 50-70% of their budget on automation. **The message is clear:** Automation isn't cheap or easy, but it is necessary for innovation and a modern release frequency. If you're spending less than 10% of your budget on test automation, you're significantly lagging behind your peers.

MOBILE STRATEGIES

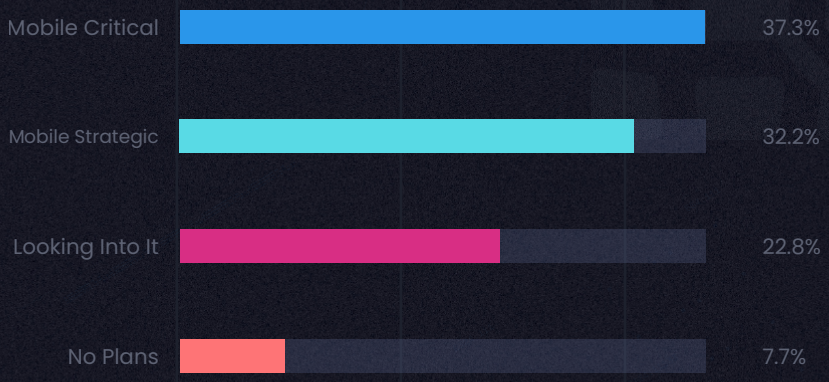
Mobile Critical: Our business model is centered around a mobile app

Mobile Strategic: Mobile is an important channel for our company, but we would survive without it

Looking Into It: Mobile is an initiative we're looking to persue

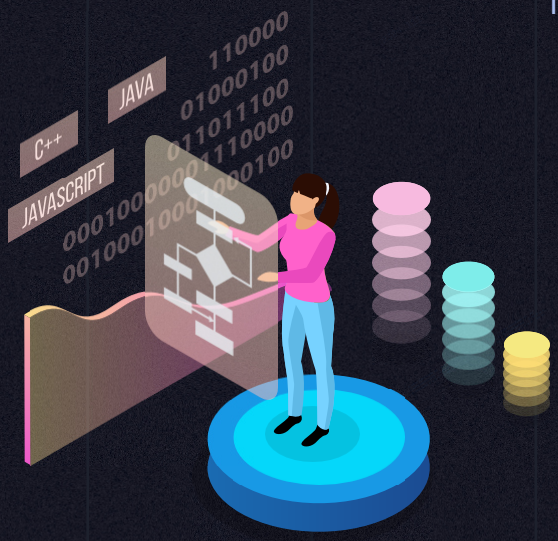
No Plans: We don't have a mobile app or any plans to implement one

Mobile Strategies

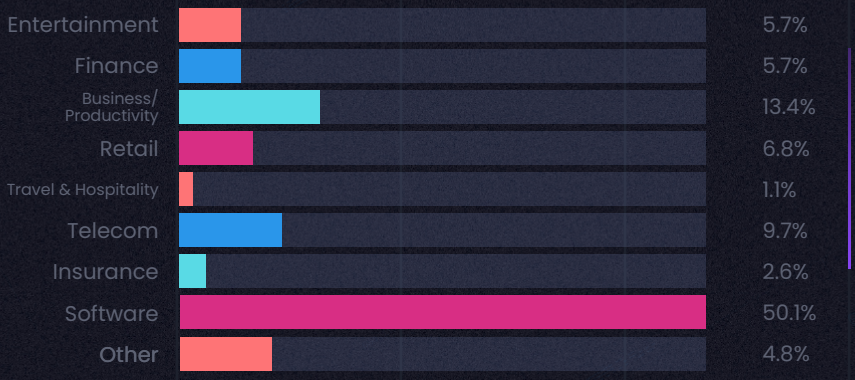


SUMMARY

The majority of respondents indicated that mobile was an important component in their business model. 37.7% of respondents said that their business was centered around a mobile app.



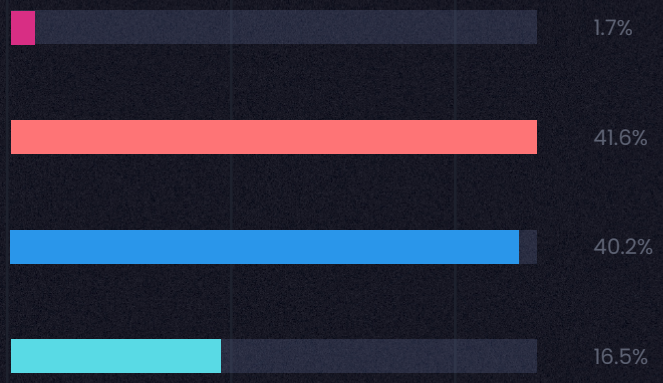
Industry/App Categories



SUMMARY

At 51%, the majority of responses collected in this survey were from software companies. The survey received the fewest responses from companies in the Travel and Hospitality vertical.

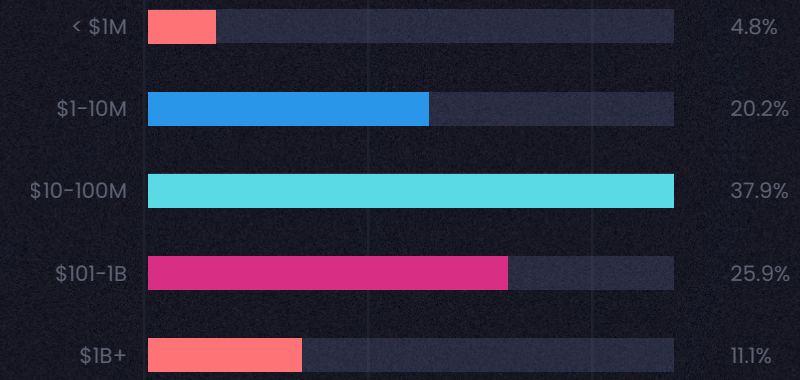
How many testers are on your team?



SUMMARY

Most of the companies surveyed have test teams of 2-25 people. Only 1.7% of respondents had 1 tester, while 16.5% had teams of more than 26 people.

Annual Company Revenue



SUMMARY

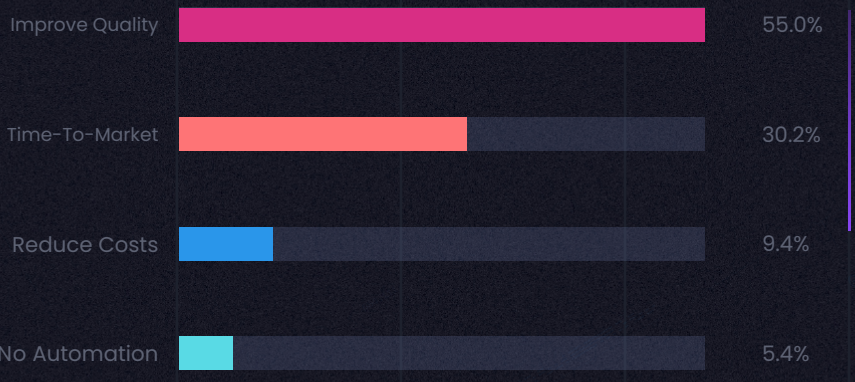
37.9% of companies surveyed had an annual revenue of $10-100M. Just 4.8% of respondents indicated an annual revenue of less than $1M.

How often do you release app updates?

SUMMARY

Respondents indicated a preference for semi-frequent updates, with most responses indicating app update releases on a weekly or monthly schedule.

What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

The majority of respondents indicated that a desire to improve overall app quality was the primary strategic driver in choosing to persue test automation.

TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

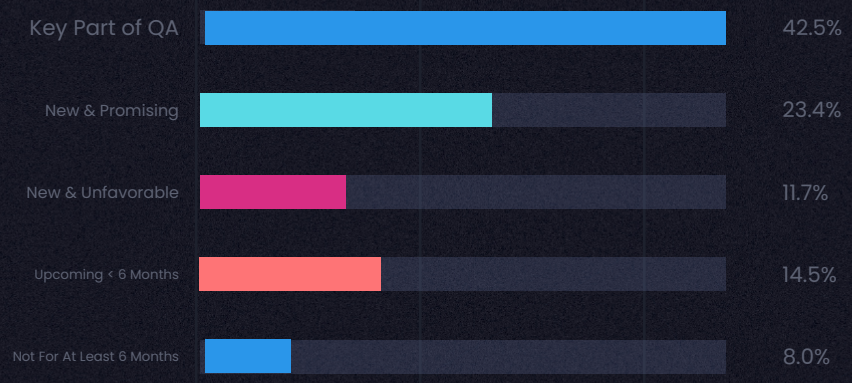
New and Promising: Our automation initiatives are relatively new and promising

New and Unfavorable: Our automation initiatives are relatively new and the results are not what we hoped for

Upcoming <6 months: Automation is an initiative we hope to start within the next 6 months

Not for at least 6 months: Automation will not happen within 6 months

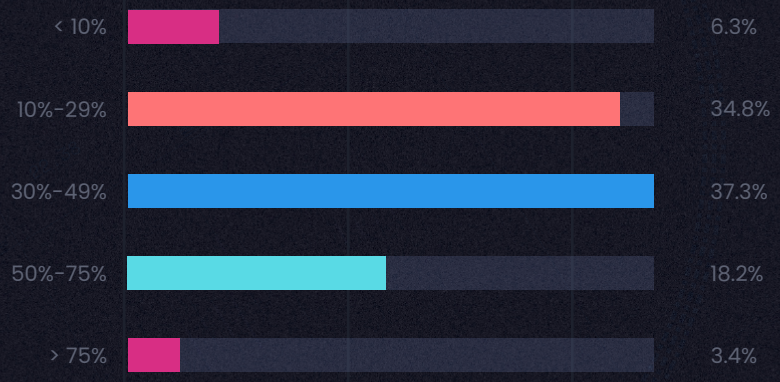
Where would you rate your current test automation maturity?



SUMMARY

42.5% of respondents indicated that test automation was a key part of their quality assurance process.

Based on the overall quality assurance budget in your organization, what percentage is spent on test automation when factoring in employees, tools, and other resources?



SUMMARY

Most respondents indicated that their companies allocate between 10 and 49% of their overall QA budget to test automation related expenditures.

All Respondents

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

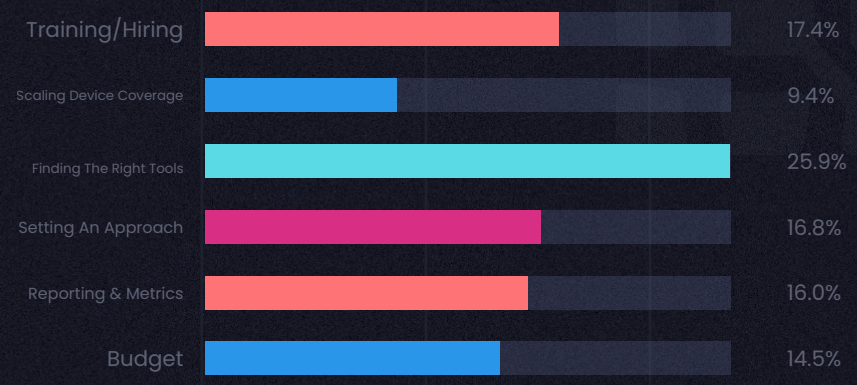
Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

Budget: Convincing the organization of the need to invest in automation

What is your biggest struggle/pain point with using or starting test automation today?



SUMMARY

The survey respondents indicated that the largest barrier to entry for test automation is finding the right tools.

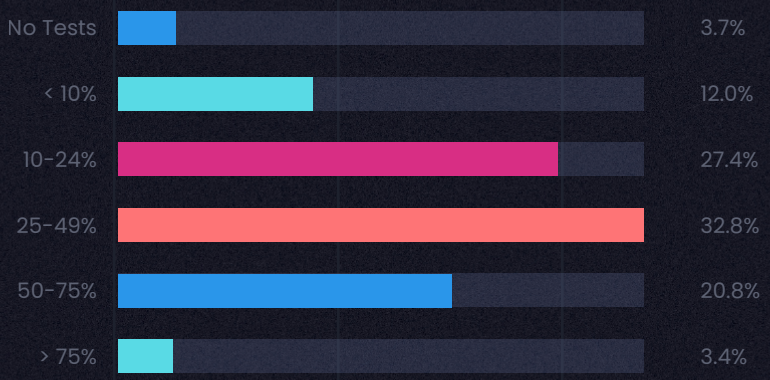
Test automation framework usage

SUMMARY

Responses indicate that Selenium is the preferred automation framework.

All Respondents

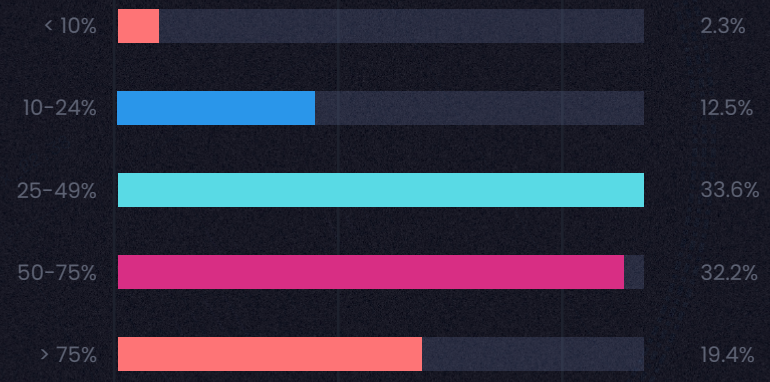
What percentage of your test cases are automated?



SUMMARY

96.3% of respondents indicated that they are performing some test automation. 32.8% of respondents specified that 25-49% of their test cases are automated.

What percentage of test cases would you like to have automated?



SUMMARY

Most respondents clearly see the value of test automation, with a noteworthy 19.4% seeking to automate more than 75% of their test cases. Comparing this graph with the one above shows a clear trend toward desired increases in test automation.

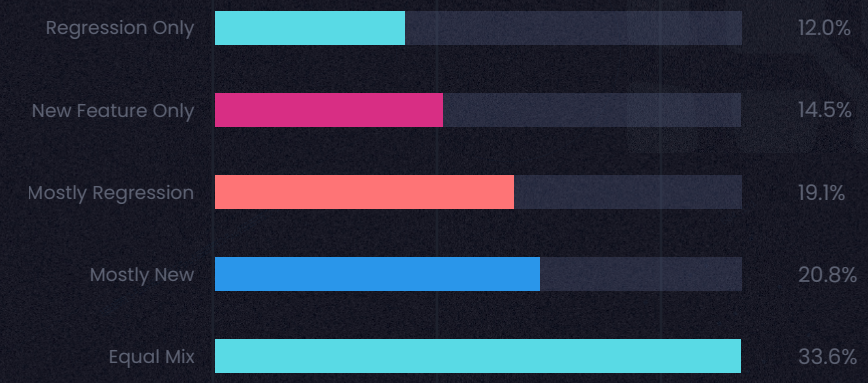
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

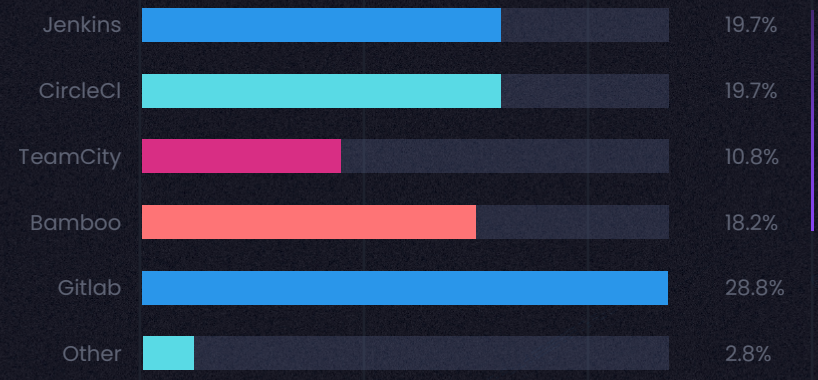
What are you using test automation primarily for?



SUMMARY

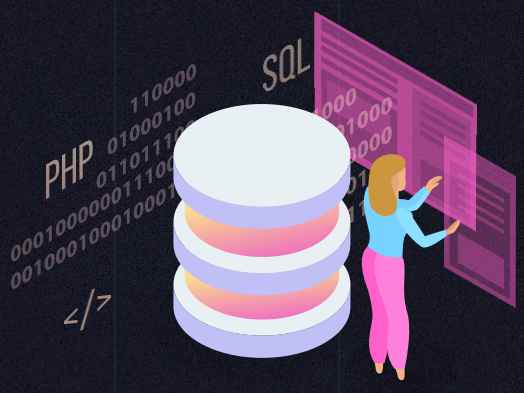
Most respondents are using test automation to verify the functionality of an equal mix in new and existing app features.

Which CI/CD tools does your organization use?



SUMMARY

Gitlab was listed as the preferred CI/CD tool amongst respondents with 28.8% indicating its use. At 19.7% Jenkins and CircleCI tied for second most frequently used.

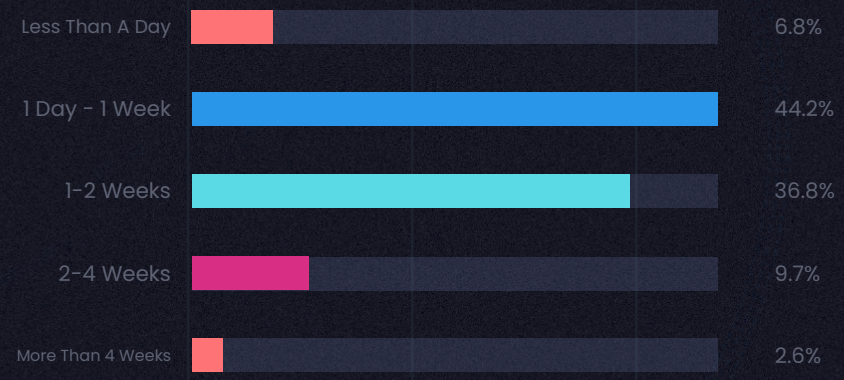


Which of the following metrics best indicates successful test automation implementation?

SUMMARY

Respondents indicated a preference for quantifying test automation success by measuring delivery speed.

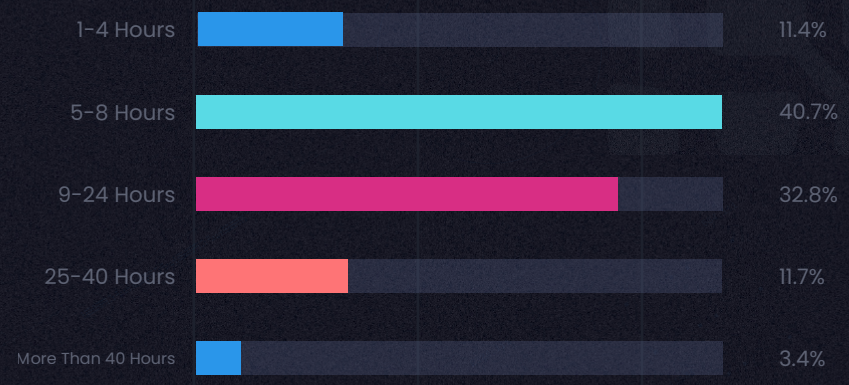
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts within 1 Day - 1 Week.

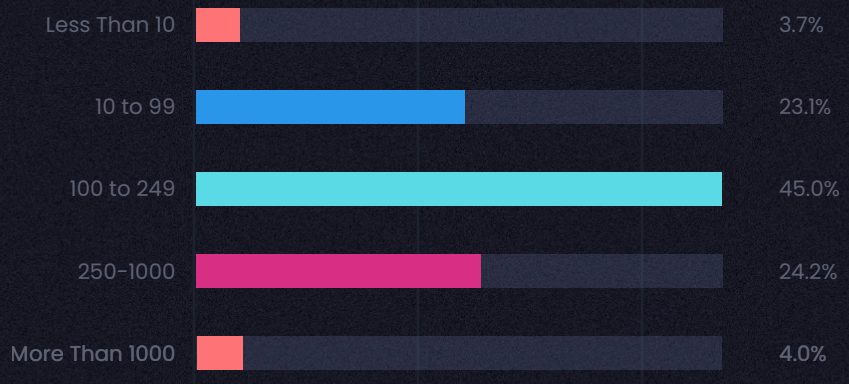
On average, how long does it take to code a test case using the framework of your choice?



SUMMARY

Survey respondents indicated that their test cases are typically coded within a 5-8 hour span.

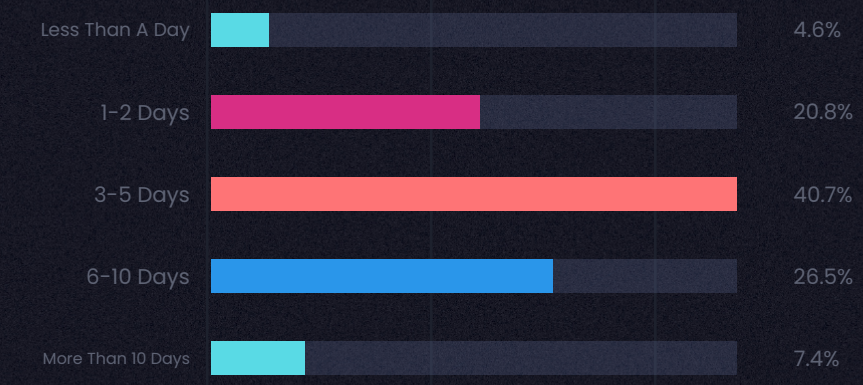
Approximately how many manual test cases are you executing with each app release?



SUMMARY

There's plenty of room for automation. 45% of respondents indicated that test teams perform 100-249 manual test cases with each app release.

Approximately how long does it take to manually test your app before every release?



SUMMARY

Manual testing is time consuming. 40.7% of respondents indicated an average manual testing time period of 3-5 days with every release.

NEGATIVE SURPRISES

Code Complexity: The coding complexity of developing test scripts

Repair/Release: The need to continually fix test scripts with every release

Repair/Devices: The need to continually fix test scripts to work across more devices

Stability: Having a stable test environment with predictable data

Hype vs. Reality: Vendor products not living up to their claims or hype

What was the biggest negative surprise you encountered as part of your test automation implementation?

SUMMARY

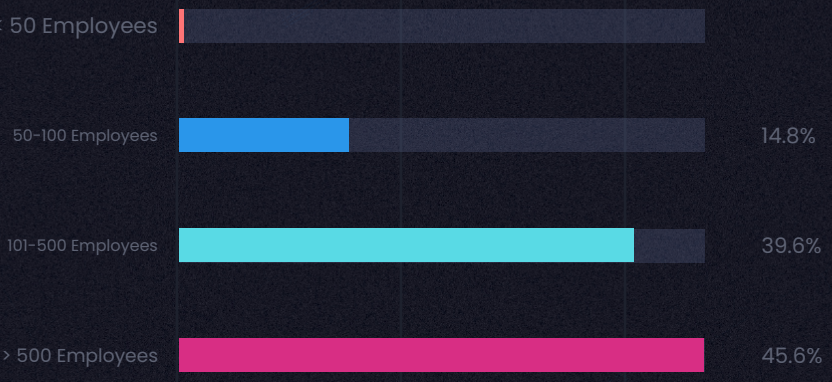
Stability issues are rampant in the test automation implementations used by most respondents. The second largest gripe with impleneting a test automation strategy is code complexity for test scripts.

Which of these best describes your occupation?

SUMMARY

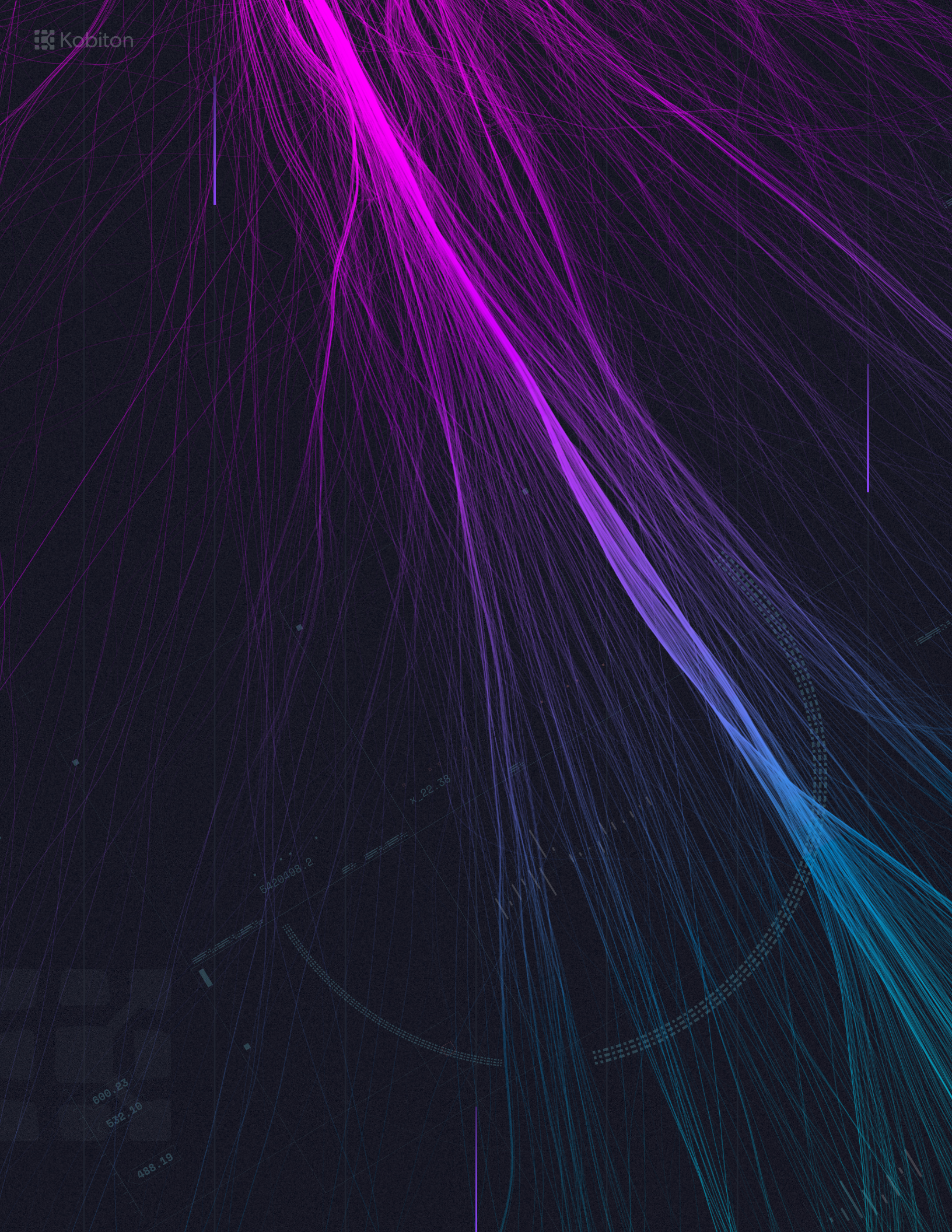
The overwhelming majority of respondents indicated that their role in their organization is as a software testing professional.

Company Size



SUMMARY

45.6% of survey respondents indicated that the company they worked for had more than 500 employees.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Kobiton

COMPANY SIZE

50–100 EMPLOYEES

Company Size

There are a few commonalities in the way small, medium and large companies approach test automation, all of which have revealed themselves to be basic pillars of success in Quality Assurance. For example, all 3 categories state that improving overall app quality is the primary driver behind pursuing test automation initiatives. They also all mention increasing time-to-market as the secondary goal.

However, their approach to achieving these broad objectives differs significantly based on the number of employees, *and presumably*, access to resources and top talent.

The smaller a company is, the more likely it is to self-identify as Mobile Critical (*app is essential to revenue*) vs Mobile Strategic (*app is important, but non-essential*). This indicates a trend of legacy enterprises being slow to declare mobile as the primary channel. Additionally, because smaller companies are more likely to be Mobile Critical, they're also more likely to follow agile best practices in mobile, with 61% of small companies releasing daily or weekly, compared to only 44% of large enterprises.

Ironically, companies with more than 500 employees are 2.5x more likely to spend over 75% of their entire QA budget on test automation. Considering that the most common success criteria for test automation in large enterprises is *speed of delivery*, their willingness to invest heavily in people and tools is not surprising. In contrast, smaller companies place greater emphasis on the *number of human hours saved* with test automation, perhaps due to a need for stretching finite resources.

Mid-size companies are 2x more likely to automate over 75% of their test cases than small companies, and 33% more likely than large enterprises. Perhaps this is because they've found the sweet spot of being both Mobile Critical and large enough to leverage resources while maintaining a scrappy mentality.

The biggest negative surprises for test automation among small and mid-size companies are all related to coding complexity, likely due to their limited access to top talent. In contrast, large enterprises with virtually unlimited capital to deploy on people and tools worry most about maintaining stable test environments where data is predictable and reliable.

In the end, it appears that more resources will always win as long as the strategy is sound and effective. Viewing the responses from these 3 categories in linear fashion provides a realistic roadmap of the test automation journey through the lens of a company's maturation.

MOBILE STRATEGIES

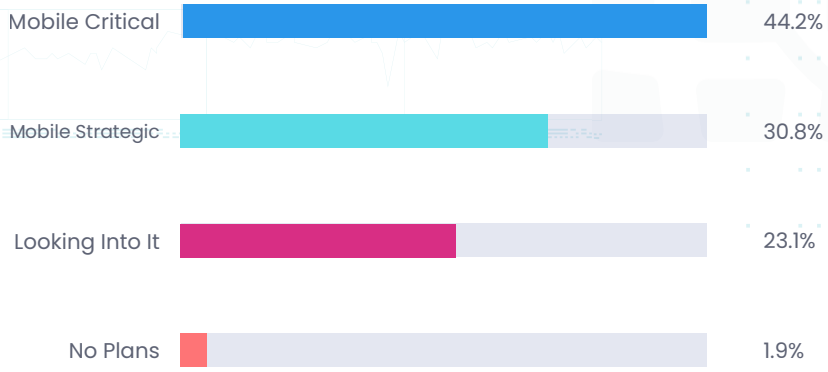
Mobile Critical: Our business model is centered around a mobile app

Mobile Strategic: Mobile is an important channel for our company, but we would survive without it

Looking Into It: Mobile is an initiative we're looking to persue

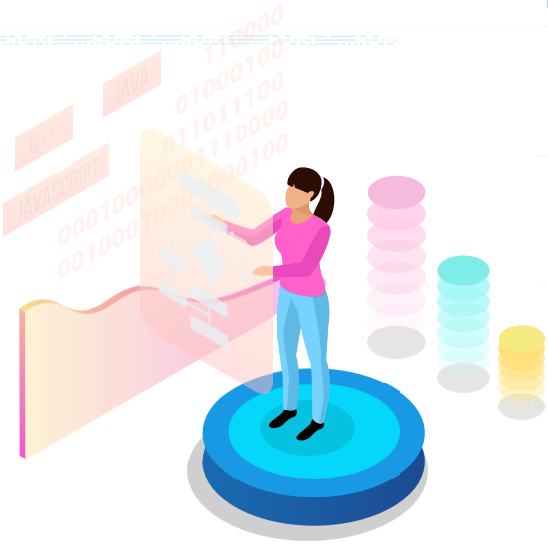
No Plans: We don't have a mobile app or any plans to implement one

Mobile Strategies

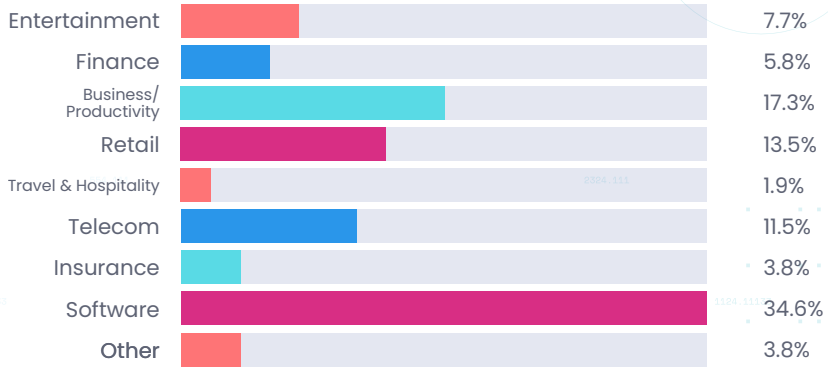


SUMMARY

The majority of respondents indicated that mobile was an important component in their business model. 44.2% of respondents said that their business was centered around a mobile app.



Industry/App Categories



SUMMARY

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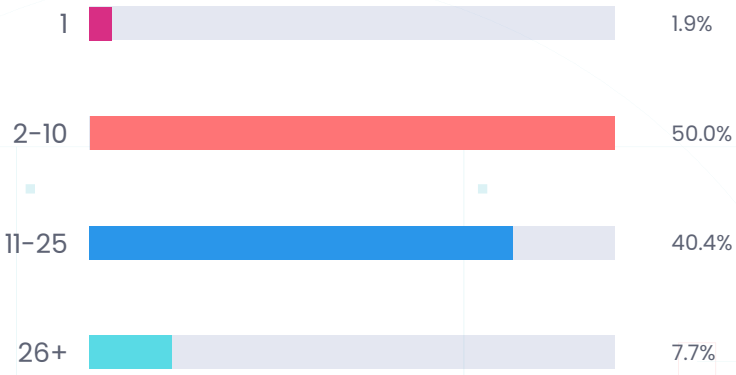
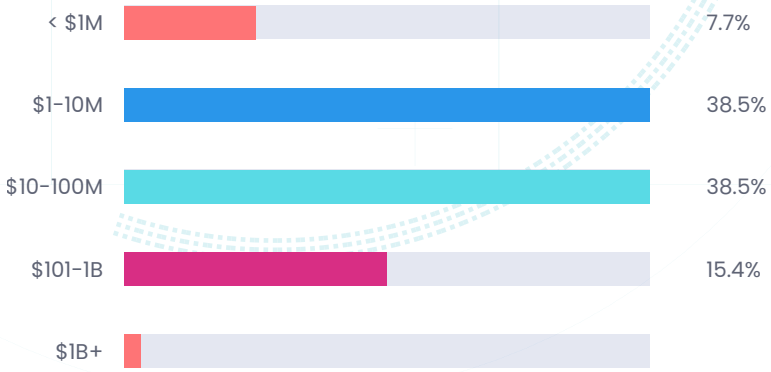
How many testers are on your team?



SUMMARY

Most of the companies surveyed have test teams of 2-25 people. Only 1.9% of respondents had 1 tester, while 7.7% had teams of more than 26 people.

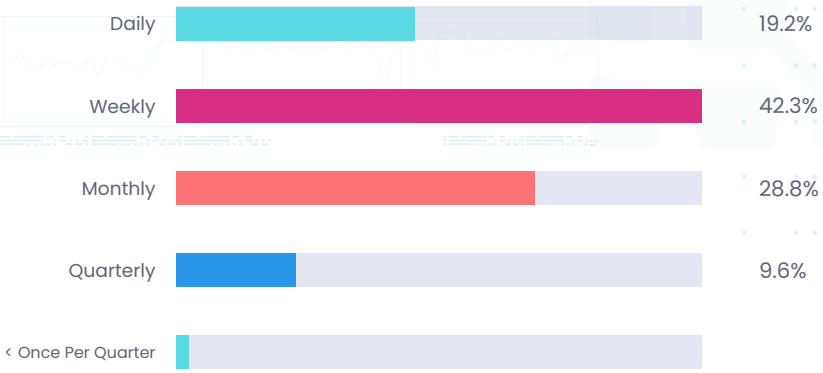
Annual Company Revenue



SUMMARY

42.3% of companies surveyed had an annual revenue of $1-10M. Just 9.6% of respondents indicated an annual revenue of more than $100M.

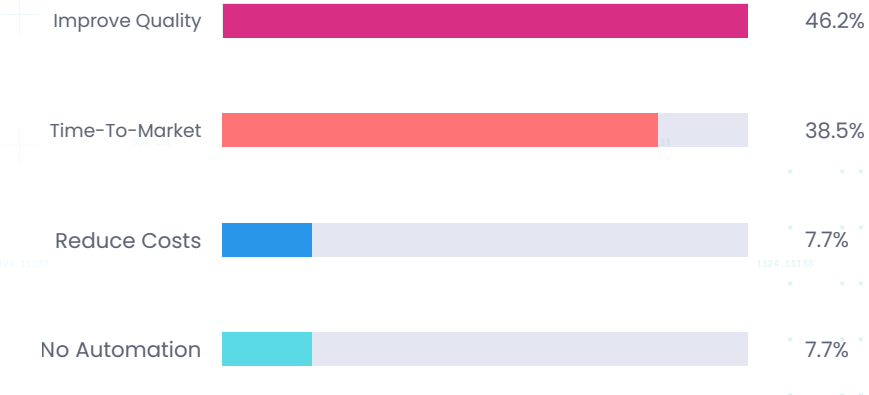
How often do you release app updates?



SUMMARY

Respondents indicated a preference for semi-frequent updates, with most responses indicating app update releases on a weekly or monthly schedule.

What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

The majority of respondents indicated that a desire to improve overall app quality was the primary strategic driver in choosing to persue test automation.

TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

New and Promising: Our automation initiatives are relatively new and promising

New and Unfavorable: Our automation initiatives are relatively new and the results are not what we hoped for

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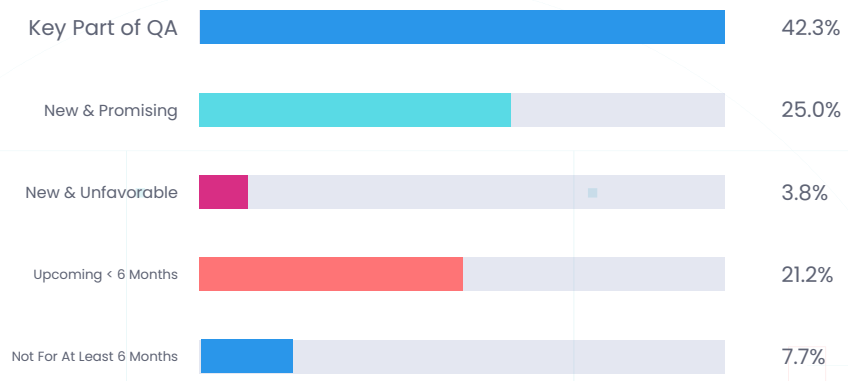
Not for at least 6 months: Automation will not happen within 6 months

Where would you rate your current test automation maturity?



SUMMARY

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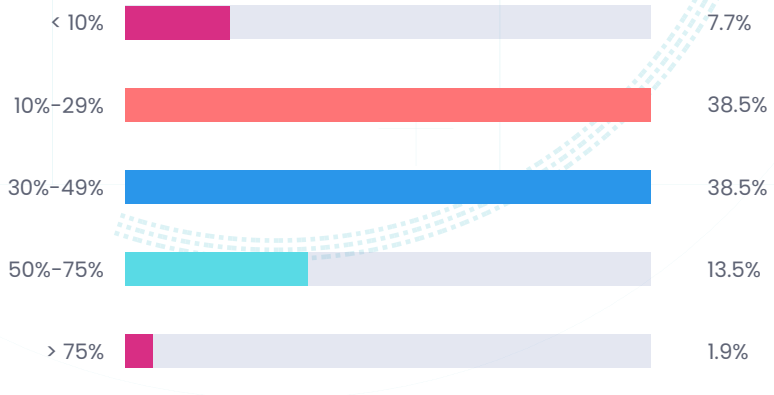
Based on the overall quality assurance budget in your organization, what percentage is spent on test automation when factoring in employees, tools, and other resources?



SUMMARY

Most respondents indicated that their companies allocate between 10 and 49% of their overall QA budget to test automation related expenditures.

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

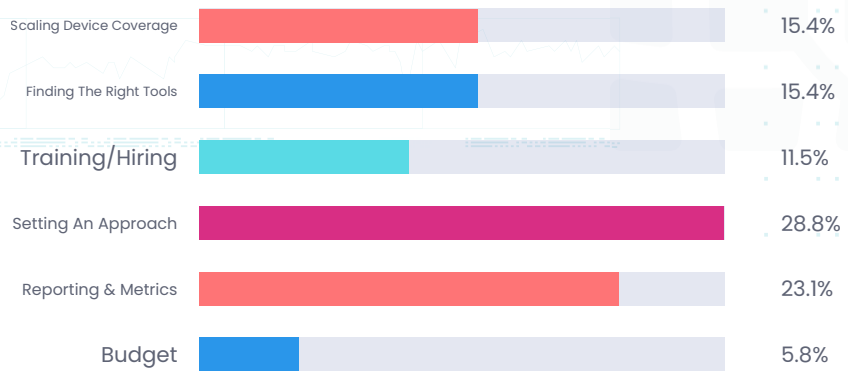
Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

Budget: Convincing the organization of the need to invest in automation

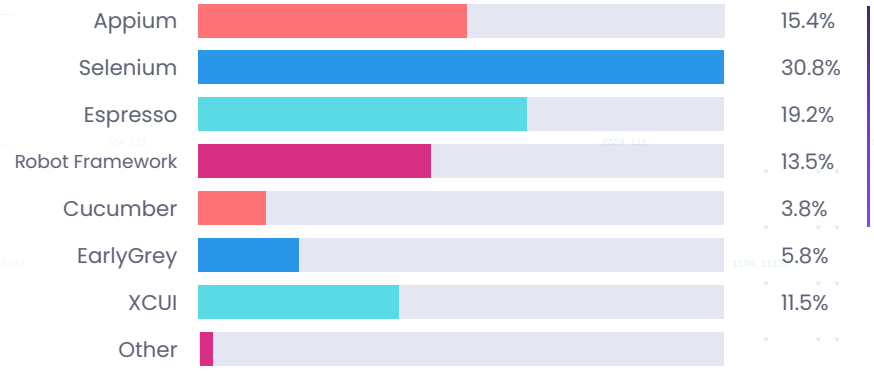
What is your biggest struggle/pain point with using or starting test automation today?



SUMMARY

The survey respondents indicated that the largest barrier to entry for test automation is setting an approach.

Test automation framework usage

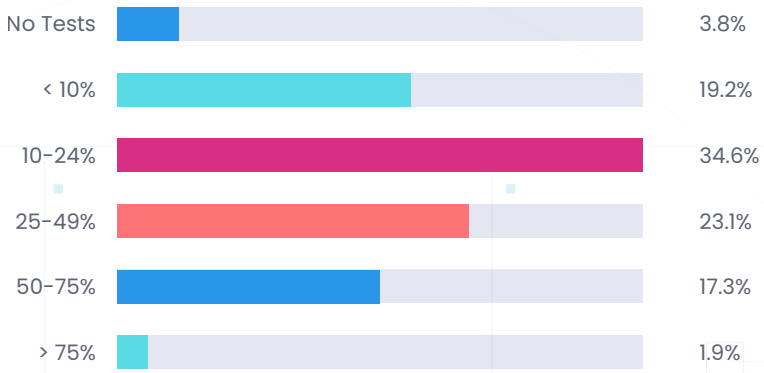


SUMMARY

Responses indicate that Selenium is the preferred automation framework.

Company Size: 50-100 Employees

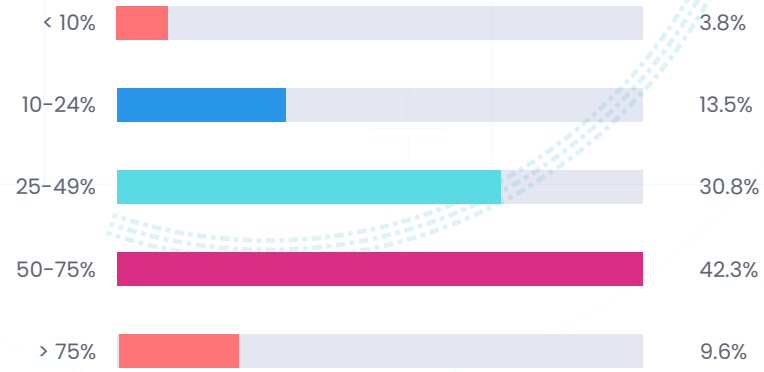
What percentage of your test cases are automated?



SUMMARY

96.2% of respondents indicated that they are performing some test automation. 23.1% of respondents specified that 25-49% of their test cases are automated.

What percentage of test cases would you like to have automated?



SUMMARY

Most respondents clearly see the value of test automation, with a noteworthy 42.3% seeking to automate 50-75% of their test cases. Comparing this graph with the one above shows a clear trend toward desired increases in test automation.

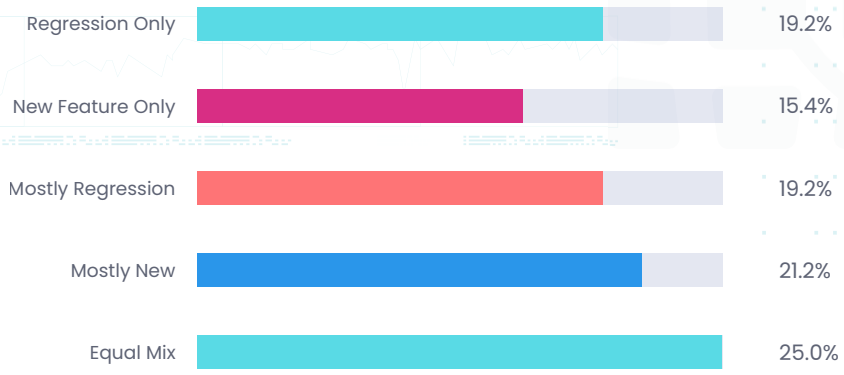
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

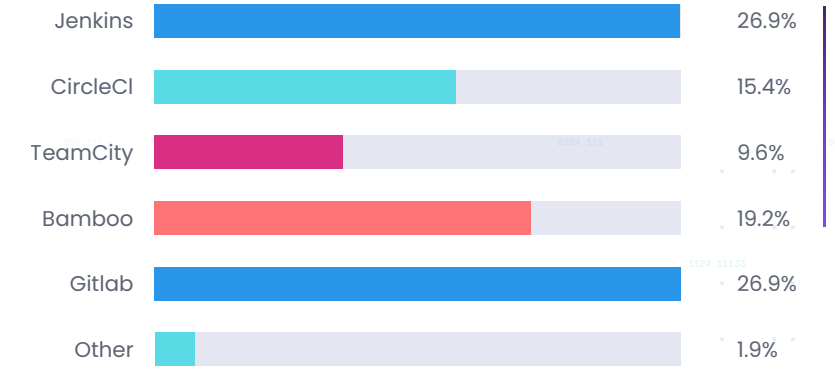
What are you using test automation primarily for?



SUMMARY

Most respondents are using test automation to verify the functionality of an equal mix in new and existing app features.

Which CI/CD tools does your organization use?

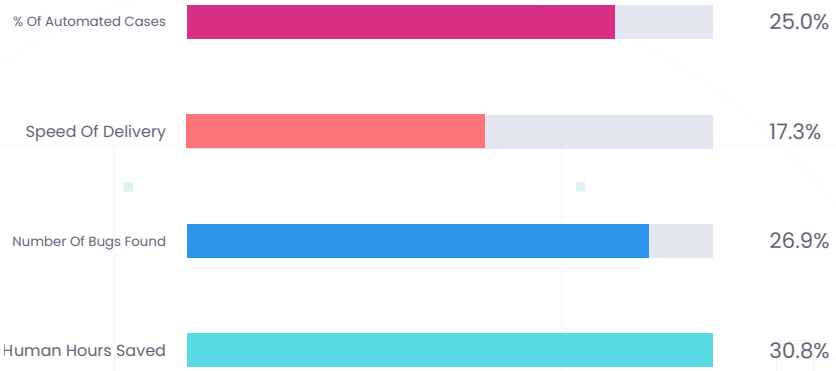


SUMMARY

Gitlab was listed as the preferred CI/CD tool amongst respondents with 26.9% indicating its use. Also tied for first is Jenkins.

Company Size: 50-100 Employees

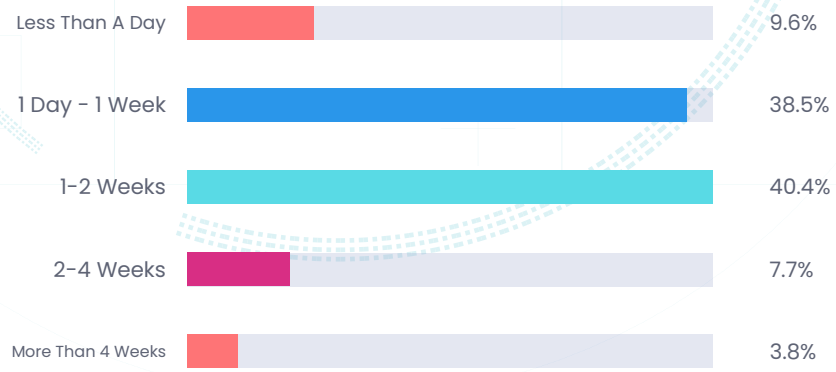
Which of the following metrics best indicates successful test automation implementation?



SUMMARY

Respondents indicated a preference for quantifying test automation success by measuring human hours saved.

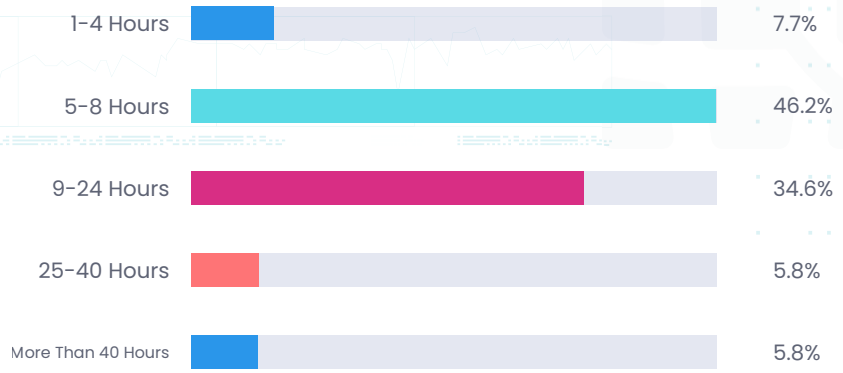
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts within 1 Day - 2 Weeks.

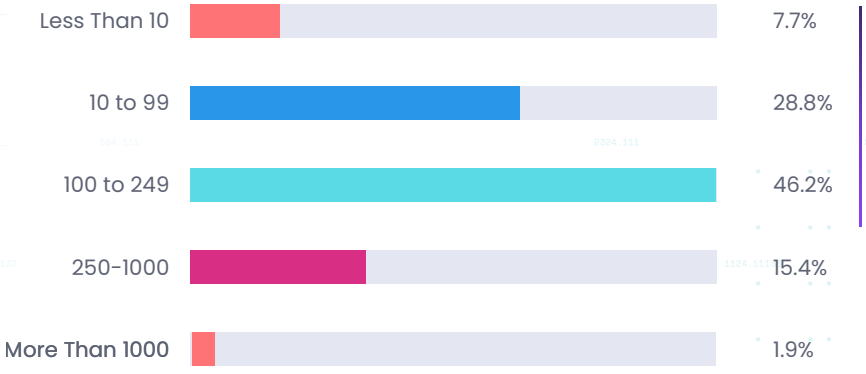
On average, how long does it take to code a test case using the framework of your choice?



SUMMARY

Survey respondents indicated that their test cases are typically coded within a 5-8 hour span.

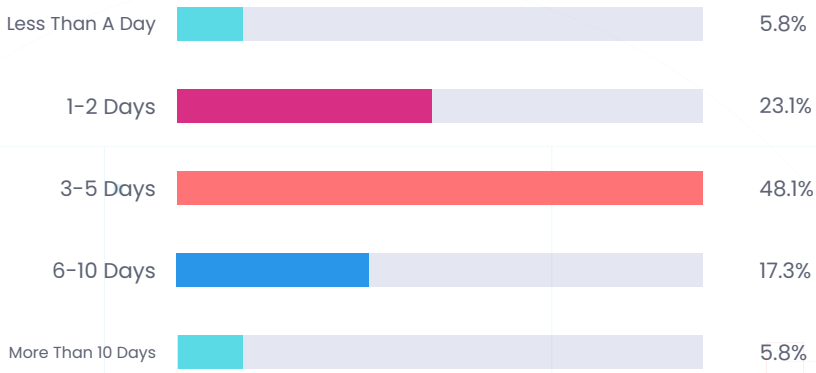
Approximately how many manual test cases are you executing with each app release?



SUMMARY

There's plenty of room for automation. 46.2% of respondents indicated that test teams perform 100-249 manual test cases with each app release.

Approximately how long does it take to manually test your app before every release?



SUMMARY

Manual testing is time consuming. 48.1% of respondents indicated an average manual testing time period of 3-5 days with every release.

NEGATIVE SURPRISES

Code Complexity: The coding complexity of developing test scripts

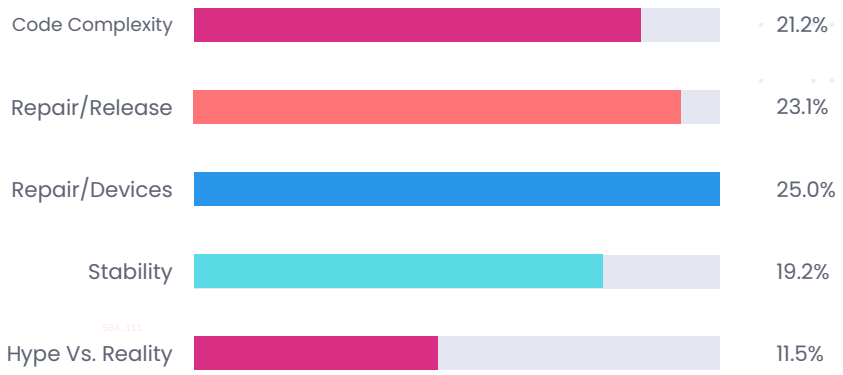
Repair/Release: The need to continually fix test scripts with every release

Repair/Devices: The need to continually fix test scripts to work across more devices

Stability: Having a stable test environment with predictable data

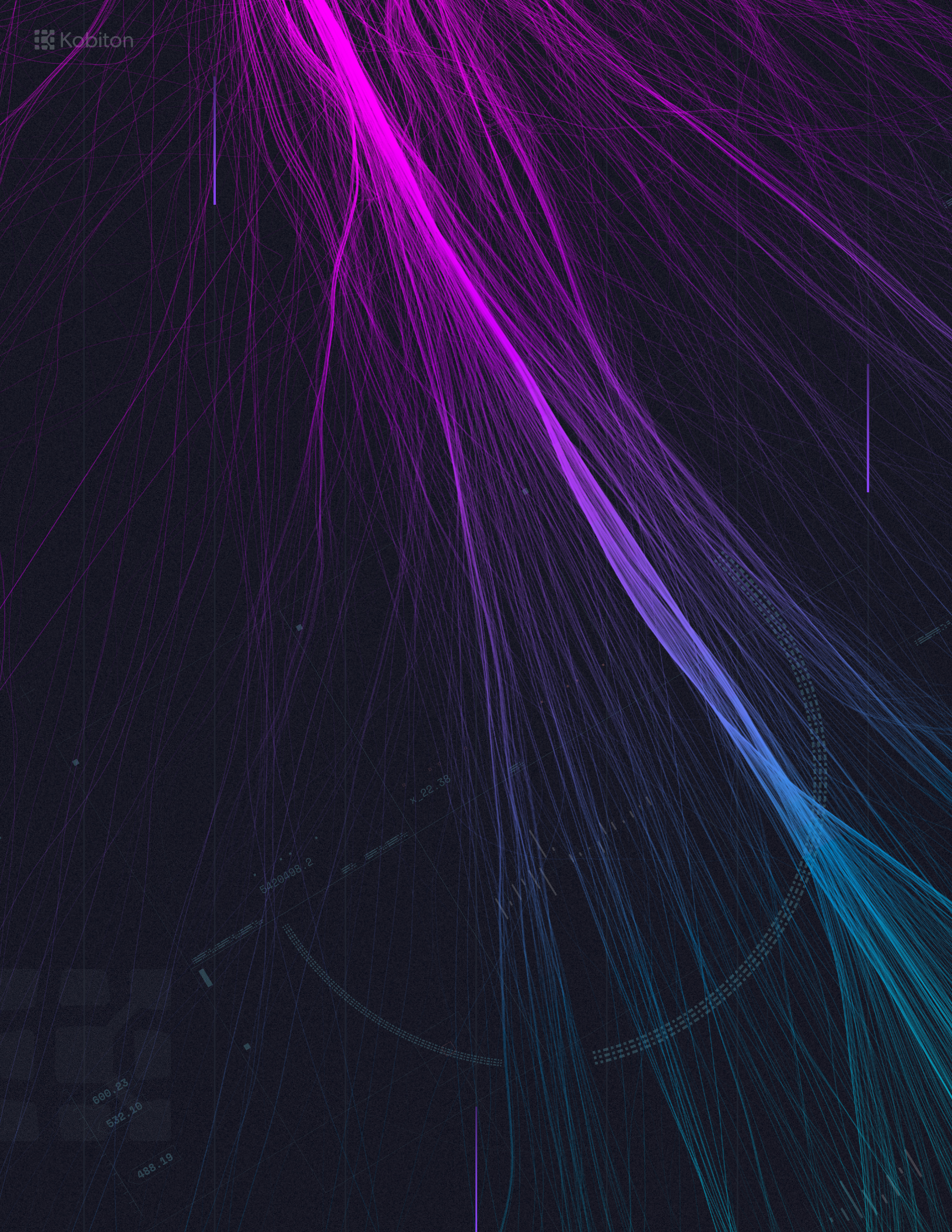
Hype vs. Reality: Vendor products not living up to their claims or hype

What was the biggest negative surprise you encountered as part of your test automation implementation?



SUMMARY

Survey respondents indicated their largest negative surprise in implementing a test automation strategy has been the need to continually fix test scripts to work across more devices.


Kobiton
x_22.38
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Kobiton

COMPANY SIZE

101-500 EMPLOYEES

Company Size

There are a few commonalities in the way small, medium and large companies approach test automation, all of which have revealed themselves to be basic pillars of success in Quality Assurance. For example, all 3 categories state that improving overall app quality is the primary driver behind pursuing test automation initiatives. They also all mention increasing time-to-market as the secondary goal.

However, their approach to achieving these broad objectives differs significantly based on the number of employees, *and presumably*, access to resources and top talent.

The smaller a company is, the more likely it is to self-identify as Mobile Critical (*app is essential to revenue*) vs Mobile Strategic (*app is important, but non-essential*). This indicates a trend of legacy enterprises being slow to declare mobile as the primary channel. Additionally, because smaller companies are more likely to be Mobile Critical, they're also more likely to follow agile best practices in mobile, with 61% of small companies releasing daily or weekly, compared to only 44% of large enterprises.

Ironically, companies with more than 500 employees are 2.5x more likely to spend over 75% of their entire QA budget on test automation. Considering that the most common success criteria for test automation in large enterprises is *speed of delivery*, their willingness to invest heavily in people and tools is not surprising. In contrast, smaller companies place greater emphasis on the *number of human hours saved* with test automation, perhaps due to a need for stretching finite resources.

Mid-size companies are 2x more likely to automate over 75% of their test cases than small companies, and 33% more likely than large enterprises. Perhaps this is because they've found the sweet spot of being both Mobile Critical and large enough to leverage resources while maintaining a scrappy mentality.

The biggest negative surprises for test automation among small and mid-size companies are all related to coding complexity, likely due to their limited access to top talent. In contrast, large enterprises with virtually unlimited capital to deploy on people and tools worry most about maintaining stable test environments where data is predictable and reliable.

In the end, it appears that more resources will always win as long as the strategy is sound and effective. Viewing the responses from these 3 categories in linear fashion provides a realistic roadmap of the test automation journey through the lens of a company's maturation.

MOBILE STRATEGIES

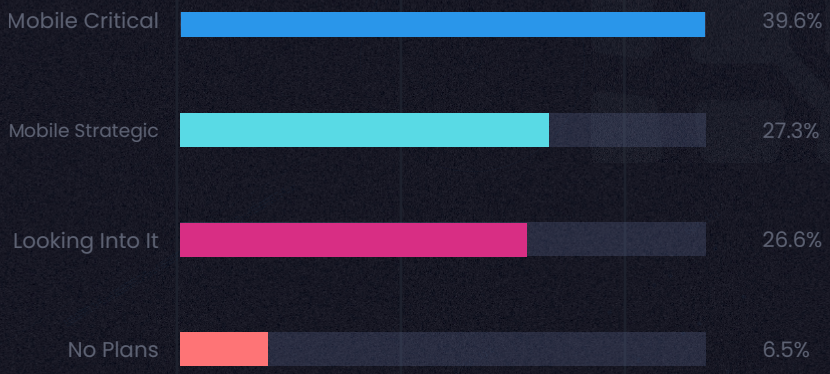
Mobile Critical: Our business model is centered around a mobile app

Mobile Strategic: Mobile is an important channel for our company, but we would survive without it

Looking Into It: Mobile is an initiative we're looking to persue

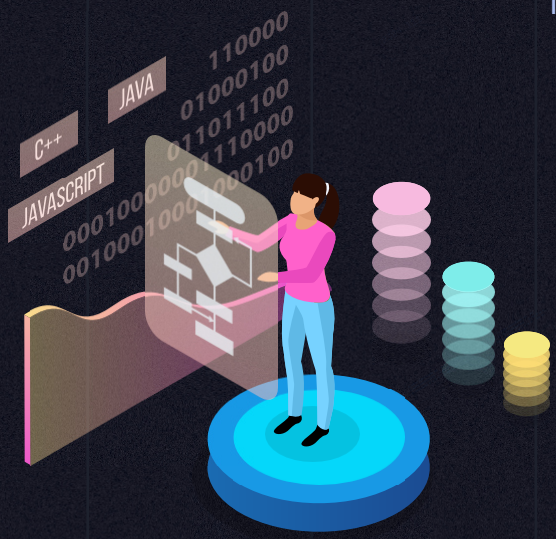
No Plans: We don't have a mobile app or any plans to implement one

Mobile Strategies



SUMMARY

The majority of respondents indicated that mobile was an important component in their business model. 39.6% of respondents said that their business was centered around a mobile app.

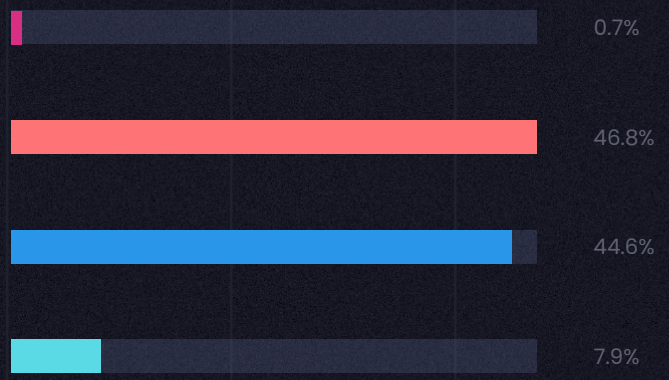


Industry/App Categories

SUMMARY

At 47.5%, the majority of responses collected in this survey were from software companies. The survey received the fewest responses from companies in the Travel and Hospitality vertical.

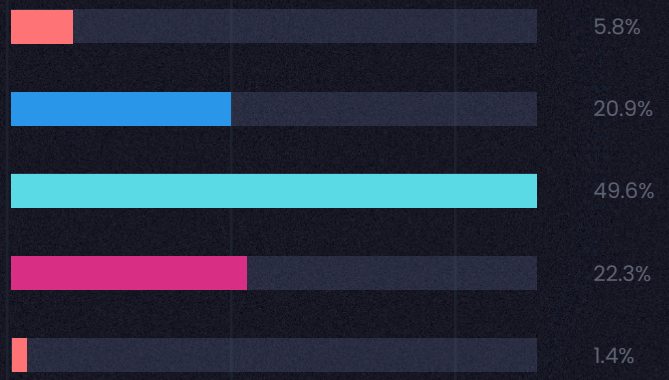
How many testers are on your team?



SUMMARY

Most of the companies surveyed have test teams of 2-25 people. Only 0.7% of respondents had 1 tester, while 7.9% had teams of more than 26 people.

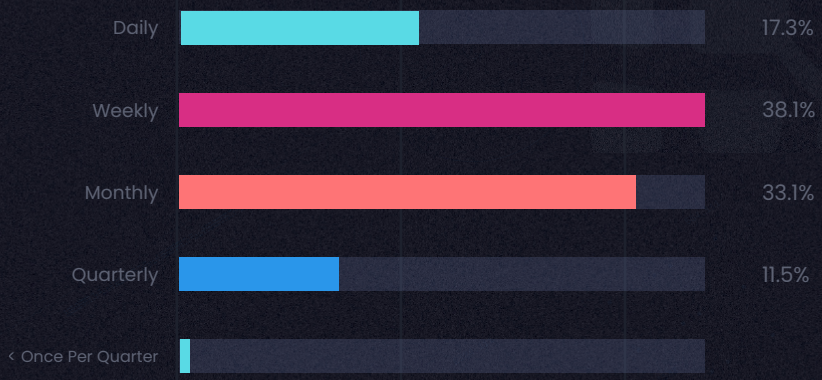
Annual Company Revenue



SUMMARY

49.6% of companies surveyed had an annual revenue of $10-100M. Just 1.4% of respondents indicated an annual revenue of more than $1B.

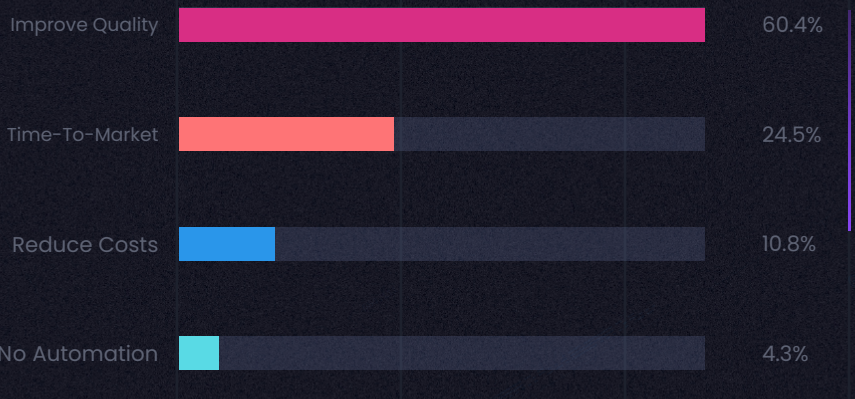
How often do you release app updates?



SUMMARY

Respondents indicated a preference for semi-frequent updates, with most responses indicating app update releases on a weekly or monthly schedule.

What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

The majority of respondents indicated that a desire to improve overall app quality was the primary strategic driver in choosing to persue test automation.

TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

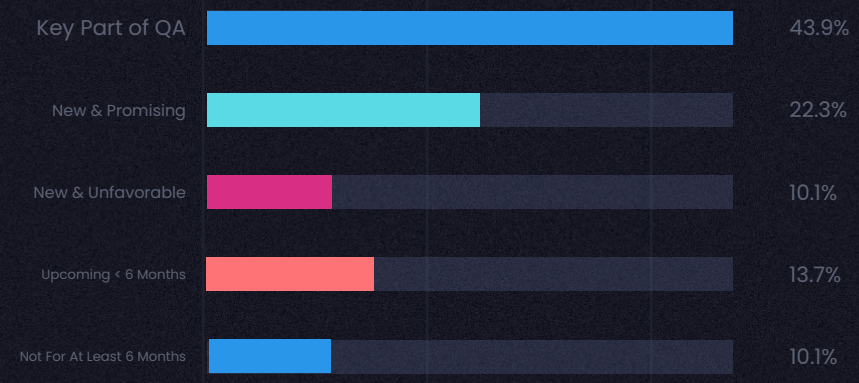
New and Promising: Our automation initiatives are relatively new and promising

New and Unfavorable: Our automation initiatives are relatively new and the results are not what we hoped for

Upcoming <6 months: Automation is an initiative we hope to start within the next 6 months

Not for at least 6 months: Automation will not happen within 6 months

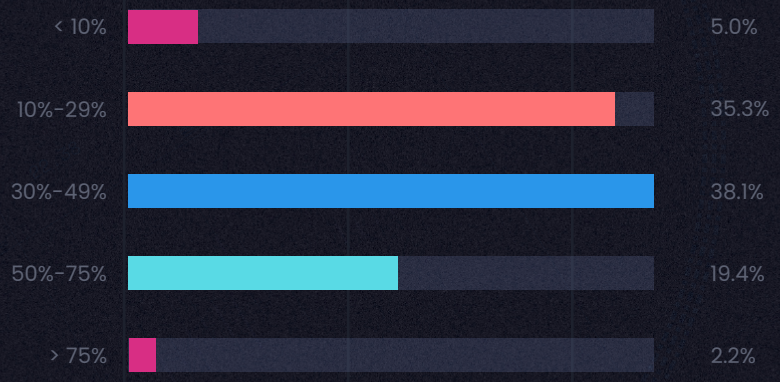
Where would you rate your current test automation maturity?



SUMMARY

43.9% of respondents indicated that test automation was a key part of their quality assurance process.

Based on the overall quality assurance budget in your organization, what percentage is spent on test automation when factoring in employees, tools, and other resources?



SUMMARY

Most respondents indicated that their companies allocate between 10 and 49% of their overall QA budget to test automation related expenditures.

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

Budget: Convincing the organization of the need to invest in automation

What is your biggest struggle/pain point with using or starting test automation today?

SUMMARY

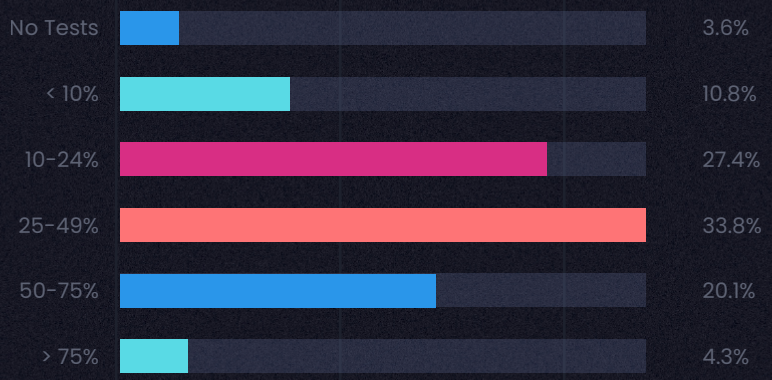
The survey respondents indicated that the largest barrier to entry for test automation is finding the right tools.

Test automation framework usage

SUMMARY

Responses indicate that Selenium is the preferred automation framework.

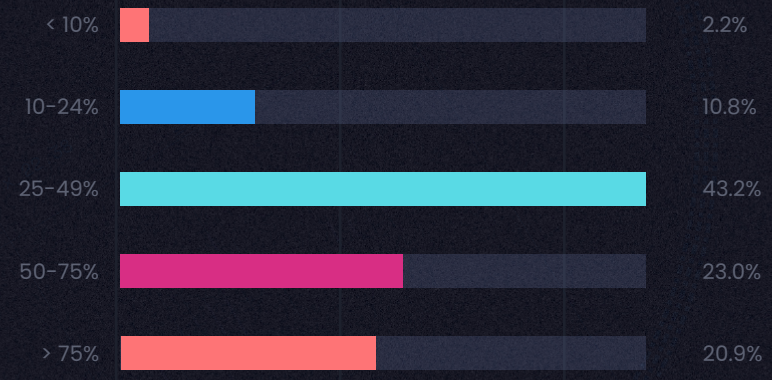
What percentage of your test cases are automated?



SUMMARY

96.3% of respondents indicated that they are performing some test automation. 33.8% of respondents specified that 25-49% of their test cases are automated.

What percentage of test cases would you like to have automated?



SUMMARY

Most respondents clearly see the value of test automation, with a noteworthy 20.9% seeking to automate more than 75% of their test cases.

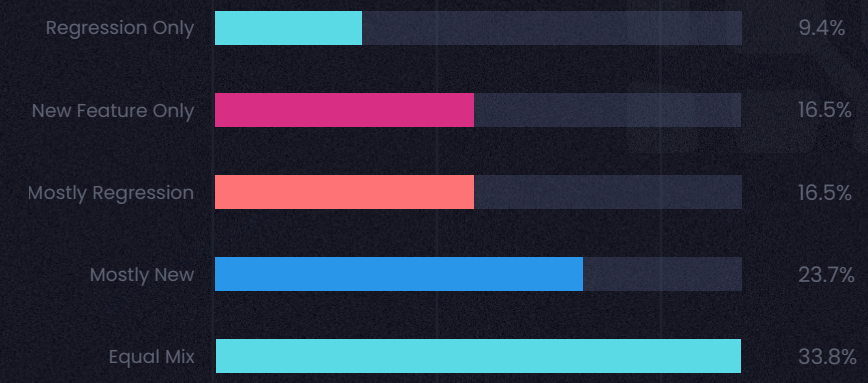
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

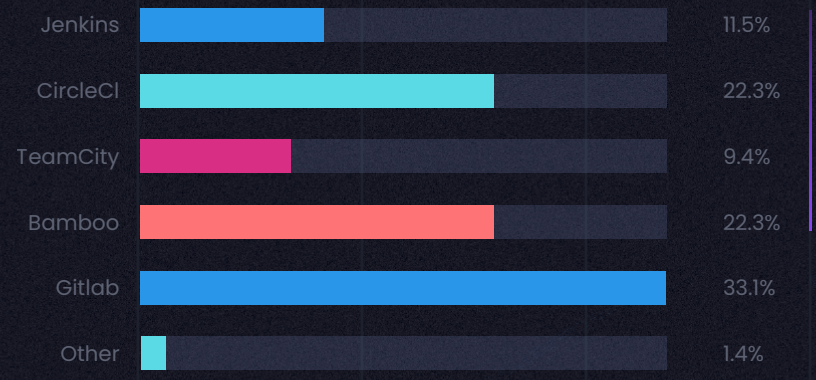
What are you using test automation primarily for?



SUMMARY

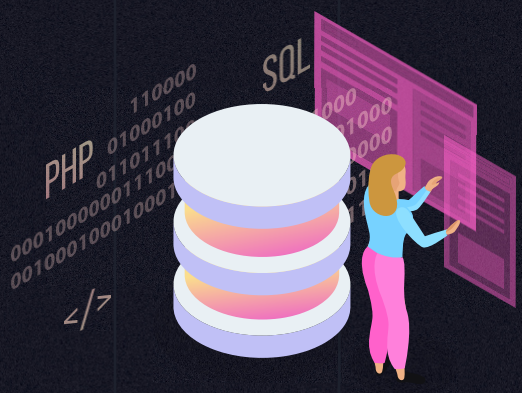
Most respondents are using test automation to verify the functionality of an equal mix of new and existing app features.

Which CI/CD tools does your organization use?



SUMMARY

Gitlab was listed as the preferred CI/CD tool amongst respondents with 33.1% indicating its use.

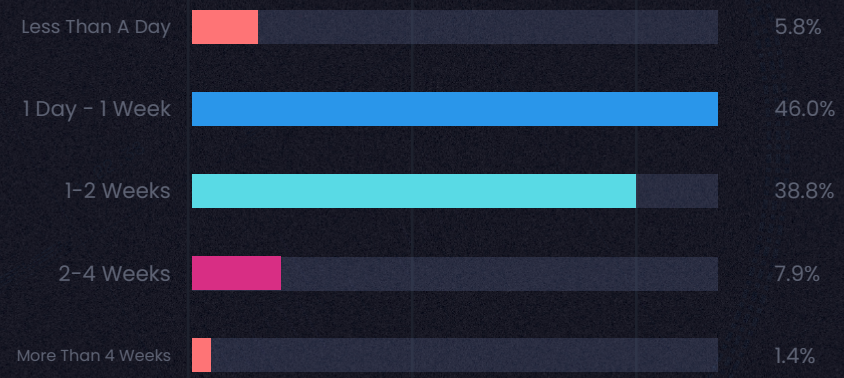


Which of the following metrics best indicates successful test automation implementation?

SUMMARY

Respondents indicated a preference for quantifying test automation success by measuring the quantity of bugs found.

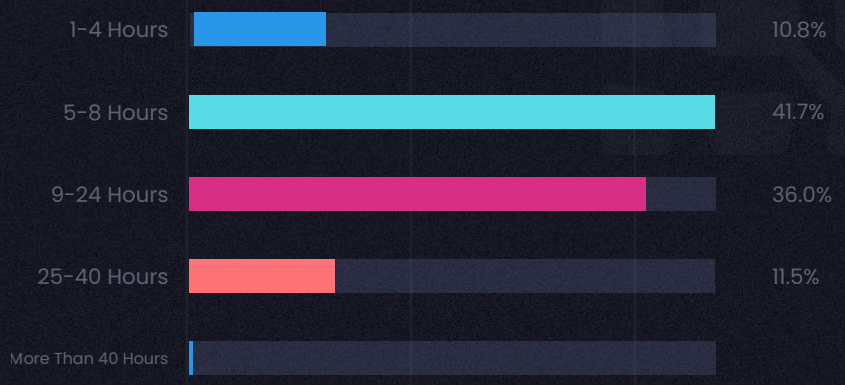
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts within 1 Day - 1 Week.

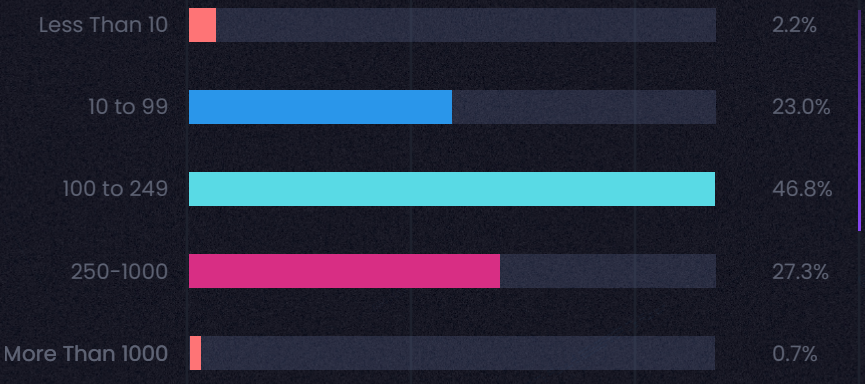
On average, how long does it take to code a test case using the framework of your choice?



SUMMARY

Survey respondents indicated that their test cases are typically coded within a 5-8 hour span.

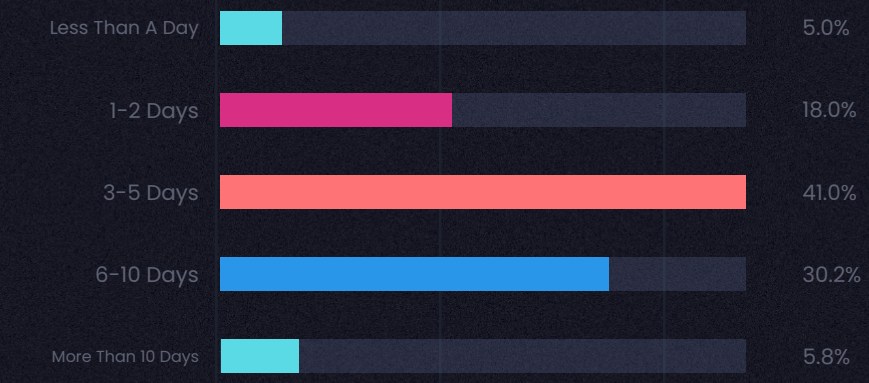
Approximately how many manual test cases are you executing with each app release?



SUMMARY

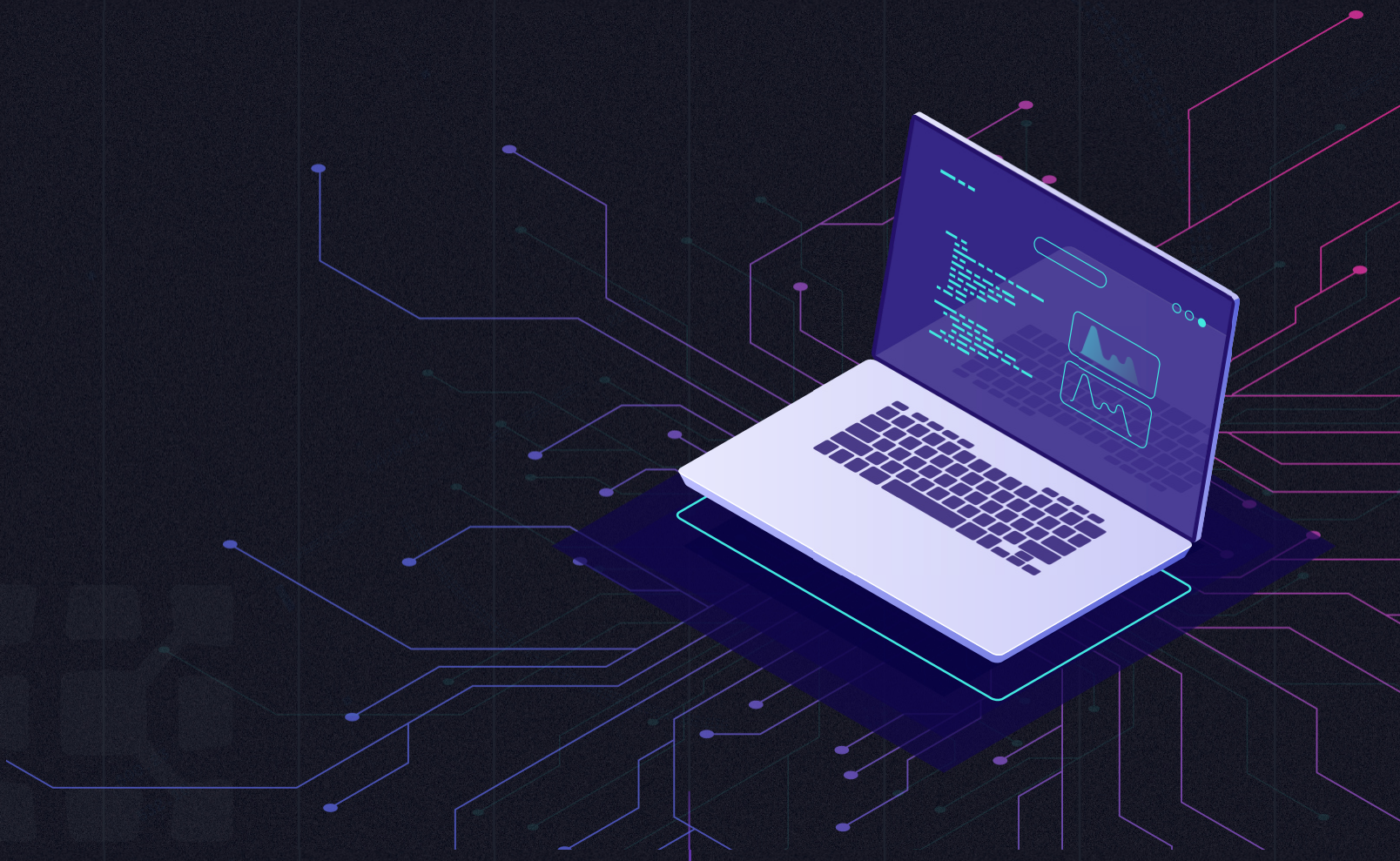
There's plenty of room for automation. 46.8% of respondents indicated that test teams perform 100-249 manual test cases with each app release.

Approximately how long does it take to manually test your app before every release?



SUMMARY

Manual testing is time consuming. 41% of respondents indicated an average manual testing time period of 3-5 days with every release.



NEGATIVE SURPRISES

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Repair/Release: The need to continually fix test scripts with every release

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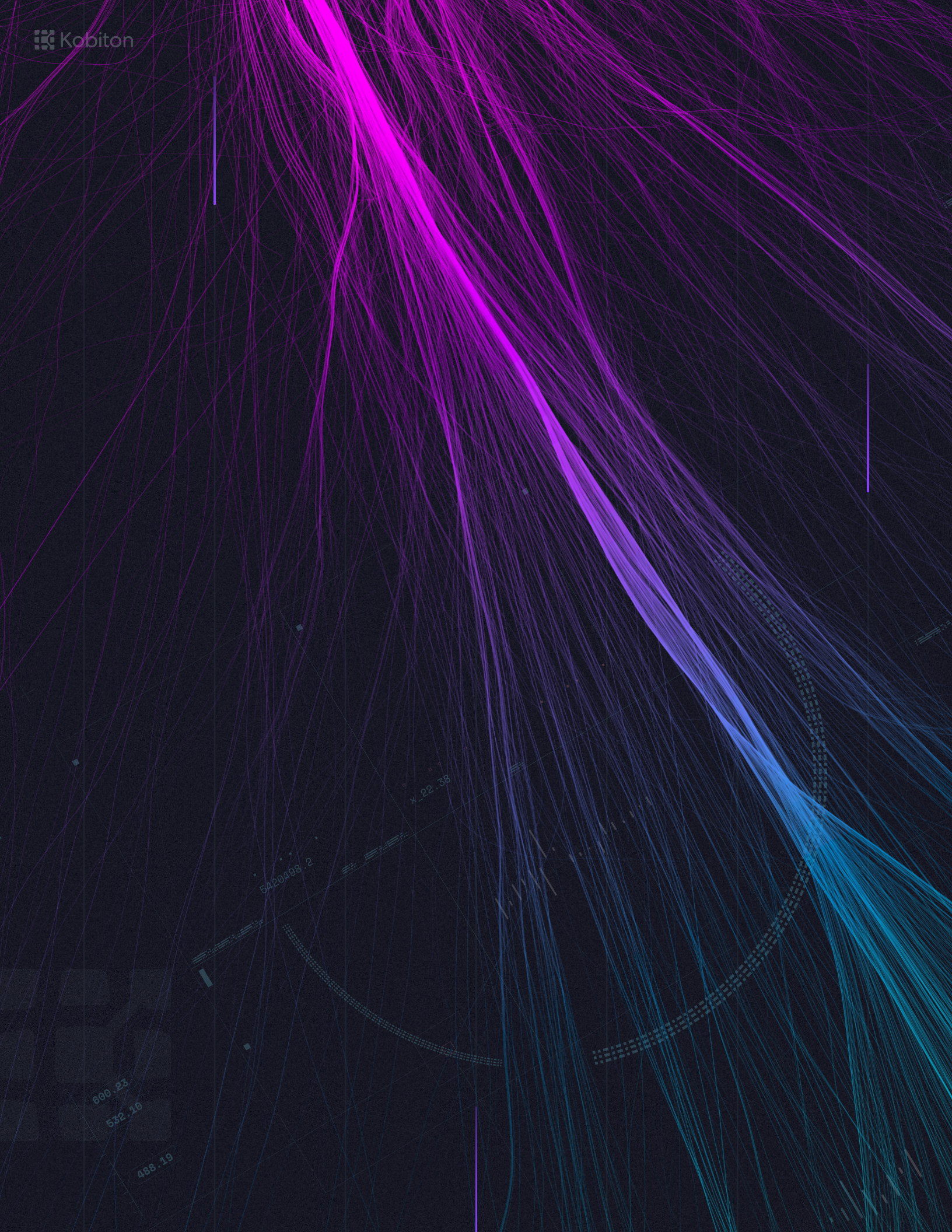
Stability: Having a stable test environment with predictable data

Hype vs. Reality: Vendor products not living up to their claims or hype

What was the biggest negative surprise you encountered as part of your test automation implementation?

SUMMARY

Respondents indicated that the largest gripe with impleneting a test automation strategy is code complexity for test scripts.


Kobiton
x_22.38
5420498.2
600.23
532.10
488.19

Kobiton

COMPANY SIZE

MORE THAN 500 EMPLOYEES

Company Size

There are a few commonalities in the way small, medium and large companies approach test automation, all of which have revealed themselves to be basic pillars of success in Quality Assurance. For example, all 3 categories state that improving overall app quality is the primary driver behind pursuing test automation initiatives. They also all mention increasing time-to-market as the secondary goal.

However, their approach to achieving these broad objectives differs significantly based on the number of employees, *and presumably*, access to resources and top talent.

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Ironically, companies with more than 500 employees are 2.5x more likely to spend over 75% of their entire QA budget on test automation. Considering that the most common success criteria for test automation in large enterprises is *speed of delivery*, their willingness to invest heavily in people and tools is not surprising. In contrast, smaller companies place greater emphasis on the *number of human hours saved* with test automation, perhaps due to a need for stretching finite resources.

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In the end, it appears that more resources will always win as long as the strategy is sound and effective. Viewing the responses from these 3 categories in linear fashion provides a realistic roadmap of the test automation journey through the lens of a company's maturation.

MOBILE STRATEGIES

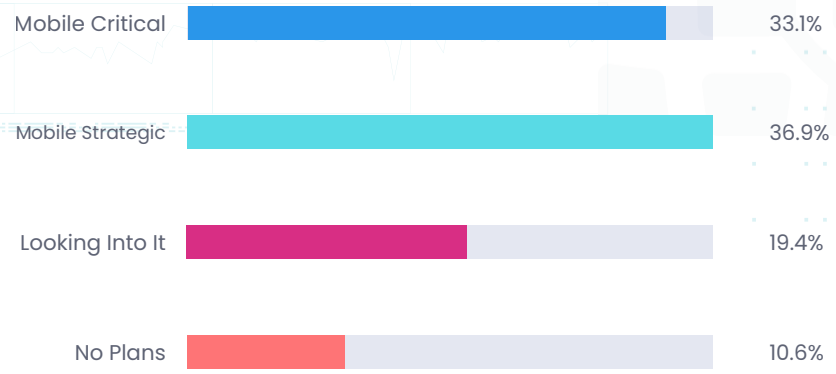
Mobile Critical: Our business model is centered around a mobile app

Mobile Strategic: Mobile is an important channel for our company, but we would survive without it

Looking Into It: Mobile is an initiative we're looking to persue

No Plans: We don't have a mobile app or any plans to implement one

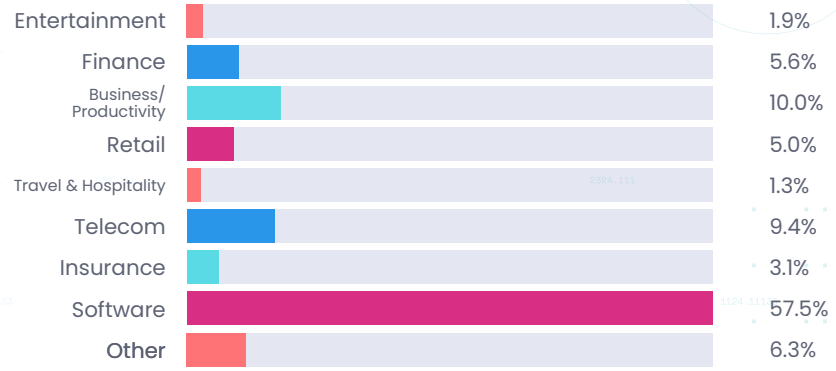
Mobile Strategies



SUMMARY

The majority of respondents indicated that mobile was an important component in their business model. 33.1% of respondents said that their business was centered around a mobile app.

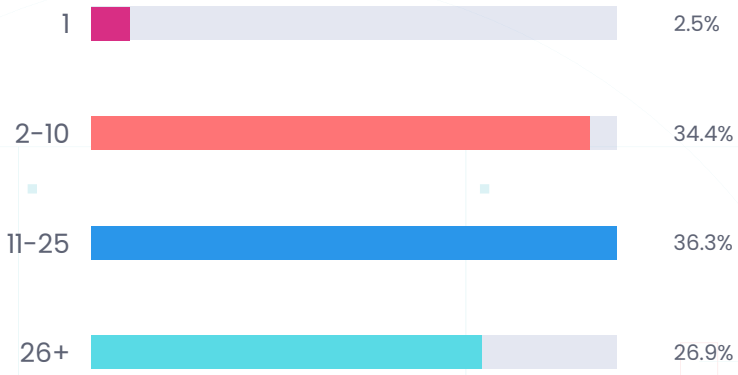
Industry/App Categories



SUMMARY

At 57.5%, the majority of responses collected in this survey were from software companies. The survey received the fewest responses from companies in the Travel and Hospitality vertical.

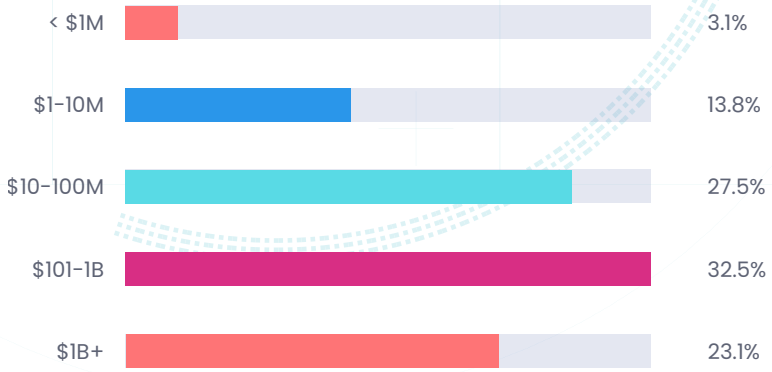
How many testers are on your team?



SUMMARY

Most of the companies surveyed have test teams of 2-25 people. Only 2.5% of respondents had 1 tester, while 26.9% had teams of more than 26 people.

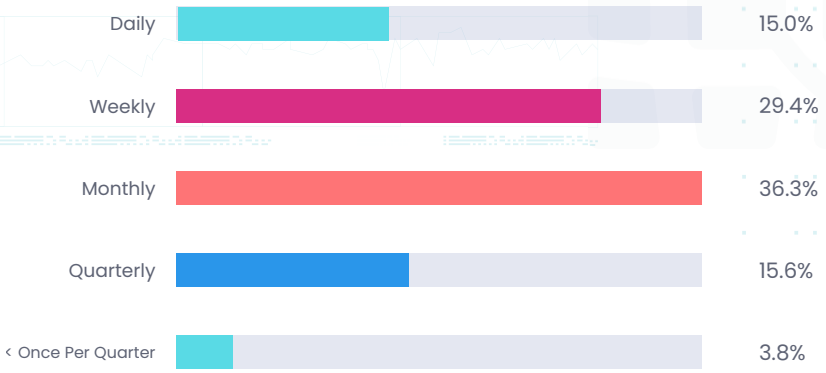
Annual Company Revenue



SUMMARY

32.5% of companies surveyed had an annual revenue of $101-1B. Just 3.1% of respondents indicated an annual revenue of less than $1M.

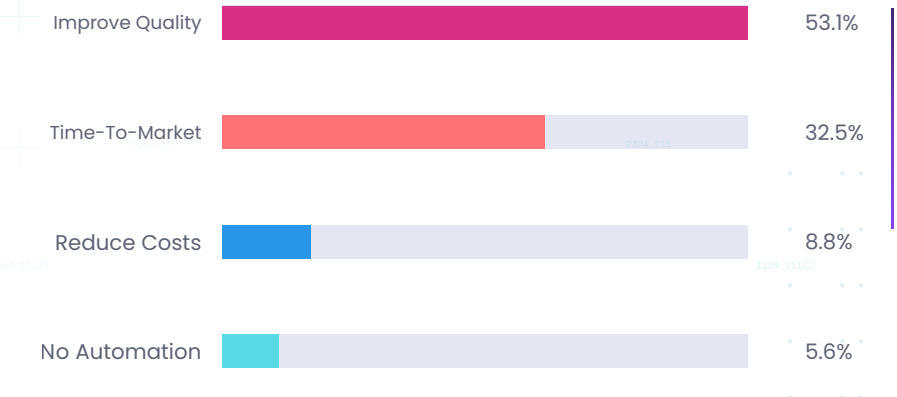
How often do you release app updates?



SUMMARY

Respondents indicated a preference for semi-frequent updates, with most responses indicating app update releases on a weekly or monthly schedule.

What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

The majority of respondents indicated that a desire to improve overall app quality was the primary strategic driver in choosing to persue test automation.

TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

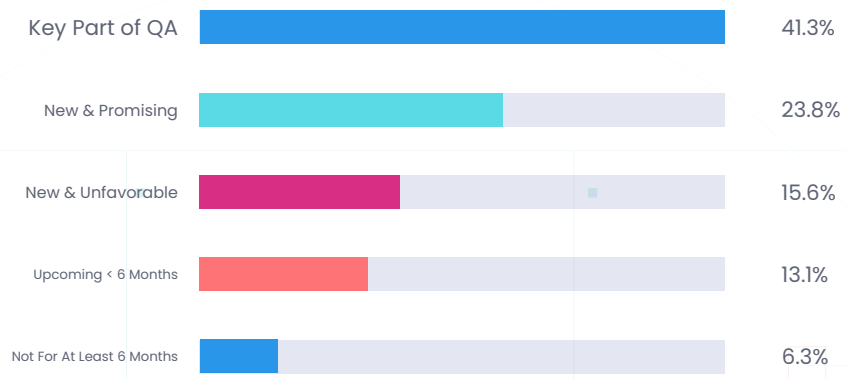
New and Promising: Our automation initiatives are relatively new and promising

New and Unfavorable: Our automation initiatives are relatively new and the results are not what we hoped for

Upcoming <6 months: Automation is an initiative we hope to start within the next 6 months

Not for at least 6 months: Automation will not happen within 6 months

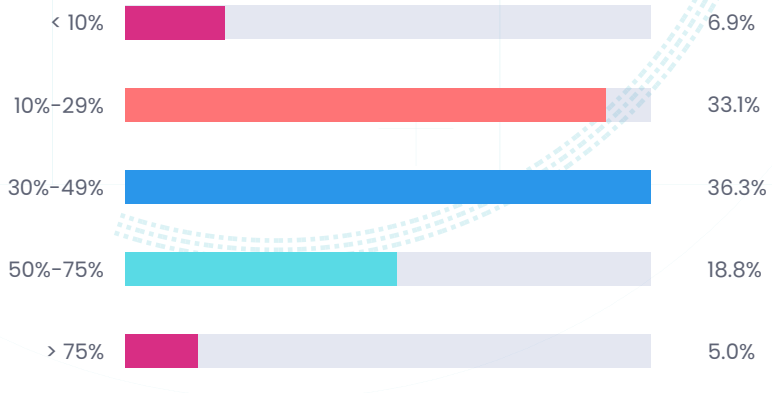
Where would you rate your current test automation maturity?



SUMMARY

41.3% of respondents indicated that test automation was a key part of their quality assurance process.

Based on the overall quality assurance budget in your organization, what percentage is spent on test automation when factoring in employees, tools, and other resources?



SUMMARY

Most respondents indicated that their companies allocate between 10 and 49% of their overall QA budget to test automation related expenditures.

Company Size: More than 500 Employees

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

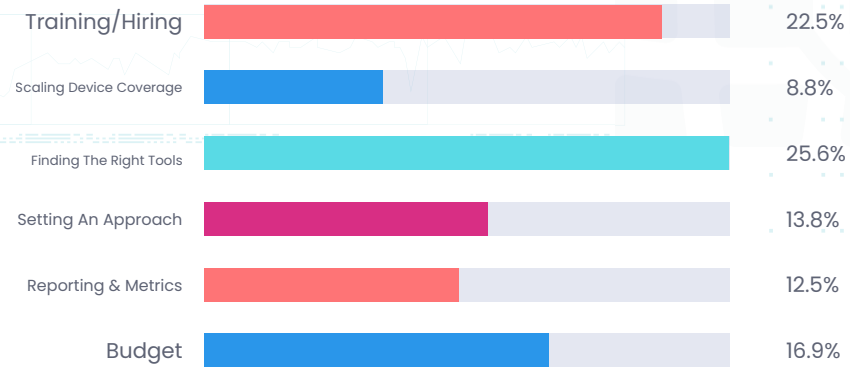
Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

Budget: Convincing the organization of the need to invest in automation

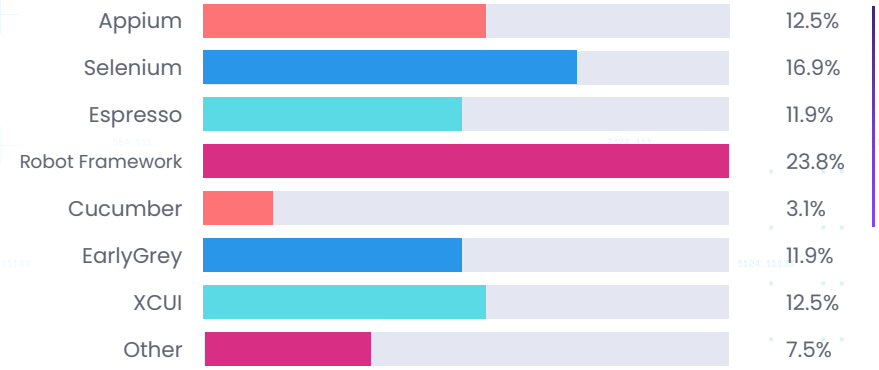
What is your biggest struggle/pain point with using or starting test automation today?



SUMMARY

The survey respondents indicated that the largest barrier to entry for test automation is finding the right tools.

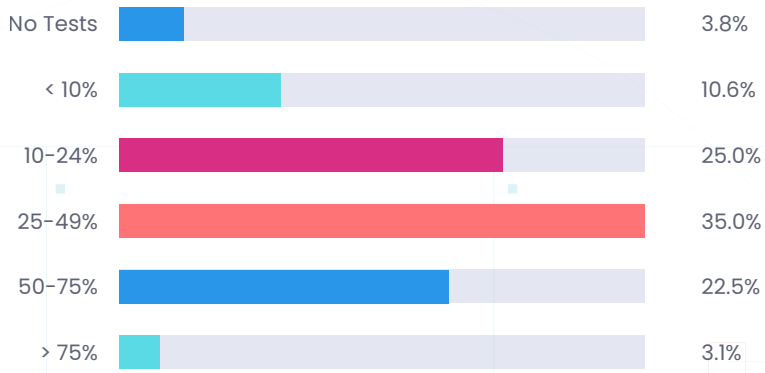
Test automation framework usage



SUMMARY

Responses indicate that Robot Framework is the preferred automation framework.

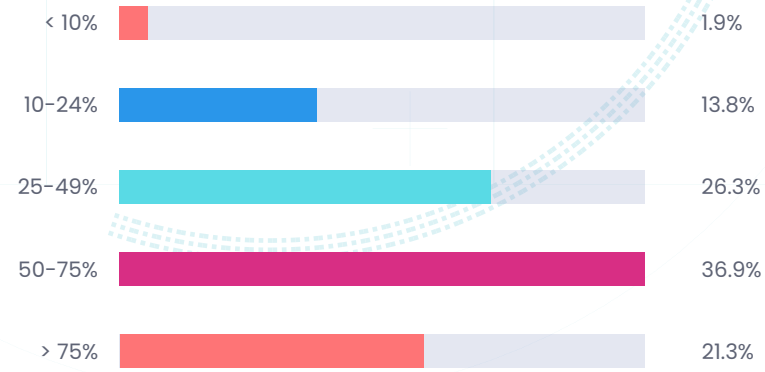
What percentage of your test cases are automated?



SUMMARY

96.2% of respondents indicated that they are performing some test automation. 35.0% of respondents specified that 25-49% of their test cases are automated.

What percentage of test cases would you like to have automated?



SUMMARY

Most respondents clearly see the value of test automation, with a noteworthy 21.3% seeking to automate more than 75% of their test cases. Comparing this graph with the one above shows a clear trend toward desired increases in test automation.

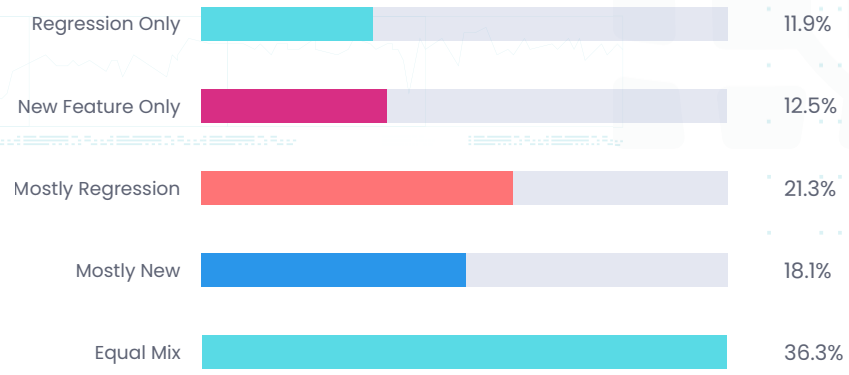
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

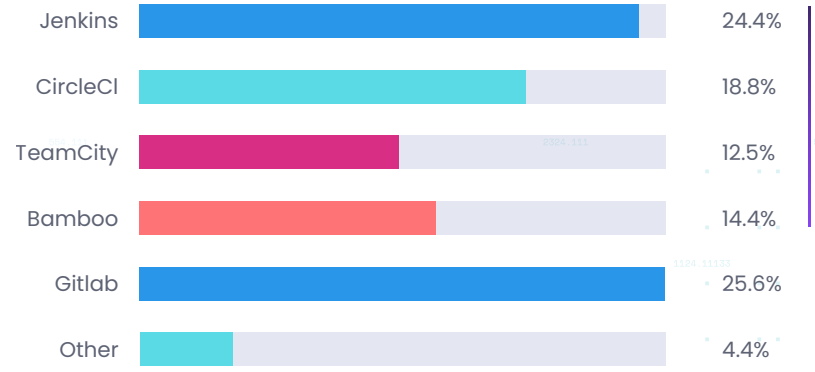
What are you using test automation primarily for?



SUMMARY

Most respondents are using test automation to verify the functionality of an equal mix of new and existing app features.

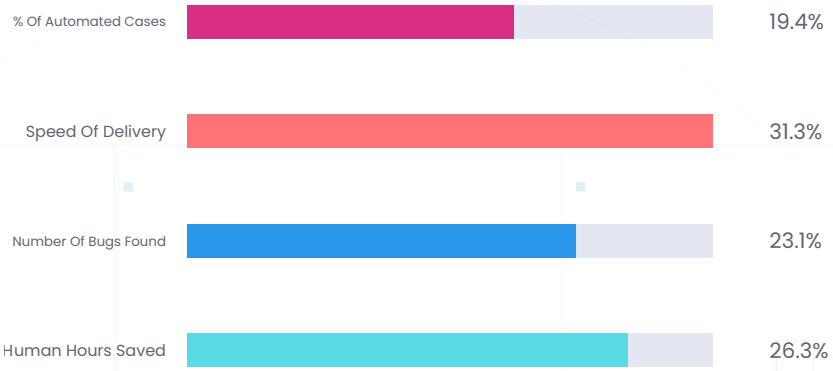
Which CI/CD tools does your organization use?



SUMMARY

Gitlab was listed as the preferred CI/CD tool amongst respondents with 25.6% indicating its use. At 24.4% Jenkins and CircleCI tied for second most frequently used.

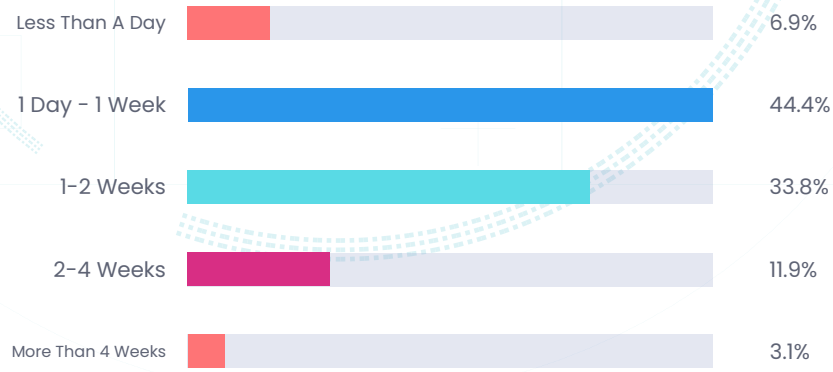
Which of the following metrics best indicates successful test automation implementation?



SUMMARY

Respondents indicated a preference for quantifying test automation success by measuring delivery speed.

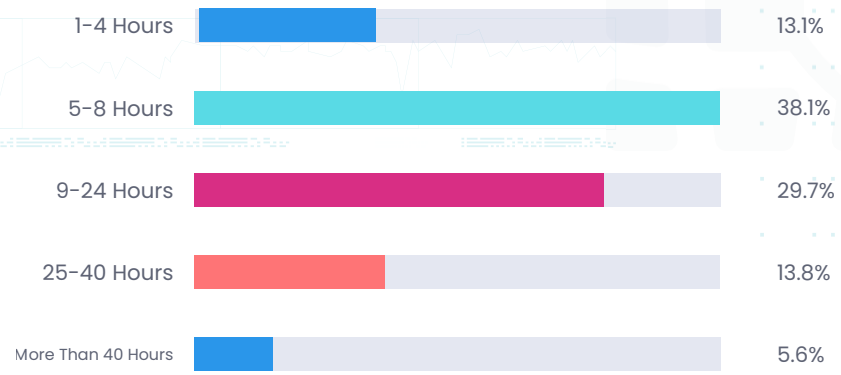
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts within 1 Day - 1 Week.

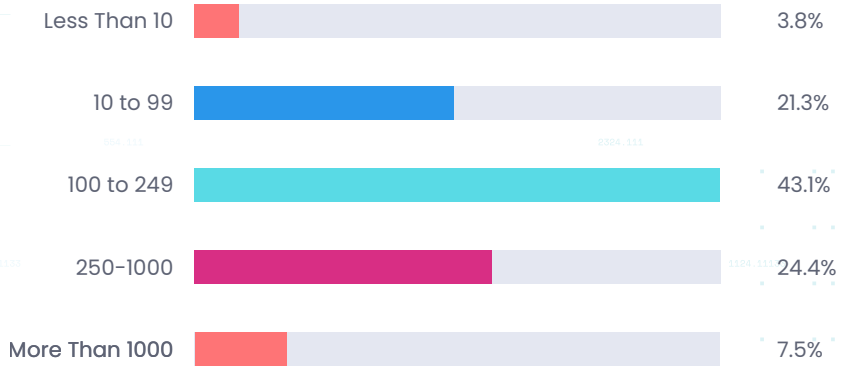
On average, how long does it take to code a test case using the framework of your choice?



SUMMARY

Survey respondents indicated that their test cases are typically coded within a 5-8 hour span.

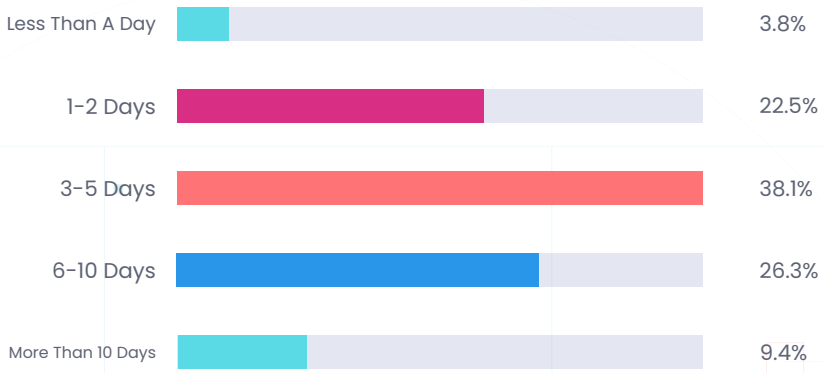
Approximately how many manual test cases are you executing with each app release?



SUMMARY

There's plenty of room for automation. 43.1% of respondents indicated that test teams perform 100-249 manual test cases with each app release.

Approximately how long does it take to manually test your app before every release?



SUMMARY

Manual testing is time consuming. 38.1% of respondents indicated an average manual testing time period of 3-5 days with every release.

NEGATIVE SURPRISES

Code Complexity: The coding complexity of developing test scripts

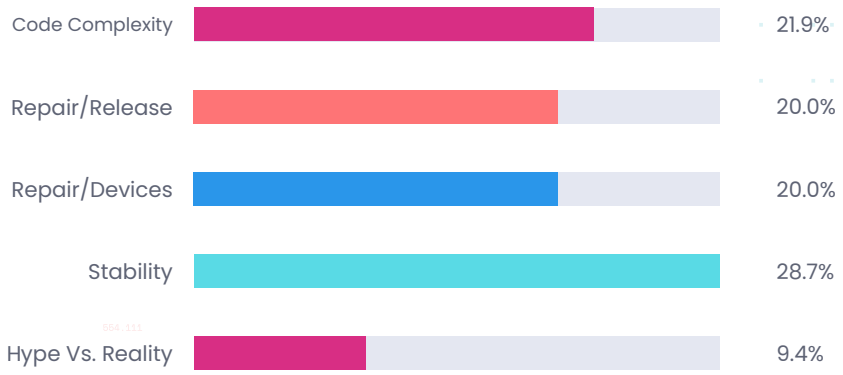
Repair/Release: The need to continually fix test scripts with every release

Repair/Devices: The need to continually fix test scripts to work across more devices

Stability: Having a stable test environment with predictable data

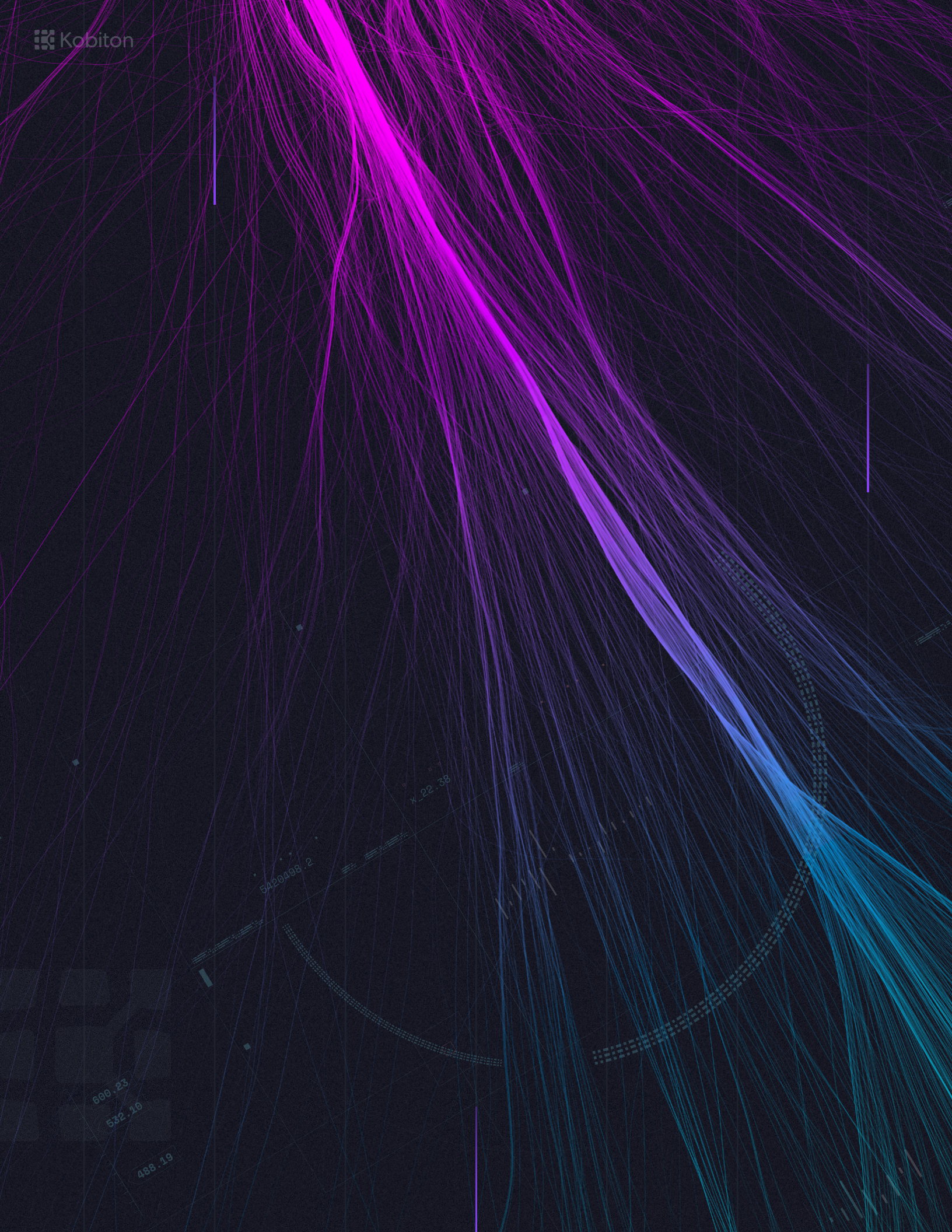
Hype vs. Reality: Vendor products not living up to their claims or hype

What was the biggest negative surprise you encountered as part of your test automation implementation?



SUMMARY

Stability issues are rampant in the test automation implementations used by most respondents. The second largest gripe with impleneting a test automation strategy is code complexity for test scripts.


Kobiton
x_22.38
5420498.2
600.23
532.10
488.19

Kobiton

QA TEAM SIZE

TEAMS WITH ONE TESTER

QA Team Size

Because of a direct correlation between company revenue and QA team size, viewing responses based on those two metrics reveals many similarities. However, there are some interesting observations.

Smaller and mid-sized teams (2-25 testers) are far more agile with their app release schedules in general. 38.3% of teams with 11-25 testers release weekly, followed closely by 35.6% for teams of 2-10. Compared to large teams (26+) where only 24.1% release weekly, it reinforces the notion that smaller teams must be scrappier than their larger competitors to survive. However, it should be noted that the very largest teams with the most resources lead the pack when it comes to agility, with 17% releasing on a daily basis.

Success criteria is another point of differentiation between the small/medium teams and the large teams. Small/Medium groups tend to measure automation success based on speed of delivery and number of bugs found, whereas large teams are overwhelmingly concerned with the number of human hours saved by using automation. This subtle difference suggests a narrative that automation is viewed by larger organizations as more of a cost-cutting strategy than an improvement to operational agility.

Another outlier is the biggest negative surprise encountered by organizations when implementing mobile test automation. 28% of small teams struggle with maintaining stable test environments and predictable data, followed by coding complexity of developing automation scripts (24.7%). In contrast, medium/large segments struggle with the need to continually fix test scripts to work across more devices. This is likely due to organizational maturity within companies that have realized the need to test on a large number of devices for full market coverage.

MOBILE STRATEGIES

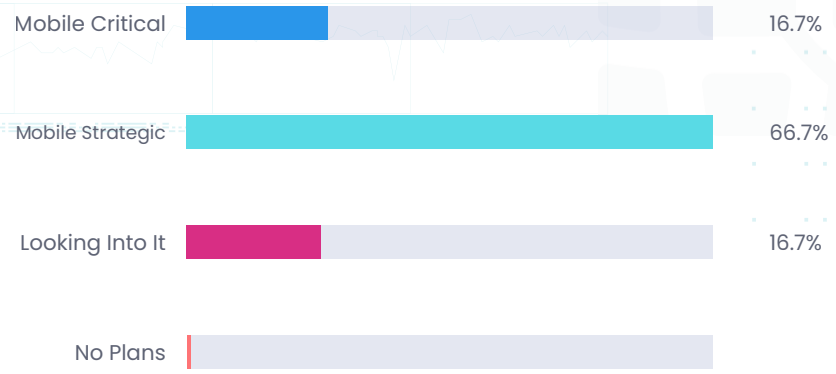
Mobile Critical: Our business model is centered around a mobile app

Mobile Strategic: Mobile is an important channel for our company, but we would survive without it

Looking Into It: Mobile is an initiative we're looking to persue

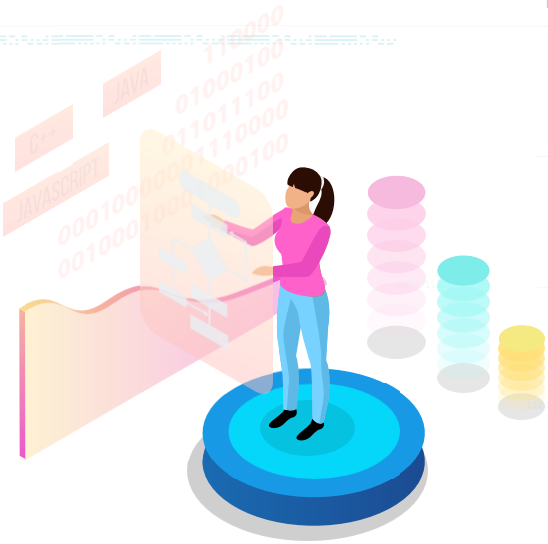
No Plans: We don't have a mobile app or any plans to implement one

Mobile Strategies

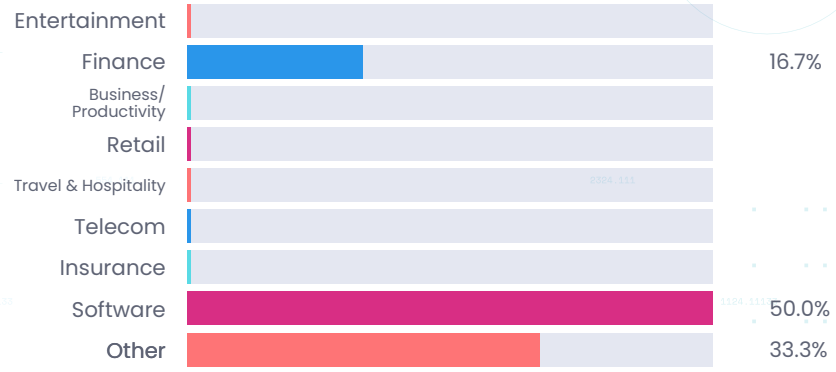


SUMMARY

The majority of respondents indicated that mobile was an important component in their strategic business model.



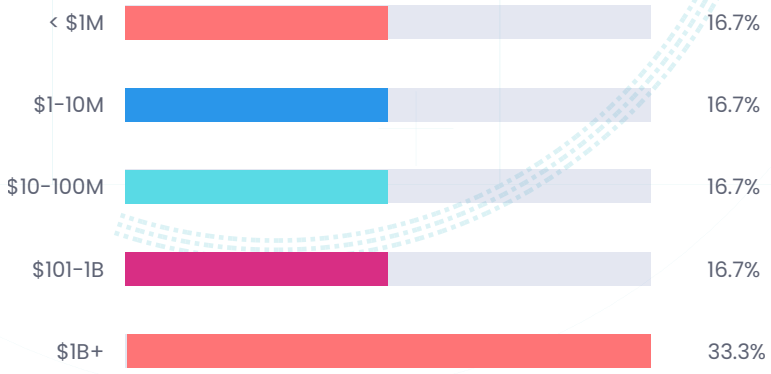
Industry/App Categories



SUMMARY

At 50%, the majority of responses collected in this survey were from software companies.

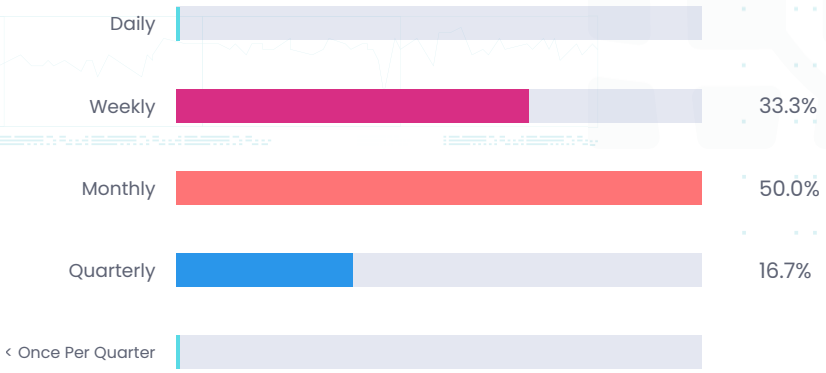
Annual Company Revenue



SUMMARY

33.3% of companies surveyed had an annual revenue of $1B or more. 66.8% of respondents indicated an annual revenue of less than $1B.

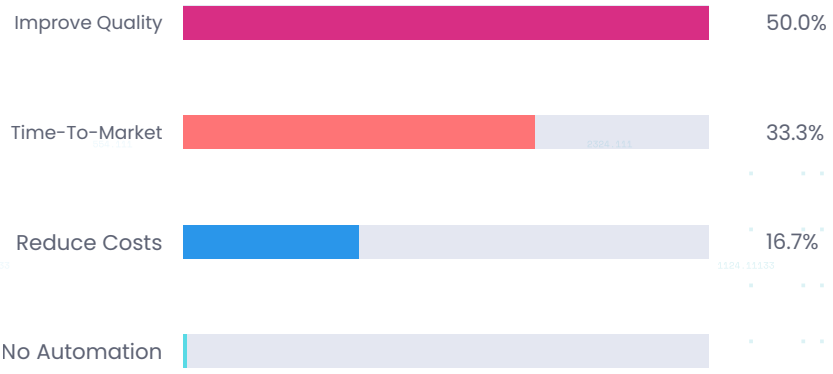
How often do you release app updates?



SUMMARY

Respondents indicated a preference for semi-frequent updates, with most responses indicating app update releases on a weekly or monthly schedule.

What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

The majority of respondents indicated that a desire to improve overall app quality was the primary strategic driver in choosing to persue test automation.

TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

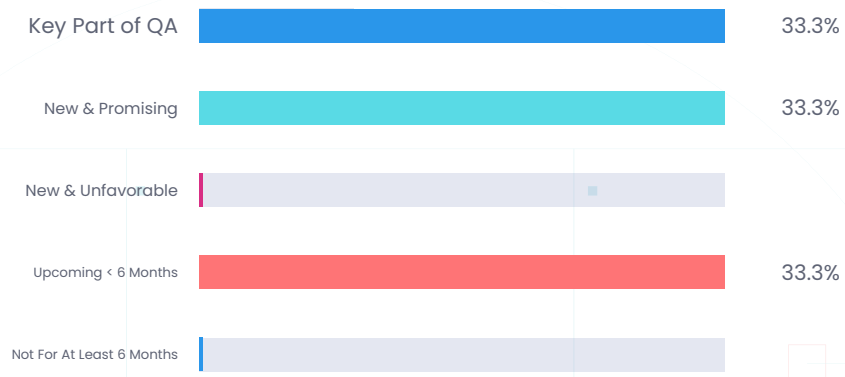
New and Promising: Our automation initiatives are relatively new and promising

New and Unfavorable: Our automation initiatives are relatively new and the results are not what we hoped for

Upcoming <6 months: Automation is an initiative we hope to start within the next 6 months

Not for at least 6 months: Automation will not happen within 6 months

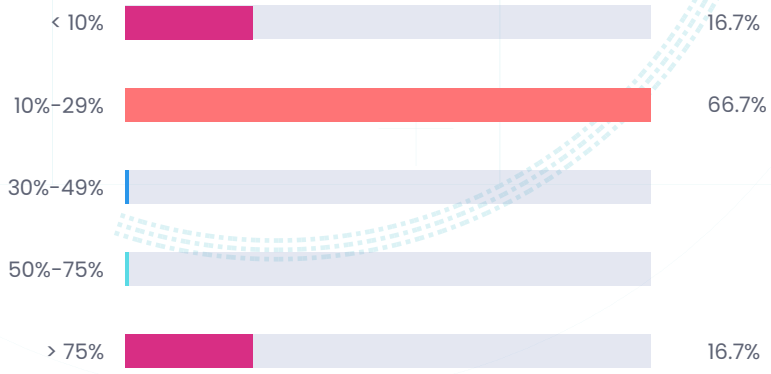
Where would you rate your current test automation maturity?



SUMMARY

Automation is a key part of respondent QA process and also something that is expected to be implemented within 6 months.

Based on the overall quality assurance budget in your organization, what percentage is spent on test automation when factoring in employees, tools, and other resources?



SUMMARY

Most respondents indicated that their companies allocate between 10 and 29% of their overall QA budget to test automation related expenditures.

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

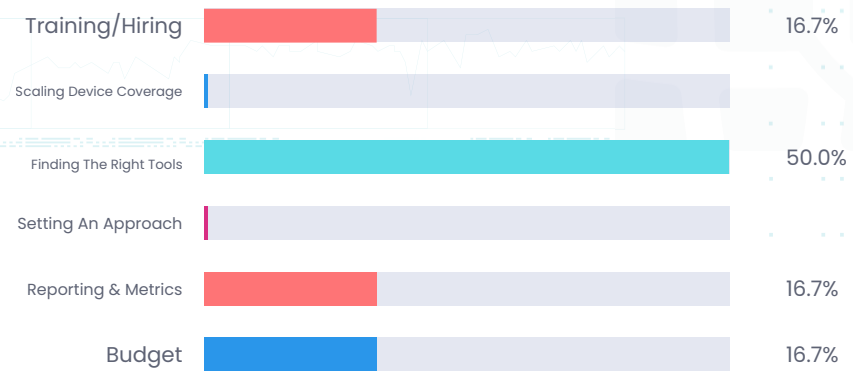
Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

Budget: Convincing the organization of the need to invest in automation

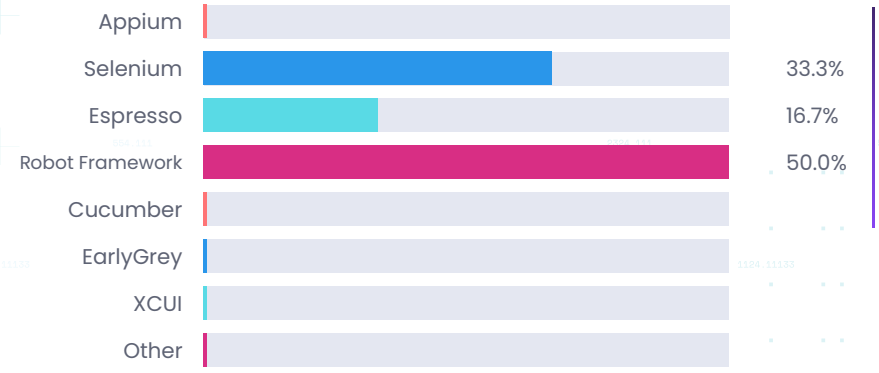
What is your biggest struggle/pain point with using or starting test automation today?



SUMMARY

The survey respondents indicated that the largest barrier to entry for test automation is finding the right tools.

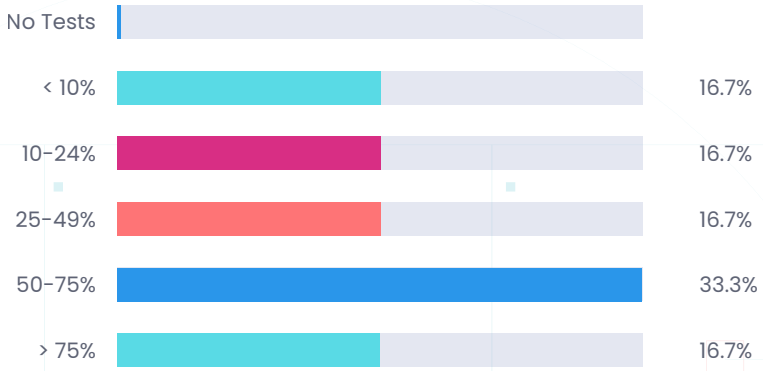
Test automation framework usage



SUMMARY

Responses indicate that Robot Framework is the preferred automation framework.

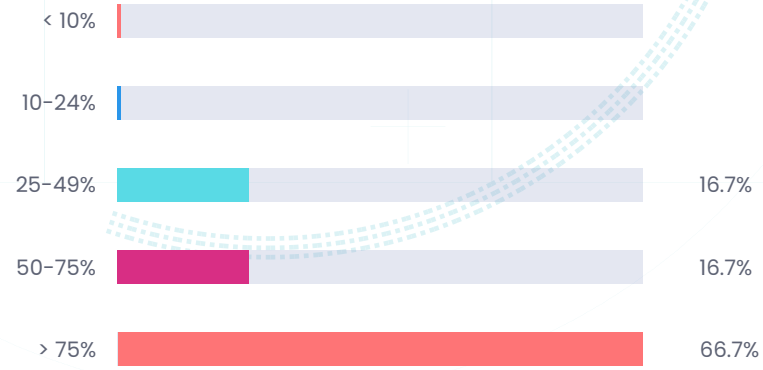
What percentage of your test cases are automated?



SUMMARY

33.3% of respondents specified that 50-75%% of their test cases are automated.

What percentage of test cases would you like to have automated?



SUMMARY

Most respondents clearly see the value of test automation, with a noteworthy 66.7% seeking to automate more than 75% of their test cases. Comparing this graph with the one above shows a clear trend toward desired increases in test automation.

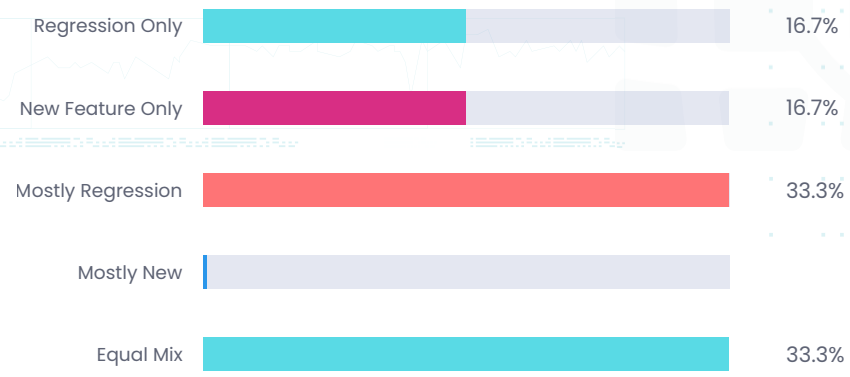
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

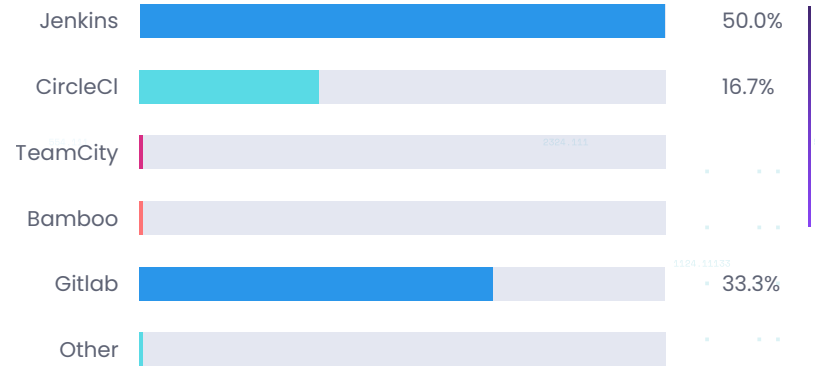
What are you using test automation primarily for?



SUMMARY

Most respondents are using test automation to verify the functionality of an equal mix in new and existing app features just as much as regression testing.

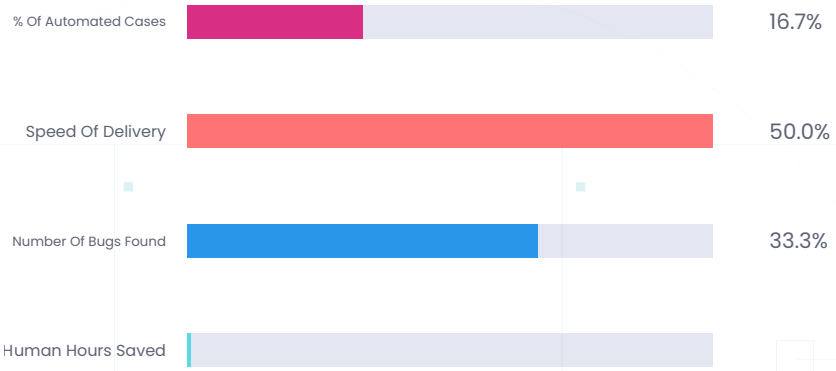
Which CI/CD tools does your organization use?



SUMMARY

Jenkins was listed as the preferred CI/CD tool amongst respondents with 50% indicating its use. At 33.3% Gitlab is the second most frequently used.

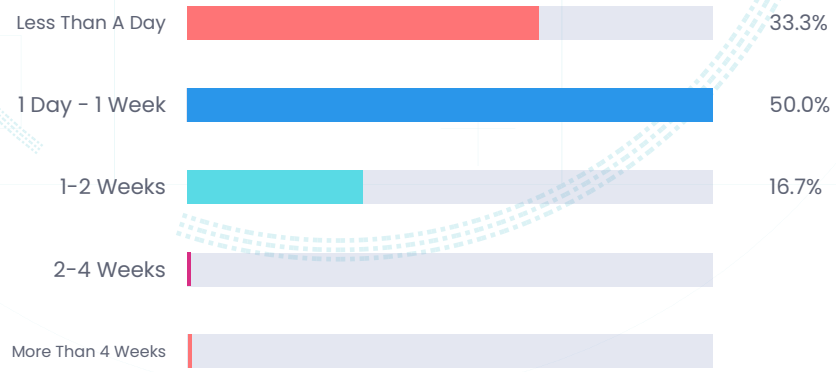
Which of the following metrics best indicates successful test automation implementation?



SUMMARY

Respondents indicated a preference for quantifying test automation success by measuring delivery speed.

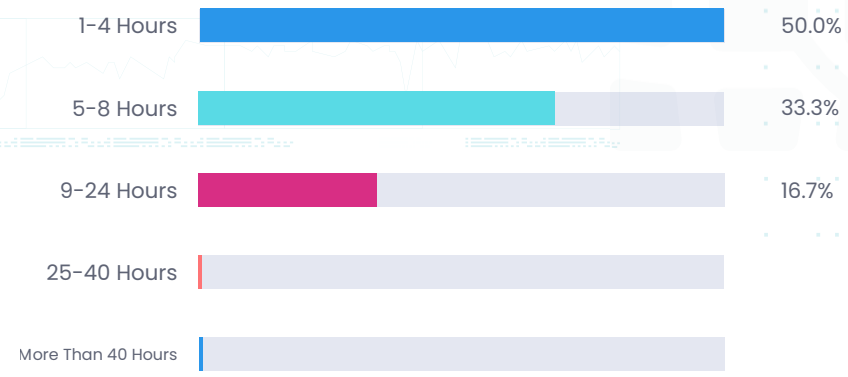
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts within 1 Day - 1 Week.

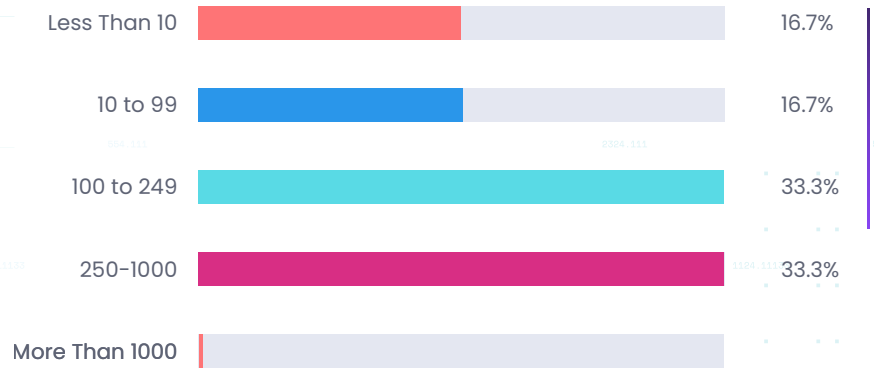
On average, how long does it take to code a test case using the framework of your choice?



SUMMARY

Survey respondents indicated that their test cases are typically coded within a 1-4 hour span.

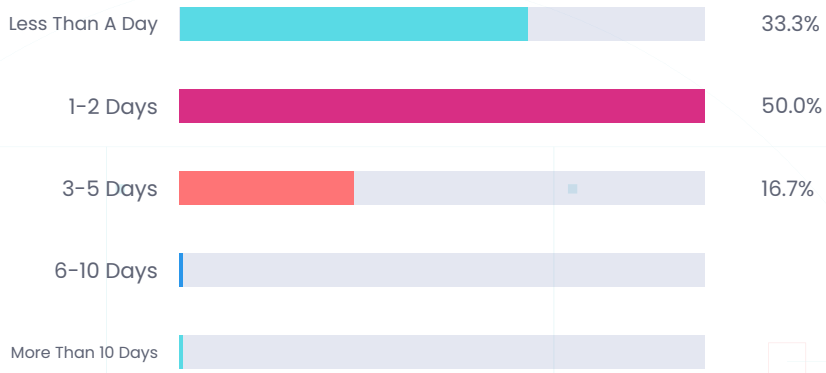
Approximately how many manual test cases are you executing with each app release?



SUMMARY

There's plenty of room for automation. 33.3% of respondents indicated that test teams perform 100-249 & 250-1000 manual test cases with each app release.

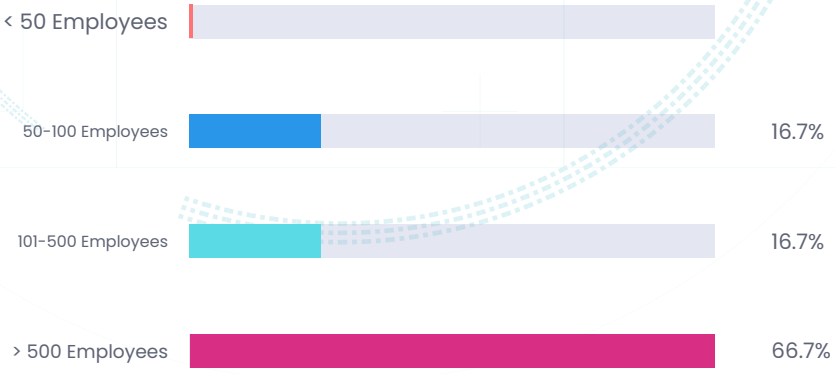
Approximately how long does it take to manually test your app before every release?



SUMMARY

50% of respondents indicated an average manual testing time period of 1-2 days with every release.

Company Size



SUMMARY

66.7% of survey respondents indicated that the company they worked for had more than 500 employees.

NEGATIVE SURPRISES

Code Complexity: The coding complexity of developing test scripts

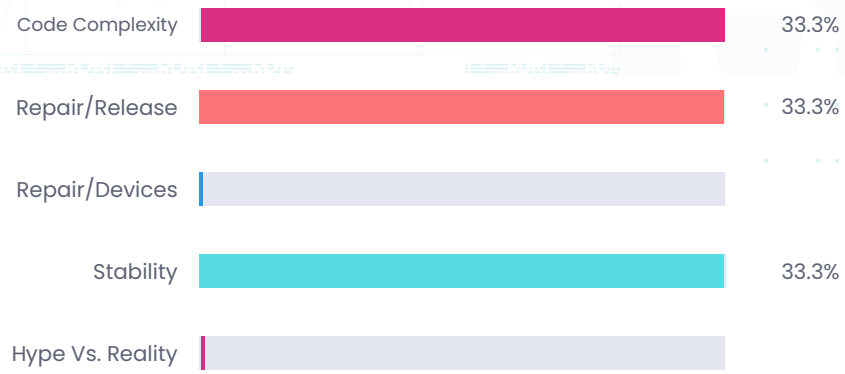
Repair/Release: The need to continually fix test scripts with every release

Repair/Devices: The need to continually fix test scripts to work across more devices

Stability: Having a stable test environment with predictable data

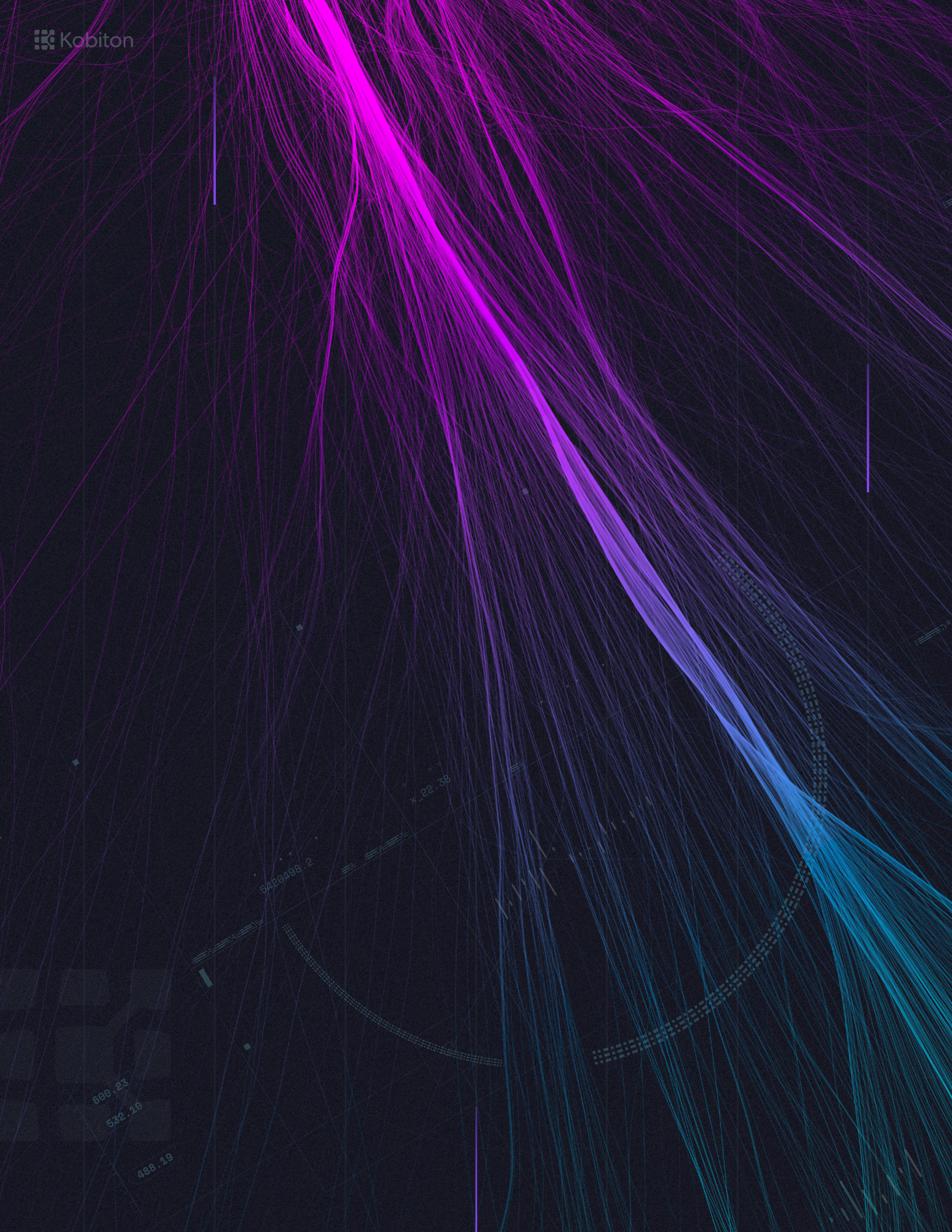
Hype vs. Reality: Vendor products not living up to their claims or hype

What was the biggest negative surprise you encountered as part of your test automation implementation?



SUMMARY

Code Complexity, Repair/Release and Stability issues are rampant in the test automation implementations used by most respondents.


Kobiton
x_22.38
5420498.2
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488.19

Kobiton

QA TEAM SIZE

TEAMS WITH 2-10 TESTERS

QA Team Size

Because of a direct correlation between company revenue and QA team size, viewing responses based on those two metrics reveals many similarities. However, there are some interesting observations.

Smaller and mid-sized teams (2-25 testers) are far more agile with their app release schedules in general. 38.3% of teams with 11-25 testers release weekly, followed closely by 35.6% for teams of 2-10. Compared to large teams (26+) where only 24.1% release weekly, it reinforces the notion that smaller teams must be scrappier than their larger competitors to survive. However, it should be noted that the very largest teams with the most resources lead the pack when it comes to agility, with 17% releasing on a daily basis.

Success criteria is another point of differentiation between the small/medium teams and the large teams. Small/Medium groups tend to measure automation success based on speed of delivery and number of bugs found, whereas large teams are overwhelmingly concerned with the number of human hours saved by using automation. This subtle difference suggests a narrative that automation is viewed by larger organizations as more of a cost-cutting strategy than an improvement to operational agility.

Another outlier is the biggest negative surprise encountered by organizations when implementing mobile test automation. 28% of small teams struggle with maintaining stable test environments and predictable data, followed by coding complexity of developing automation scripts (24.7%). In contrast, medium/large segments struggle with the need to continually fix test scripts to work across more devices. This is likely due to organizational maturity within companies that have realized the need to test on a large number of devices for full market coverage.

MOBILE STRATEGIES

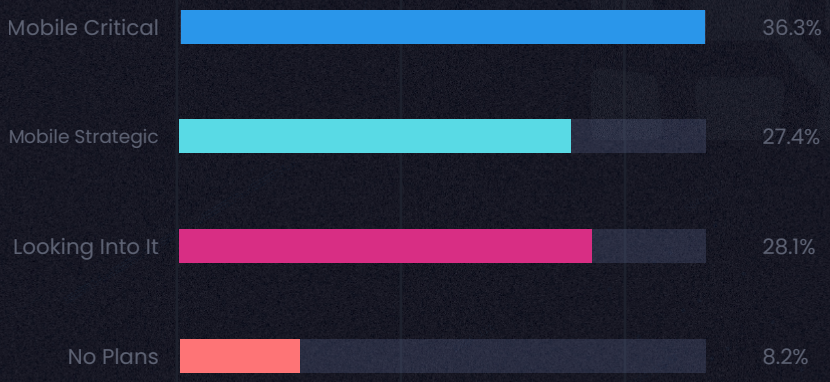
Mobile Critical: Our business model is centered around a mobile app

Mobile Strategic: Mobile is an important channel for our company, but we would survive without it

Looking Into It: Mobile is an initiative we're looking to persue

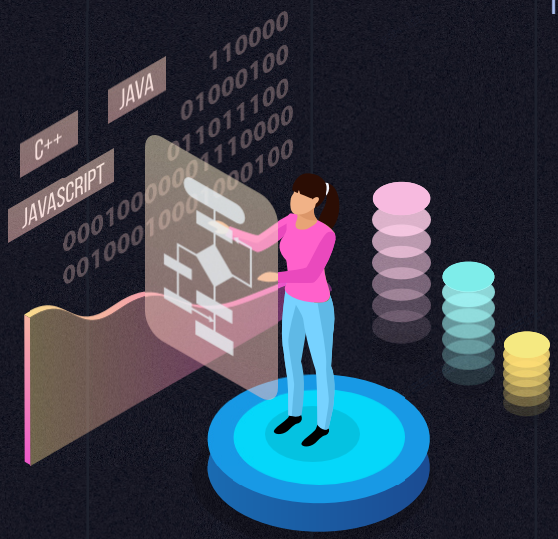
No Plans: We don't have a mobile app or any plans to implement one

Mobile Strategies

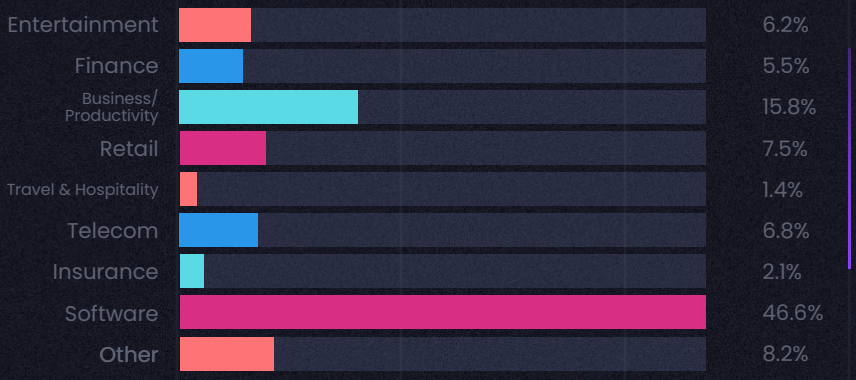


SUMMARY

The majority of respondents indicated that mobile was an important component in their business model. 63.7% of respondents said that their business was centered around a mobile app, and 28.1% are looking into it.



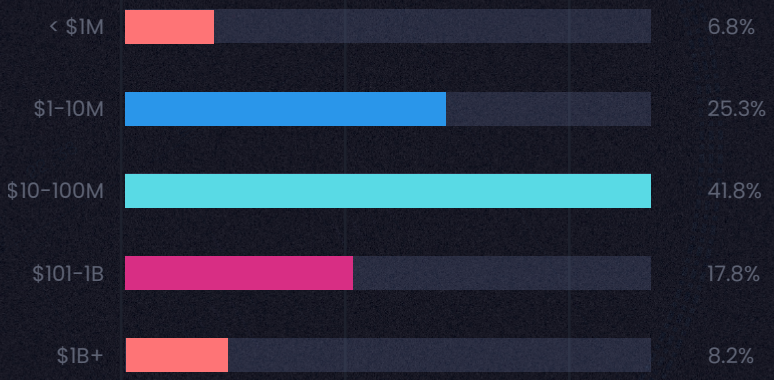
Industry/App Categories



SUMMARY

At 46.6%, the majority of responses collected in this survey were from software companies. The survey received the fewest responses from companies in the Travel and Hospitality vertical.

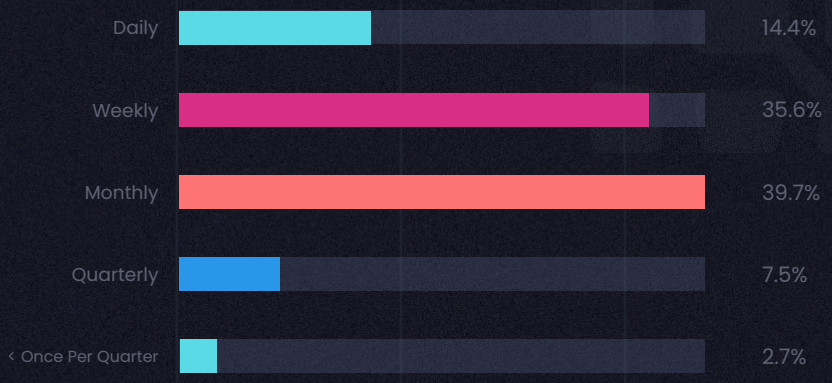
Annual Company Revenue



SUMMARY

41.8% of companies surveyed had an annual revenue of $10-100M. Just 6.8% of respondents indicated an annual revenue of less than $1M.

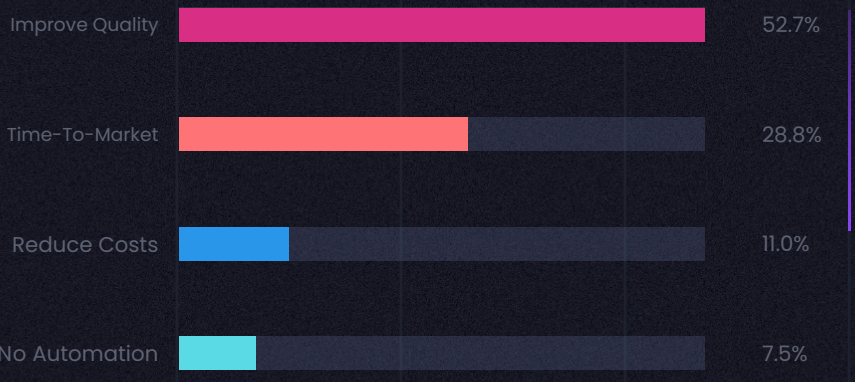
How often do you release app updates?



SUMMARY

Respondents indicated a preference for semi-frequent updates, with most responses indicating app update releases on a monthly schedule.

What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

The majority of respondents indicated that a desire to improve overall app quality was the primary strategic driver in choosing to persue test automation.

TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

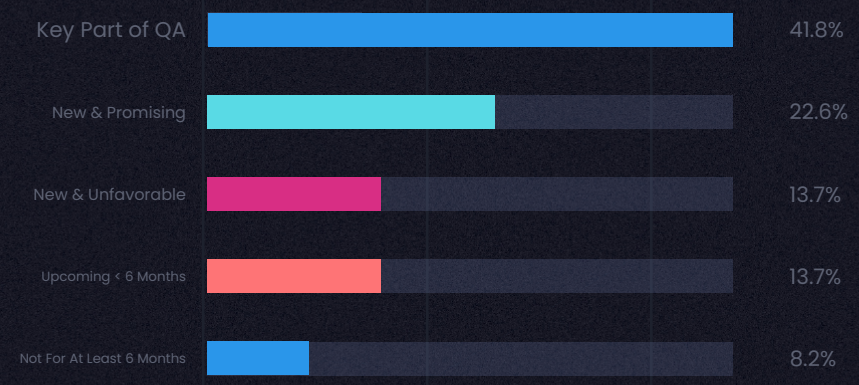
New and Promising: Our automation initiatives are relatively new and promising

New and Unfavorable: Our automation initiatives are relatively new and the results are not what we hoped for

Upcoming <6 months: Automation is an initiative we hope to start within the next 6 months

Not for at least 6 months: Automation will not happen within 6 months

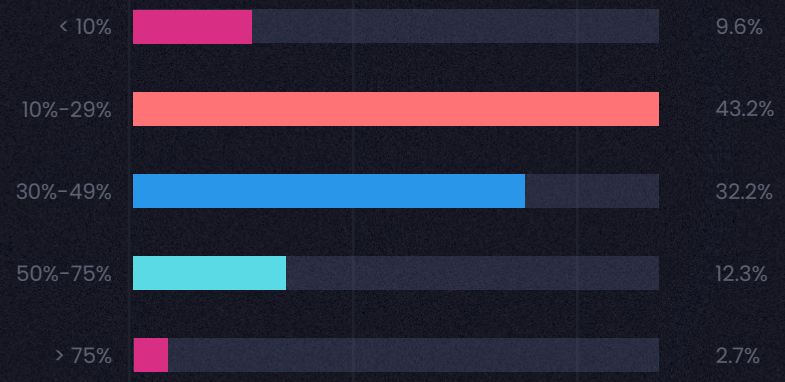
Where would you rate your current test automation maturity?



SUMMARY

41.8% of respondents indicated that test automation was a key part of their quality assurance process.

Based on the overall quality assurance budget in your organization, what percentage is spent on test automation when factoring in employees, tools, and other resources?



SUMMARY

Most respondents indicated that their companies allocate between 10 and 49% of their overall QA budget to test automation related expenditures.

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

Budget: Convincing the organization of the need to invest in automation

What is your biggest struggle/pain point with using or starting test automation today?

SUMMARY

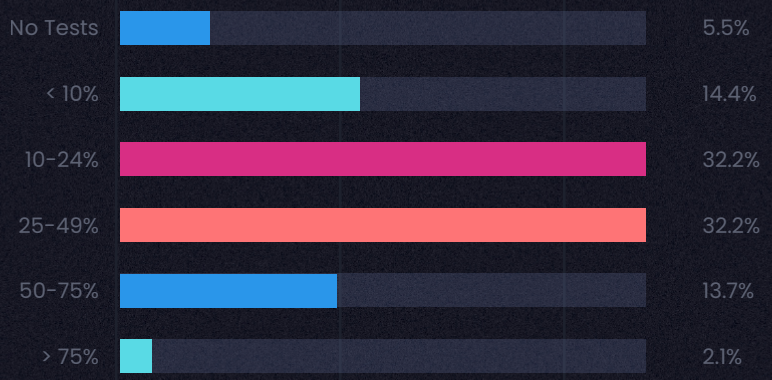
The survey respondents indicated that the largest barrier to entry for test automation is finding the right tools.

Test automation framework usage

SUMMARY

Responses indicate that Selenium is the preferred automation framework.

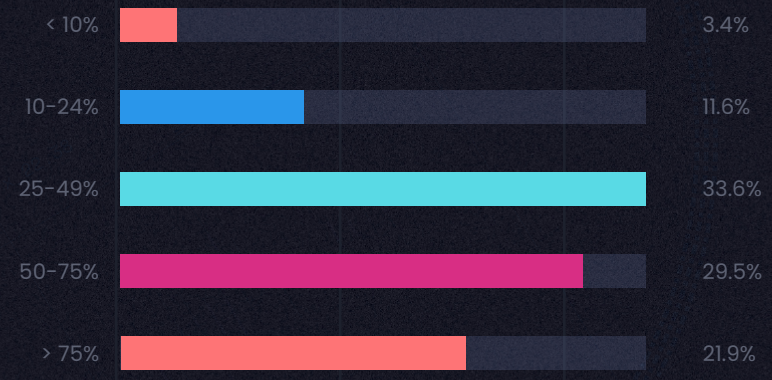
What percentage of your test cases are automated?



SUMMARY

64.4% of respondents specified that 10-49% of their test cases are automated.

What percentage of test cases would you like to have automated?



SUMMARY

Most respondents clearly see the value of test automation, with 51.4% seeking to automate 50%-75%+ their test cases. Comparing this graph with the one above shows a clear trend toward desired increases in test automation.

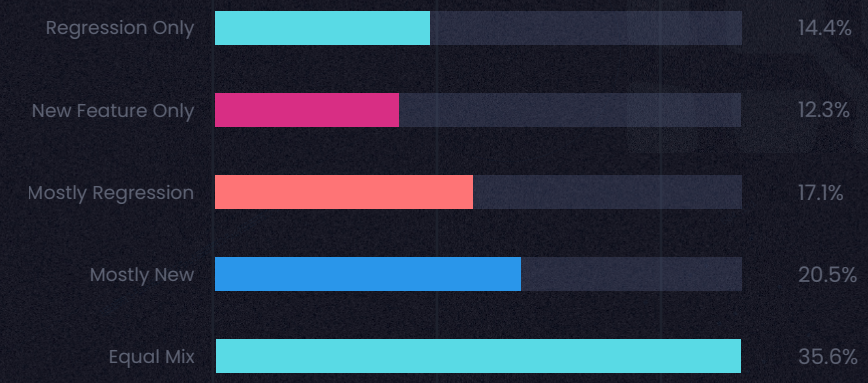
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

What are you using test automation primarily for?



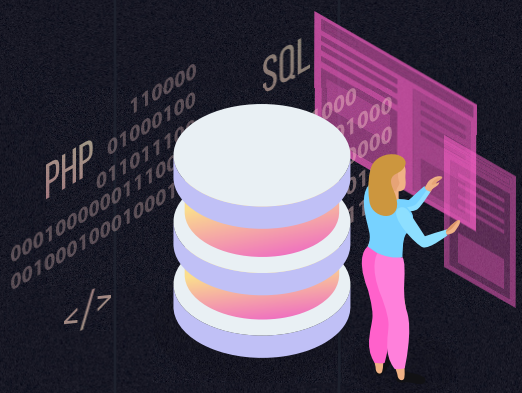
SUMMARY

Most respondents are using test automation to verify the functionality of an equal mix in new and existing app features.

Which CI/CD tools does your organization use?

SUMMARY

Gitlab was listed as the preferred CI/CD tool amongst respondents with 28.8% indicating its use. At 19.7% Jenkins and CircleCI tied for second most frequently used.

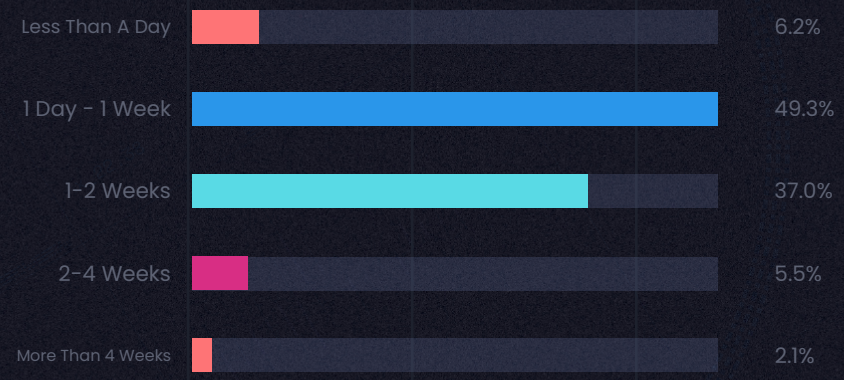


Which of the following metrics best indicates successful test automation implementation?

SUMMARY

Respondents indicated a preference for quantifying test automation success by measuring delivery speed.

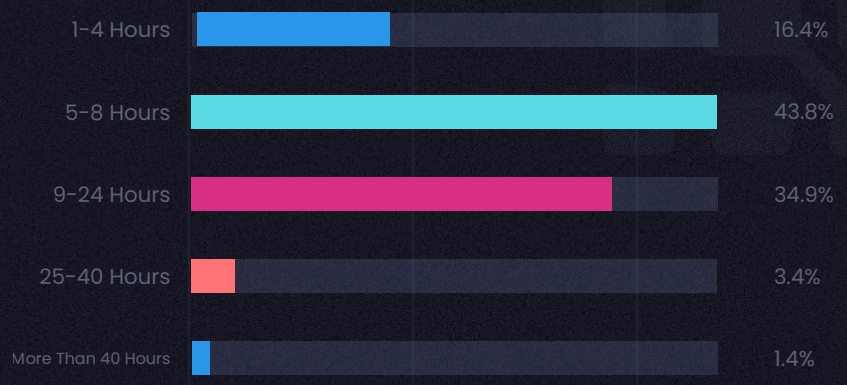
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts within 1 Day - 1 Week.

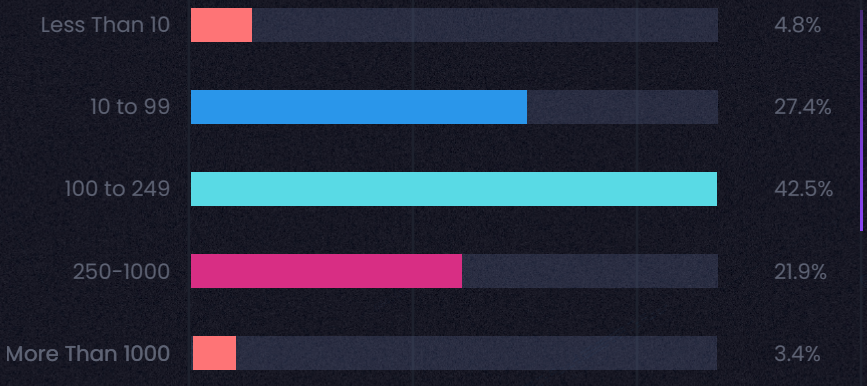
On average, how long does it take to code a test case using the framework of your choice?



SUMMARY

Survey respondents indicated that their test cases are typically coded within a 5-8 hour span.

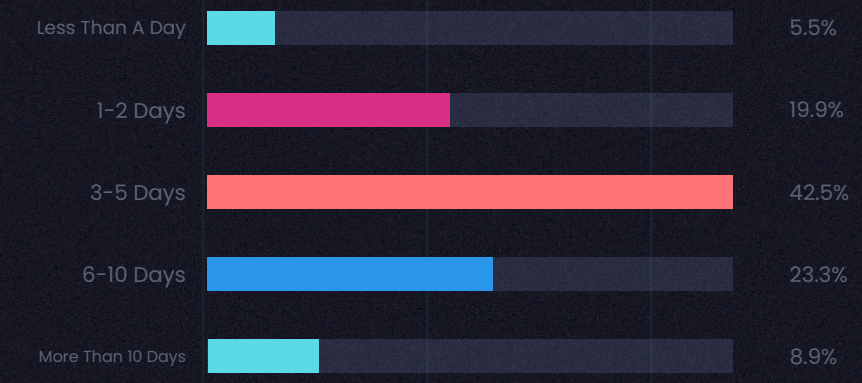
Approximately how many manual test cases are you executing with each app release?



SUMMARY

There's plenty of room for automation. 42.5% of respondents indicated that test teams perform 100-249 manual test cases with each app release.

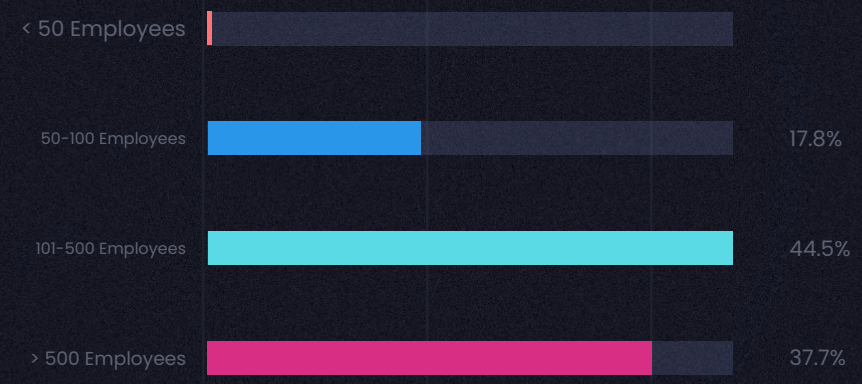
Approximately how long does it take to manually test your app before every release?



SUMMARY

Manual testing is time consuming. 42.5% of respondents indicated an average manual testing time period of 3-5 days with every release.

Company Size



SUMMARY

44.5% of survey respondents indicated that the company they worked for had 101-500 employees.

NEGATIVE SURPRISES

Code Complexity: The coding complexity of developing test scripts

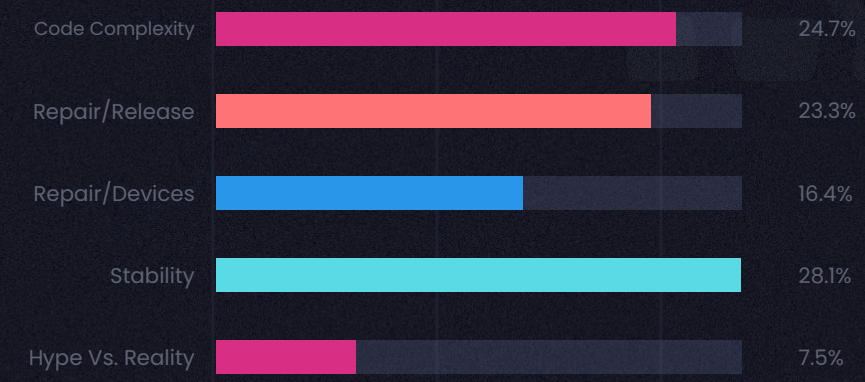
Repair/Release: The need to continually fix test scripts with every release

Repair/Devices: The need to continually fix test scripts to work across more devices

Stability: Having a stable test environment with predictable data

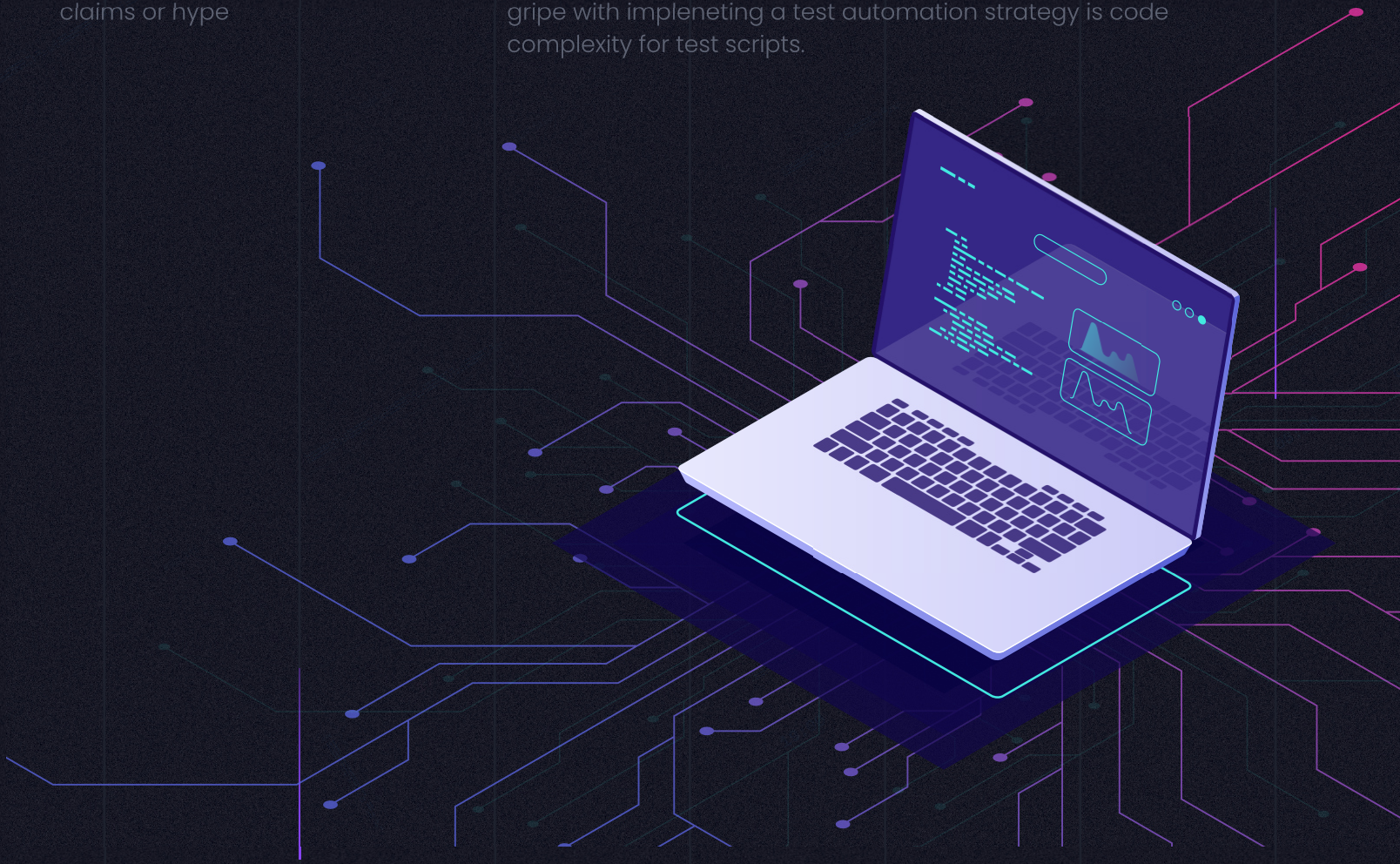
Hype vs. Reality: Vendor products not living up to their claims or hype

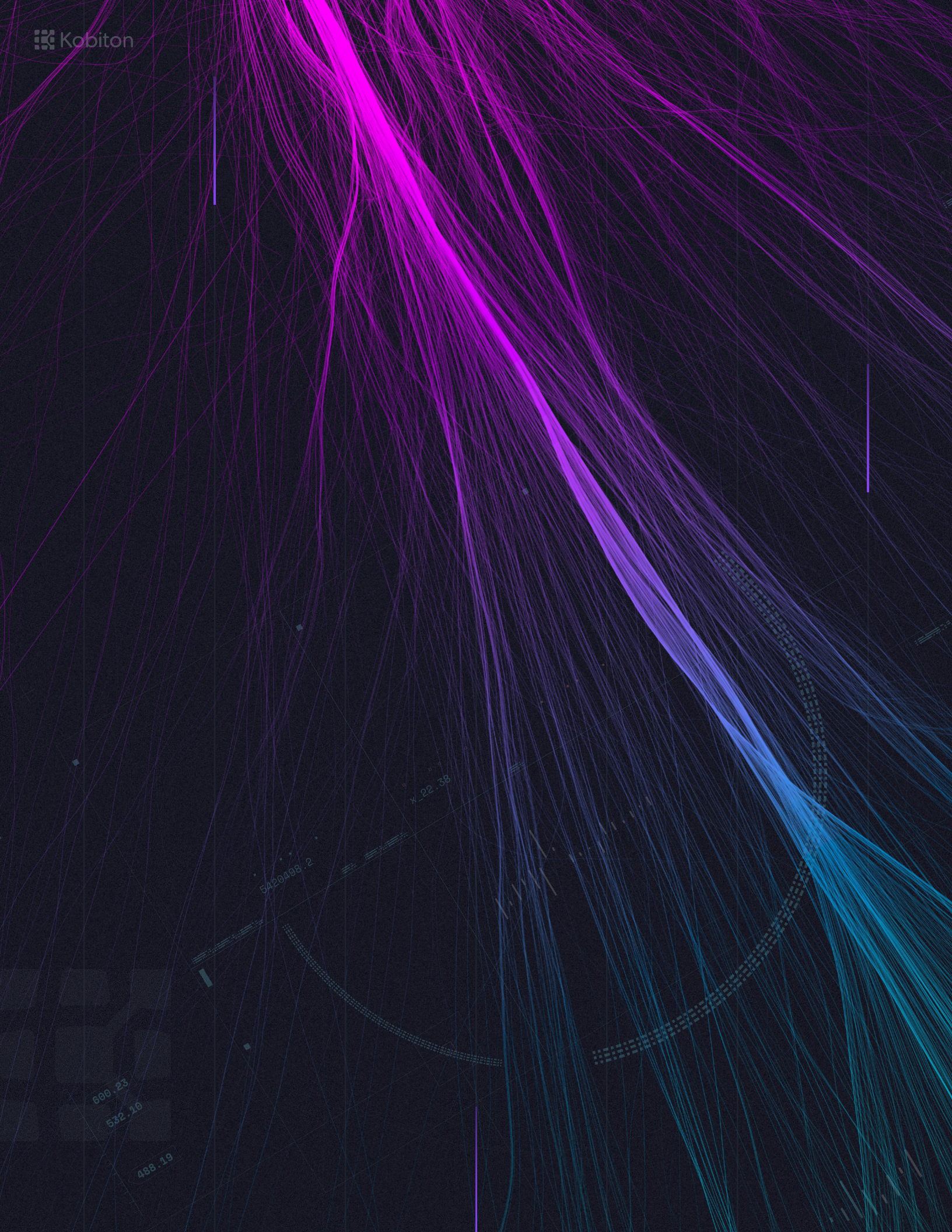
What was the biggest negative surprise you encountered as part of your test automation implementation?



SUMMARY

Stability issues are rampant in the test automation implementations used by most respondents. The second largest gripe with impleneting a test automation strategy is code complexity for test scripts.

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Kobiton

QA TEAM SIZE

TEAMS WITH 11-25 TESTERS

QA Team Size

Because of a direct correlation between company revenue and QA team size, viewing responses based on those two metrics reveals many similarities. However, there are some interesting observations.

Smaller and mid-sized teams (2-25 testers) are far more agile with their app release schedules in general. 38.3% of teams with 11-25 testers release weekly, followed closely by 35.6% for teams of 2-10. Compared to large teams (26+) where only 24.1% release weekly, it reinforces the notion that smaller teams must be scrappier than their larger competitors to survive. However, it should be noted that the very largest teams with the most resources lead the pack when it comes to agility, with 17% releasing on a daily basis.

Success criteria is another point of differentiation between the small/medium teams and the large teams. Small/Medium groups tend to measure automation success based on speed of delivery and number of bugs found, whereas large teams are overwhelmingly concerned with the number of human hours saved by using automation. This subtle difference suggests a narrative that automation is viewed by larger organizations as more of a cost-cutting strategy than an improvement to operational agility.

Another outlier is the biggest negative surprise encountered by organizations when implementing mobile test automation. 28% of small teams struggle with maintaining stable test environments and predictable data, followed by coding complexity of developing automation scripts (24.7%). In contrast, medium/large segments struggle with the need to continually fix test scripts to work across more devices. This is likely due to organizational maturity within companies that have realized the need to test on a large number of devices for full market coverage.

MOBILE STRATEGIES

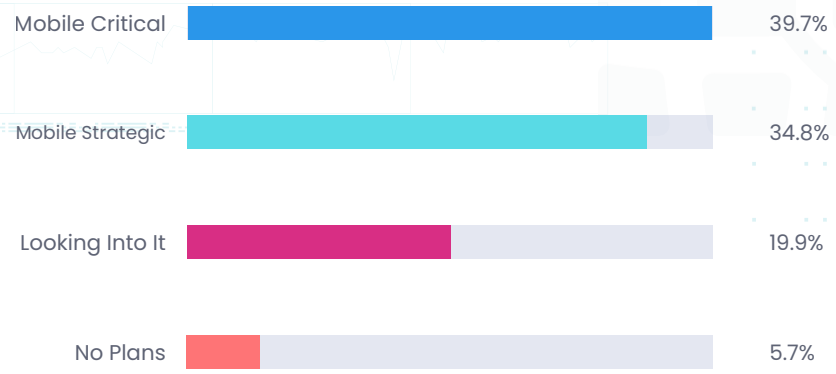
Mobile Critical: Our business model is centered around a mobile app

Mobile Strategic: Mobile is an important channel for our company, but we would survive without it

Looking Into It: Mobile is an initiative we're looking to persue

No Plans: We don't have a mobile app or any plans to implement one

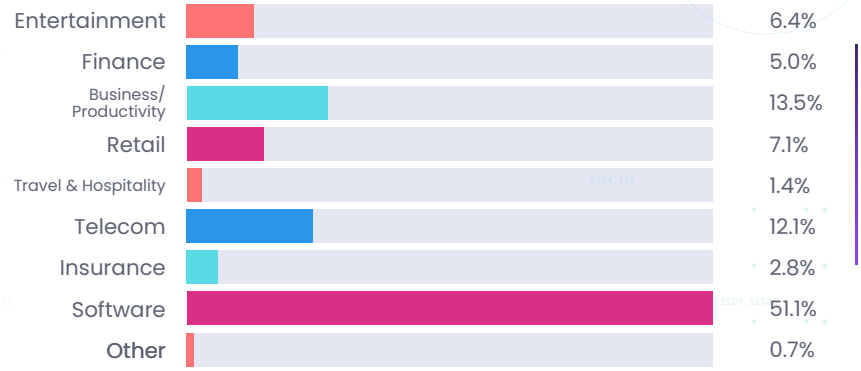
Mobile Strategies



SUMMARY

The majority of respondents indicated that mobile was an important component in their business model. 74.5% of respondents said that their business was centered around a mobile app.

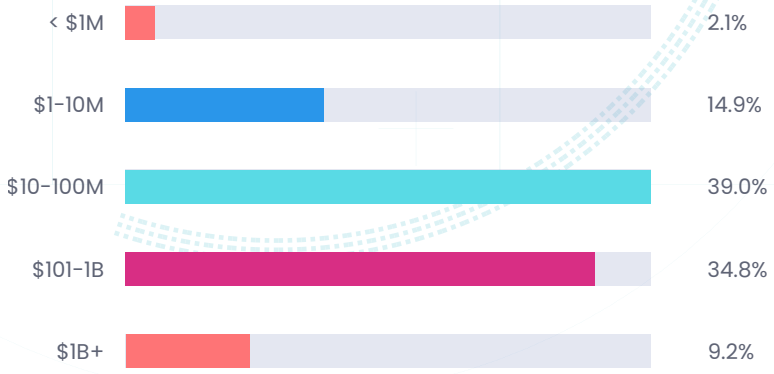
Industry/App Categories



SUMMARY

At 51.1%, the majority of responses collected in this survey were from software companies. The survey received the fewest responses from companies in the Travel and Hospitality vertical.

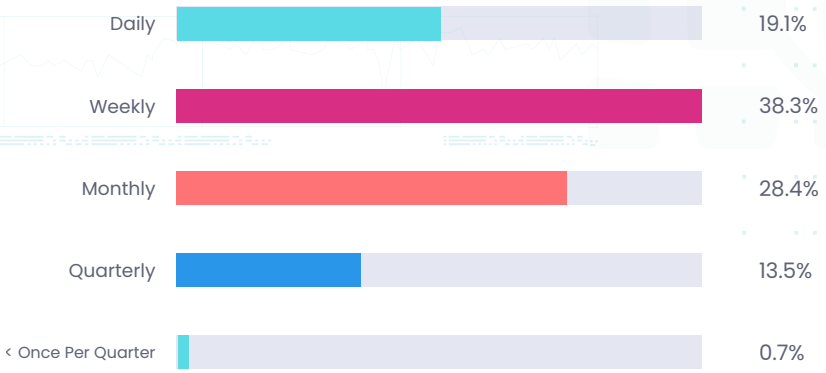
Annual Company Revenue



SUMMARY

39% of companies surveyed had an annual revenue of $10-100M. Just 2.1% of respondents indicated an annual revenue of less than $1M.

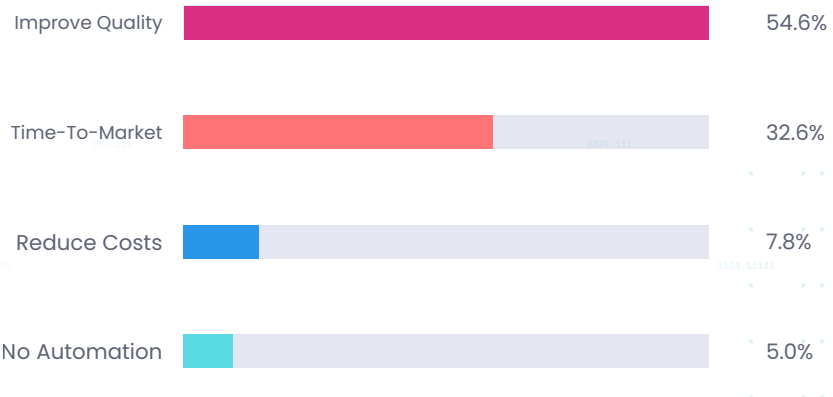
How often do you release app updates?



SUMMARY

Respondents indicated a preference for semi-frequent updates, with most responses indicating app update releases on a weekly or monthly schedule.

What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

The majority of respondents indicated that a desire to improve overall app quality was the primary strategic driver in choosing to persue test automation.

TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

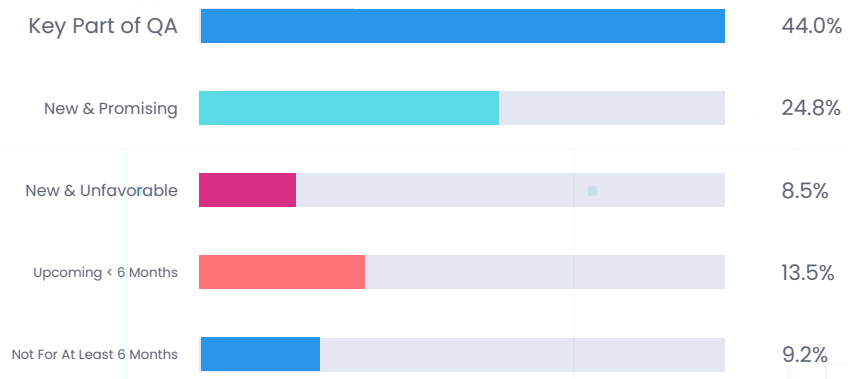
New and Promising: Our automation initiatives are relatively new and promising

New and Unfavorable: Our automation initiatives are relatively new and the results are not what we hoped for

Upcoming <6 months: Automation is an initiative we hope to start within the next 6 months

Not for at least 6 months: Automation will not happen within 6 months

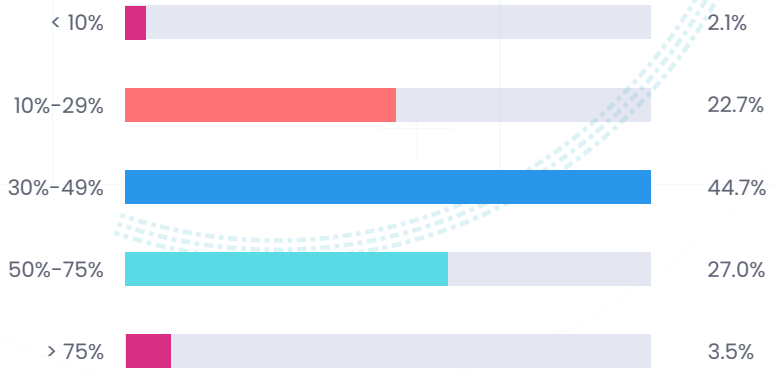
Where would you rate your current test automation maturity?



SUMMARY

44% of respondents indicated that test automation was a key part of their quality assurance process.

Based on the overall quality assurance budget in your organization, what percentage is spent on test automation when factoring in employees, tools, and other resources?



SUMMARY

Most respondents indicated that their companies allocate between 30% and 49% of their overall QA budget to test automation related expenditures.

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

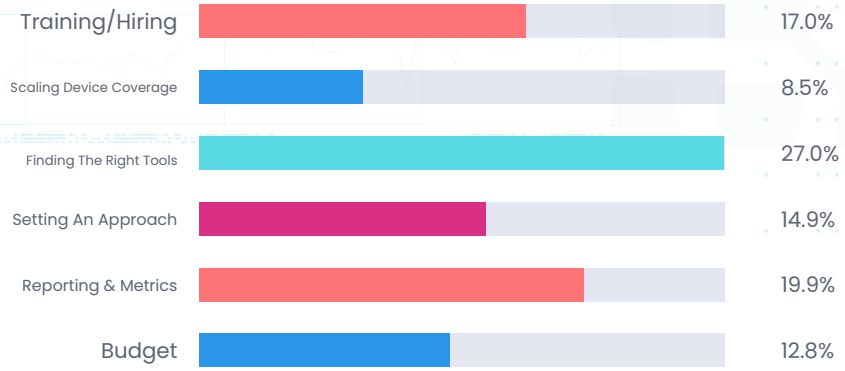
Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

Budget: Convincing the organization of the need to invest in automation

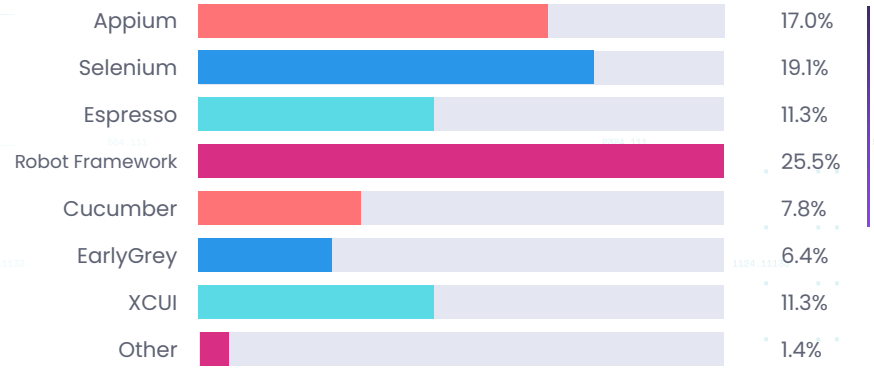
What is your biggest struggle/pain point with using or starting test automation today?



SUMMARY

The survey respondents indicated that the largest barrier to entry for test automation is finding the right tools.

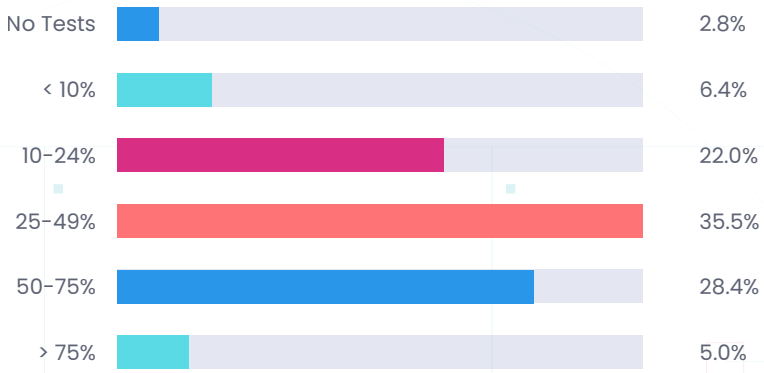
Test automation framework usage



SUMMARY

Responses indicate that Robot Framework is the preferred automation framework.

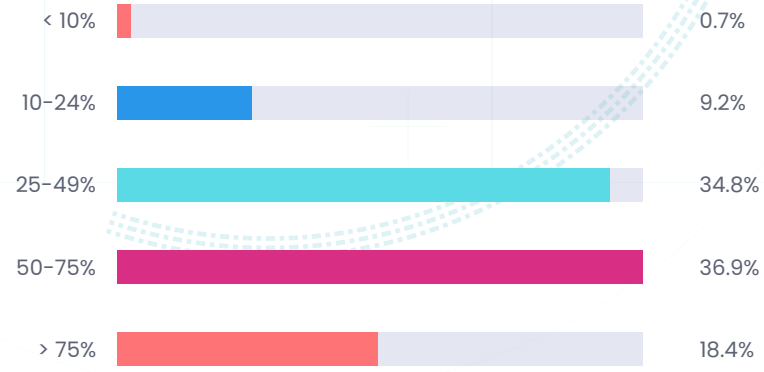
What percentage of your test cases are automated?



SUMMARY

97.2% of respondents indicated that they are performing some test automation. 35.5% of respondents specified that 25-49% of their test cases are automated.

What percentage of test cases would you like to have automated?



SUMMARY

Most respondents clearly see the value of test automation, with a noteworthy 36.9% seeking to automate more than 75% of their test cases. Comparing this graph with the one above shows a clear trend toward desired increases in test automation.

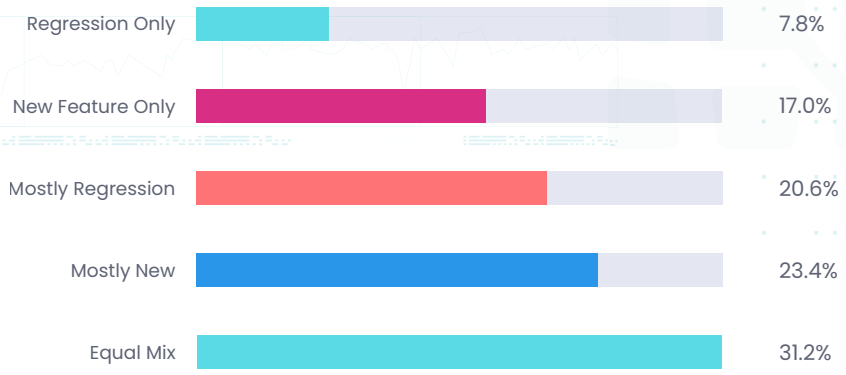
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

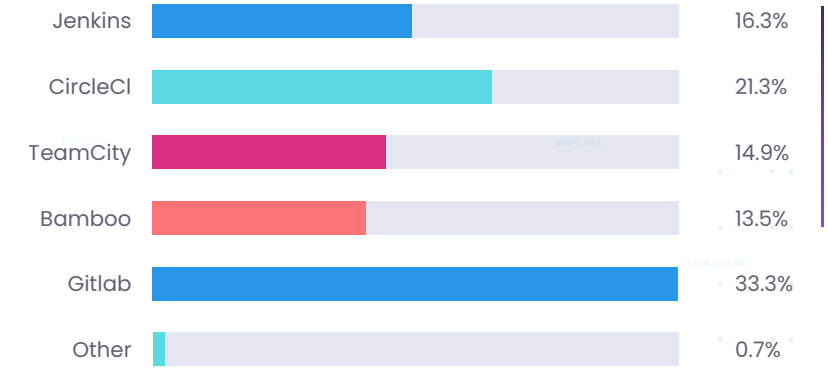
What are you using test automation primarily for?



SUMMARY

Most respondents are using test automation to verify the functionality of an equal mix in new and existing app features.

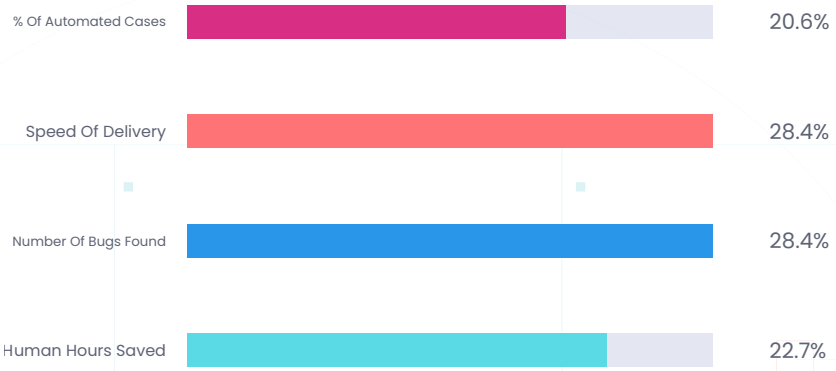
Which CI/CD tools does your organization use?



SUMMARY

Gitlab was listed as the preferred CI/CD tool amongst respondents with 28.8% indicating its use. At 19.7% Jenkins and CircleCI tied for second most frequently used.

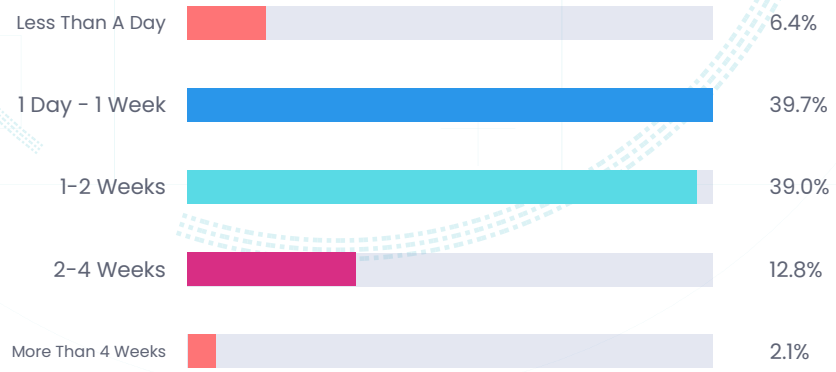
Which of the following metrics best indicates successful test automation implementation?



SUMMARY

Respondents indicated a preference for quantifying test automation success by measuring delivery speed and by the number of bugs found.

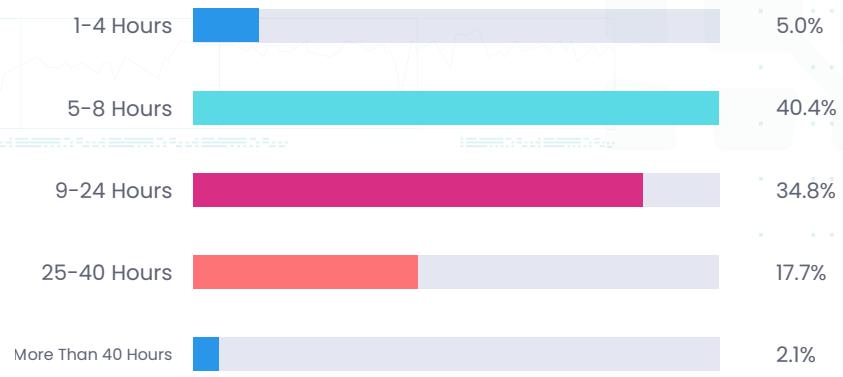
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts within 1 Day - 1 Week.

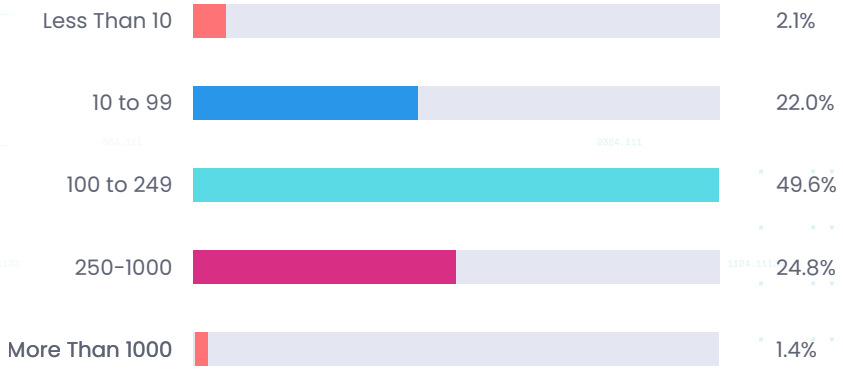
On average, how long does it take to code a test case using the framework of your choice?



SUMMARY

Survey respondents indicated that their test cases are typically coded within a 5-8 hour span.

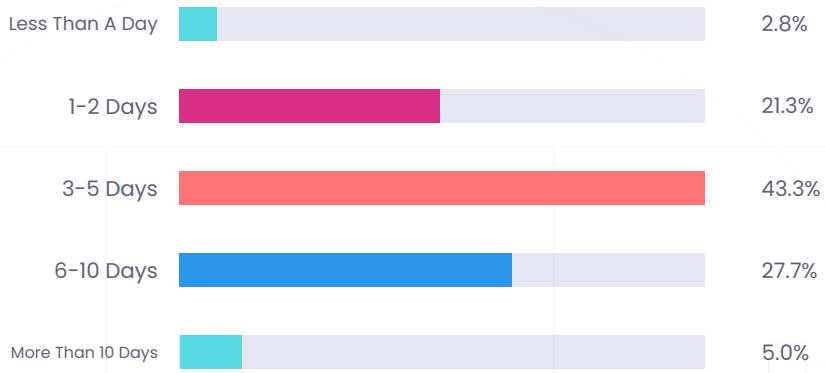
Approximately how many manual test cases are you executing with each app release?



SUMMARY

There's plenty of room for automation. 49.6% of respondents indicated that test teams perform 100-249 manual test cases with each app release.

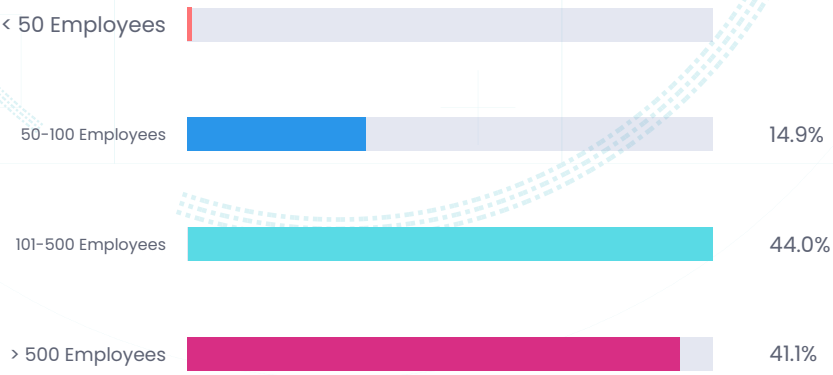
Approximately how long does it take to manually test your app before every release?



SUMMARY

Manual testing is time consuming. 43.3% of respondents indicated an average manual testing time period of 3-5 days with every release.

Company Size



SUMMARY

44.0% of survey respondents indicated that the company they worked for had 101-500 employees.

NEGATIVE SURPRISES

Code Complexity: The coding complexity of developing test scripts

Repair/Release: The need to continually fix test scripts with every release

Repair/Devices: The need to continually fix test scripts to work across more devices

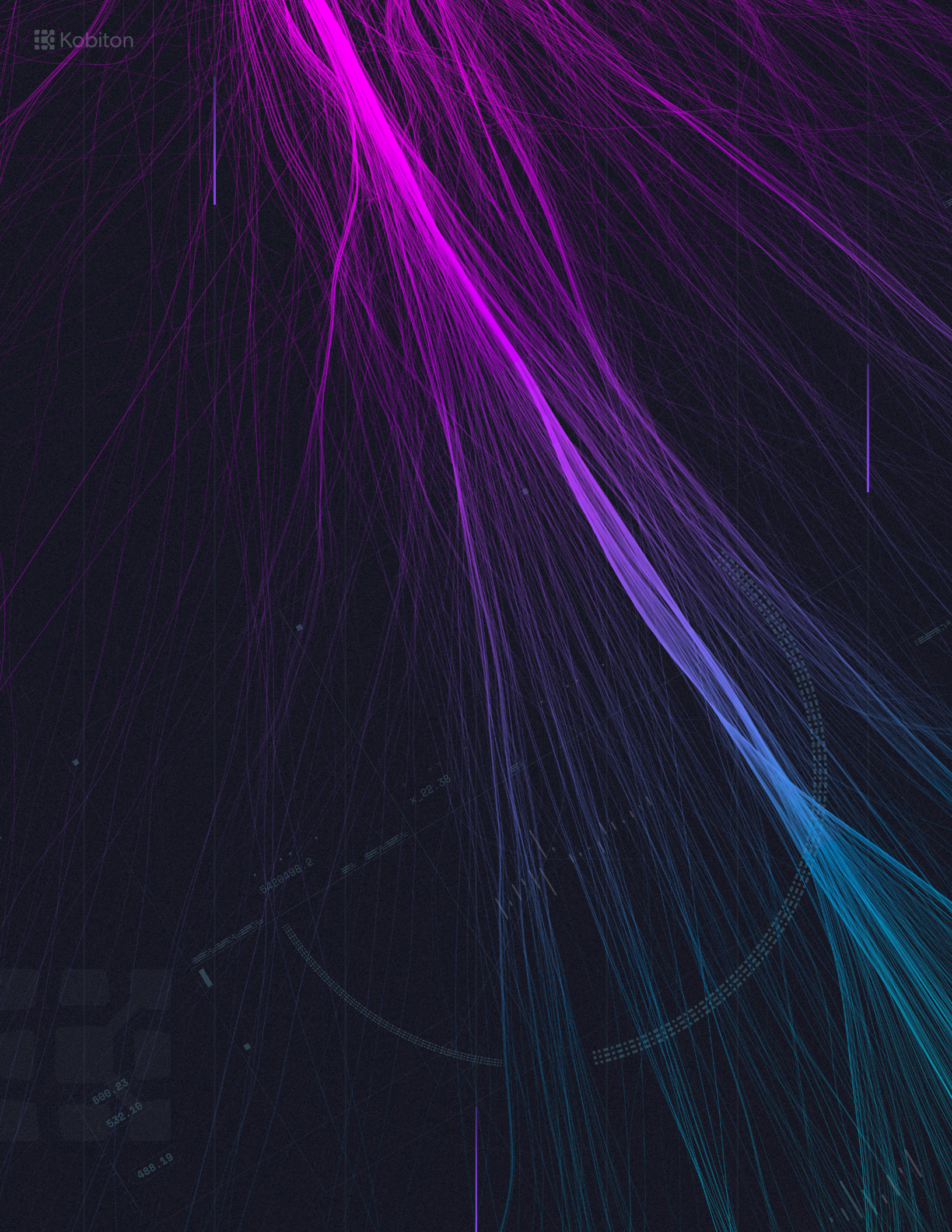
Stability: Having a stable test environment with predictable data

Hype vs. Reality: Vendor products not living up to their claims or hype

What was the biggest negative surprise you encountered as part of your test automation implementation?

SUMMARY

The need to continually fix test scripts to work across more devices is what most respondents encounter in their test automation. The second largest gripe with impleneting a test automation strategy is continually fixing test scripts with every release.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Kobiton

QA TEAM SIZE

TEAMS WITH 26 OR MORE TESTERS

QA Team Size

Because of a direct correlation between company revenue and QA team size, viewing responses based on those two metrics reveals many similarities. However, there are some interesting observations.

Smaller and mid-sized teams (2-25 testers) are far more agile with their app release schedules in general. 38.3% of teams with 11-25 testers release weekly, followed closely by 35.6% for teams of 2-10. Compared to large teams (26+) where only 24.1% release weekly, it reinforces the notion that smaller teams must be scrappier than their larger competitors to survive. However, it should be noted that the very largest teams with the most resources lead the pack when it comes to agility, with 17% releasing on a daily basis.

Success criteria is another point of differentiation between the small/medium teams and the large teams. Small/Medium groups tend to measure automation success based on speed of delivery and number of bugs found, whereas large teams are overwhelmingly concerned with the number of human hours saved by using automation. This subtle difference suggests a narrative that automation is viewed by larger organizations as more of a cost-cutting strategy than an improvement to operational agility.

Another outlier is the biggest negative surprise encountered by organizations when implementing mobile test automation. 28% of small teams struggle with maintaining stable test environments and predictable data, followed by coding complexity of developing automation scripts (24.7%). In contrast, medium/large segments struggle with the need to continually fix test scripts to work across more devices. This is likely due to organizational maturity within companies that have realized the need to test on a large number of devices for full market coverage.

MOBILE STRATEGIES

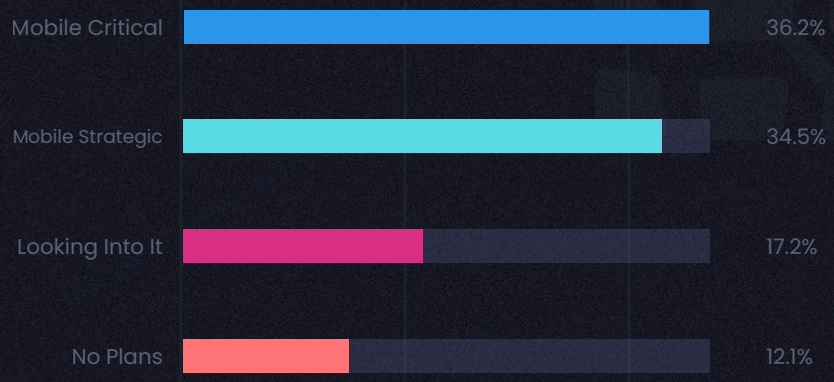
Mobile Critical: Our business model is centered around a mobile app

Mobile Strategic: Mobile is an important channel for our company, but we would survive without it

Looking Into It: Mobile is an initiative we're looking to persue

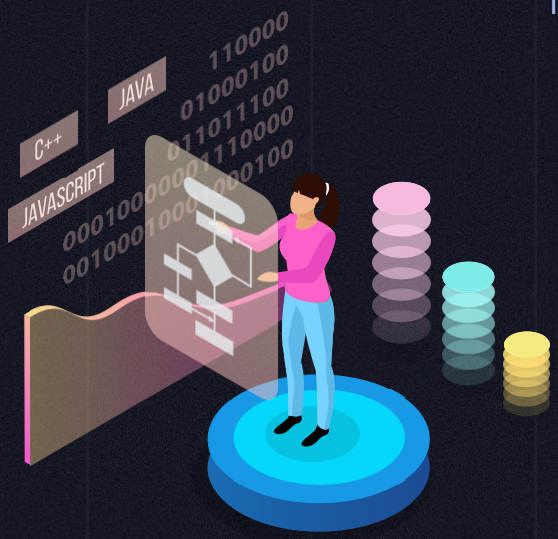
No Plans: We don't have a mobile app or any plans to implement one

Mobile Strategies

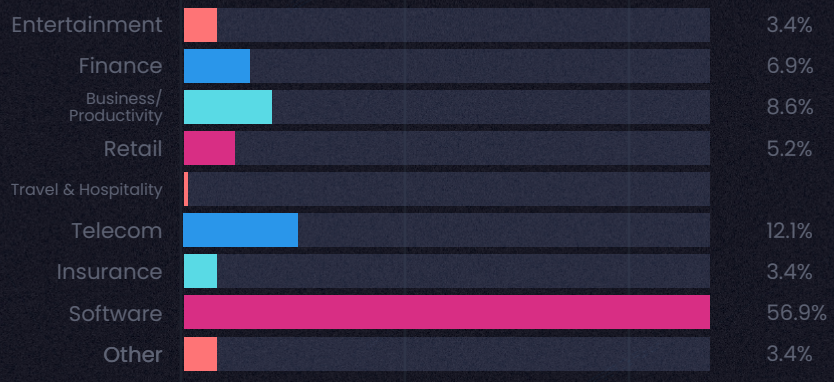


SUMMARY

The majority of respondents indicated that mobile was an important component in their business model. 70.7% of respondents said that their business was centered around a mobile app.



Industry/App Categories



SUMMARY

At 56.9%, the majority of responses collected in this survey were from software companies. The survey received the fewest responses from companies in the Travel and Hospitality vertical.

Annual Company Revenue

SUMMARY

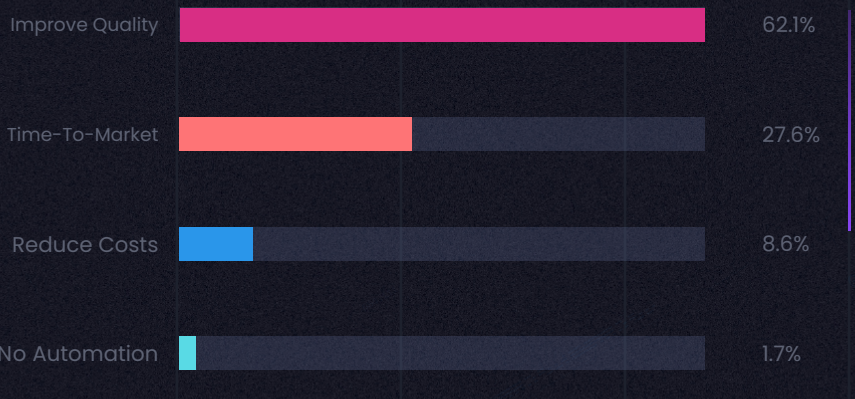
27.6% of companies surveyed had an annual revenue of $10-100M. Just 5.2% of respondents indicated an annual revenue of less than $1M.

How often do you release app updates?

SUMMARY

Respondents indicated a preference for semi-frequent updates, with most responses indicating app update releases on a monthly schedule.

What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

The majority of respondents indicated that a desire to improve overall app quality was the primary strategic driver in choosing to persue test automation.

TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

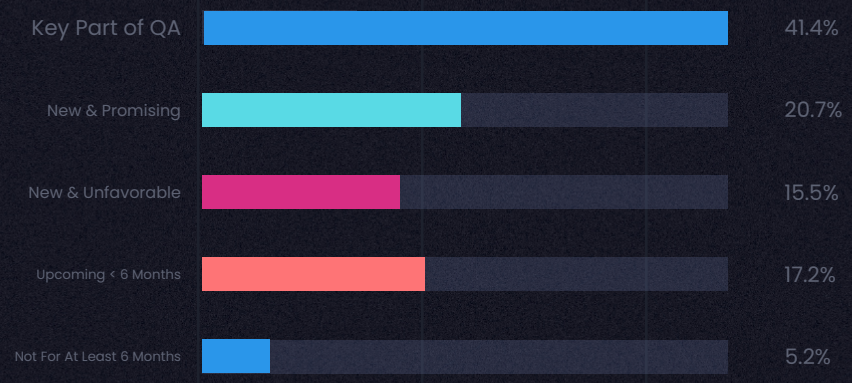
New and Promising: Our automation initiatives are relatively new and promising

New and Unfavorable: Our automation initiatives are relatively new and the results are not what we hoped for

Upcoming <6 months: Automation is an initiative we hope to start within the next 6 months

Not for at least 6 months: Automation will not happen within 6 months

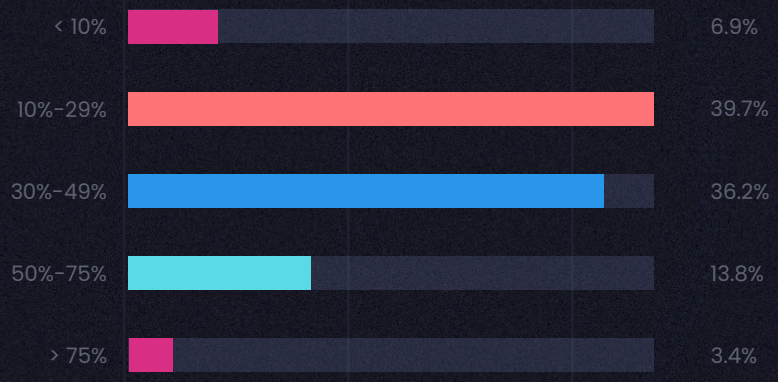
Where would you rate your current test automation maturity?



SUMMARY

41.4% of respondents indicated that test automation was a key part of their quality assurance process.

Based on the overall quality assurance budget in your organization, what percentage is spent on test automation when factoring in employees, tools, and other resources?



SUMMARY

Most respondents indicated that their companies allocate between 10% and 29% of their overall QA budget to test automation related expenditures.

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

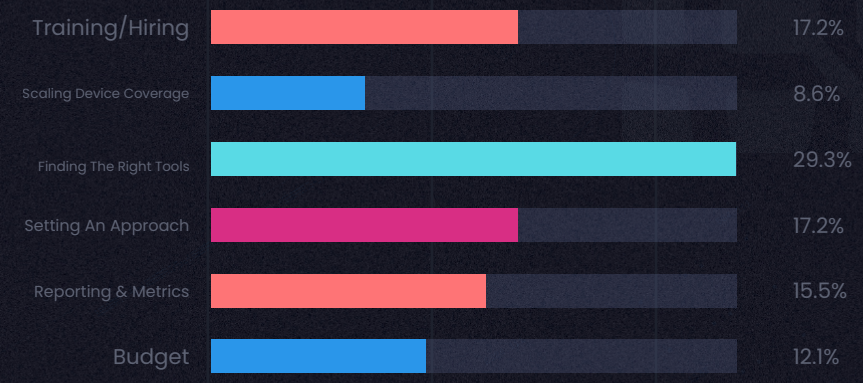
Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

Budget: Convincing the organization of the need to invest in automation

What is your biggest struggle/pain point with using or starting test automation today?



SUMMARY

The survey respondents indicated that the largest barrier to entry for test automation is finding the right tools.

Test automation framework usage

SUMMARY

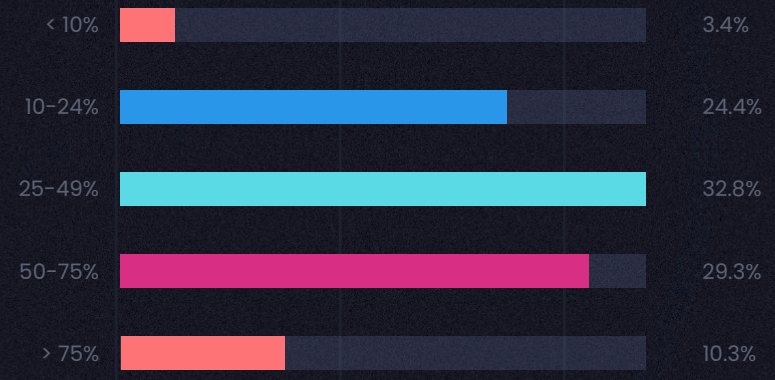
Responses indicate that Robot Framework is the preferred automation framework.

What percentage of your test cases are automated?

SUMMARY

98.3% of respondents indicated that they are performing some test automation. 58.6% of respondents specified that 10-49% of their test cases are automated.

What percentage of test cases would you like to have automated?



SUMMARY

Most respondents clearly see the value of test automation, with a noteworthy 32.8% seeking to automate 25%-49% of their test cases. Comparing this graph with the one above shows a clear trend toward desired increases in test automation.

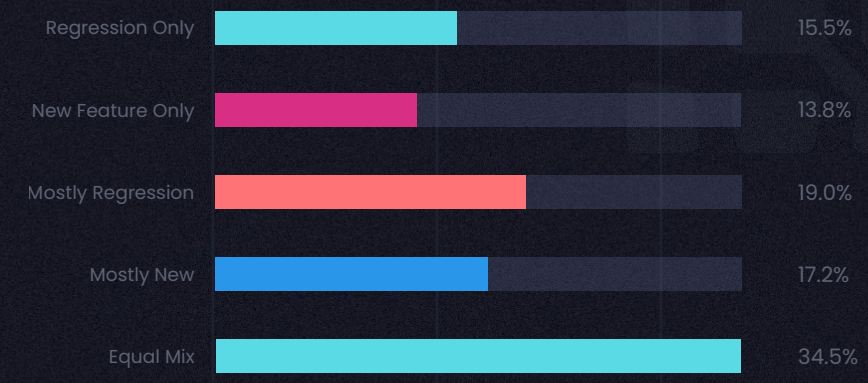
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

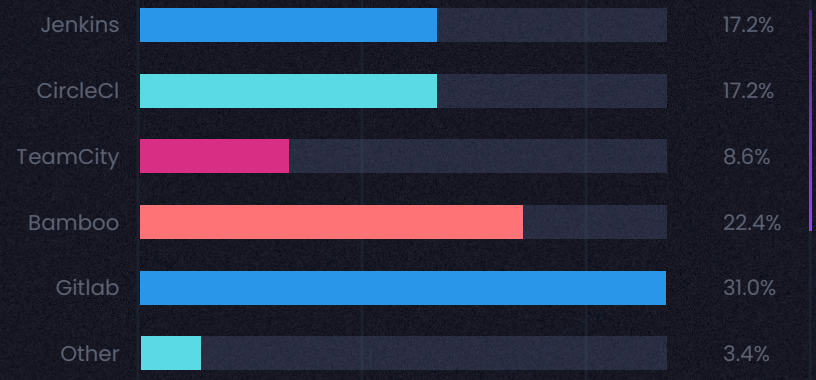
What are you using test automation primarily for?



SUMMARY

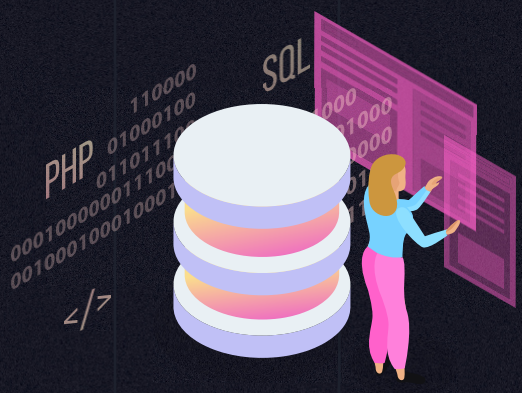
Most respondents are using test automation to verify the functionality of an equal mix in new and existing app features.

Which CI/CD tools does your organization use?

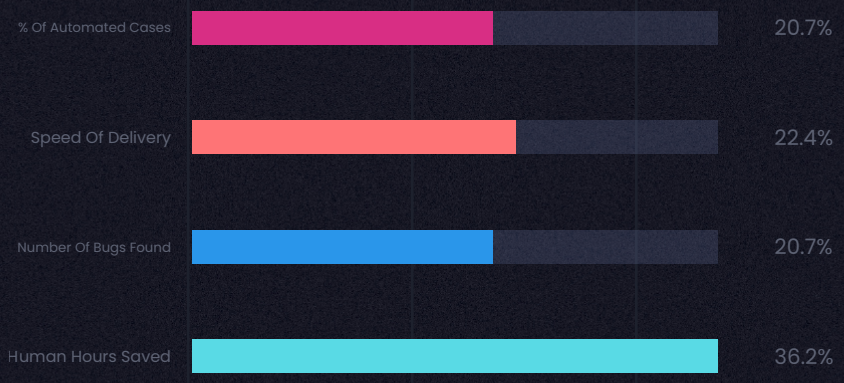


SUMMARY

Gitlab was listed as the preferred CI/CD tool amongst respondents with 31% indicating its use. At 22.4% Bamboo is the second most frequently used.



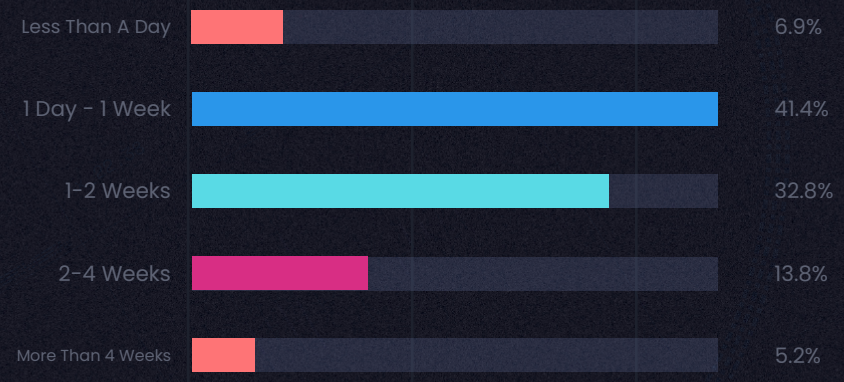
Which of the following metrics best indicates successful test automation implementation?



SUMMARY

Respondents indicated a preference for quantifying test automation success by measuring the amount of human hours saved.

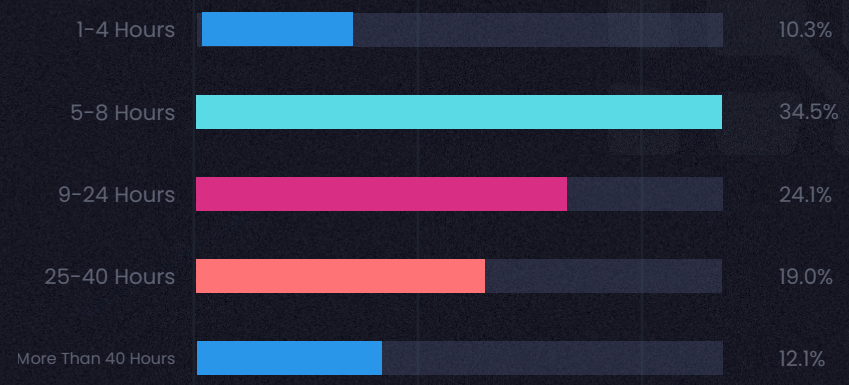
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts within 1 Day - 1 Week.

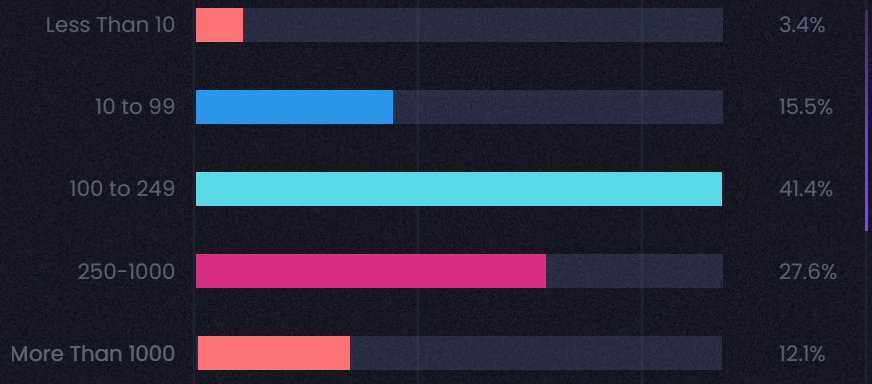
On average, how long does it take to code a test case using the framework of your choice?



SUMMARY

Survey respondents indicated that their test cases are typically coded within a 5-8 hour span.

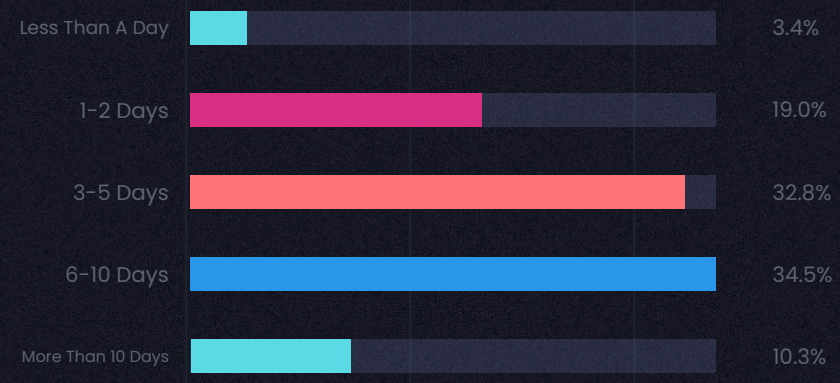
Approximately how many manual test cases are you executing with each app release?



SUMMARY

There's plenty of room for automation. 41.4% of respondents indicated that test teams perform 100-249 manual test cases with each app release.

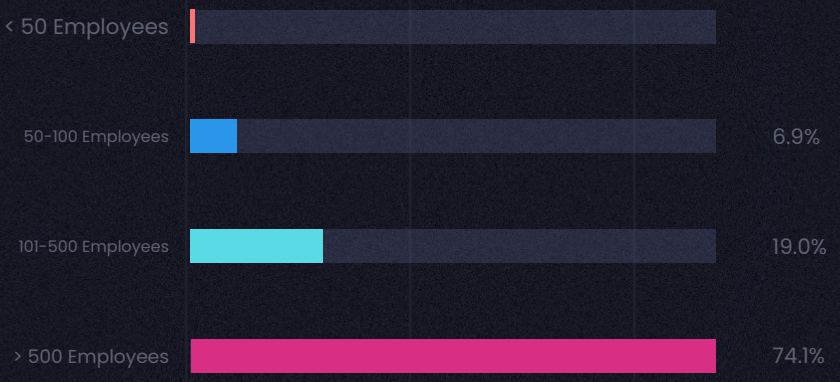
Approximately how long does it take to manually test your app before every release?



SUMMARY

Manual testing is time consuming. 34.5% of respondents indicated an average manual testing time period of 6-10 days with every release.

Company Size



SUMMARY

74.1% of survey respondents indicated that the company they worked for had more than 500 employees.

NEGATIVE SURPRISES

Code Complexity: The coding complexity of developing test scripts

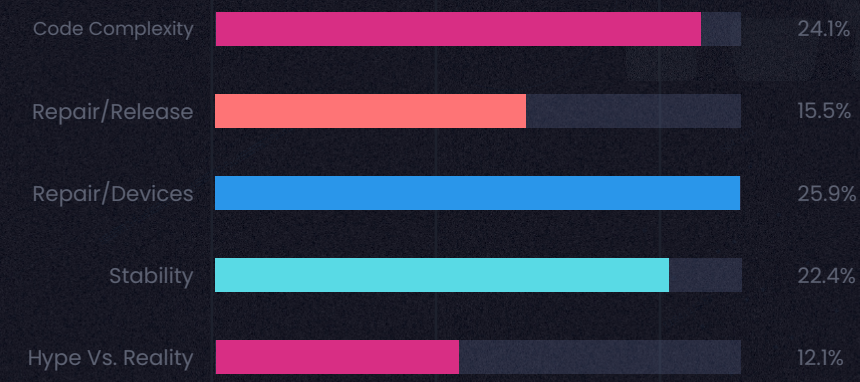
Repair/Release: The need to continually fix test scripts with every release

Repair/Devices: The need to continually fix test scripts to work across more devices

Stability: Having a stable test environment with predictable data

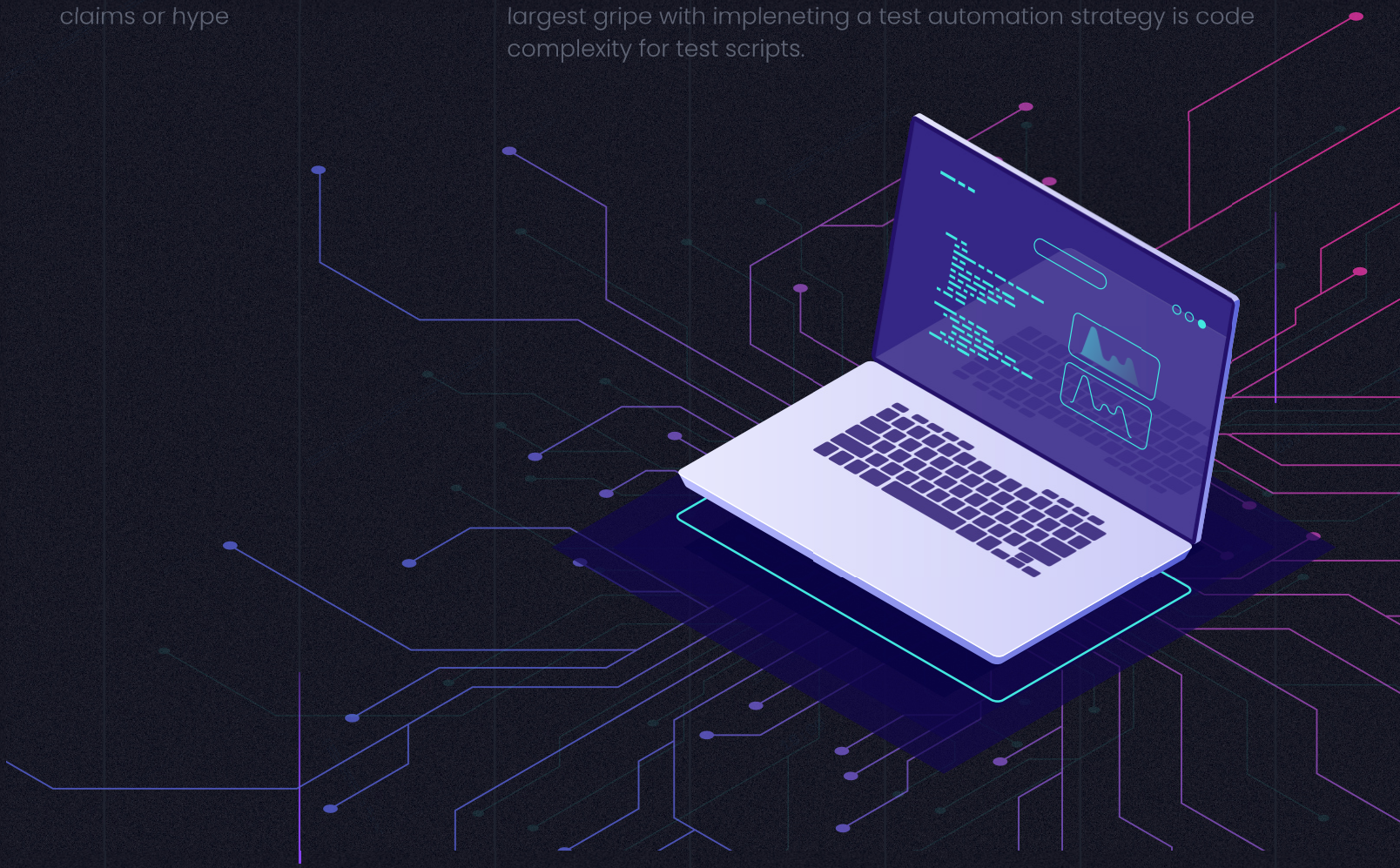
Hype vs. Reality: Vendor products not living up to their claims or hype

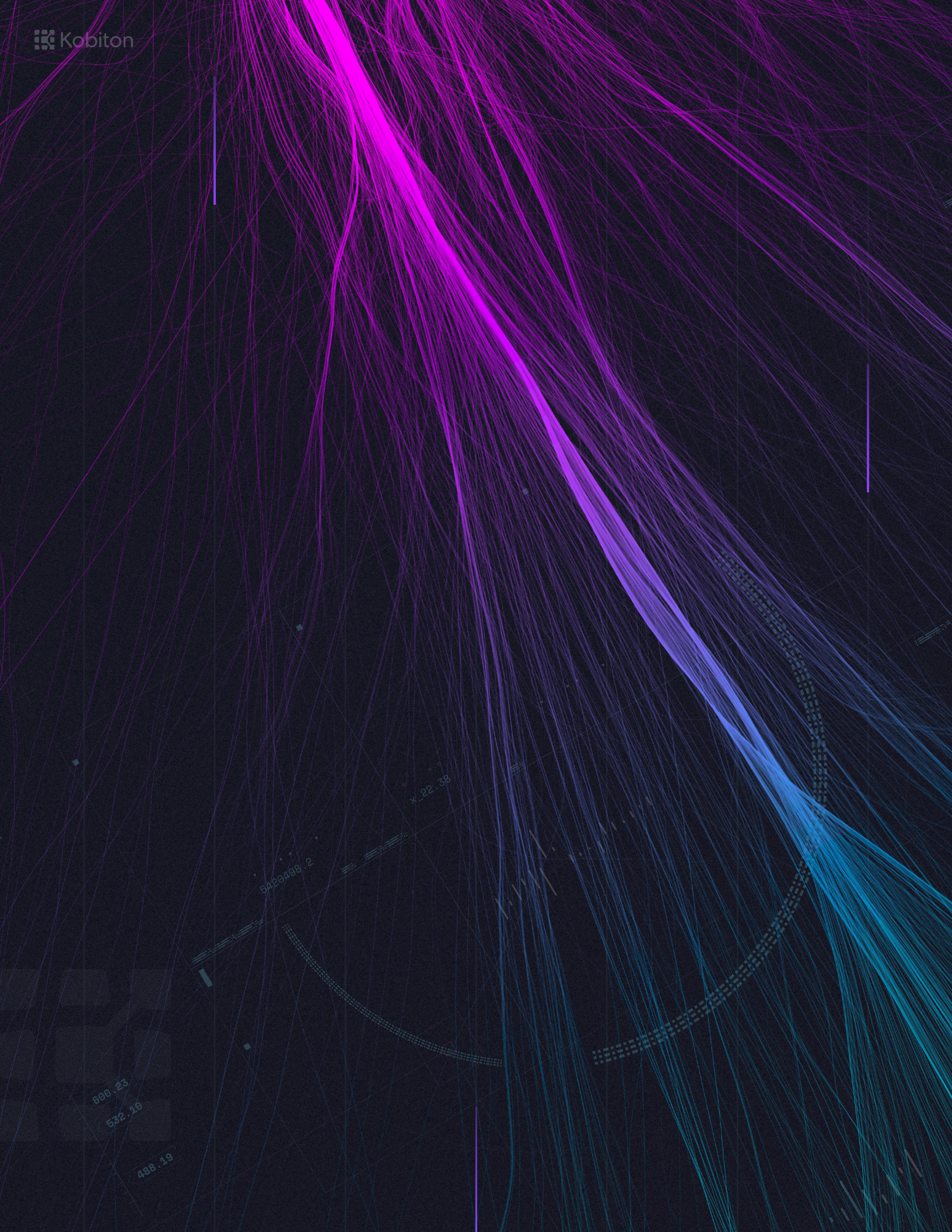
What was the biggest negative surprise you encountered as part of your test automation implementation?



SUMMARY

The need to continuallty fix test scripts to work across more devices is what respondents encounter the most. The second largest gripe with impleneting a test automation strategy is code complexity for test scripts.

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COMPANY REVENUE

LESS THAN $1 MILLION

Company Revenue

Responses reveal that company size, *as measured by annual revenue*, has a major impact on resource-driven initiatives such as QA headcount. However, some interesting differences emerge in other areas.

Companies under $1B in revenue are far more agile in their app releases and are generally more inclined to release weekly, despite having smaller QA teams. Ironically, the $1B+ organizations are overwhelmingly skewed toward monthly releases (43%) in lieu of weekly releases (10%) and are up to six times more likely to only support quarterly releases than their smaller revenue counterparts. This correlates with the majority of $1B+ organizations defining themselves as Mobile Strategic (*app is non-essential to company survival*), in contrast to the majority of sub $1B companies that self-identify as Mobile Critical (*app is essential to revenue*). It is clear that Mobile Strategic organizations, most notably in legacy industries, are not yet feeling the pain of disruption and the urgency to relentlessly pursue mobile.

All companies with significant revenue (*greater than $1M*) have embraced test automation as a key part of their testing and delivery process. 42% of all respondents claim to have mature automation capabilities; compared to 23% whose automation initiatives are nascent but delivering promising results. 14% hope to launch their automation efforts within the next six months, and only 8% have no plans for automation.

Companies of all sizes list the biggest struggle in automation as evaluating and selecting the right vendor, framework or technology. Interestingly, the second biggest pain point varies according to company size. Sub $100M companies say their second-biggest pain is trying to decide what to automate (*the approach*), while $100M+ companies point to acquiring/training skilled automation engineers as the second-highest pain. This contrast could be indicative of a greater trend where larger companies are not just looking for more people, but also want talent that can quickly integrate into their "coding" based approach to test automation; whereas many smaller companies are fine with utilizing scriptless automation technologies until their people develop coding capabilities.

All companies with revenues north of $10M automate 25-50% of their test cases. The largest $1B+ companies state that they'd like to achieve more than 75% automation, a goal far more lofty than their smaller counterparts. Ironically, these are the same companies that only release monthly or quarterly today.

MOBILE STRATEGIES

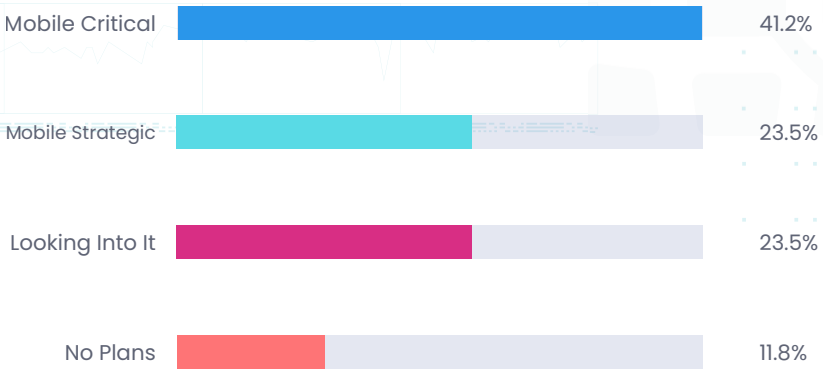
Mobile Critical: Our business model is centered around a mobile app

Mobile Strategic: Mobile is an important channel for our company, but we would survive without it

Looking Into It: Mobile is an initiative we're looking to pursue

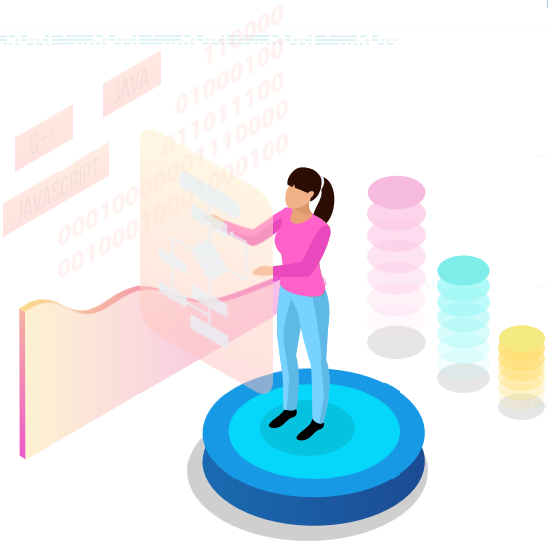
No Plans: We don't have a mobile app or any plans to implement one

Mobile Strategies

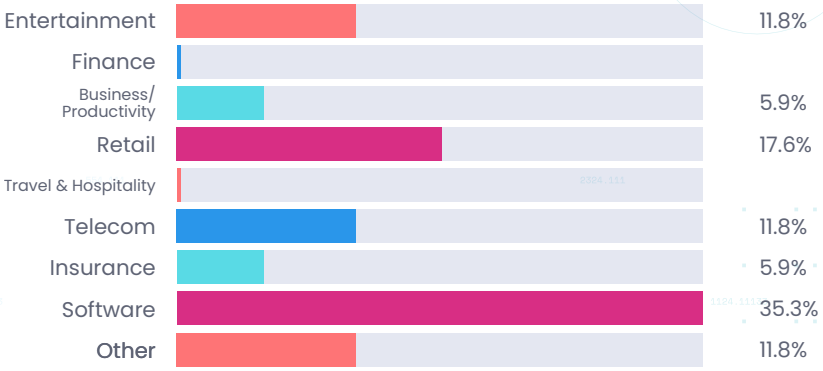


SUMMARY

The majority of respondents indicated that mobile was an important component in their business model. 41.2% of respondents said that their business was centered around a mobile app.



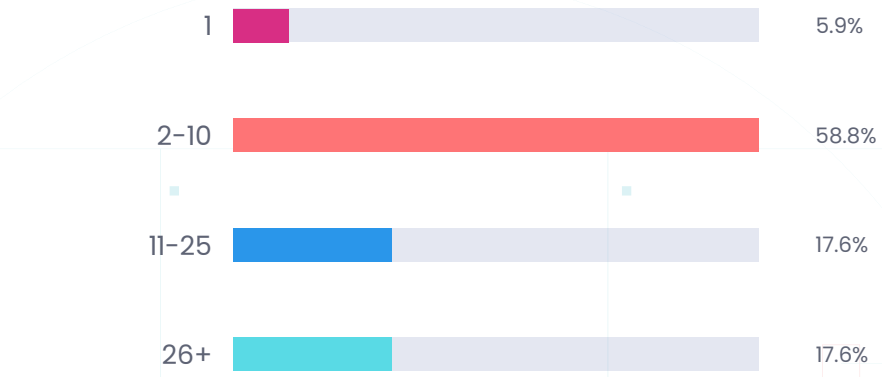
Industry/App Categories



SUMMARY

At 35.3%, the majority of responses collected in this survey were from software companies. The survey received the fewest responses from companies in the Travel and Hospitality vertical.

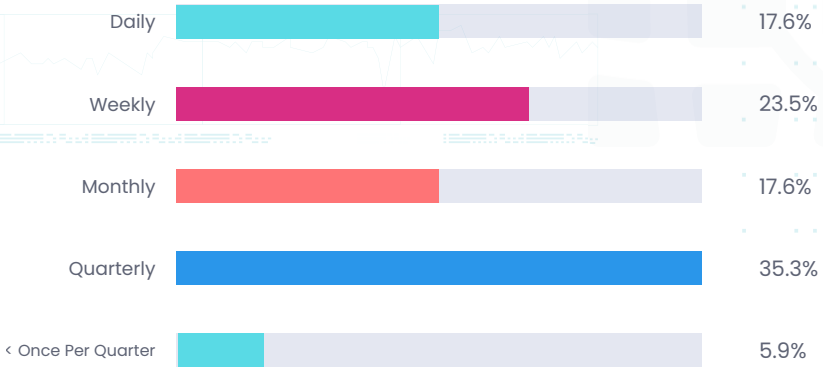
How many testers are on your team?



SUMMARY

Most of the companies surveyed have test teams of 2-10 people. Only 5.9% of respondents had 1 tester, while 17.6% had teams of 11-25 and more than 26 people.

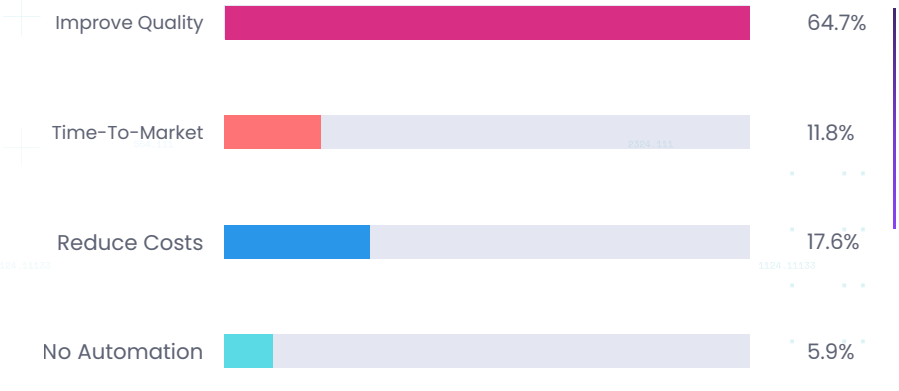
How often do you release app updates?



SUMMARY

Respondents indicated a preference for semi-frequent updates, with most responses indicating app update releases on a quarterly schedule.

What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

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TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

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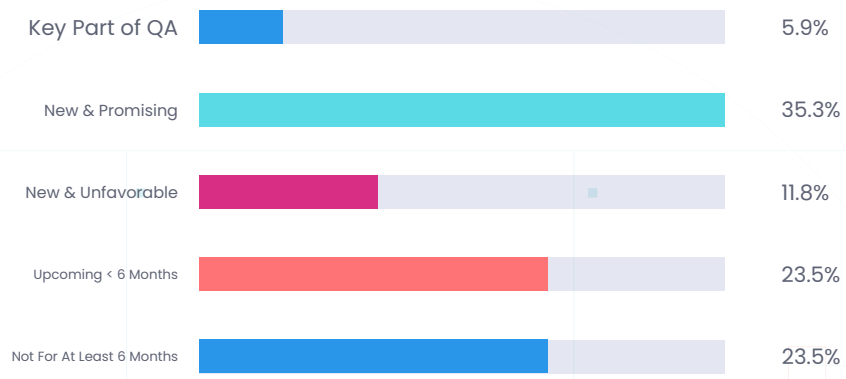
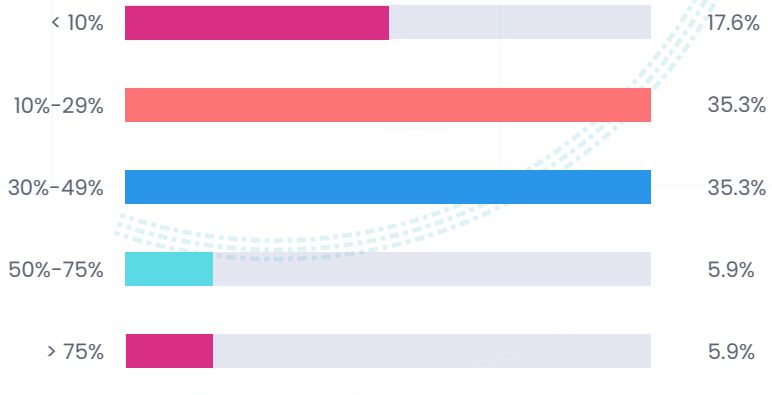
Where would you rate your current test automation maturity?



SUMMARY

35.3% of respondents indicated that test automation was a key part of their quality assurance process.

Based on the overall quality assurance budget in your organization, what percentage is spent on test automation when factoring in employees, tools, and other resources?



SUMMARY

Most respondents indicated that their companies allocate between 10 and 49% of their overall QA budget to test automation related expenditures.

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

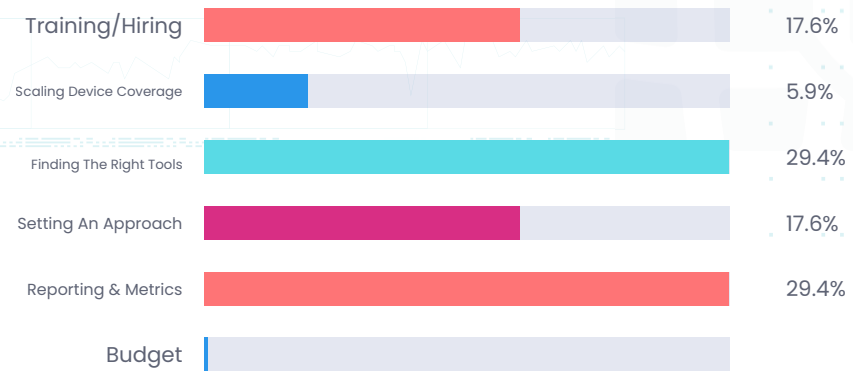
Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

Budget: Convincing the organization of the need to invest in automation

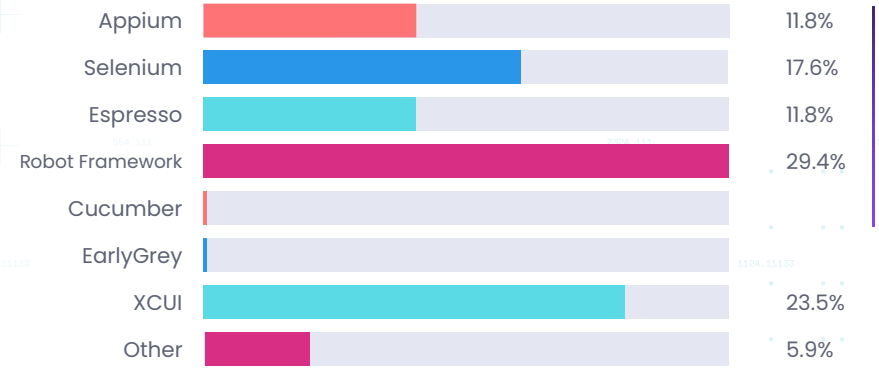
What is your biggest struggle/pain point with using or starting test automation today?



SUMMARY

The survey respondents indicated that the largest barrier to entry for test automation is finding the right tools and reporting & metrics.

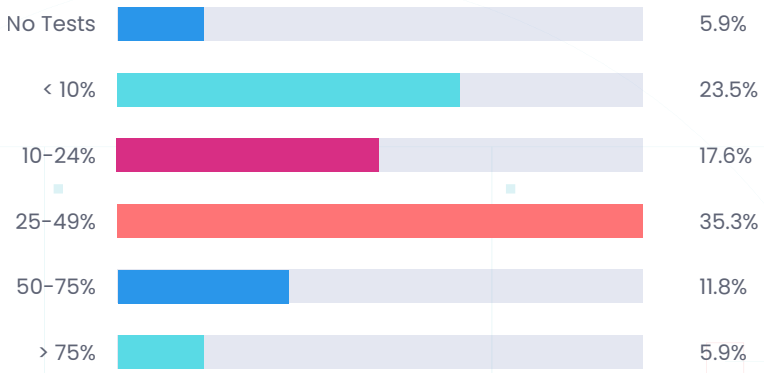
Test automation framework usage



SUMMARY

Responses indicate that Robot Framework is the preferred automation framework.

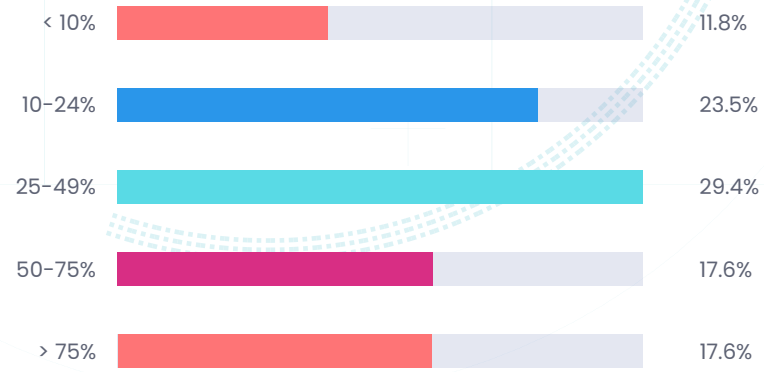
What percentage of your test cases are automated?



SUMMARY

96.3% of respondents indicated that they are performing some test automation. 32.8% of respondents specified that 25-49% of their test cases are automated.

What percentage of test cases would you like to have automated?



SUMMARY

Most respondents clearly see the value of test automation, with a noteworthy 29.4% seeking to automate 25%-49% of their test cases. Comparing this graph with the one above shows a clear trend toward desired increases in test automation.

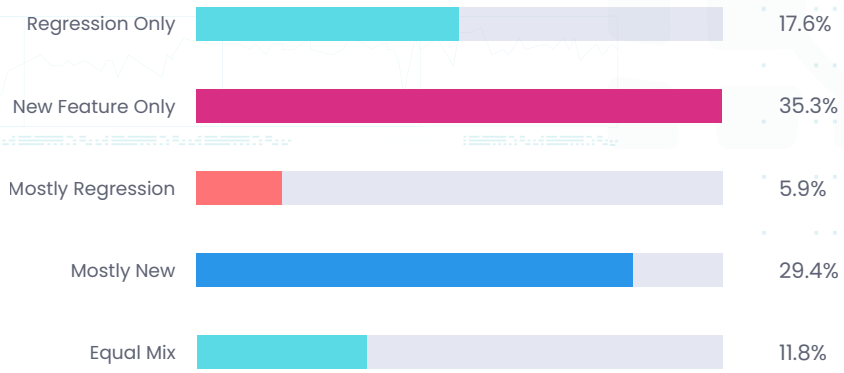
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

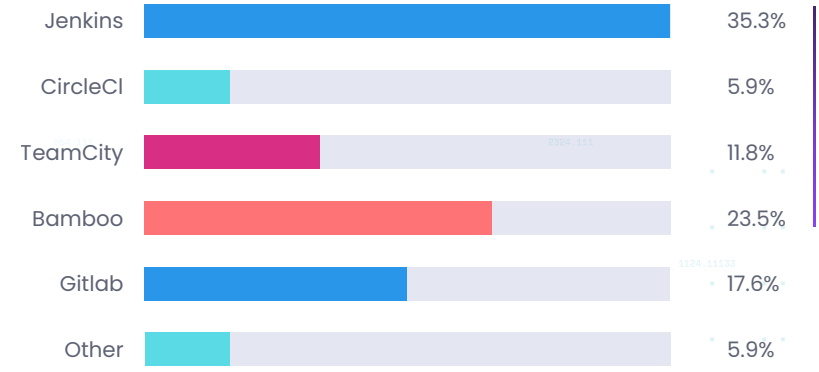
What are you using test automation primarily for?



SUMMARY

Most respondents are using test automation to verify the functionality of new app features.

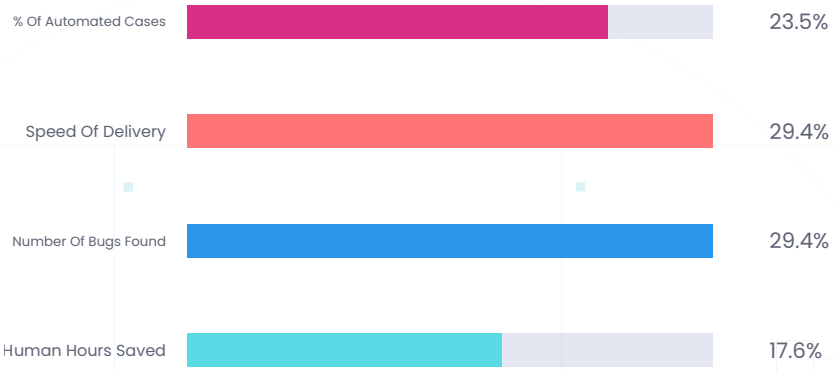
Which CI/CD tools does your organization use?



SUMMARY

Jenkins was listed as the preferred CI/CD tool amongst respondents with 35.3% indicating its use. At 23.5% Bamboo is the second most frequently used.

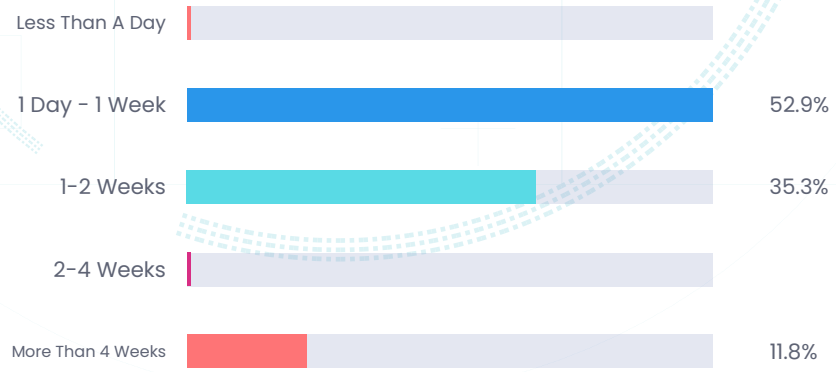
Which of the following metrics best indicates successful test automation implementation?



SUMMARY

Respondents indicated a preference for quantifying test automation success by measuring delivery speed and number of bugs found.

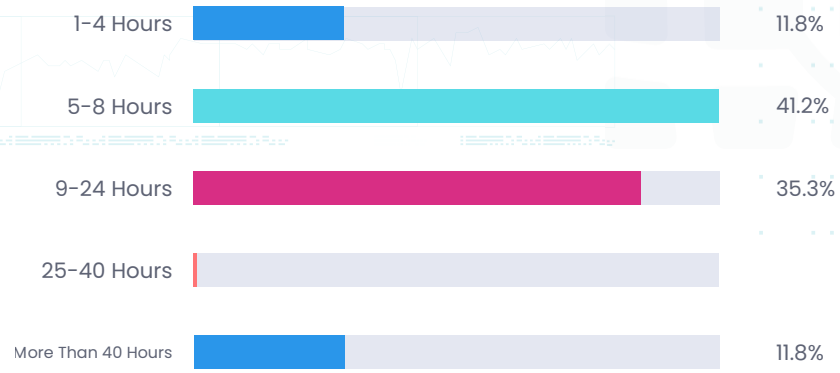
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts within 1 Day - 1 Week.

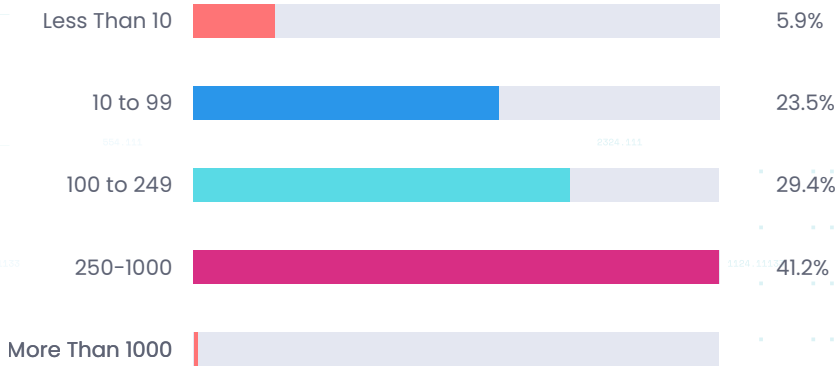
On average, how long does it take to code a test case using the framework of your choice?



SUMMARY

Survey respondents indicated that their test cases are typically coded within a 5-8 hour span.

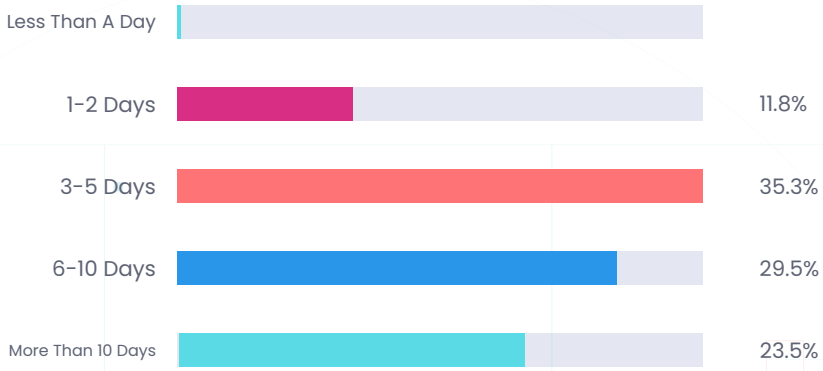
Approximately how many manual test cases are you executing with each app release?



SUMMARY

41.2% of respondents indicated that test teams perform 249-1000 manual test cases with each app release.

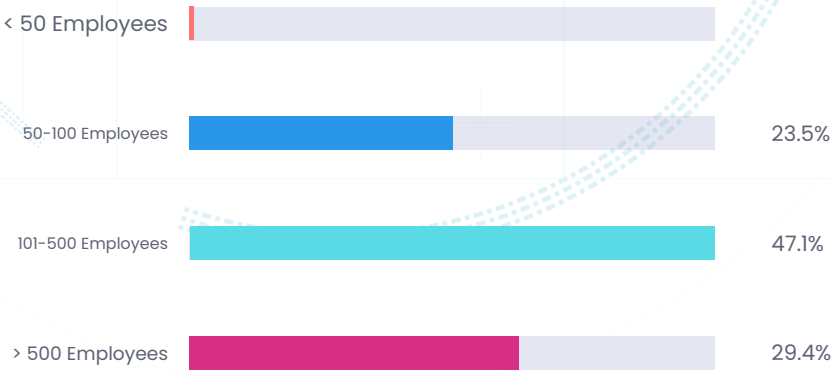
Approximately how long does it take to manually test your app before every release?



SUMMARY

Manual testing is time consuming. 35.3% of respondents indicated an average manual testing time period of 3-5 days with every release.

Company Size



SUMMARY

47.1% of survey respondents indicated that the company they worked for had more than 500 employees.

Company Revenue: Less than $1 Million

NEGATIVE SURPRISES

Code Complexity: The coding complexity of developing test scripts

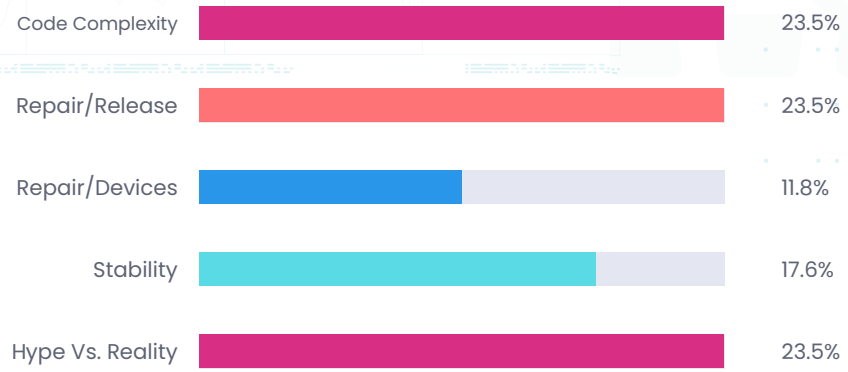
Repair/Release: The need to continually fix test scripts with every release

Repair/Devices: The need to continually fix test scripts to work across more devices

Stability: Having a stable test environment with predictable data

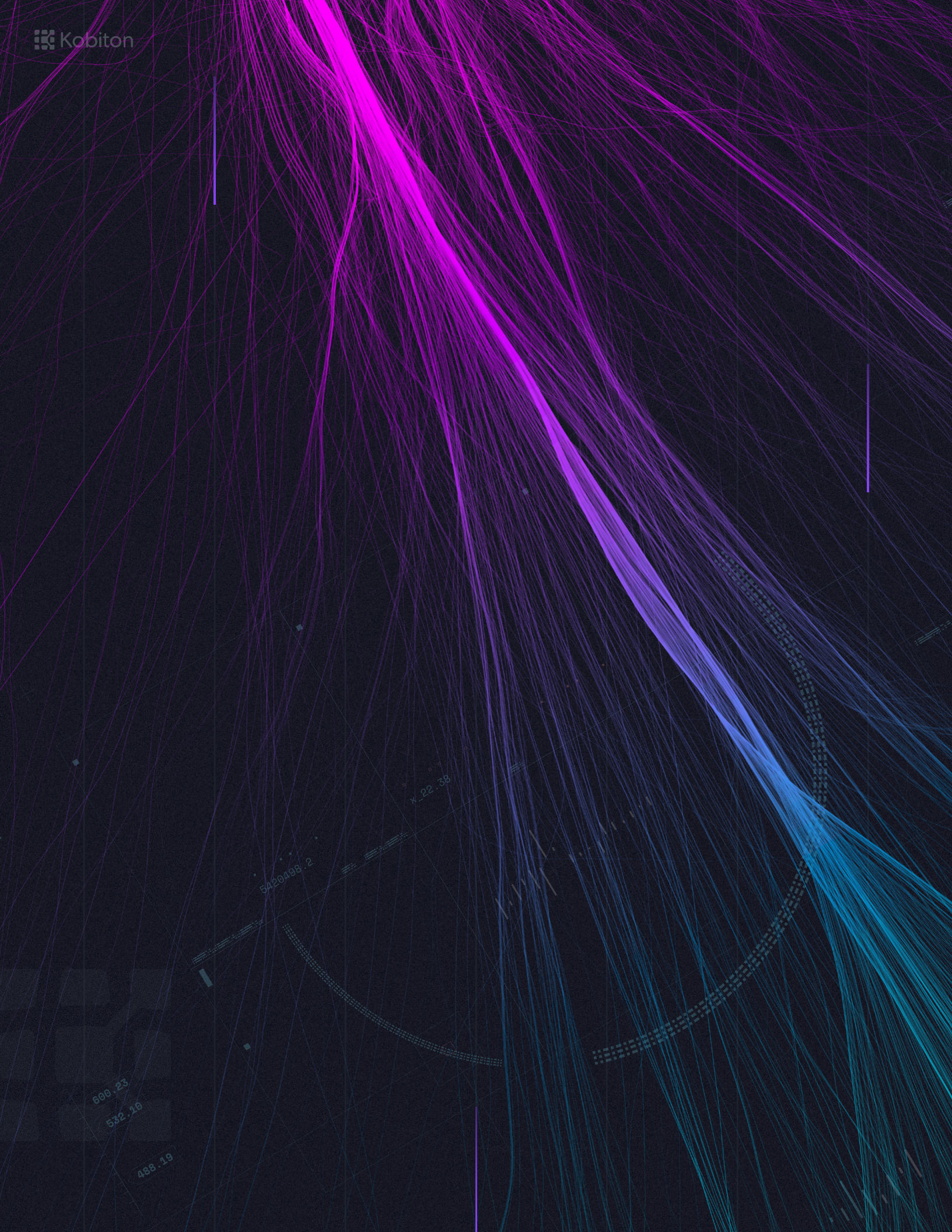
Hype vs. Reality: Vendor products not living up to their claims or hype

What was the biggest negative surprise you encountered as part of your test automation implementation?



SUMMARY

The biggest negative surprise encountered in test automation is a three way tie with code complexity, release fixes, and products not living up the the HYPE.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Kobiton

COMPANY REVENUE

$1-10 MILLION

Company Revenue

Responses reveal that company size, *as measured by annual revenue*, has a major impact on resource-driven initiatives such as QA headcount. However, some interesting differences emerge in other areas.

Companies under $1B in revenue are far more agile in their app releases and are generally more inclined to release weekly, despite having smaller QA teams. Ironically, the $1B+ organizations are overwhelmingly skewed toward monthly releases (43%) in lieu of weekly releases (10%) and are up to six times more likely to only support quarterly releases than their smaller revenue counterparts. This correlates with the majority of $1B+ organizations defining themselves as Mobile Strategic (*app is non-essential to company survival*), in contrast to the majority of sub $1B companies that self-identify as Mobile Critical (*app is essential to revenue*). It is clear that Mobile Strategic organizations, most notably in legacy industries, are not yet feeling the pain of disruption and the urgency to relentlessly pursue mobile.

All companies with significant revenue (*greater than $1M*) have embraced test automation as a key part of their testing and delivery process. 42% of all respondents claim to have mature automation capabilities; compared to 23% whose automation initiatives are nascent but delivering promising results. 14% hope to launch their automation efforts within the next six months, and only 8% have no plans for automation.

Companies of all sizes list the biggest struggle in automation as evaluating and selecting the right vendor, framework or technology. Interestingly, the second biggest pain point varies according to company size. Sub $100M companies say their second-biggest pain is trying to decide what to automate (*the approach*), while $100M+ companies point to acquiring/training skilled automation engineers as the second-highest pain. This contrast could be indicative of a greater trend where larger companies are not just looking for more people, but also want talent that can quickly integrate into their "coding" based approach to test automation; whereas many smaller companies are fine with utilizing scriptless automation technologies until their people develop coding capabilities.

All companies with revenues north of $10M automate 25-50% of their test cases. The largest $1B+ companies state that they'd like to achieve more than 75% automation, a goal far more lofty than their smaller counterparts. Ironically, these are the same companies that only release monthly or quarterly today.

MOBILE STRATEGIES

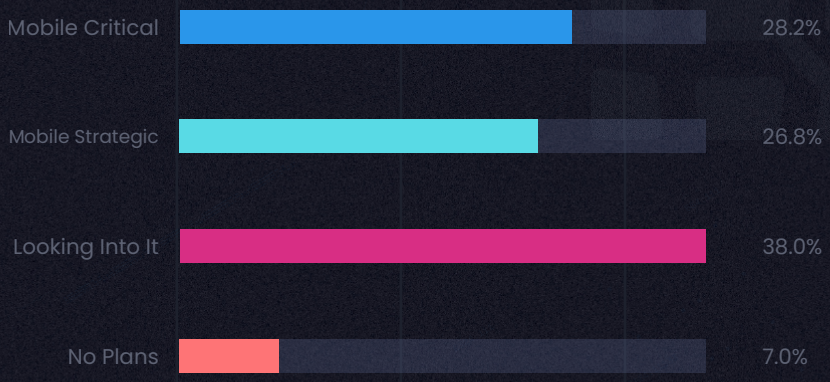
Mobile Critical: Our business model is centered around a mobile app

Mobile Strategic: Mobile is an important channel for our company, but we would survive without it

Looking Into It: Mobile is an initiative we're looking to pursue

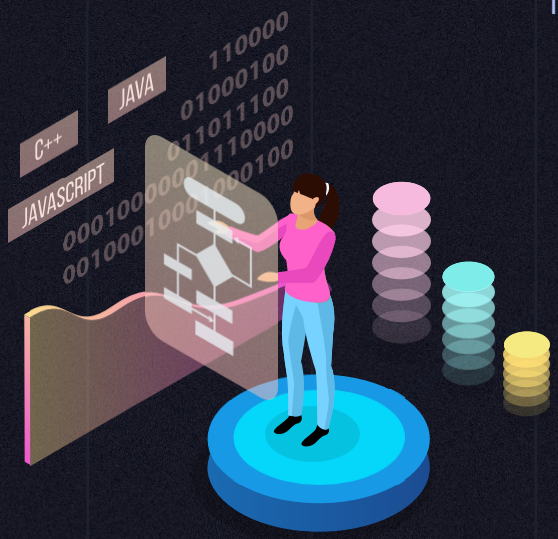
No Plans: We don't have a mobile app or any plans to implement one

Mobile Strategies

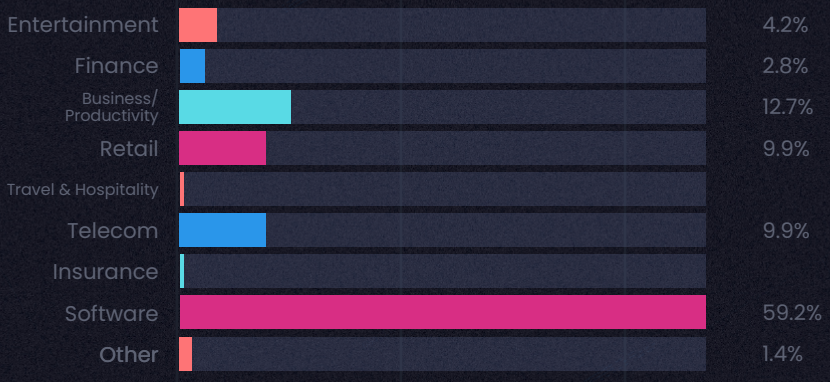


SUMMARY

The majority of respondents indicated that they are looking into mobile strategies. 38.0% of respondents said that their business was seeking to initiate mobile app development.



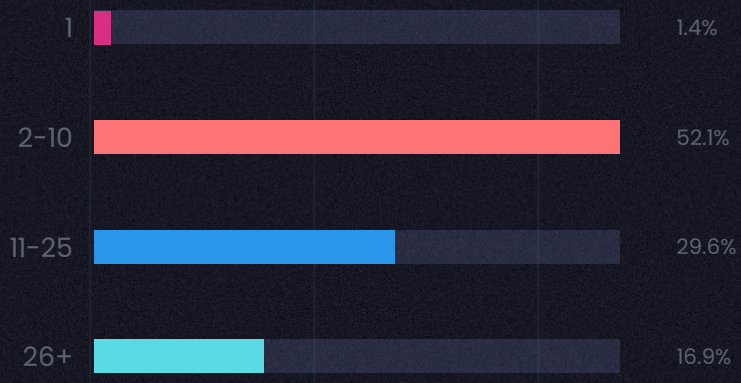
Industry/App Categories



SUMMARY

At 59.2%, the majority of responses collected in this survey were from software companies. The survey received the fewest responses from companies in the Travel and Hospitality vertical.

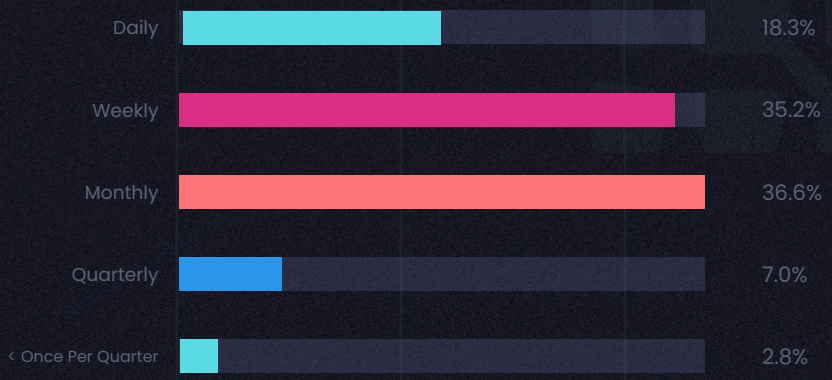
How many testers are on your team?



SUMMARY

Most of the companies surveyed have test teams of 2-10people. Only 1.4% of respondents had 1 tester, while 16.9% had teams of more than 26 people.

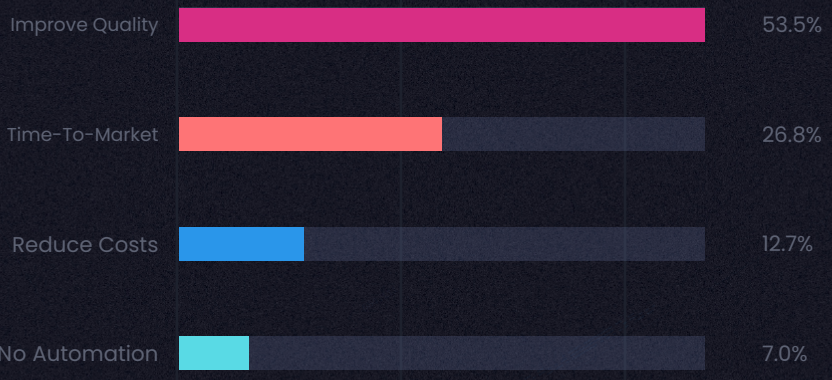
How often do you release app updates?



SUMMARY

Respondents indicated a preference for semi-frequent updates, with most responses indicating app update releases on a weekly or monthly schedule.

What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

The majority of respondents indicated that a desire to improve overall app quality was the primary strategic driver in choosing to pursue test automation.

TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

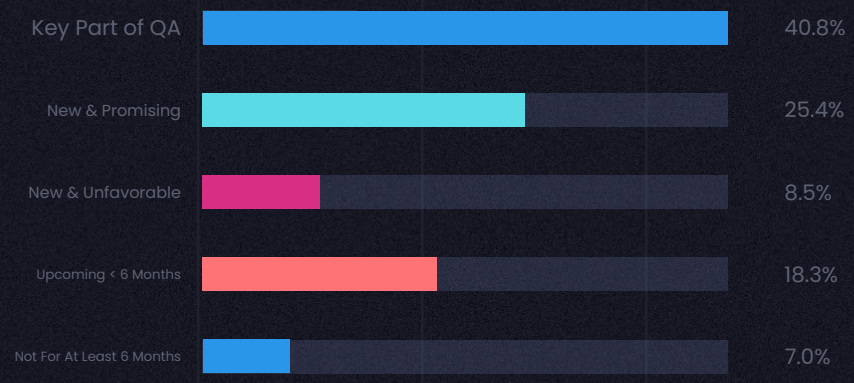
New and Promising: Our automation initiatives are relatively new and promising

New and Unfavorable: Our automation initiatives are relatively new and the results are not what we hoped for

Upcoming <6 months: Automation is an initiative we hope to start within the next 6 months

Not for at least 6 months: Automation will not happen within 6 months

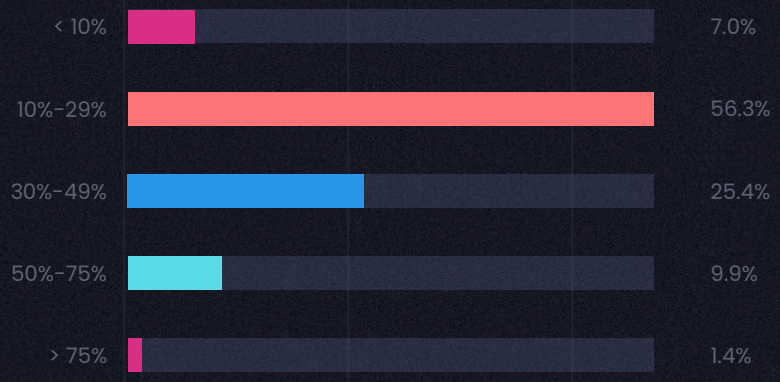
Where would you rate your current test automation maturity?



SUMMARY

40.8% of respondents indicated that test automation was a key part of their quality assurance process.

Based on the overall quality assurance budget in your organization, what percentage is spent on test automation when factoring in employees, tools, and other resources?



SUMMARY

Most respondents indicated that their companies allocate between 10 and 29% of their overall QA budget to test automation related expenditures.

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

Budget: Convincing the organization of the need to invest in automation

What is your biggest struggle/pain point with using or starting test automation today?

SUMMARY

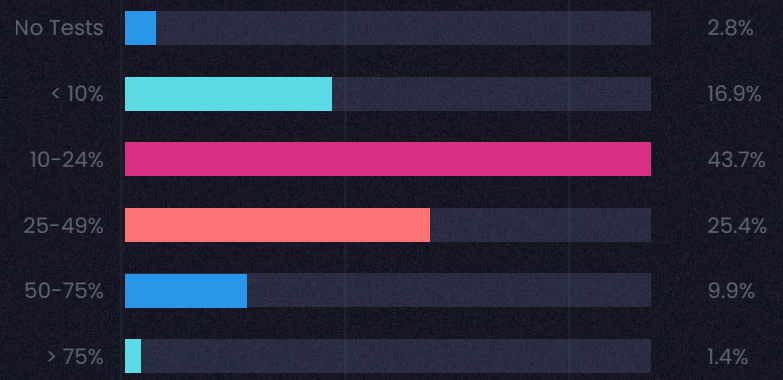
The survey respondents indicated that the largest barrier to entry for test automation is finding the right tools.

Test automation framework usage

SUMMARY

Responses indicate that Selenium is the preferred automation framework.

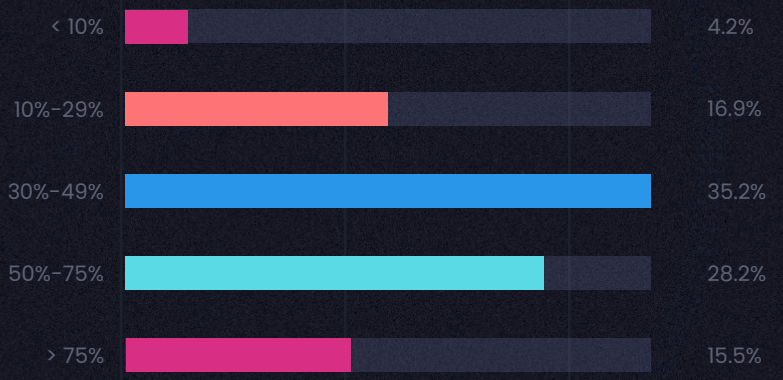
What percentage of your test cases are automated?



SUMMARY

97.2% of respondents indicated that they are performing some test automation. 43.7% of respondents specified that 10-24% of their test cases are automated.

What percentage of test cases would you like to have automated?



SUMMARY

Most respondents clearly see the value of test automation, with a noteworthy 35.2% seeking to automate 30-49% of their test cases. Comparing this graph with the one above shows a clear trend toward desired increases in test automation.

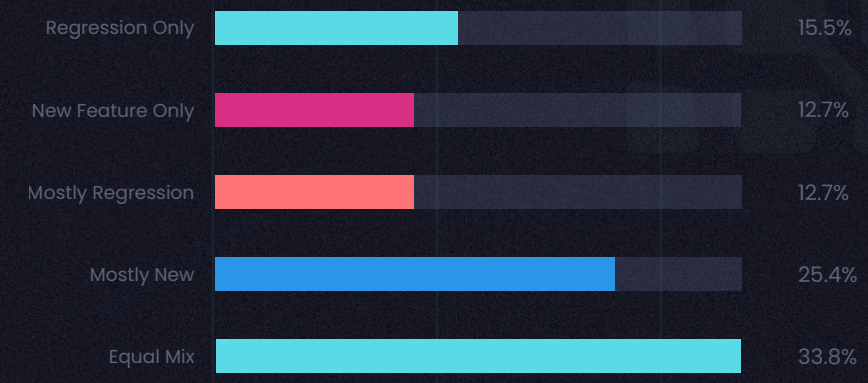
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

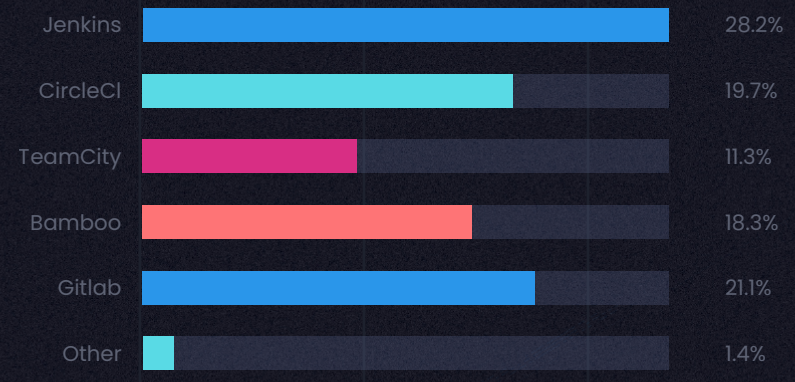
What are you using test automation primarily for?



SUMMARY

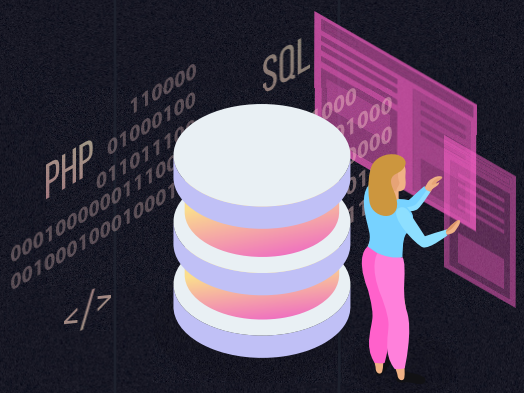
Most respondents are using test automation to verify the functionality of an equal mix in new and existing app features.

Which CI/CD tools does your organization use?



SUMMARY

Jenkins was listed as the preferred CI/CD tool amongst respondents with 28.2% indicating its use. At 21.1% Gitlab is the second most frequently used.

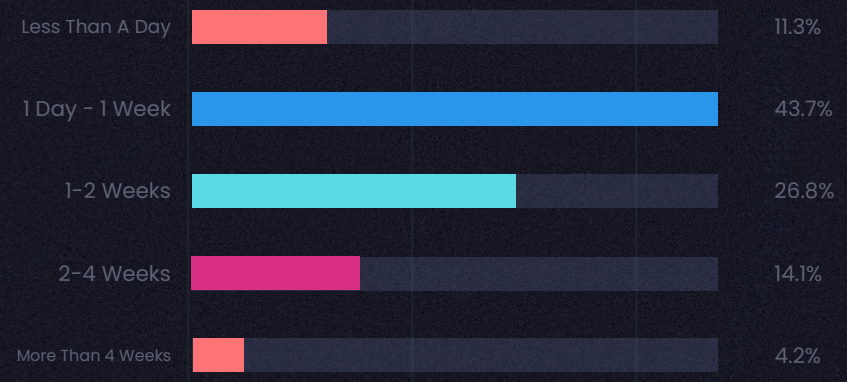


Which of the following metrics best indicates successful test automation implementation?

SUMMARY

Respondents indicated a preference for quantifying test automation success by measuring number of bugs found.

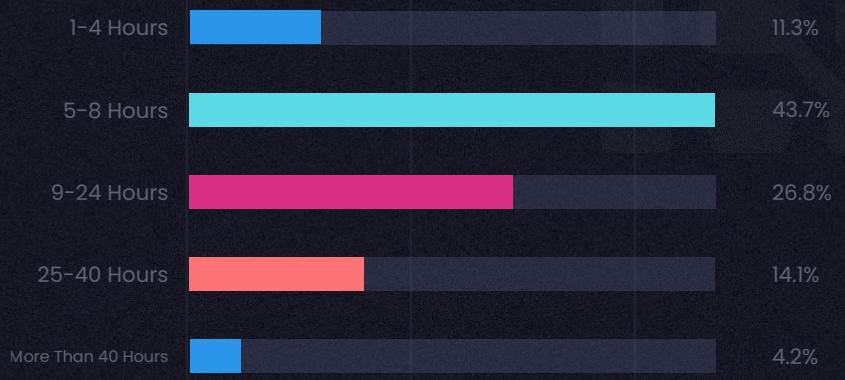
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts within 1 Day - 1 Week.

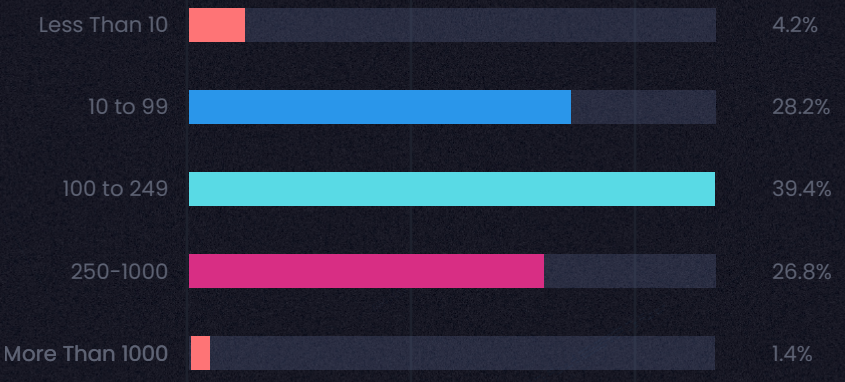
On average, how long does it take to code a test case using the framework of your choice?



SUMMARY

Survey respondents indicated that their test cases are typically coded within a 5-8 hour span.

Approximately how many manual test cases are you executing with each app release?



SUMMARY

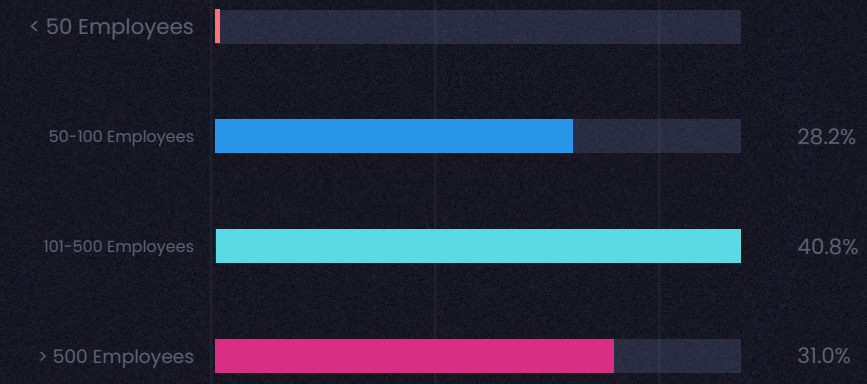
There's plenty of room for automation. 39.4% of respondents indicated that test teams perform 100-249 manual test cases with each app release.

Approximately how long does it take to manually test your app before every release?

SUMMARY

Manual testing is time consuming. 33.8% of respondents indicated an average manual testing time period of 3-5 days with every release.

Company Size



SUMMARY

40.8% of survey respondents indicated that the company they worked for had 100-500 employees.

NEGATIVE SURPRISES

Code Complexity: The coding complexity of developing test scripts

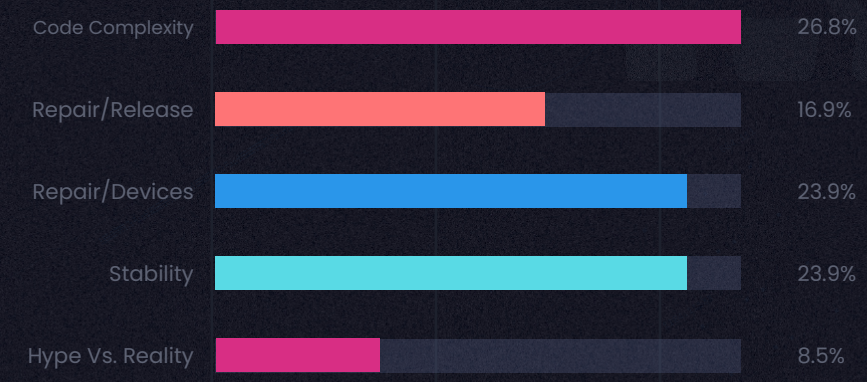
Repair/Release: The need to continually fix test scripts with every release

Repair/Devices: The need to continually fix test scripts to work across more devices

Stability: Having a stable test environment with predictable data

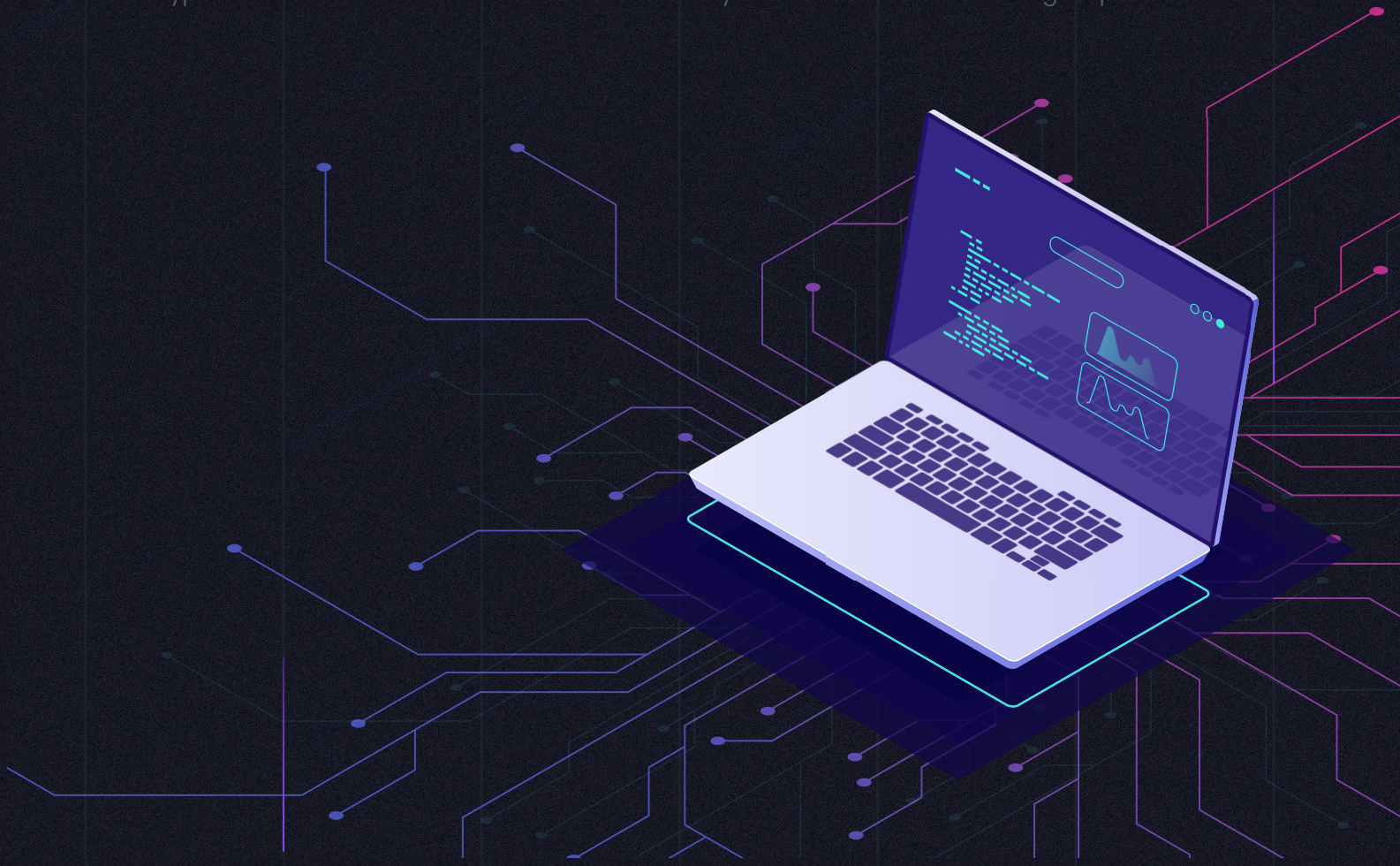
Hype vs. Reality: Vendor products not living up to their claims or hype

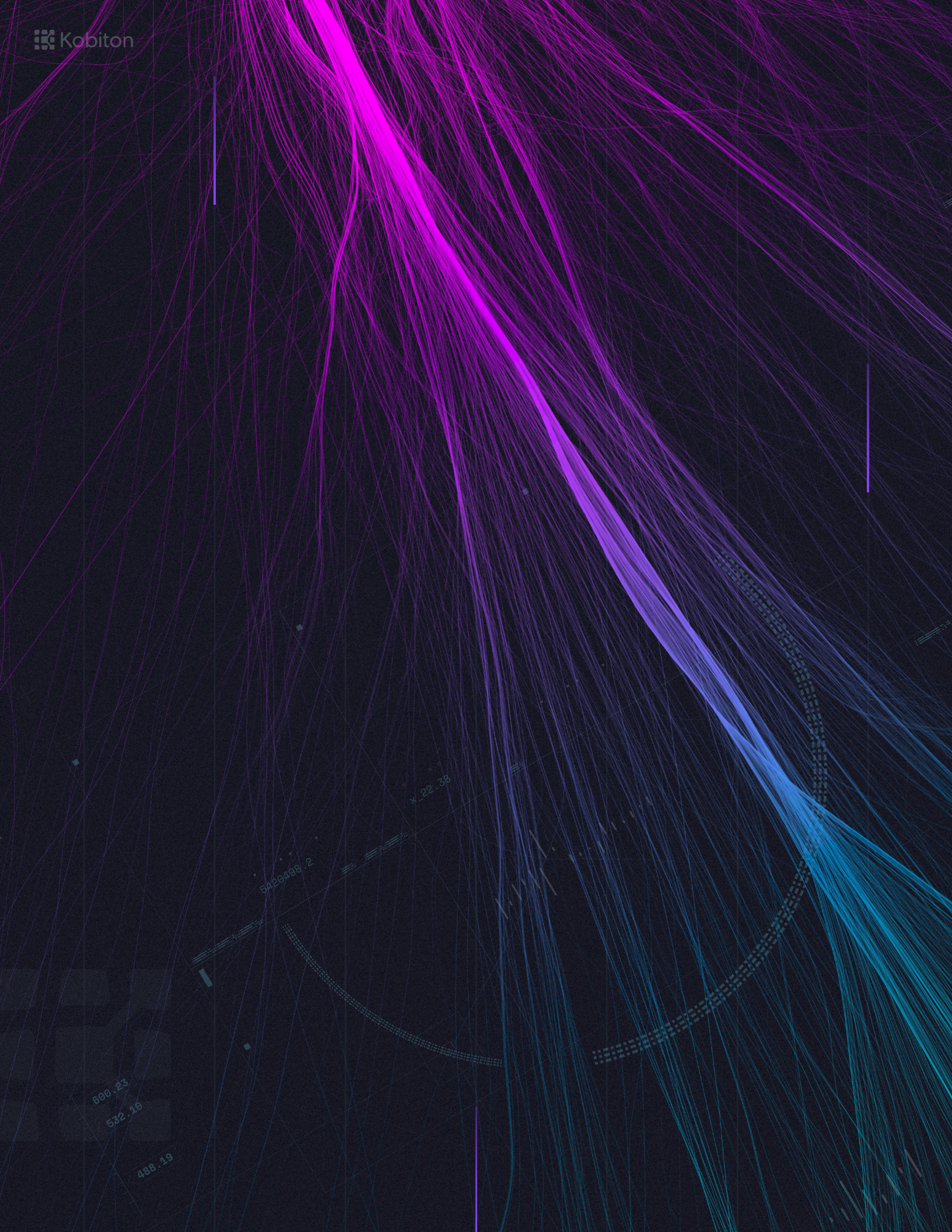
What was the biggest negative surprise you encountered as part of your test automation implementation?



SUMMARY

Code complexity is the main issue encountered in test automation implementation. Repairing test scripts to work across more devices and stability are tied for the second largest problem.

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x_22.38
5420498.2
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Kobiton

COMPANY REVENUE

$10–100 MILLION

Company Revenue

Responses reveal that company size, *as measured by annual revenue*, has a major impact on resource-driven initiatives such as QA headcount. However, some interesting differences emerge in other areas.

Companies under $1B in revenue are far more agile in their app releases and are generally more inclined to release weekly, despite having smaller QA teams. Ironically, the $1B+ organizations are overwhelmingly skewed toward monthly releases (43%) in lieu of weekly releases (10%) and are up to six times more likely to only support quarterly releases than their smaller revenue counterparts. This correlates with the majority of $1B+ organizations defining themselves as Mobile Strategic (*app is non-essential to company survival*), in contrast to the majority of sub $1B companies that self-identify as Mobile Critical (*app is essential to revenue*). It is clear that Mobile Strategic organizations, most notably in legacy industries, are not yet feeling the pain of disruption and the urgency to relentlessly pursue mobile.

All companies with significant revenue (*greater than $1M*) have embraced test automation as a key part of their testing and delivery process. 42% of all respondents claim to have mature automation capabilities; compared to 23% whose automation initiatives are nascent but delivering promising results. 14% hope to launch their automation efforts within the next six months, and only 8% have no plans for automation.

Companies of all sizes list the biggest struggle in automation as evaluating and selecting the right vendor, framework or technology. Interestingly, the second biggest pain point varies according to company size. Sub $100M companies say their second-biggest pain is trying to decide what to automate (*the approach*), while $100M+ companies point to acquiring/training skilled automation engineers as the second-highest pain. This contrast could be indicative of a greater trend where larger companies are not just looking for more people, but also want talent that can quickly integrate into their "coding" based approach to test automation; whereas many smaller companies are fine with utilizing scriptless automation technologies until their people develop coding capabilities.

All companies with revenues north of $10M automate 25-50% of their test cases. The largest $1B+ companies state that they'd like to achieve more than 75% automation, a goal far more lofty than their smaller counterparts. Ironically, these are the same companies that only release monthly or quarterly today.

MOBILE STRATEGIES

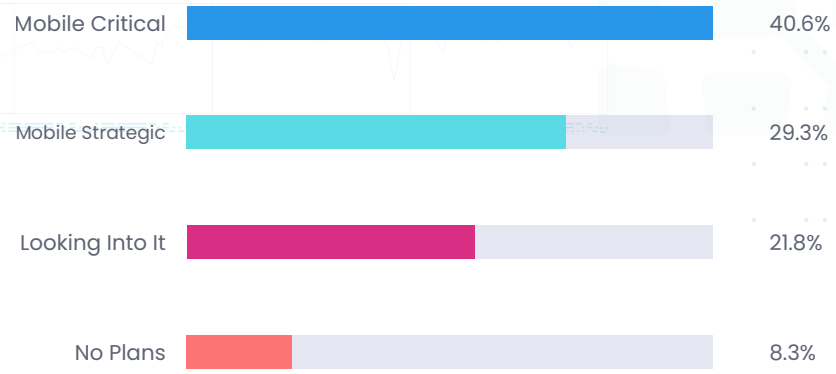
Mobile Critical: Our business model is centered around a mobile app

Mobile Strategic: Mobile is an important channel for our company, but we would survive without it

Looking Into It: Mobile is an initiative we're looking to pursue

No Plans: We don't have a mobile app or any plans to implement one

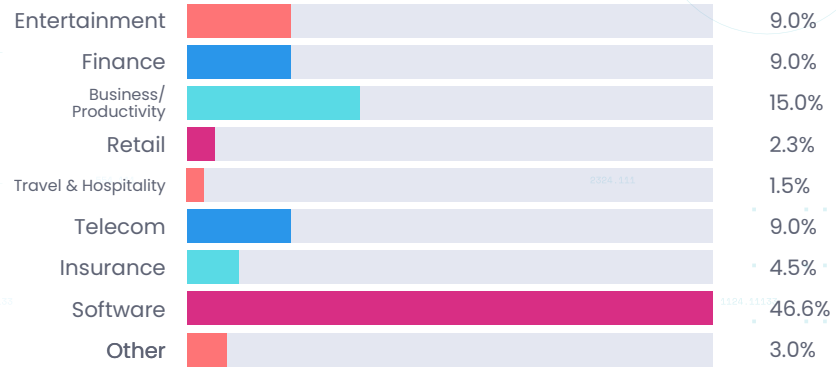
Mobile Strategies



SUMMARY

The majority of respondents indicated that mobile was an important component in their business model. 40.6% of respondents said that their business was centered around a mobile app.

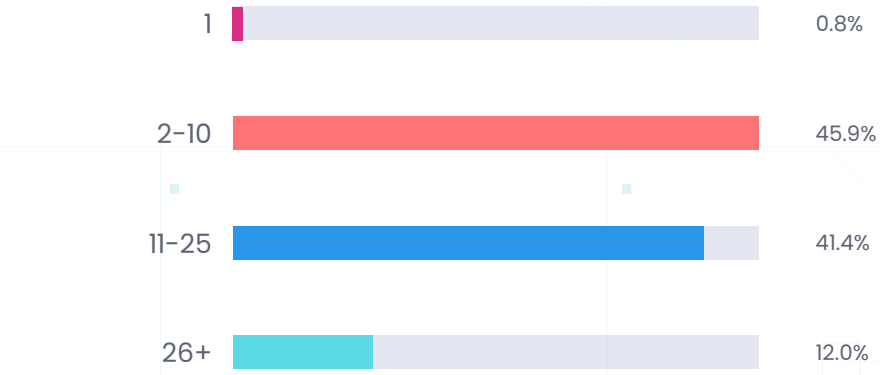
Industry/App Categories



SUMMARY

At 46.6%, the majority of responses collected in this survey were from software companies. The survey received the fewest responses from companies in the Travel and Hospitality vertical.

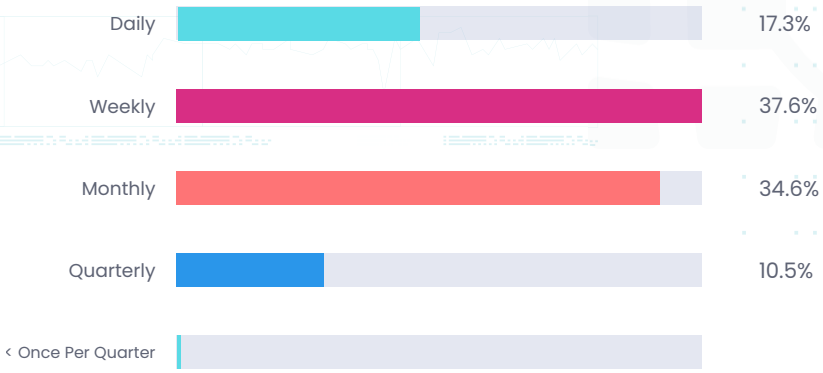
How many testers are on your team?



SUMMARY

Most of the companies surveyed have test teams of 2-25 people. Only 0.8% of respondents had 1 tester, while 12% had teams of more than 26 people.

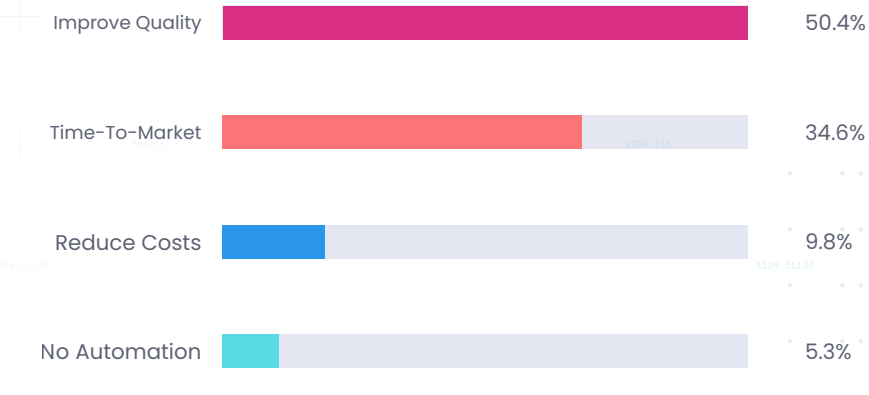
How often do you release app updates?



SUMMARY

Respondents indicated a preference for semi-frequent updates, with most responses indicating app update releases on a weekly or monthly schedule.

What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

The majority of respondents indicated that a desire to improve overall app quality was the primary strategic driver in choosing to pursue test automation.

TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

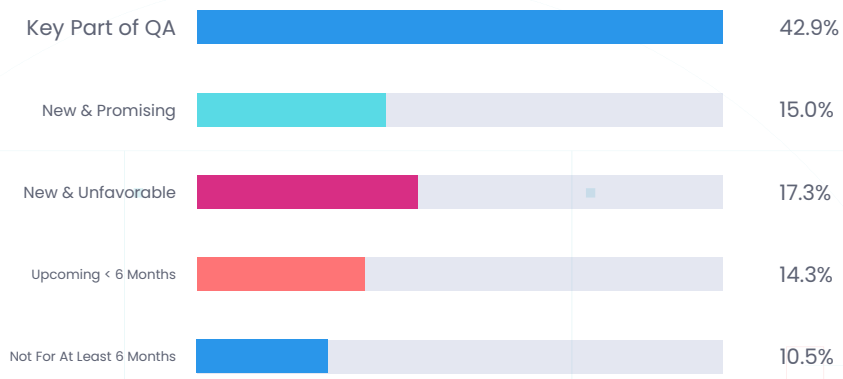
New and Promising: Our automation initiatives are relatively new and promising

New and Unfavorable: Our automation initiatives are relatively new and the results are not what we hoped for

Upcoming <6 months: Automation is an initiative we hope to start within the next 6 months

Not for at least 6 months: Automation will not happen within 6 months

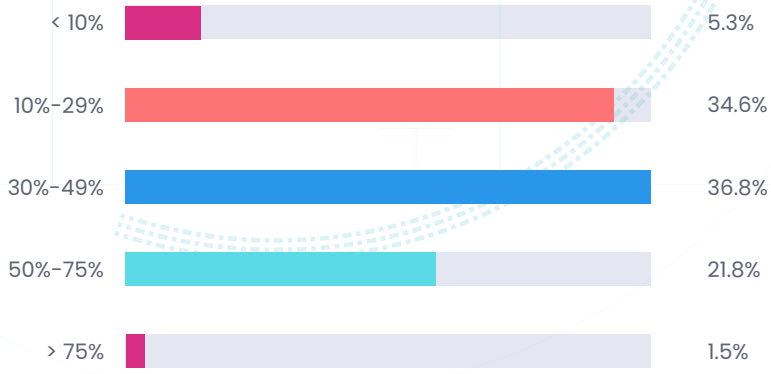
Where would you rate your current test automation maturity?



SUMMARY

42.9% of respondents indicated that test automation was a key part of their quality assurance process.

Based on the overall quality assurance budget in your organization, what percentage is spent on test automation when factoring in employees, tools, and other resources?



SUMMARY

Most respondents indicated that their companies allocate between 10 and 49% of their overall QA budget to test automation related expenditures.

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

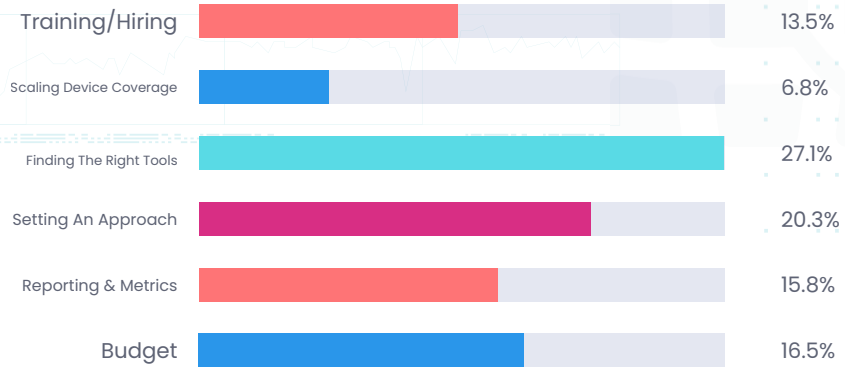
Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

Budget: Convincing the organization of the need to invest in automation

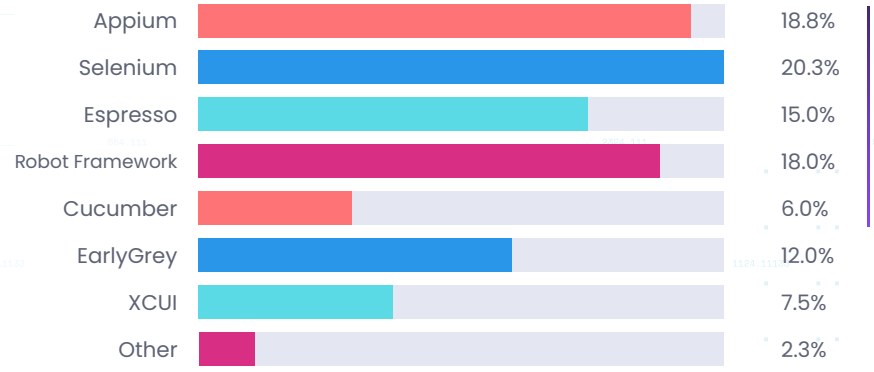
What is your biggest struggle/pain point with using or starting test automation today?



SUMMARY

The survey respondents indicated that the largest barrier to entry for test automation is finding the right tools.

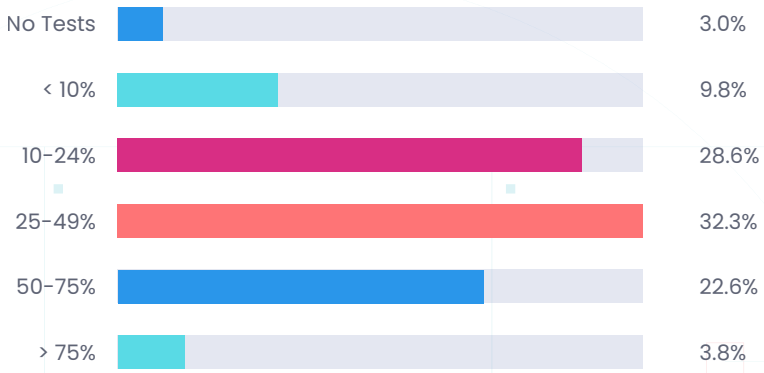
Test automation framework usage



SUMMARY

Responses indicate that Selenium is the preferred automation framework.

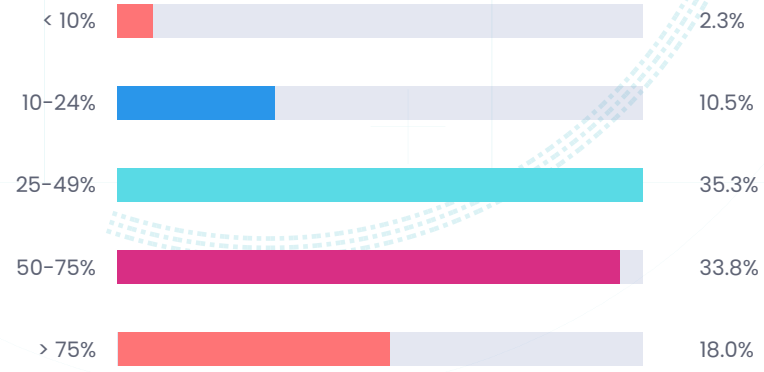
What percentage of your test cases are automated?



SUMMARY

97% of respondents indicated that they are performing some test automation. 32.3% of respondents specified that 25-49% of their test cases are automated.

What percentage of test cases would you like to have automated?



SUMMARY

Most respondents clearly see the value of test automation, with a noteworthy 69.1% seeking to automate 25-75% of their test cases. Comparing this graph with the one above shows a clear trend toward desired increases in test automation.

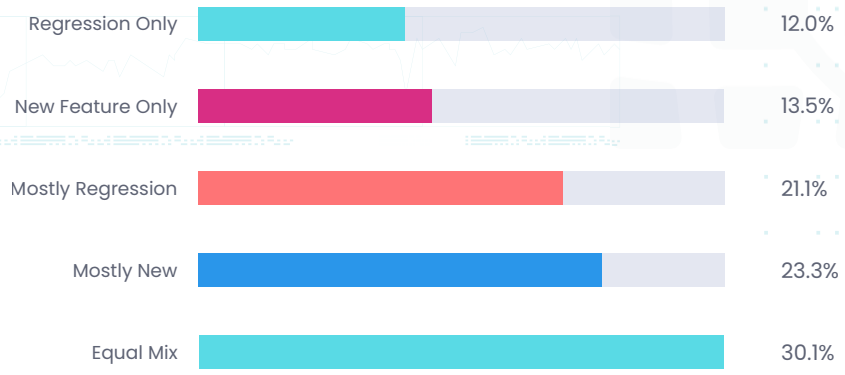
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

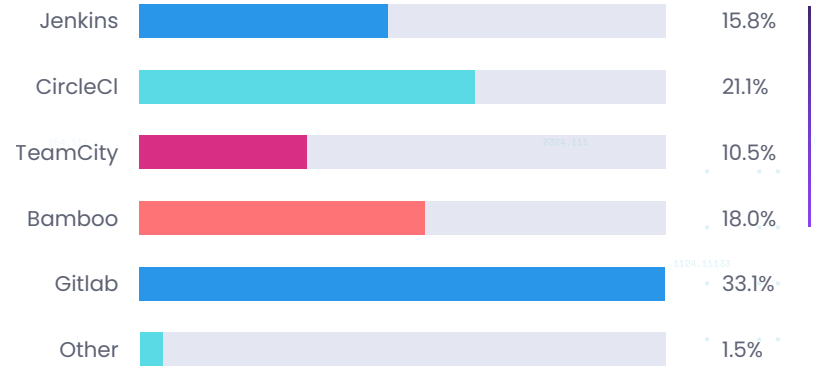
What are you using test automation primarily for?



SUMMARY

Most respondents are using test automation to verify the functionality of an equal mix in new and existing app features.

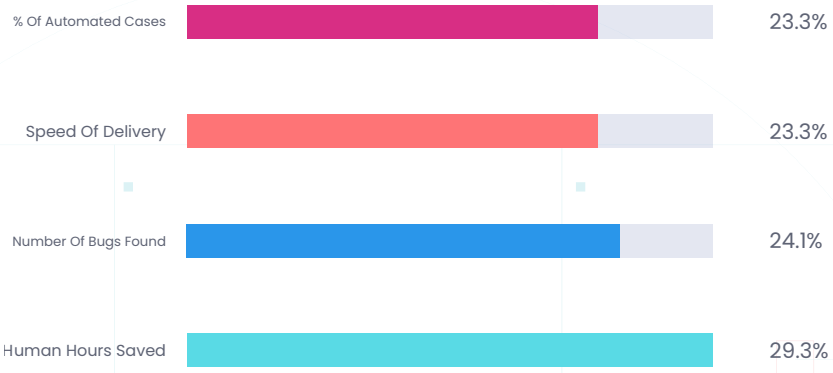
Which CI/CD tools does your organization use?



SUMMARY

Gitlab was listed as the preferred CI/CD tool amongst respondents with 33.1% indicating its use. At 21.1% CircleCI is the second most frequently used.

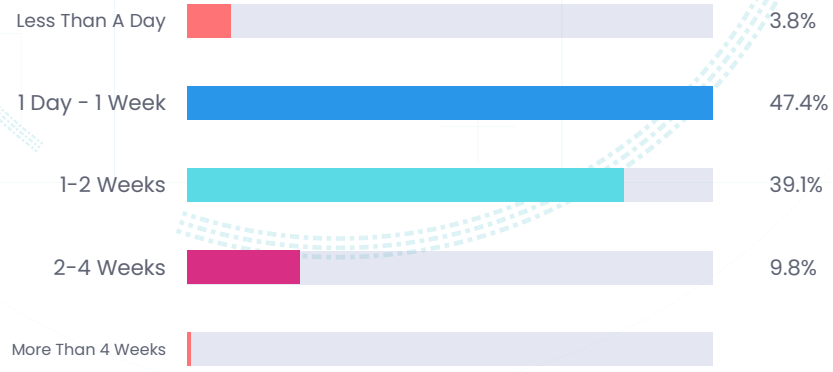
Which of the following metrics best indicates successful test automation implementation?



SUMMARY

Respondents indicated a preference for quantifying test automation success by measuring amount of hours saved.

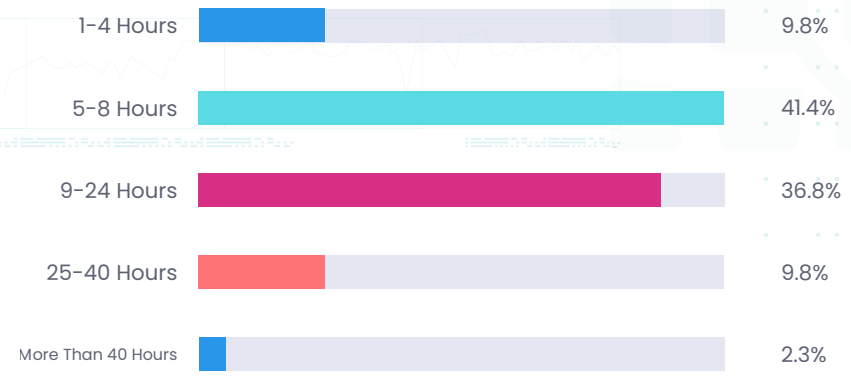
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts within 1 Day - 1 Week.

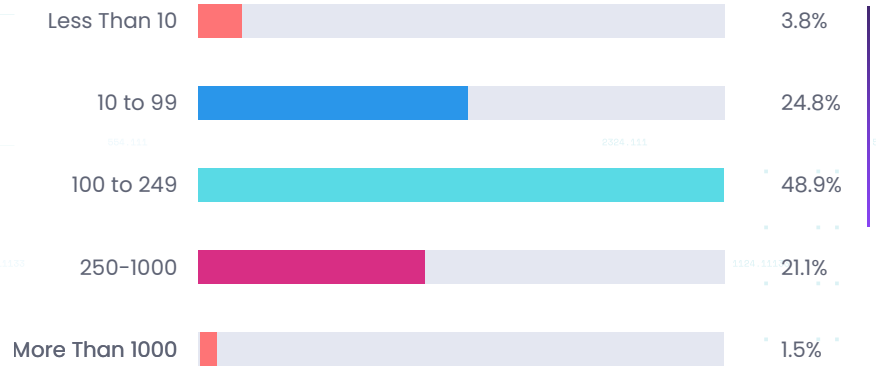
On average, how long does it take to code a test case using the framework of your choice?



SUMMARY

Survey respondents indicated that their test cases are typically coded within a 5-8 hour span.

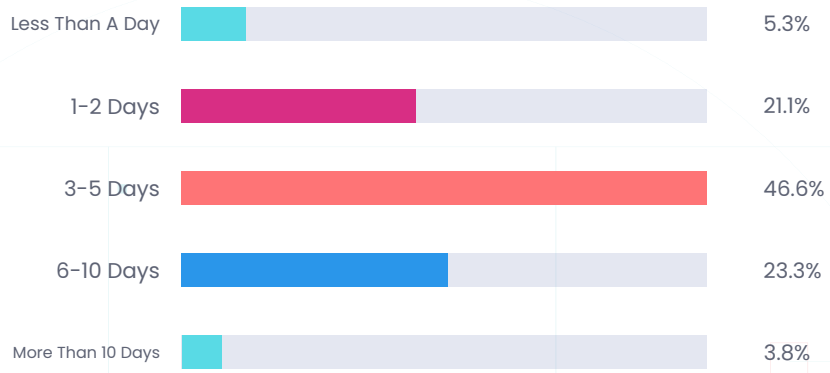
Approximately how many manual test cases are you executing with each app release?



SUMMARY

There's plenty of room for automation. 48.9% of respondents indicated that test teams perform 100-249 manual test cases with each app release.

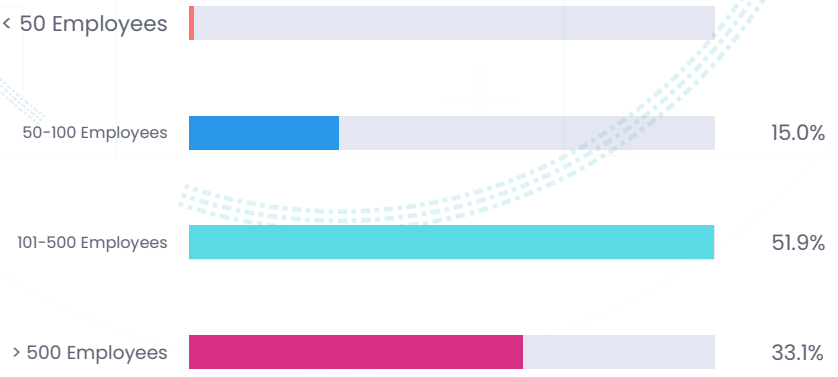
Approximately how long does it take to manually test your app before every release?



SUMMARY

Manual testing is time consuming. 46.6% of respondents indicated an average manual testing time period of 3-5 days with every release.

Company Size



SUMMARY

51.9% of survey respondents indicated that the company they worked for had 101-500 employees.

NEGATIVE SURPRISES

Code Complexity: The coding complexity of developing test scripts

Repair/Release: The need to continually fix test scripts with every release

Repair/Devices: The need to continually fix test scripts to work across more devices

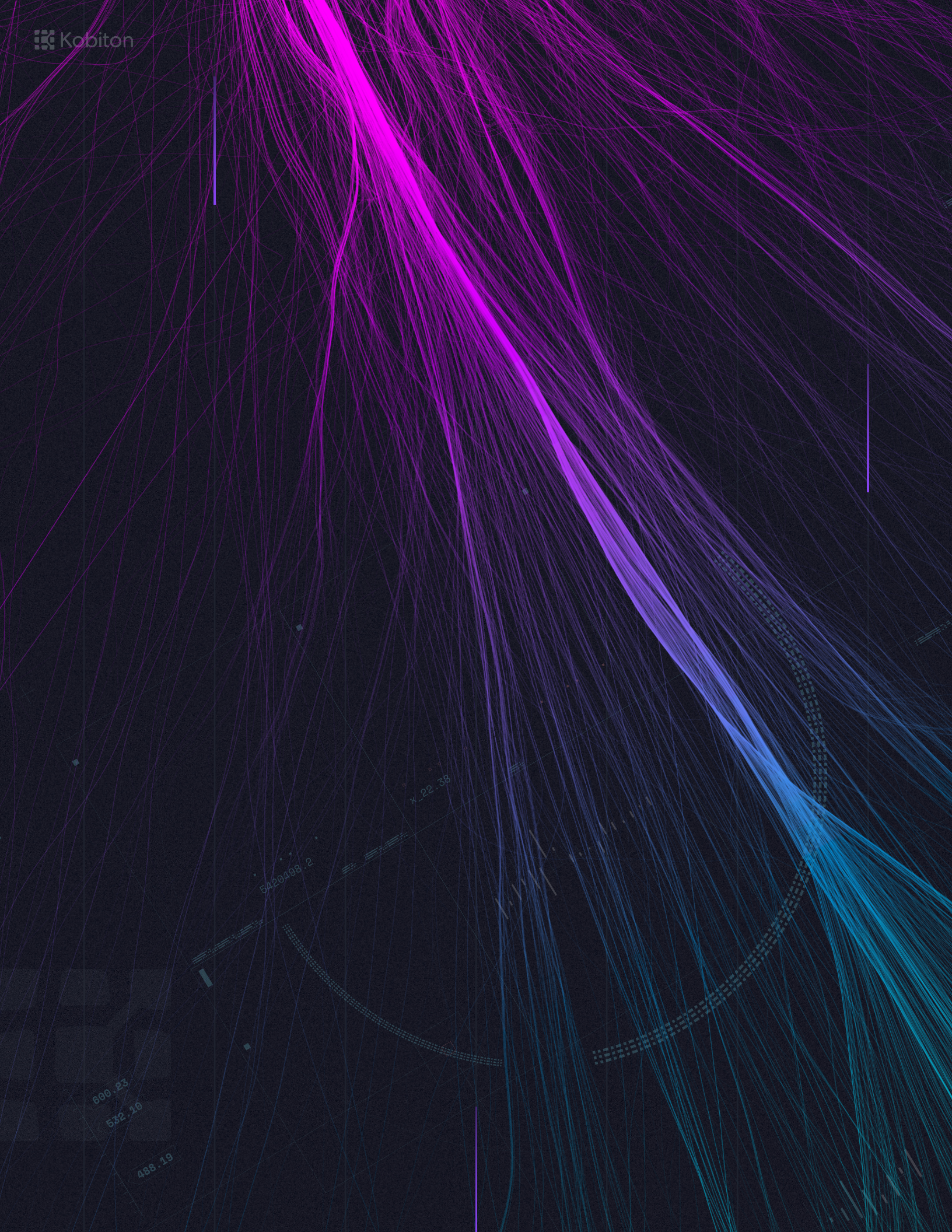
Stability: Having a stable test environment with predictable data

Hype vs. Reality: Vendor products not living up to their claims or hype

What was the biggest negative surprise you encountered as part of your test automation implementation?

SUMMARY

Code complexity is the main issue encountered by most respondents in test automation implementation. The second largest gripe with implementing a test automation strategy is stability.


Kobiton
x_22.38
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532.10
488.19

Kobiton

COMPANY REVENUE

$101 MILLION - $1 BILLION

Company Revenue

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Companies under $1B in revenue are far more agile in their app releases and are generally more inclined to release weekly, despite having smaller QA teams. Ironically, the $1B+ organizations are overwhelmingly skewed toward monthly releases (43%) in lieu of weekly releases (10%) and are up to six times more likely to only support quarterly releases than their smaller revenue counterparts. This correlates with the majority of $1B+ organizations defining themselves as Mobile Strategic (*app is non-essential to company survival*), in contrast to the majority of sub $1B companies that self-identify as Mobile Critical (*app is essential to revenue*). It is clear that Mobile Strategic organizations, most notably in legacy industries, are not yet feeling the pain of disruption and the urgency to relentlessly pursue mobile.

All companies with significant revenue (*greater than $1M*) have embraced test automation as a key part of their testing and delivery process. 42% of all respondents claim to have mature automation capabilities; compared to 23% whose automation initiatives are nascent but delivering promising results. 14% hope to launch their automation efforts within the next six months, and only 8% have no plans for automation.

Companies of all sizes list the biggest struggle in automation as evaluating and selecting the right vendor, framework or technology. Interestingly, the second biggest pain point varies according to company size. Sub $100M companies say their second-biggest pain is trying to decide what to automate (*the approach*), while $100M+ companies point to acquiring/training skilled automation engineers as the second-highest pain. This contrast could be indicative of a greater trend where larger companies are not just looking for more people, but also want talent that can quickly integrate into their "coding" based approach to test automation; whereas many smaller companies are fine with utilizing scriptless automation technologies until their people develop coding capabilities.

All companies with revenues north of $10M automate 25-50% of their test cases. The largest $1B+ companies state that they'd like to achieve more than 75% automation, a goal far more lofty than their smaller counterparts. Ironically, these are the same companies that only release monthly or quarterly today.

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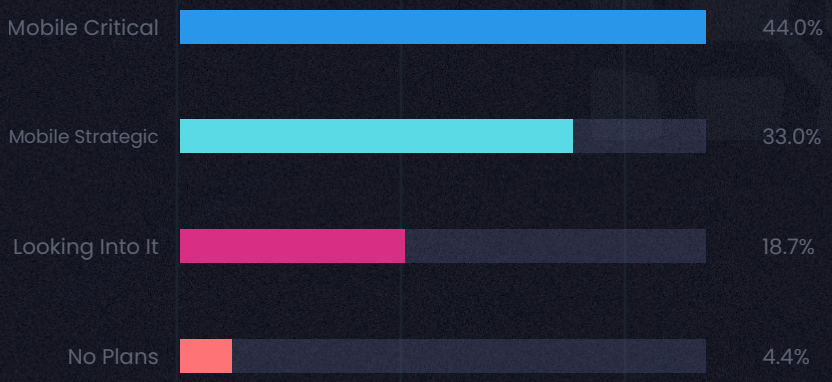
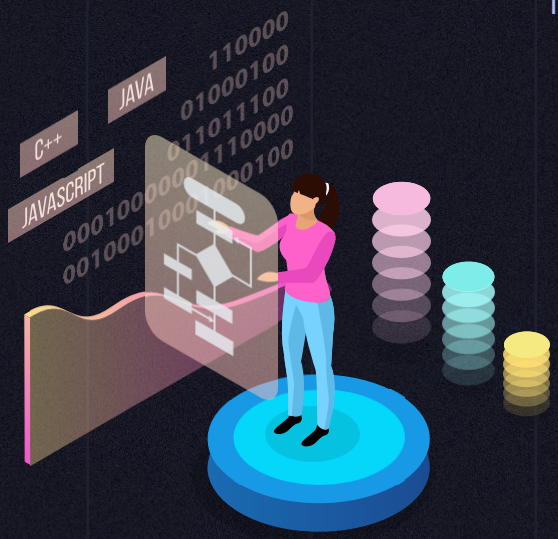
Mobile Strategies

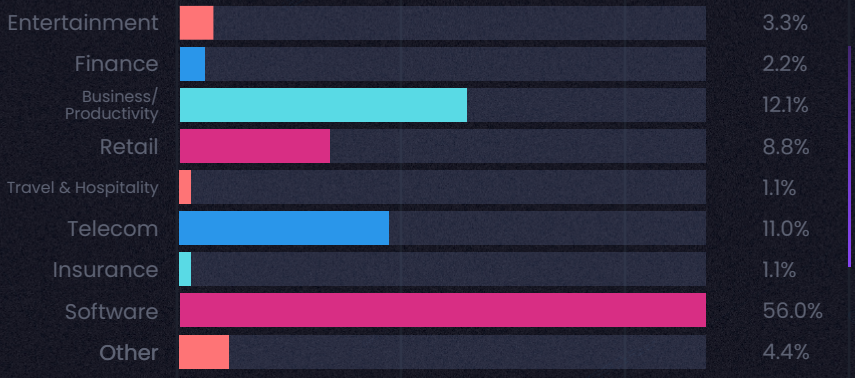


SUMMARY

The majority of respondents indicated that mobile was an important component in their business model. 44% of respondents said that their business was centered around a mobile app.



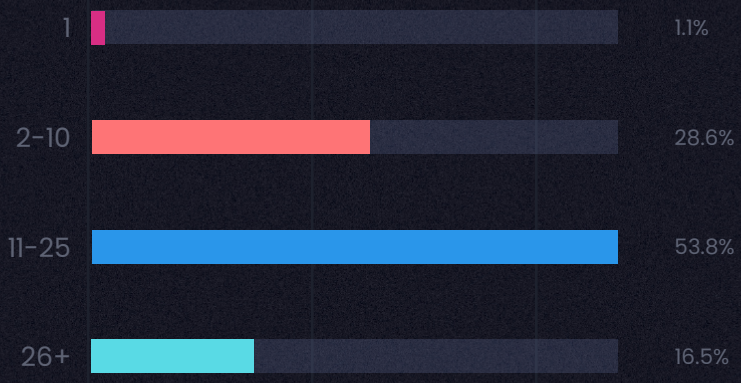
Industry/App Categories



SUMMARY

At 56%, the majority of responses collected in this survey were from software companies. The survey received the fewest responses from companies in the Travel and Hospitality vertical.

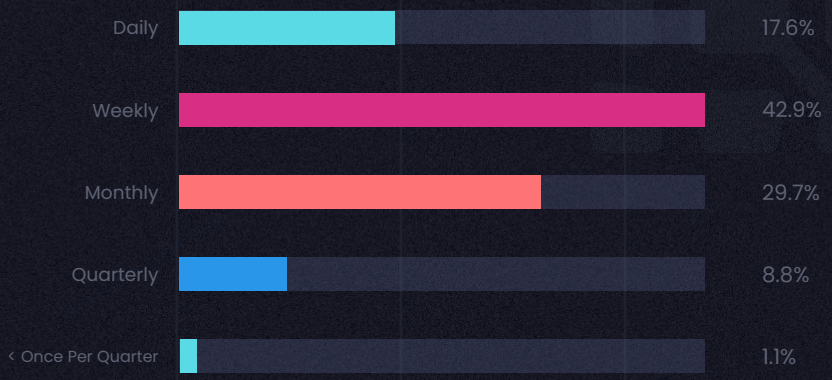
How many testers are on your team?



SUMMARY

Most of the companies surveyed have test teams of 11-25 people. Only 1.1% of respondents had 1 tester, while 16.5% had teams of more than 26 people.

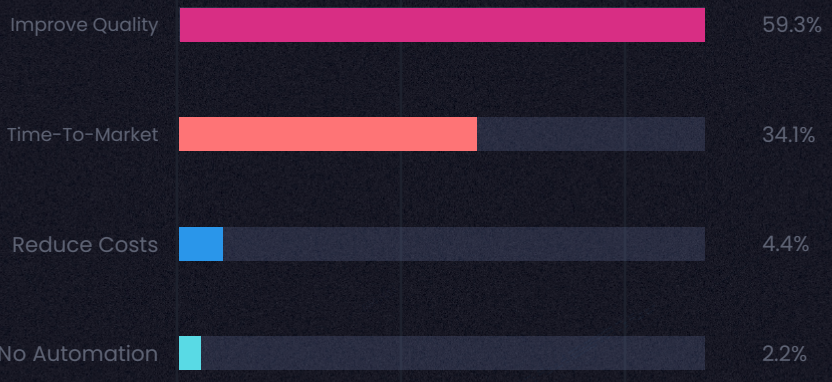
How often do you release app updates?



SUMMARY

Respondents indicated a preference for semi-frequent updates, with most responses indicating app update releases on a weekly or monthly schedule.

What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

The majority of respondents indicated that a desire to improve overall app quality was the primary strategic driver in choosing to pursue test automation.

TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

New and Promising: Our automation initiatives are relatively new and promising

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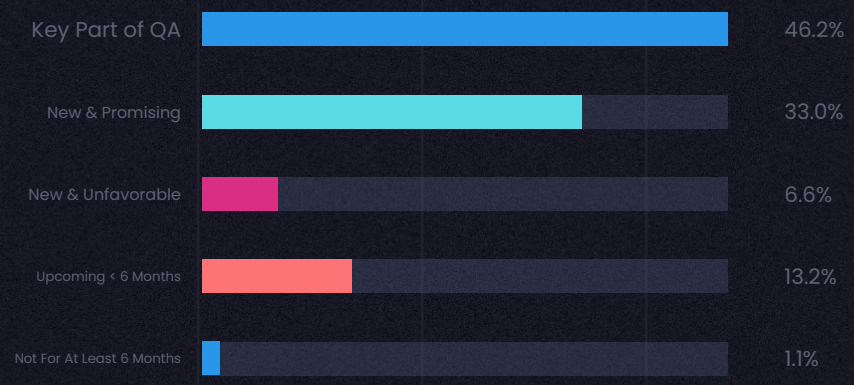
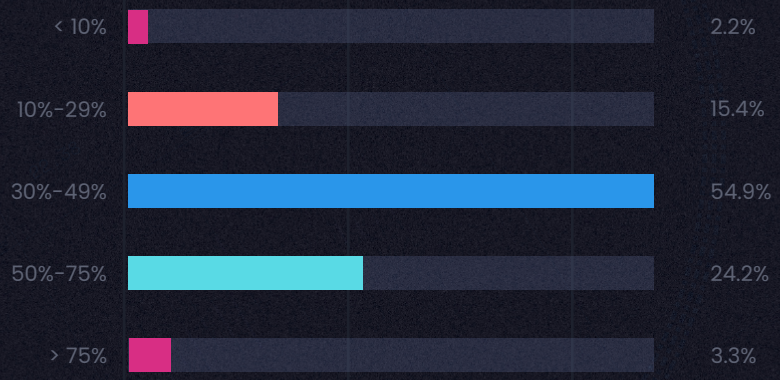
Where would you rate your current test automation maturity?



SUMMARY

46.2% of respondents indicated that test automation was a key part of their quality assurance process.

Based on the overall quality assurance budget in your organization, what percentage is spent on test automation when factoring in employees, tools, and other resources?



SUMMARY

Most respondents indicated that their companies allocate between 30 and 49% of their overall QA budget to test automation related expenditures.

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

Budget: Convincing the organization of the need to invest in automation

What is your biggest struggle/pain point with using or starting test automation today?

SUMMARY

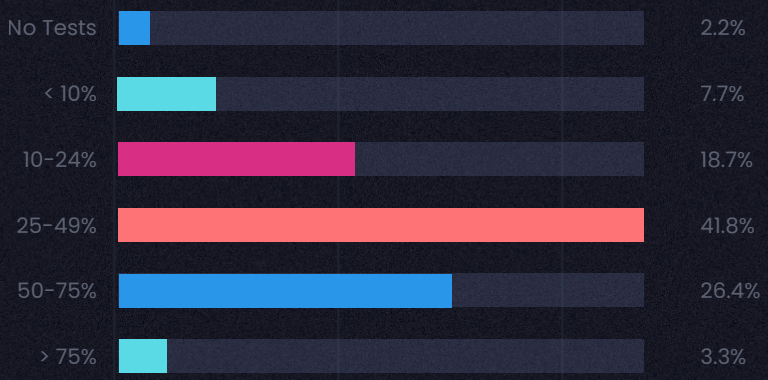
The survey respondents indicated that the largest barrier to entry for test automation is finding the right tools.

Test automation framework usage

SUMMARY

Responses indicate that Robot Framework is the preferred automation framework.

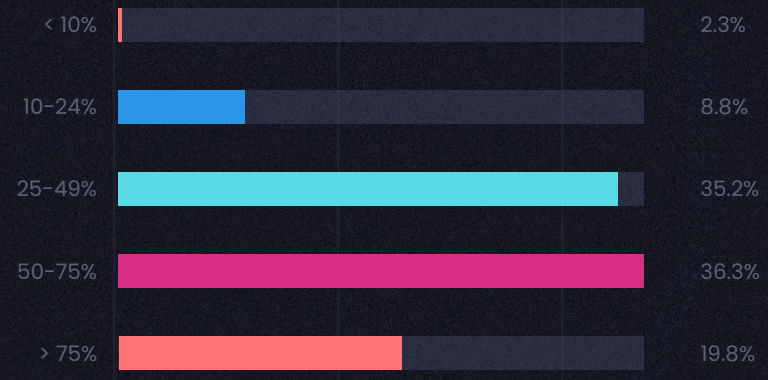
What percentage of your test cases are automated?



SUMMARY

97.8% of respondents indicated that they are performing some test automation. 41.8% of respondents specified that 25-49% of their test cases are automated.

What percentage of test cases would you like to have automated?



SUMMARY

Most respondents clearly see the value of test automation, with a noteworthy 36.3% seeking to automate 50-75% of their test cases. Comparing this graph with the one above shows a clear trend toward desired increases in test automation.

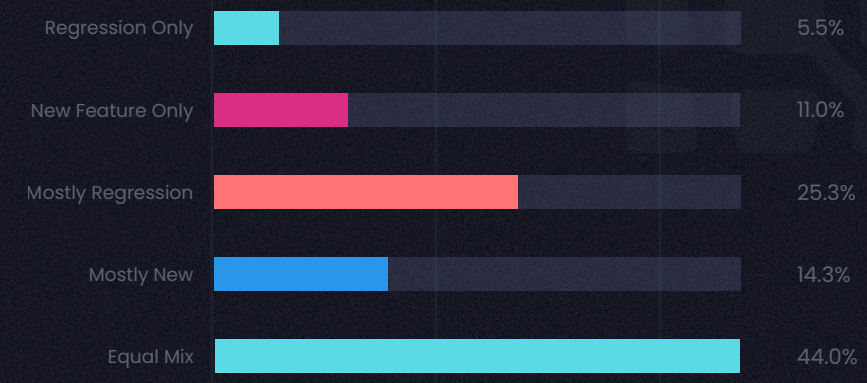
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

What are you using test automation primarily for?



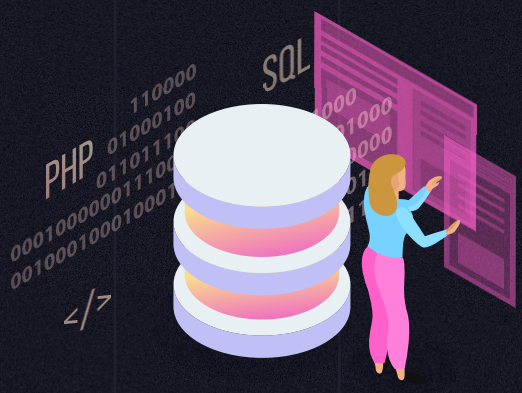
SUMMARY

Most respondents are using test automation to verify the functionality of an equal mix in new and existing app features.

Which CI/CD tools does your organization use?

SUMMARY

Gitlab was listed as the preferred CI/CD tool amongst respondents with 34.1% indicating its use. At 20.9% CircleCI is the second most frequently used.

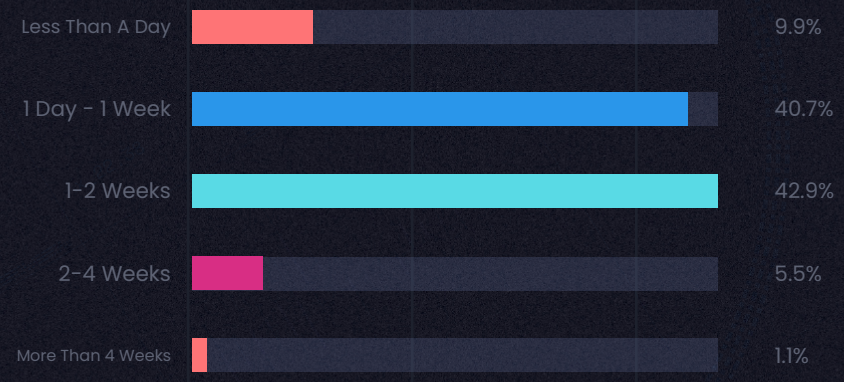


Which of the following metrics best indicates successful test automation implementation?

SUMMARY

Respondents indicated a preference for quantifying test automation success by measuring delivery speed.

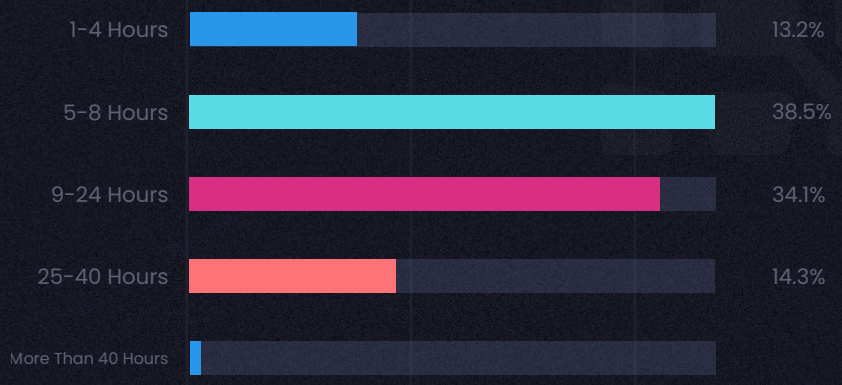
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts within 1 day - 2 Weeks.

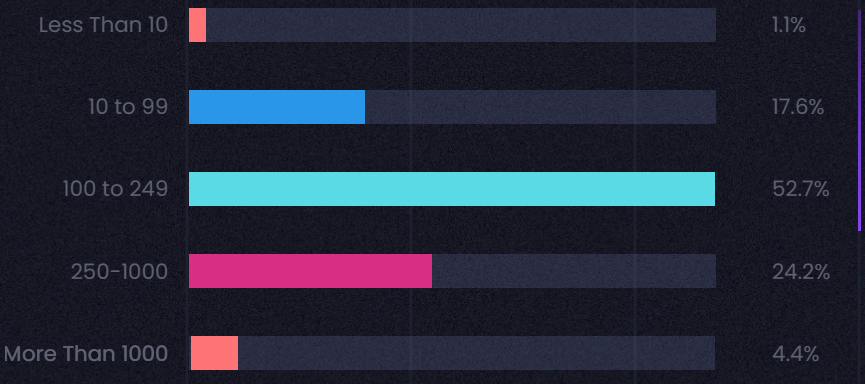
On average, how long does it take to code a test case using the framework of your choice?



SUMMARY

Survey respondents indicated that their test cases are typically coded within a 5-8 hour span.

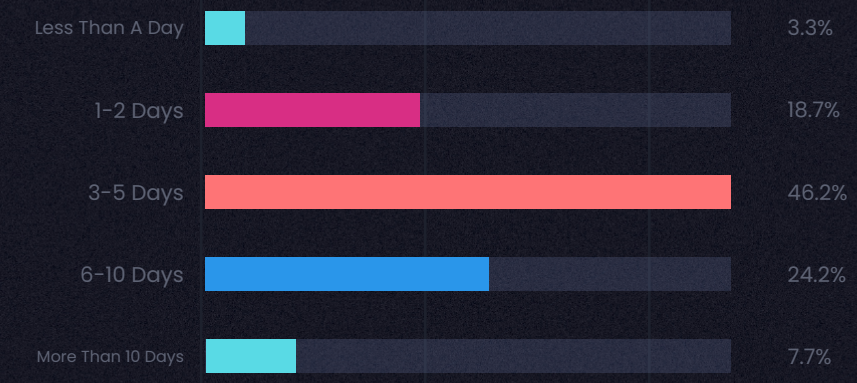
Approximately how many manual test cases are you executing with each app release?



SUMMARY

There's plenty of room for automation. 52.7% of respondents indicated that test teams perform 100-249 manual test cases with each app release.

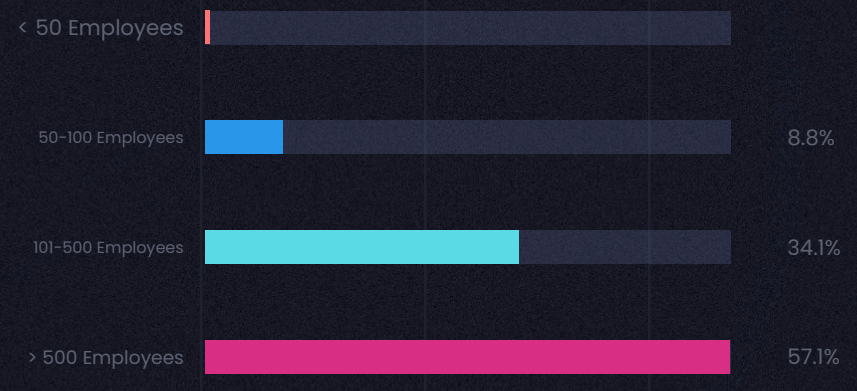
Approximately how long does it take to manually test your app before every release?



SUMMARY

Manual testing is time consuming. 46.2% of respondents indicated an average manual testing time period of 3-5 days with every release.

Company Size



SUMMARY

57.1% of survey respondents indicated that the company they worked for had more than 500 employees.

NEGATIVE SURPRISES

Code Complexity: The coding complexity of developing test scripts

Repair/Release: The need to continually fix test scripts with every release

Repair/Devices: The need to continually fix test scripts to work across more devices

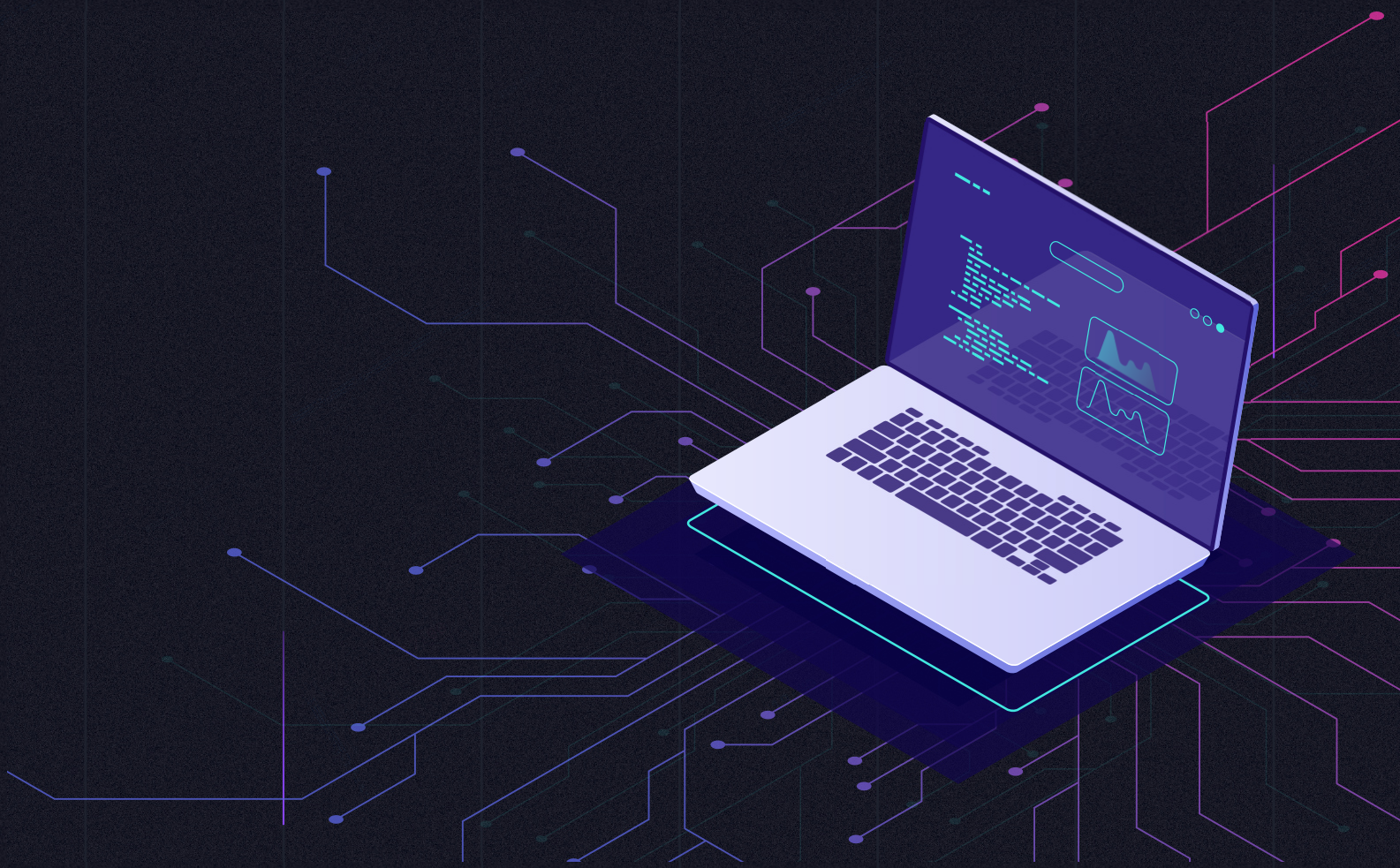
Stability: Having a stable test environment with predictable data

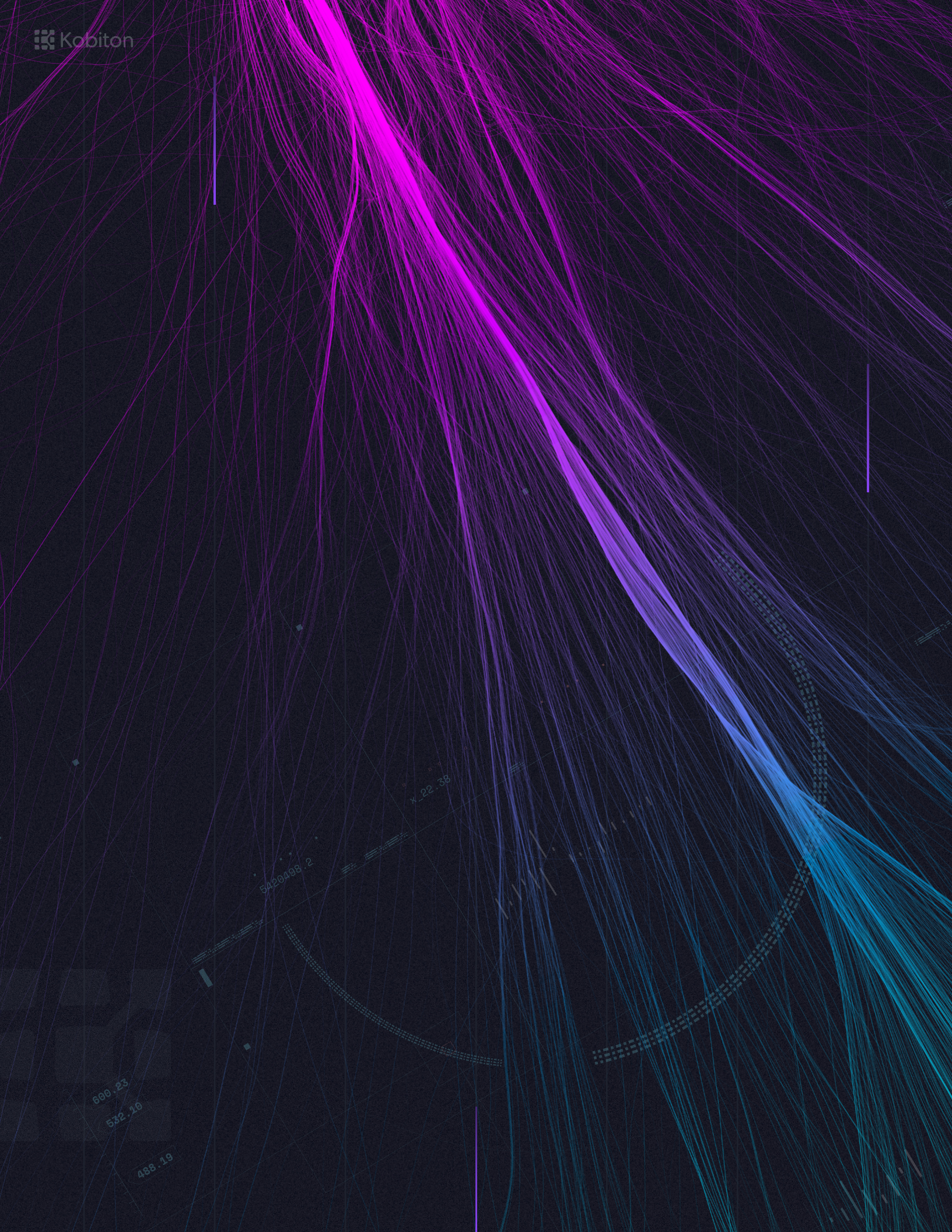
Hype vs. Reality: Vendor products not living up to their claims or hype

What was the biggest negative surprise you encountered as part of your test automation implementation?

SUMMARY

The need to continually fix test scripts with every release and stability are the biggest issues encountered in test automation implementations.

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Kobiton

COMPANY REVENUE

MORE THAN $1 BILLION

Company Revenue

Responses reveal that company size, *as measured by annual revenue*, has a major impact on resource-driven initiatives such as QA headcount. However, some interesting differences emerge in other areas.

Companies under $1B in revenue are far more agile in their app releases and are generally more inclined to release weekly, despite having smaller QA teams. Ironically, the $1B+ organizations are overwhelmingly skewed toward monthly releases (43%) in lieu of weekly releases (10%) and are up to six times more likely to only support quarterly releases than their smaller revenue counterparts. This correlates with the majority of $1B+ organizations defining themselves as Mobile Strategic (*app is non-essential to company survival*), in contrast to the majority of sub $1B companies that self-identify as Mobile Critical (*app is essential to revenue*). It is clear that Mobile Strategic organizations, most notably in legacy industries, are not yet feeling the pain of disruption and the urgency to relentlessly pursue mobile.

All companies with significant revenue (*greater than $1M*) have embraced test automation as a key part of their testing and delivery process. 42% of all respondents claim to have mature automation capabilities; compared to 23% whose automation initiatives are nascent but delivering promising results. 14% hope to launch their automation efforts within the next six months, and only 8% have no plans for automation.

Companies of all sizes list the biggest struggle in automation as evaluating and selecting the right vendor, framework or technology. Interestingly, the second biggest pain point varies according to company size. Sub $100M companies say their second-biggest pain is trying to decide what to automate (*the approach*), while $100M+ companies point to acquiring/training skilled automation engineers as the second-highest pain. This contrast could be indicative of a greater trend where larger companies are not just looking for more people, but also want talent that can quickly integrate into their "coding" based approach to test automation; whereas many smaller companies are fine with utilizing scriptless automation technologies until their people develop coding capabilities.

All companies with revenues north of $10M automate 25-50% of their test cases. The largest $1B+ companies state that they'd like to achieve more than 75% automation, a goal far more lofty than their smaller counterparts. Ironically, these are the same companies that only release monthly or quarterly today.

MOBILE STRATEGIES

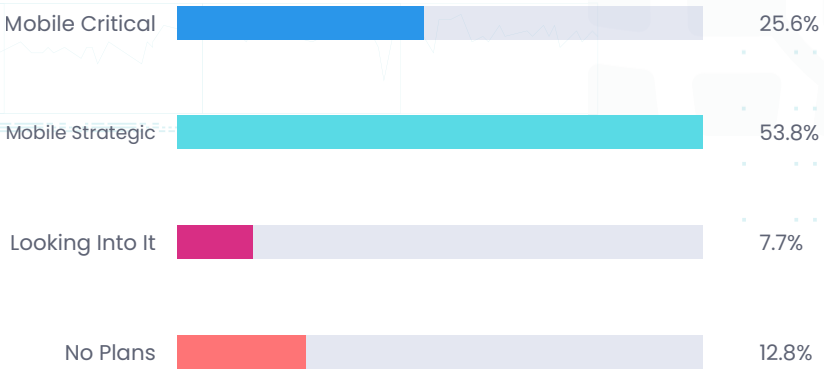
Mobile Critical: Our business model is centered around a mobile app

Mobile Strategic: Mobile is an important channel for our company, but we would survive without it

Looking Into It: Mobile is an initiative we're looking to pursue

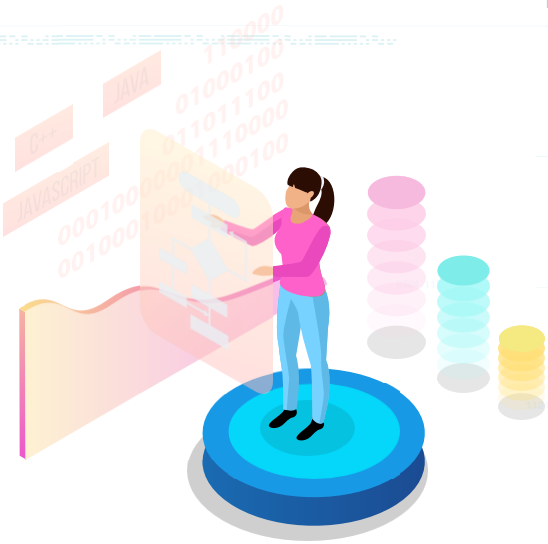
No Plans: We don't have a mobile app or any plans to implement one

Mobile Strategies

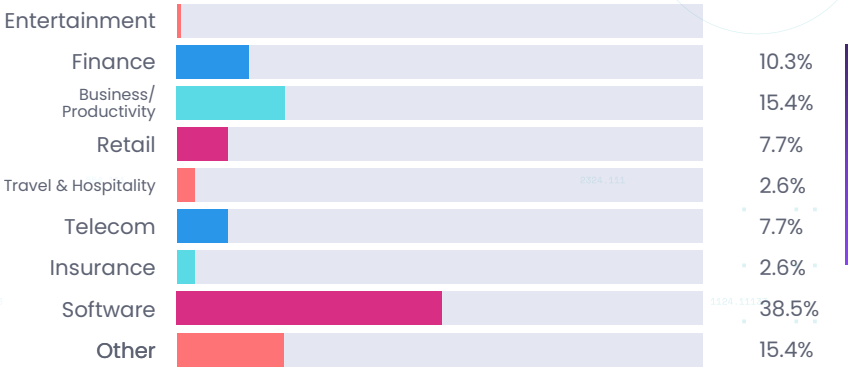


SUMMARY

The majority of respondents indicated that mobile was an important component in their business model.



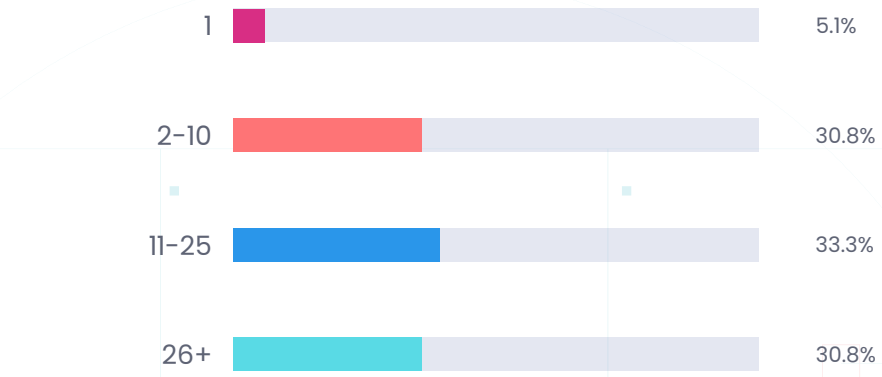
Industry/App Categories



SUMMARY

At 38.5%, the majority of responses collected in this survey were from software companies. This survey received the fewest responses from companies in the Entertainment vertical.

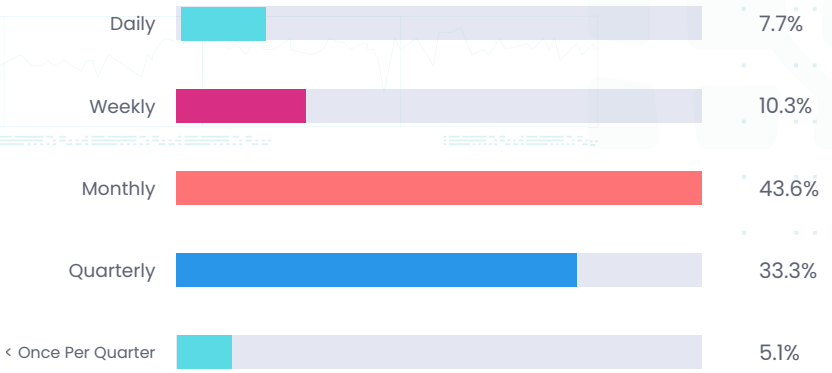
How many testers are on your team?



SUMMARY

Most of the companies surveyed have test teams of 11-25 people. Only 5.1% of respondents had 1 tester, while 30.8% had teams of more than 26 people.

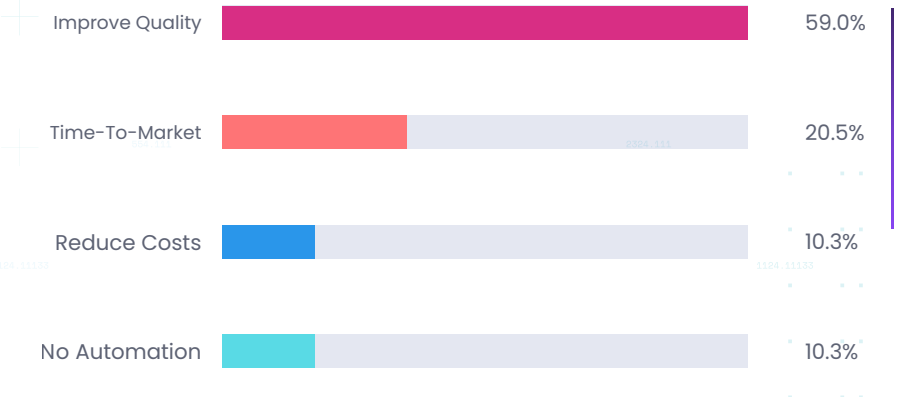
How often do you release app updates?



SUMMARY

Respondents indicated a preference for semi-frequent updates, with most responses indicating app update releases on a monthly schedule.

What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

The majority of respondents indicated that a desire to improve overall app quality was the primary strategic driver in choosing to pursue test automation.

TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

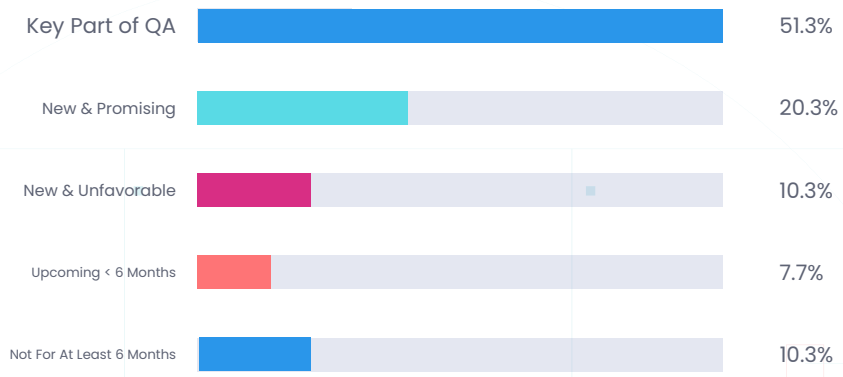
New and Promising: Our automation initiatives are relatively new and promising

New and Unfavorable: Our automation initiatives are relatively new and the results are not what we hoped for

Upcoming <6 months: Automation is an initiative we hope to start within the next 6 months

Not for at least 6 months: Automation will not happen within 6 months

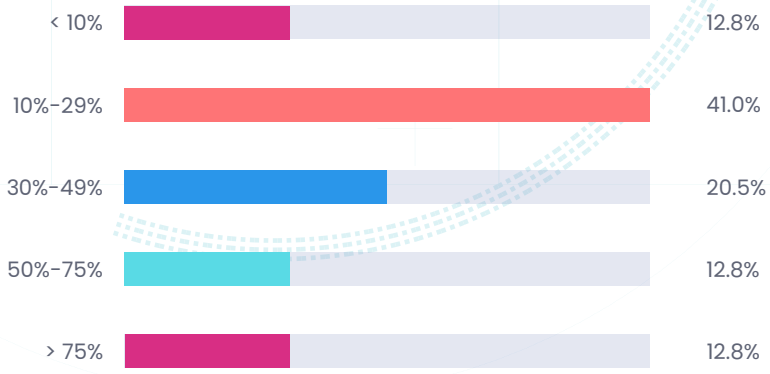
Where would you rate your current test automation maturity?



SUMMARY

51.3% of respondents indicated that test automation was a key part of their quality assurance process.

Based on the overall quality assurance budget in your organization, what percentage is spent on test automation when factoring in employees, tools, and other resources?



SUMMARY

Most respondents indicated that their companies allocate between 10 and 29% of their overall QA budget to test automation related expenditures.

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

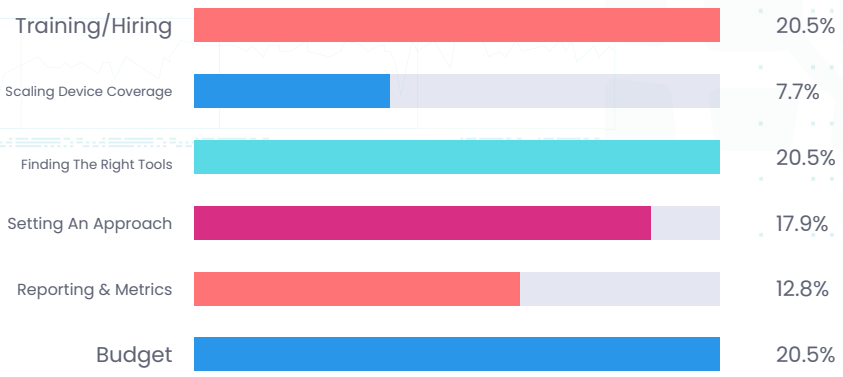
Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

Budget: Convincing the organization of the need to invest in automation

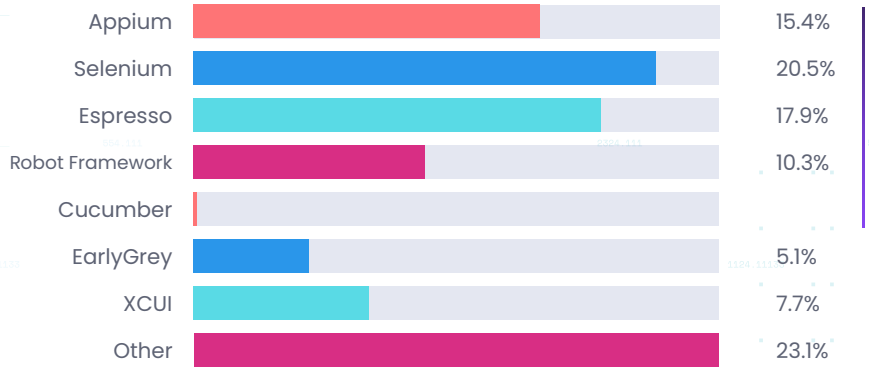
What is your biggest struggle/pain point with using or starting test automation today?



SUMMARY

The survey respondents indicated that the largest barrier to entry for test automation is tied for training/hiring, finding the right tools, and budget issues.

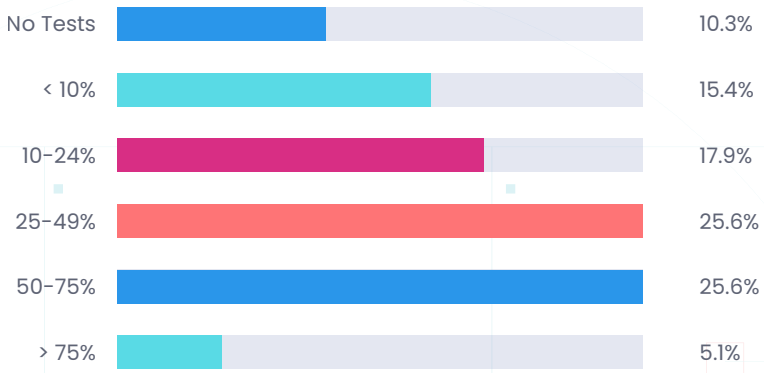
Test automation framework usage



SUMMARY

Responses indicate that their preferred automation framework is not listed here.

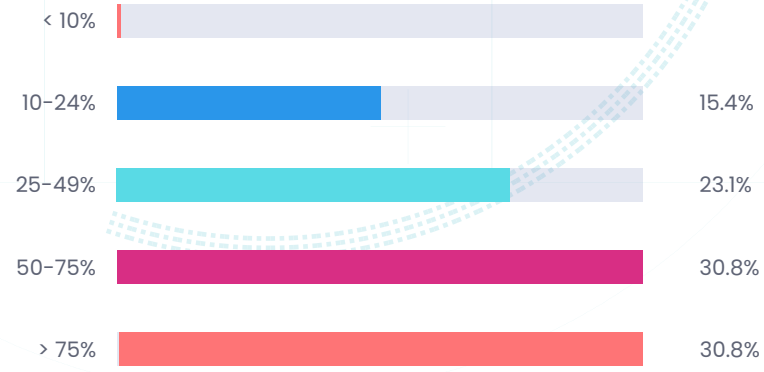
What percentage of your test cases are automated?



SUMMARY

89.7% of respondents indicated that they are performing some test automation. 51.2% of respondents specified that 25-75% of their test cases are automated.

What percentage of test cases would you like to have automated?



SUMMARY

Most respondents clearly see the value of test automation, with a noteworthy 30.8% seeking to automate more than 75% of their test cases. Comparing this graph with the one above shows a clear trend toward desired increases in test automation.

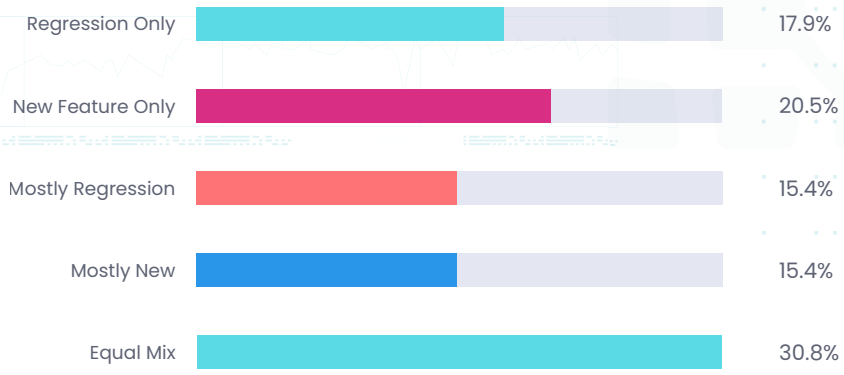
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

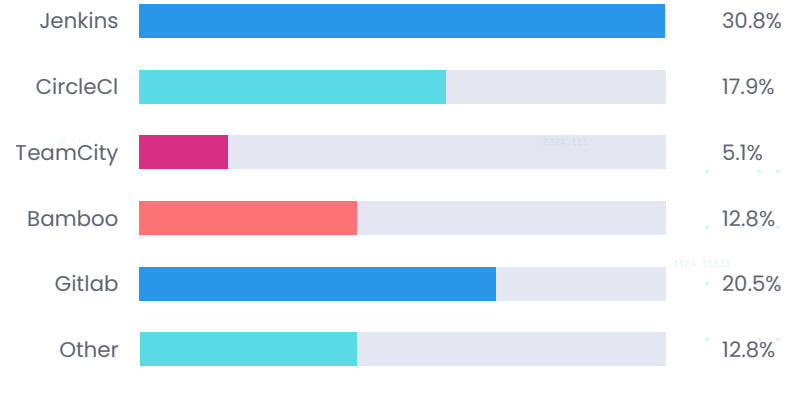
What are you using test automation primarily for?



SUMMARY

Most respondents are using test automation to verify the functionality of an equal mix in new and existing app features.

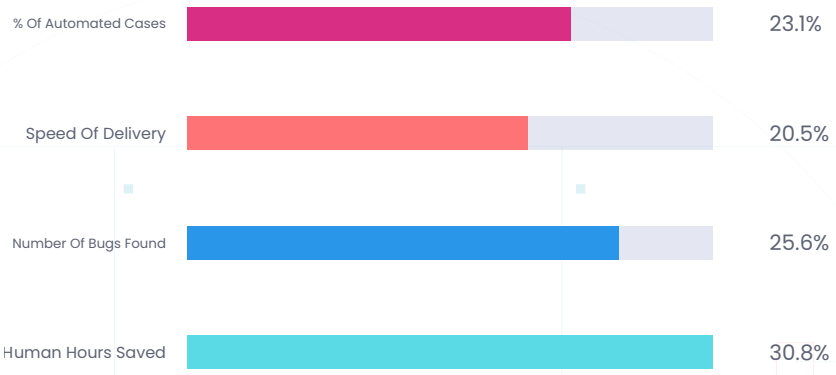
Which CI/CD tools does your organization use?



SUMMARY

Jenkins was listed as the preferred CI/CD tool amongst respondents with 30.8% indicating its use. At 20.5% Gitlab is the second most frequently used.

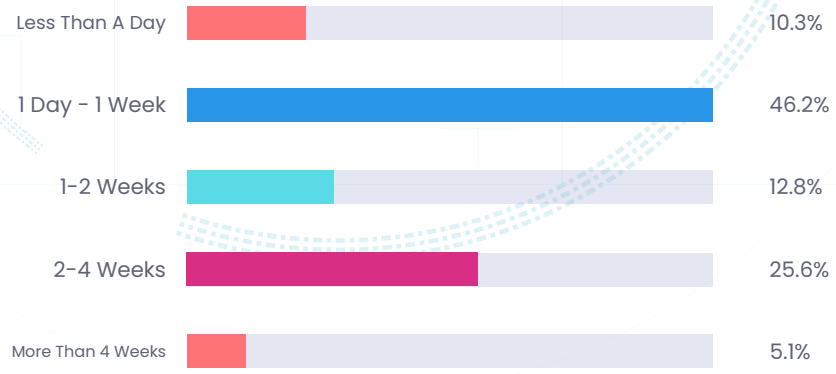
Which of the following metrics best indicates successful test automation implementation?



SUMMARY

Respondents indicated a preference for quantifying test automation success by measuring amount of human hours saved.

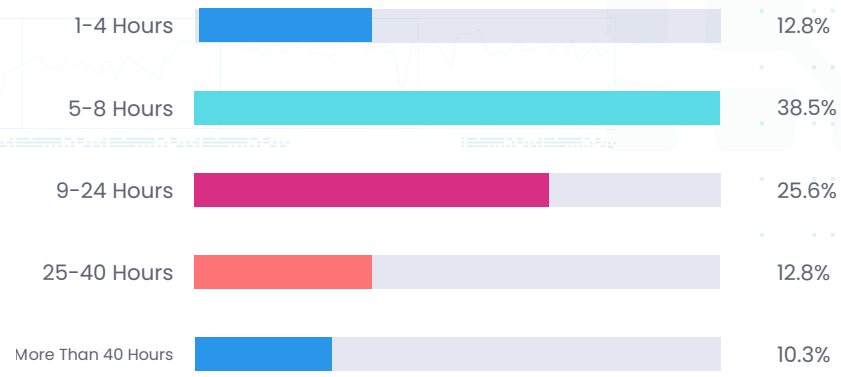
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts within 1 Day - 1 Week.

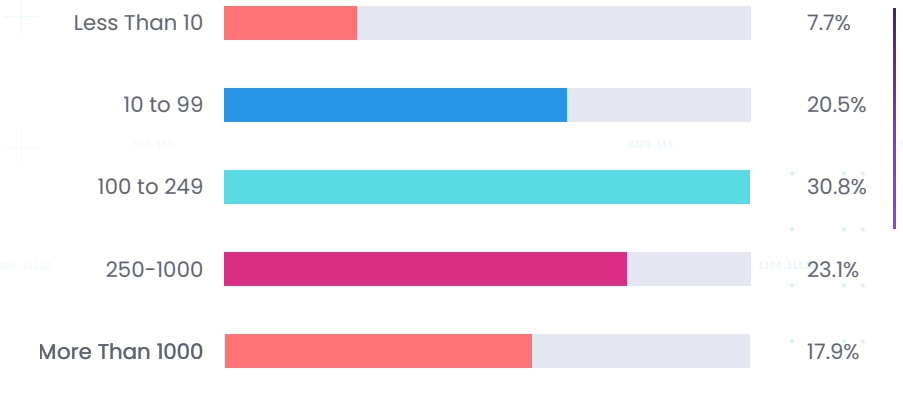
On average, how long does it take to code a test case using the framework of your choice?



SUMMARY

Survey respondents indicated that their test cases are typically coded within a 5-8 hour span.

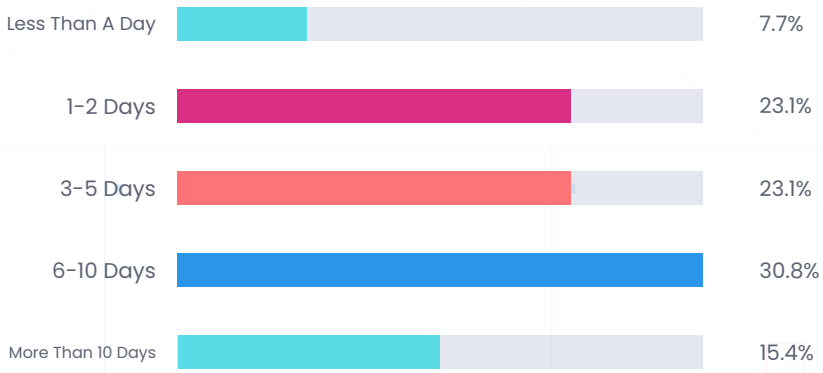
Approximately how many manual test cases are you executing with each app release?



SUMMARY

There's plenty of room for automation. 30.8% of respondents indicated that test teams perform 100-249 manual test cases with each app release.

Approximately how long does it take to manually test your app before every release?



SUMMARY

Manual testing is time consuming. 30.8% of respondents indicated an average manual testing time period of 6-10 days with every release.

Company Size

SUMMARY

94.9% of survey respondents indicated that the company they worked for had more than 500 employees.

Company Revenue: More than $1 Billion

NEGATIVE SURPRISES

Code Complexity: The coding complexity of developing test scripts

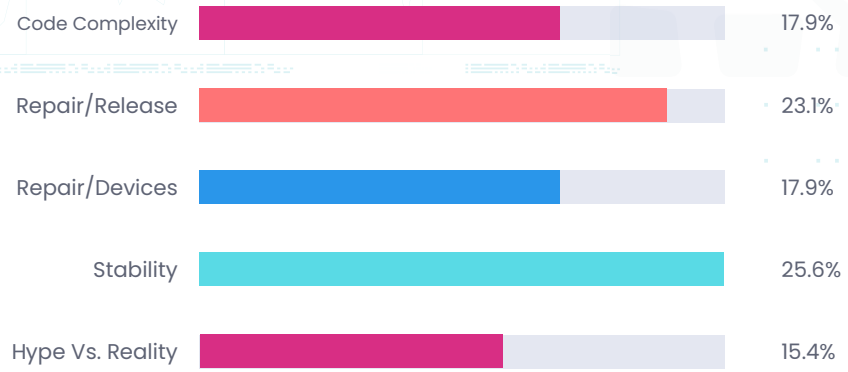
Repair/Release: The need to continually fix test scripts with every release

Repair/Devices: The need to continually fix test scripts to work across more devices

Stability: Having a stable test environment with predictable data

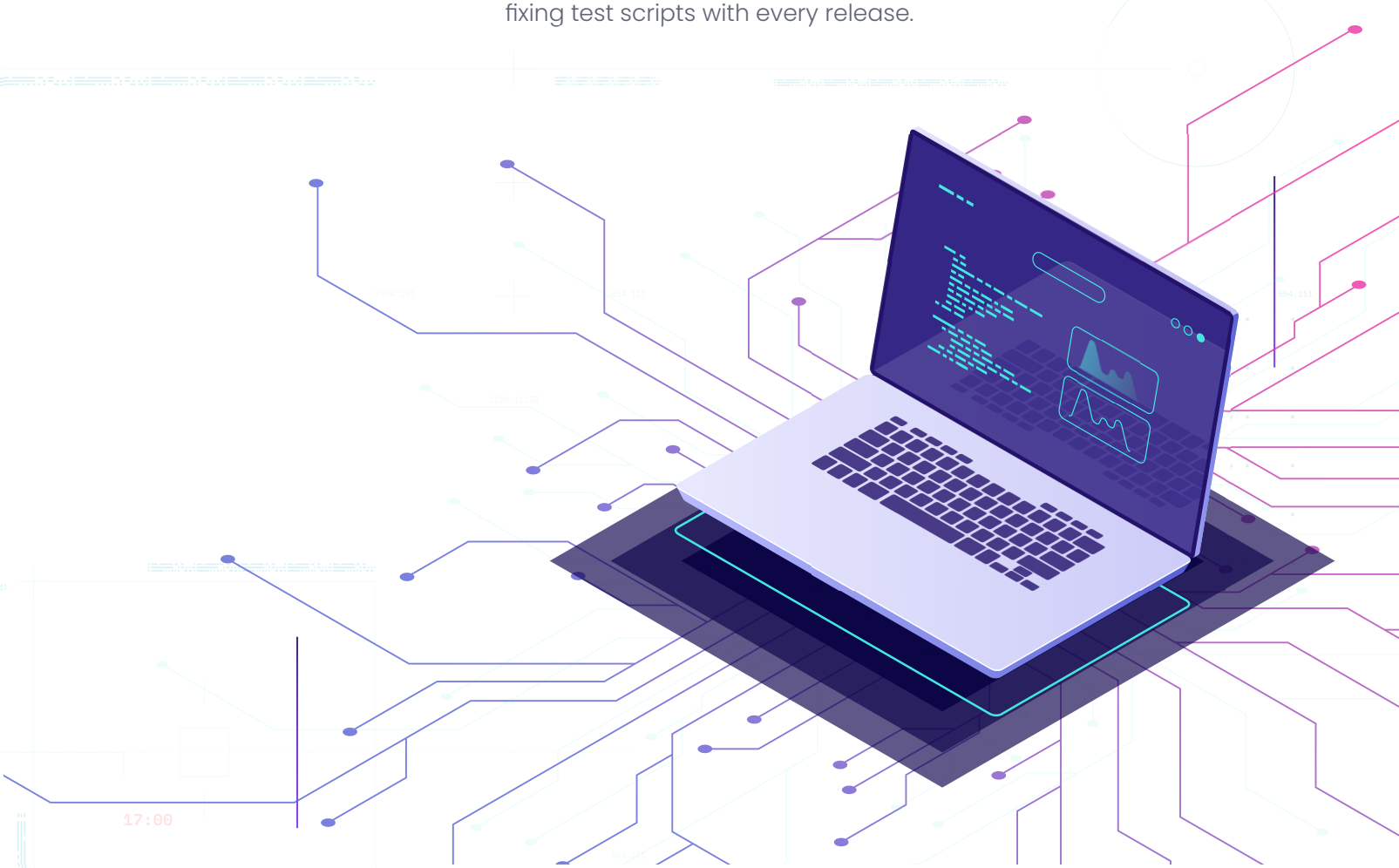
Hype vs. Reality: Vendor products not living up to their claims or hype

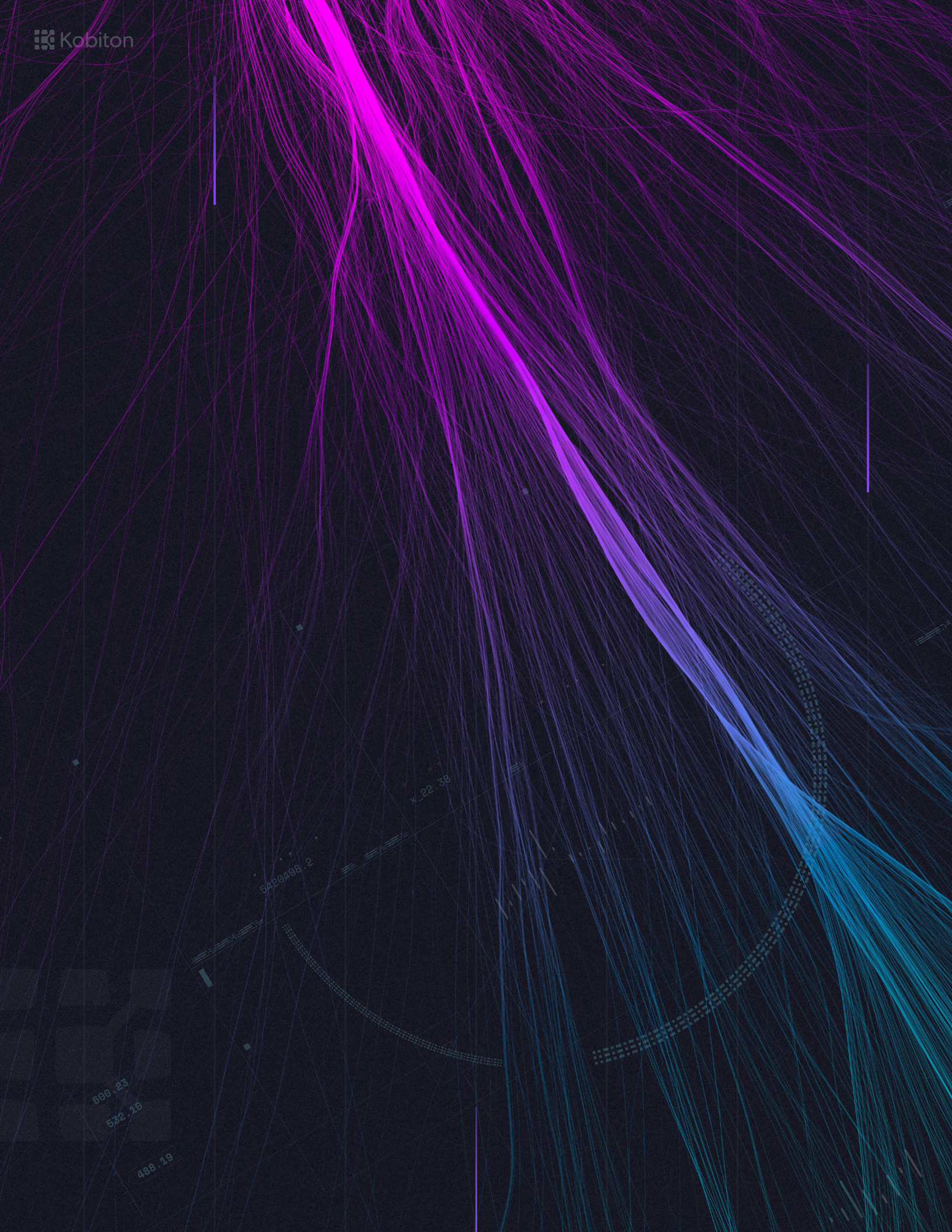
What was the biggest negative surprise you encountered as part of your test automation implementation?



SUMMARY

Stability issues are rampant in the test automation implementations used by most respondents. The second largest gripe with implementing a test automation strategy is continually fixing test scripts with every release.

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Kobiton

AUTOMATION BUDGET

LESS THAN 10%

Automation Budget

Of all the companies that identify as Mobile Critical (*where the app is essential to revenue*), **none** spend less than 10% of their QA budget on mobile test automation, whereas those who claim to be Mobile Strategic (*app is non-essential to company survival*) are more likely to invest below the 10% mark.

Improving app quality is the primary reason cited by all budget ranges for making the move to automation. Time-to-market becomes increasingly important for those with heavier investment, but still secondary to app quality.

In terms of app release frequency, ~68% of all respondents release on a monthly or weekly basis, with only 16% reaching the elite status of daily releases. However, this number changes dramatically for companies spending 50-75% of their budget on automation. Every company with this level of investment is able to release at least weekly, with 50% achieving daily releases. Those who need to release on a daily basis place more emphasis on test automation to accomplish that goal, and therefore spend a greater percentage of their overall QA budget on automation.

Across the board the primary obstacle causing organizations in every budget range to stumble is the difficulty in evaluating and selecting the right tools. More than 10% of all respondents say that vendors who overpromise and underdeliver is one of the biggest negative surprises of the software procurement process. **This should serve as a cautionary note for vendors:** prospects struggle with selecting tools, and when they do select them, they *certainly* don't want to be disappointed at the product not living up to its hype. Test Leads, Managers, and QA Directors should be vigilant and do thorough due diligence when engaging vendors on fairly rigorous proof-of-concepts.

When looking at success criteria for test automation, smaller budgets place more emphasis on the number of bugs found, whereas speed of delivery becomes proportionally more critical as the budget allocation increases. Additionally, there appears to be a linear relationship between the percentage of budget allocated to test automation and the number of test cases automated. Those spending 10% of their QA budget on automation have automated about 10% of test cases, and those spending 10-25% of their QA budget have automated roughly 10-25% of their test cases, etc.

MOBILE STRATEGIES

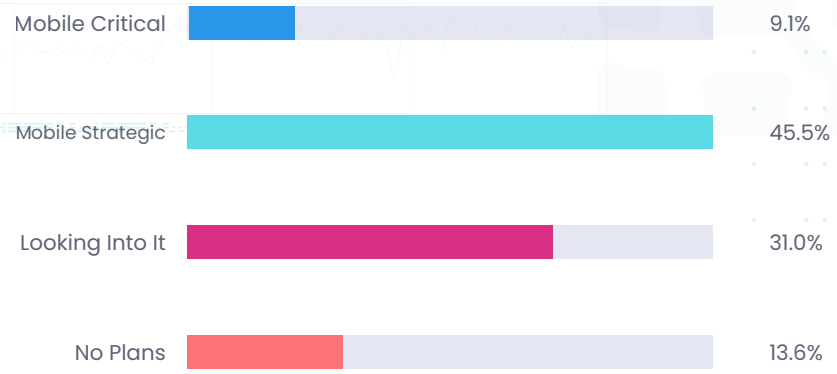
Mobile Critical: Our business model is centered around a mobile app

Mobile Strategic: Mobile is an important channel for our company, but we would survive without it

Looking Into It: Mobile is an initiative we're looking to pursue

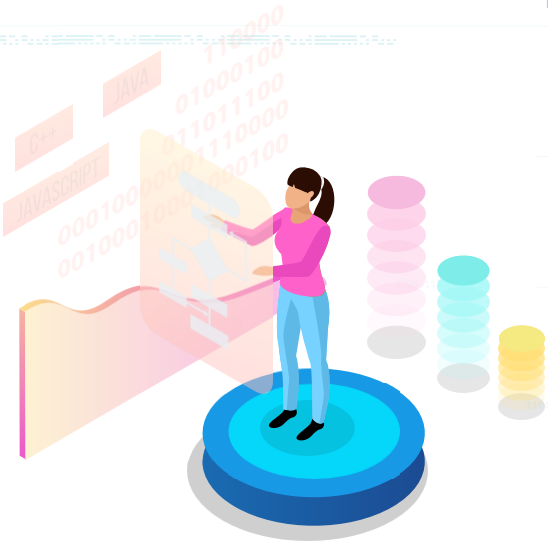
No Plans: We don't have a mobile app or any plans to implement one

Mobile Strategies

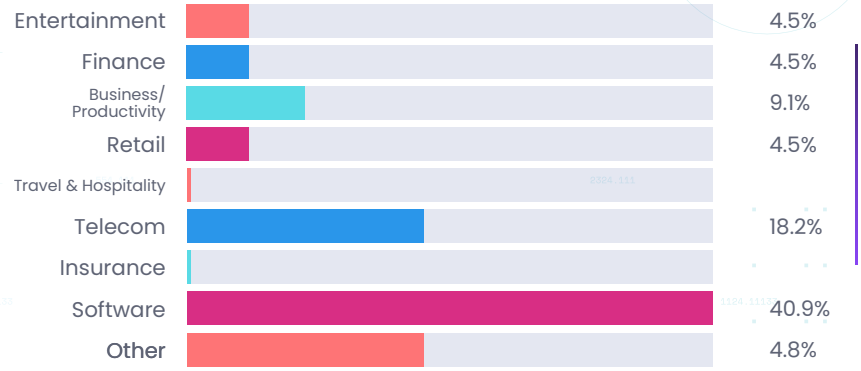


SUMMARY

The majority of respondents indicated that mobile was an important component in their business model.



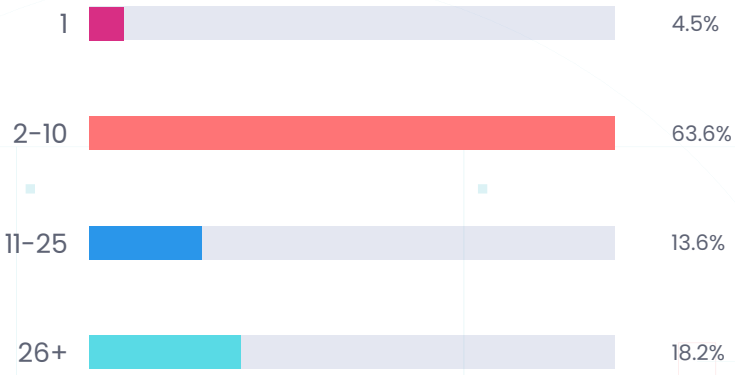
Industry/App Categories



SUMMARY

The majority of responses collected in this survey were from software companies.

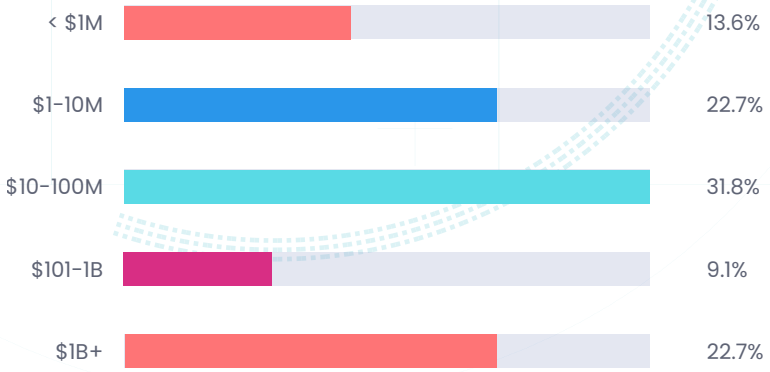
How many testers are on your team?



SUMMARY

Most of the companies surveyed have test teams of 2-10 people. Only 4.5% of respondents had 1 tester, while 18.2% had teams of more than 26 people.

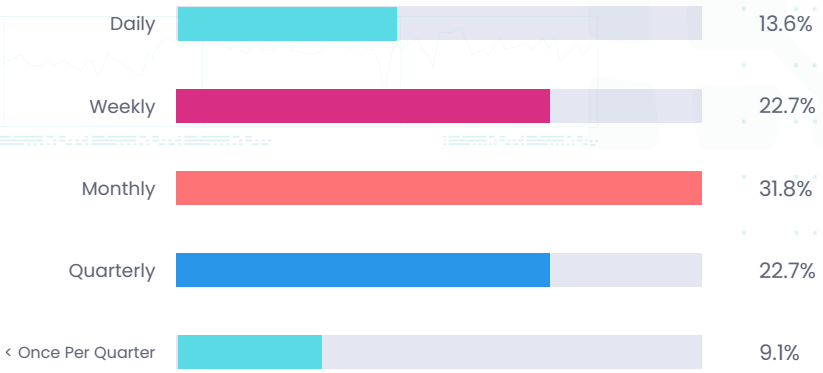
Annual Company Revenue



SUMMARY

31.8% of companies surveyed had an annual revenue of $10-100M.

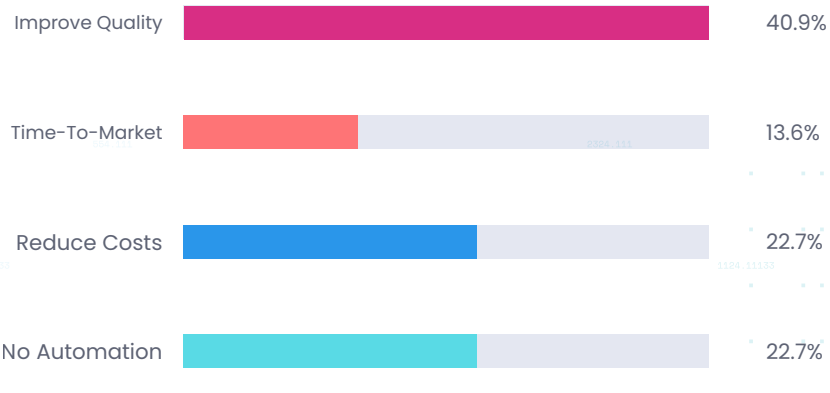
How often do you release app updates?



SUMMARY

Respondents indicated a preference for semi-frequent updates, with most responses indicating app update releases on a weekly or monthly schedule.

What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

The majority of respondents indicated that a desire to improve overall app quality was the primary strategic driver in choosing to persue test automation.

TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

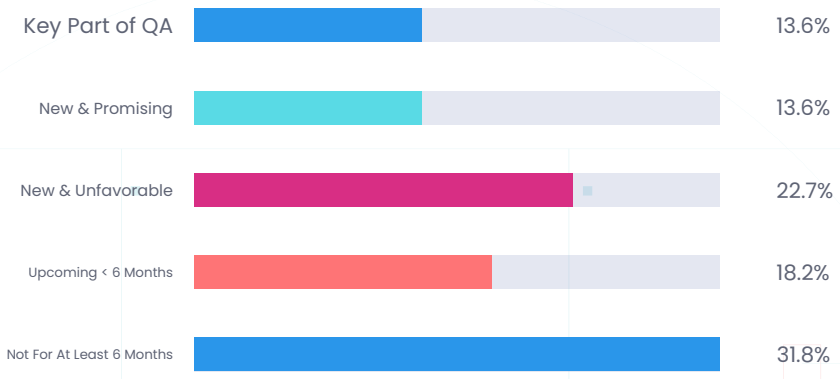
New and Promising: Our automation initiatives are relatively new and promising

New and Unfavorable: Our automation initiatives are relatively new and the results are not what we hoped for

Upcoming <6 months: Automation is an initiative we hope to start within the next 6 months

Not for at least 6 months: Automation will not happen within 6 months

Where would you rate your current test automation maturity?



SUMMARY

31.8% of respondents indicated that test automation is not something their organization will pursue in the next 6 months.

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

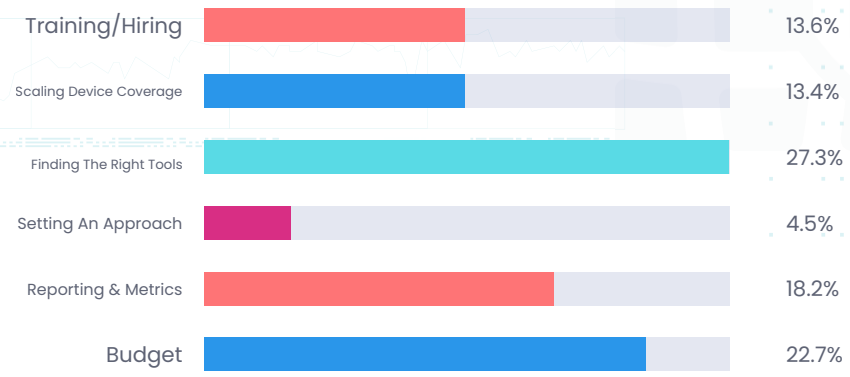
Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

Budget: Convincing the organization of the need to invest in automation

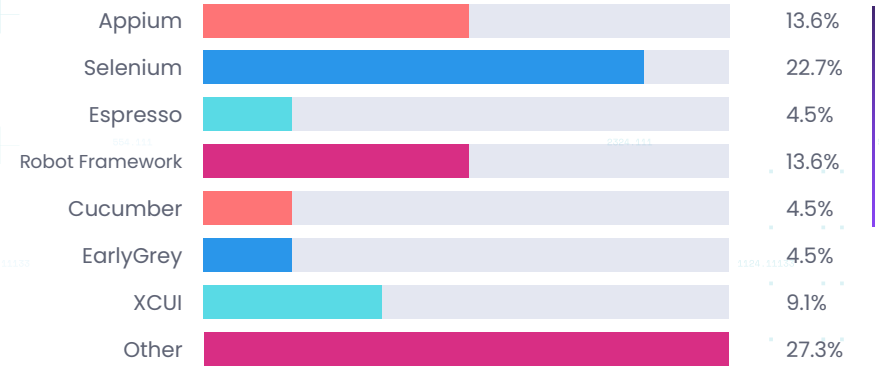
What is your biggest struggle/pain point with using or starting test automation today?



SUMMARY

The survey respondents indicated that the largest barrier to entry for test automation is finding the right tools.

Test automation framework usage

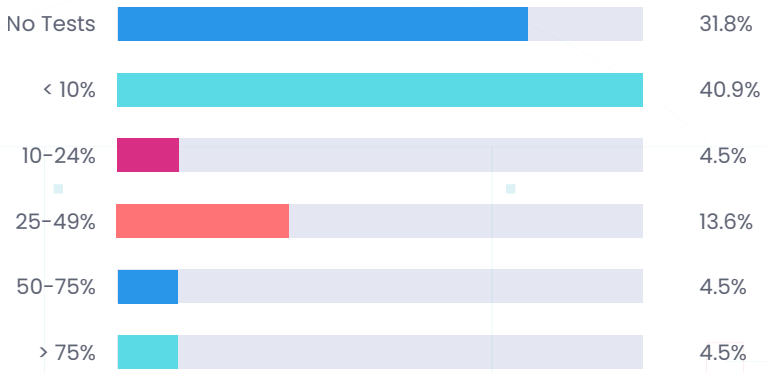


SUMMARY

Responses indicate a preference for Selenium over the listed automation frameworks, but overall the most frequently chosen answer is “other”

Automation Budget: Less Than 10%

What percentage of your test cases are automated?



SUMMARY

68.2% of respondents indicated that they are performing some test automation. 40.9% of respondents specified that <10% of their test cases are automated.

What percentage of test cases would you like to have automated?

SUMMARY

Most respondents clearly see the value of test automation, with a noteworthy 18.2% seeking to automate more than 75% of their test cases. Comparing this graph with the one above shows a clear trend toward desired increases in test automation.

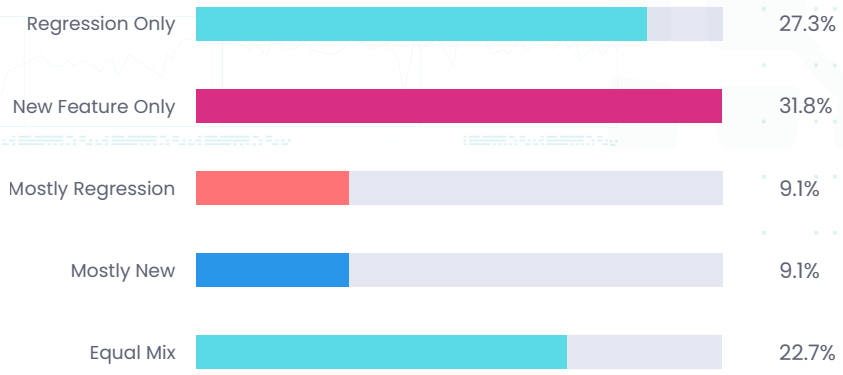
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

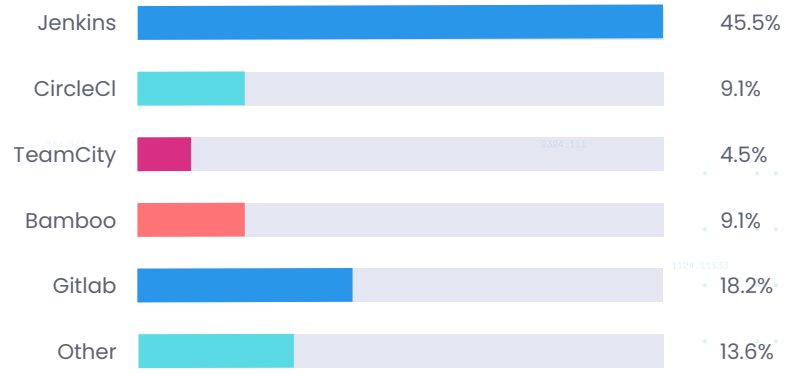
What are you using test automation primarily for?



SUMMARY

Most respondents are using test automation to verify the functionality of new app features.

Which CI/CD tools does your organization use?

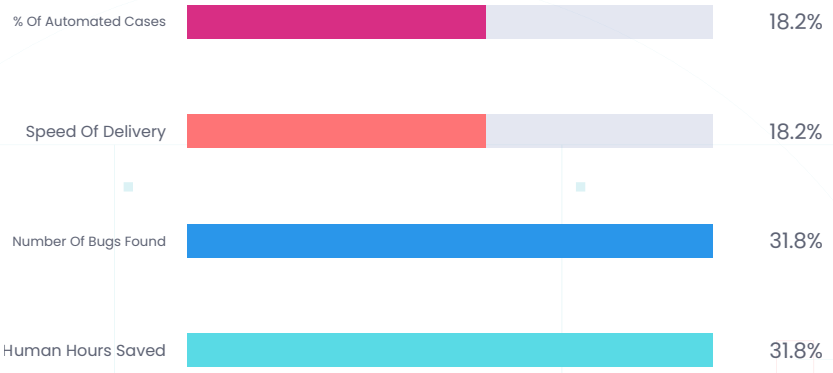


SUMMARY

Jenkins was listed as the preferred CI/CD tool amongst respondents with 45.5% indicating its use.

Automation Budget: Less Than 10%

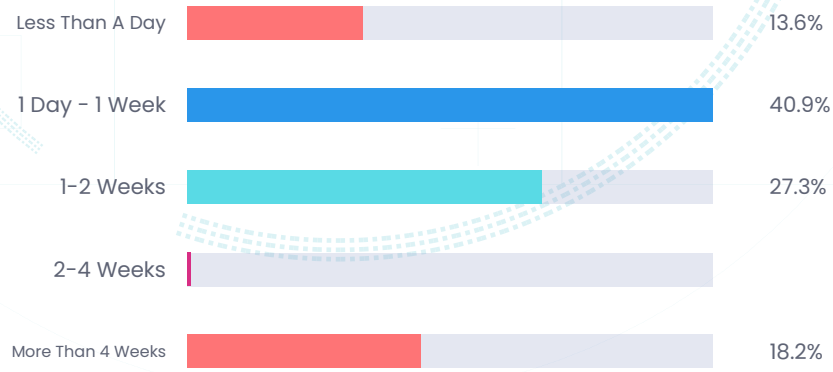
Which of the following metrics best indicates successful test automation implementation?



SUMMARY

Respondents indicated a preference for quantifying test automation success by measuring number of bugs found and human hours saved.

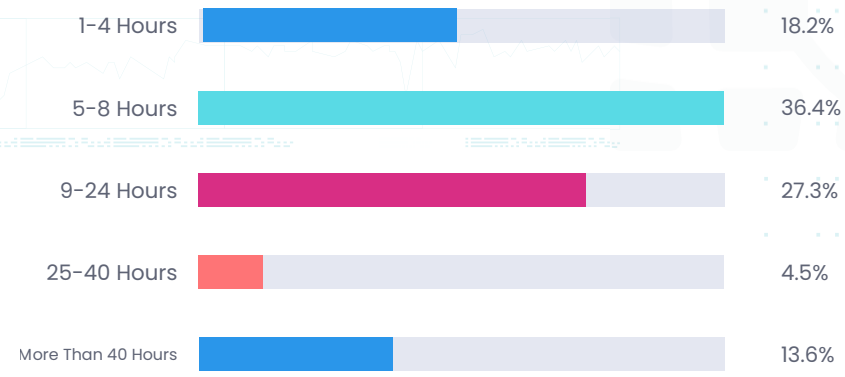
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts within 1 Day - 1 Week.

On average, how long does it take to code a test case using the framework of your choice?



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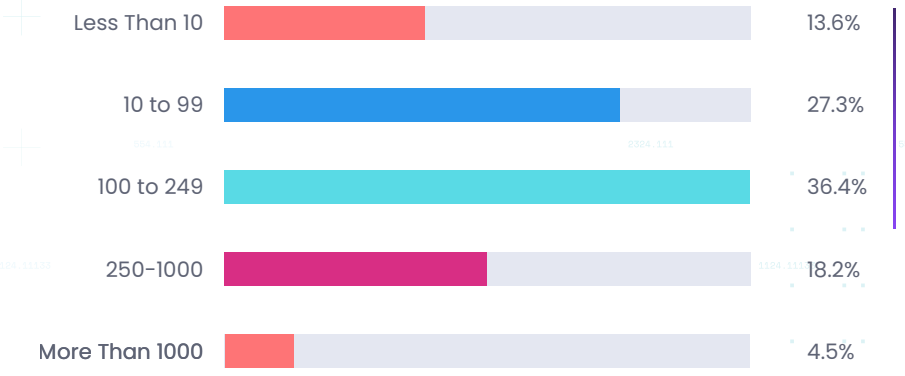
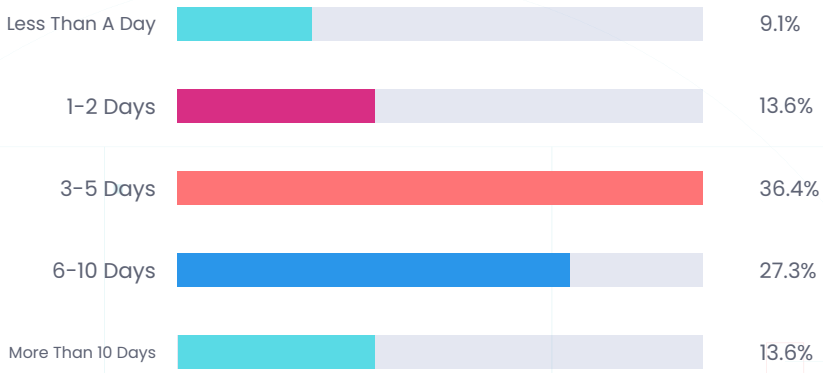


SUMMARY

There's plenty of room for automation. 36.4% of respondents indicated that test teams perform 100-249 manual test cases with each app release.

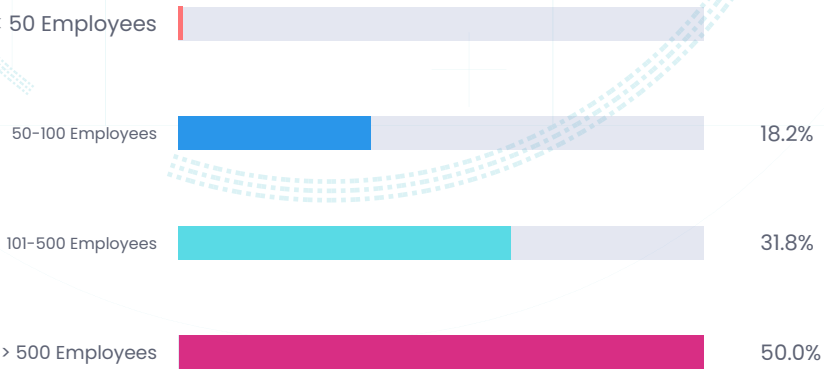
Approximately how long does it take to manually test your app before every release?



SUMMARY

Manual testing is time consuming. 36.4% of respondents indicated an average manual testing time period of 3-5 days with every release.

Company Size



SUMMARY

50.0% of survey respondents indicated that the company they worked for had more than 500 employees.

NEGATIVE SURPRISES

Code Complexity: The coding complexity of developing test scripts

Repair/Release: The need to continually fix test scripts with every release

Repair/Devices: The need to continually fix test scripts to work across more devices

Stability: Having a stable test environment with predictable data

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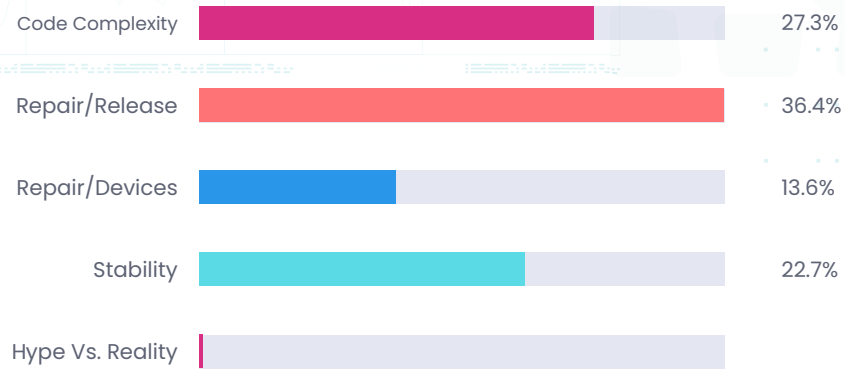
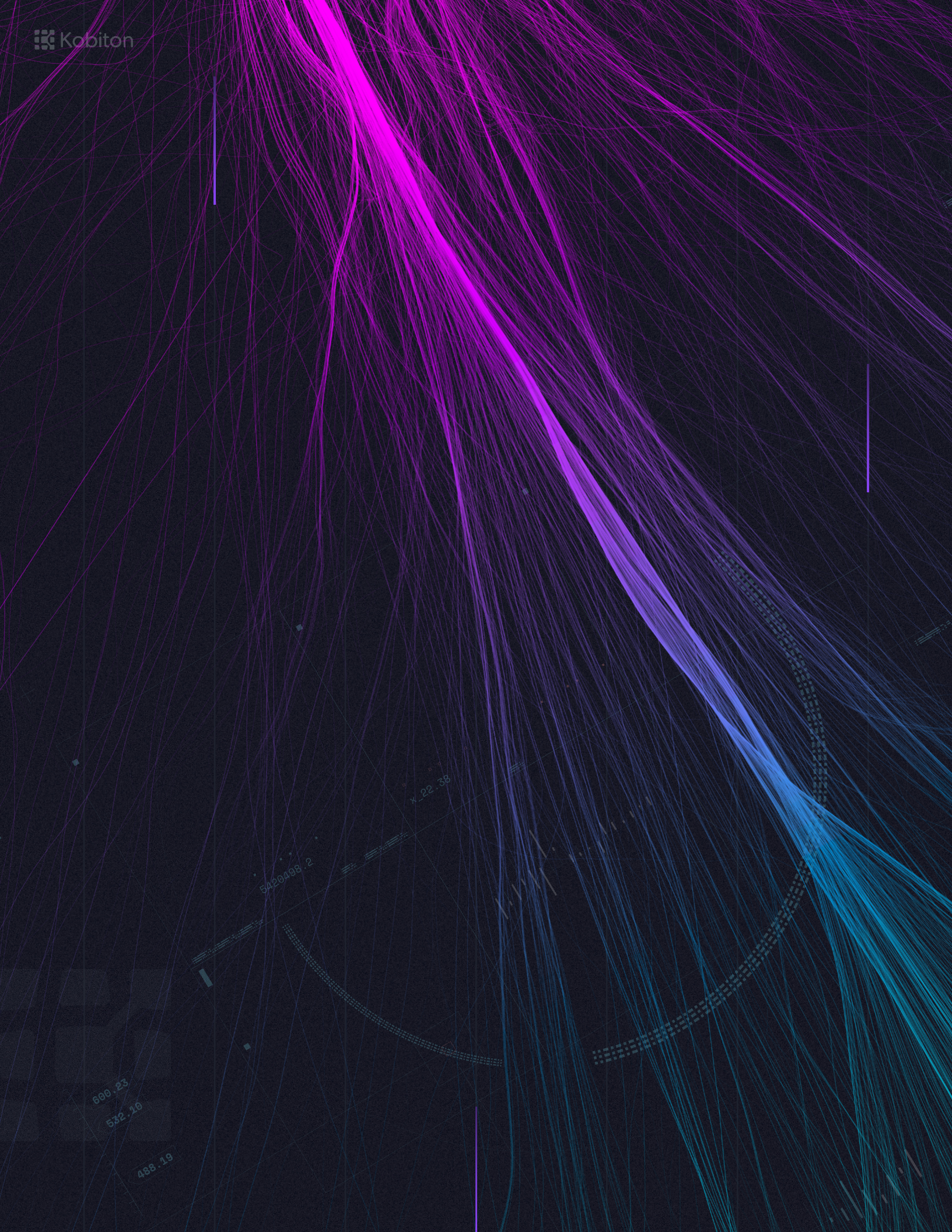
What was the biggest negative surprise you encountered as part of your test automation implementation?



SUMMARY

The largest negative surprise respondents encountered was the need to continually fix test scripts with every release.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Kobiton

AUTOMATION BUDGET

10-29%

Automation Budget

Of all the companies that identify as Mobile Critical (*where the app is essential to revenue*), **none** spend less than 10% of their QA budget on mobile test automation, whereas those who claim to be Mobile Strategic (*app is non-essential to company survival*) are more likely to invest below the 10% mark.

Improving app quality is the primary reason cited by all budget ranges for making the move to automation. Time-to-market becomes increasingly important for those with heavier investment, but still secondary to app quality.

In terms of app release frequency, ~68% of all respondents release on a monthly or weekly basis, with only 16% reaching the elite status of daily releases. However, this number changes dramatically for companies spending 50-75% of their budget on automation. Every company with this level of investment is able to release at least weekly, with 50% achieving daily releases. Those who need to release on a daily basis place more emphasis on test automation to accomplish that goal, and therefore spend a greater v of their overall QA budget on automation.

Across the board the primary obstacle causing organizations in every budget range to stumble is the difficulty in evaluating and selecting the right tools. More than 10% of all respondents say that vendors who overpromise and underdeliver is one of the biggest negative surprises of the software procurement process. **This should serve as a cautionary note for vendors:** prospects struggle with selecting tools, and when they do select them, they *certainly* don't want to be disappointed at the product not living up to its hype. Test Leads, Managers, and QA Directors should be vigilant and do thorough due diligence when engaging vendors on fairly rigorous proof-of-concepts.

When looking at success criteria for test automation, smaller budgets place more emphasis on the number of bugs found, whereas speed of delivery becomes proportionally more critical as the budget allocation increases. Additionally, there appears to be a linear relationship between the percentage of budget allocated to test automation and the number of test cases automated. Those spending 10% of their QA budget on automation have automated about 10% of test cases, and those spending 10-25% of their QA budget have automated roughly 10-25% of their test cases, etc.

MOBILE STRATEGIES

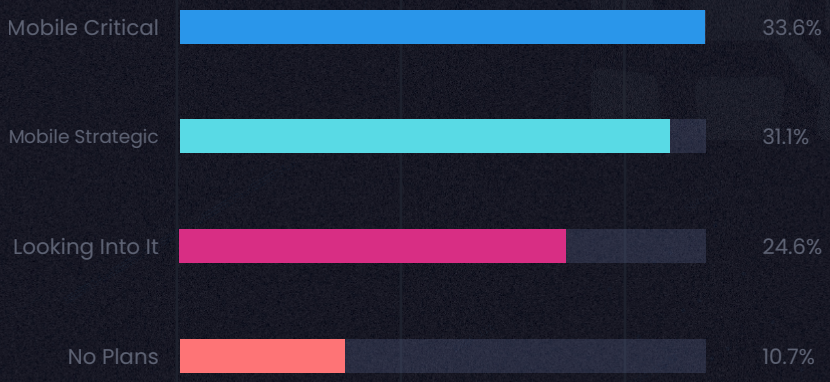
Mobile Critical: Our business model is centered around a mobile app

Mobile Strategic: Mobile is an important channel for our company, but we would survive without it

Looking Into It: Mobile is an initiative we're looking to pursue

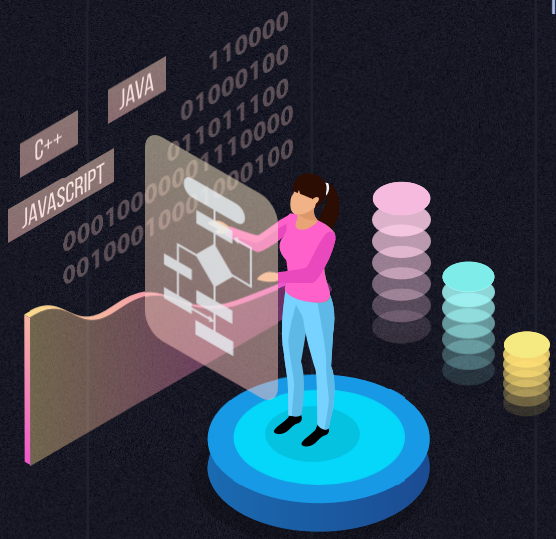
No Plans: We don't have a mobile app or any plans to implement one

Mobile Strategies

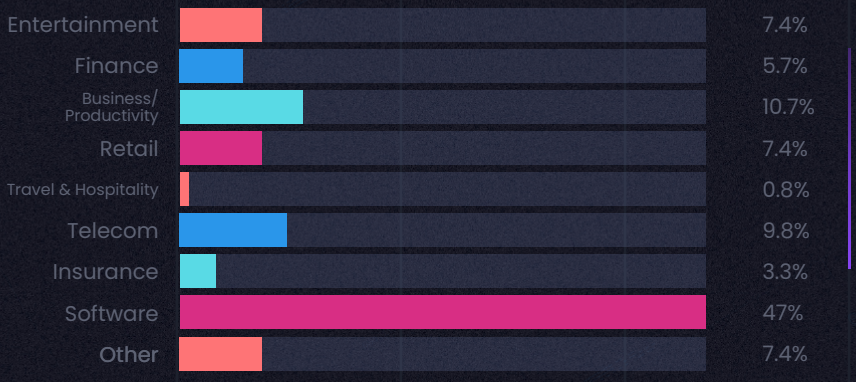


SUMMARY

The majority of respondents indicated that mobile was an important component in their business model.



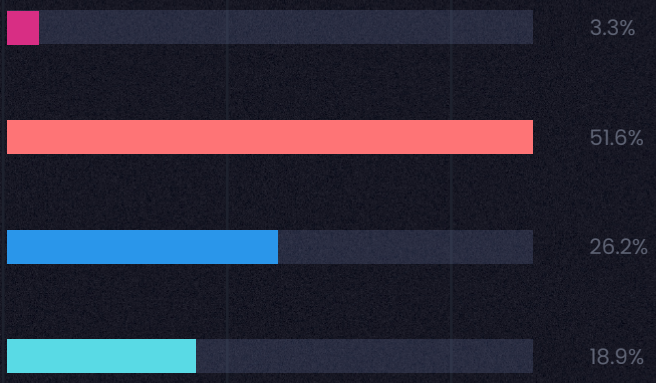
Industry/App Categories



SUMMARY

The majority of responses collected in this survey were from software companies.

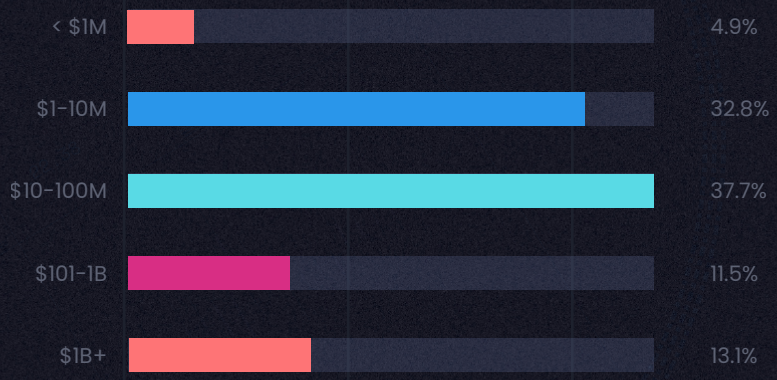
How many testers are on your team?



SUMMARY

Most of the companies surveyed have test teams of 2-25 people. Only 3.3% of respondents had 1 tester, while 18.9% had teams of more than 26 people.

Annual Company Revenue



SUMMARY

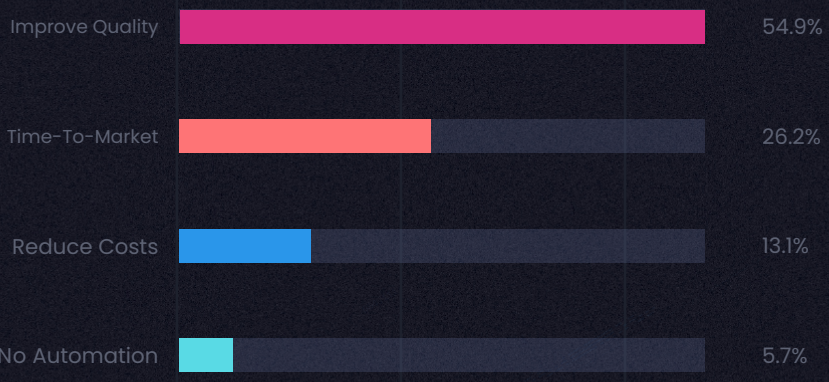
37.7% of companies surveyed had an annual revenue of $10-100M.

How often do you release app updates?

SUMMARY

Respondents indicated a preference for semi-frequent updates, with most responses indicating app update releases on a weekly or monthly schedule.

What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

The majority of respondents indicated that a desire to improve overall app quality was the primary strategic driver in choosing to pursue test automation.

TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

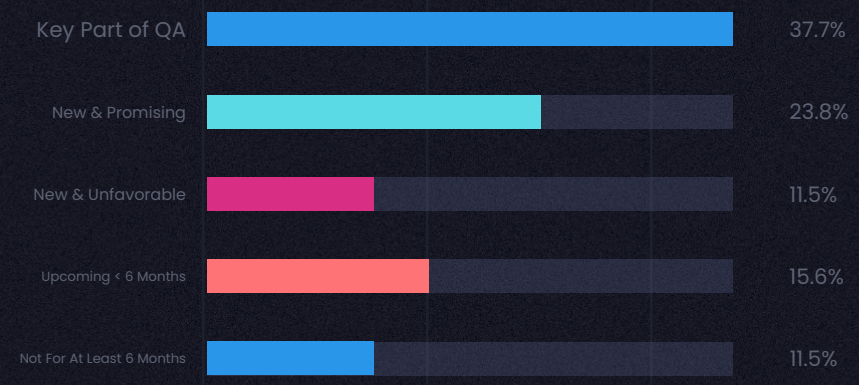
New and Promising: Our automation initiatives are relatively new and promising

New and Unfavorable: Our automation initiatives are relatively new and the results are not what we hoped for

Upcoming <6 months: Automation is an initiative we hope to start within the next 6 months

Not for at least 6 months: Automation will not happen within 6 months

Where would you rate your current test automation maturity?



SUMMARY

37.7% of respondents indicated that test automation was a key part of their quality assurance process.

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

Budget: Convincing the organization of the need to invest in automation

What is your biggest struggle/pain point with using or starting test automation today?

SUMMARY

The survey respondents indicated that the largest barrier to entry for test automation is a tie between finding the right tools and setting an approach.

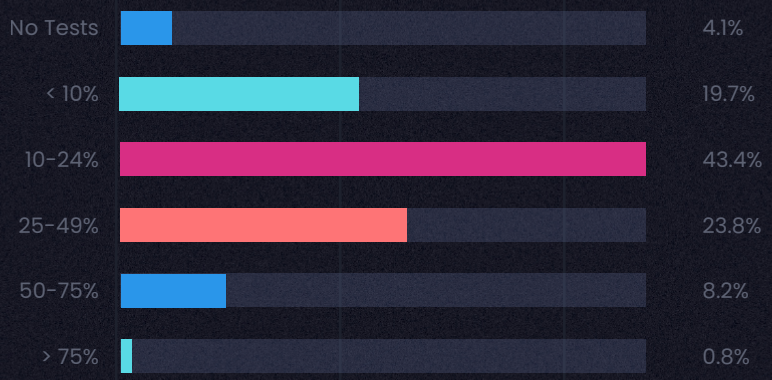
Test automation framework usage

SUMMARY

Responses indicate that Selenium is the preferred automation framework.

Automation Budget: 10% - 29%

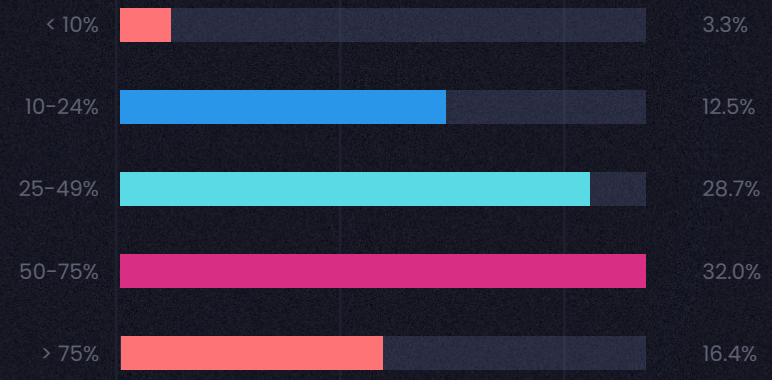
What percentage of your test cases are automated?



SUMMARY

95.9% of respondents indicated that they are performing some test automation. 43.4% of respondents specified that 10-24% of their test cases are automated.

What percentage of test cases would you like to have automated?



SUMMARY

Most respondents clearly see the value of test automation, with a noteworthy 16.4% seeking to automate more than 75% of their test cases. Comparing this graph with the one above shows a clear trend toward desired increases in test automation.

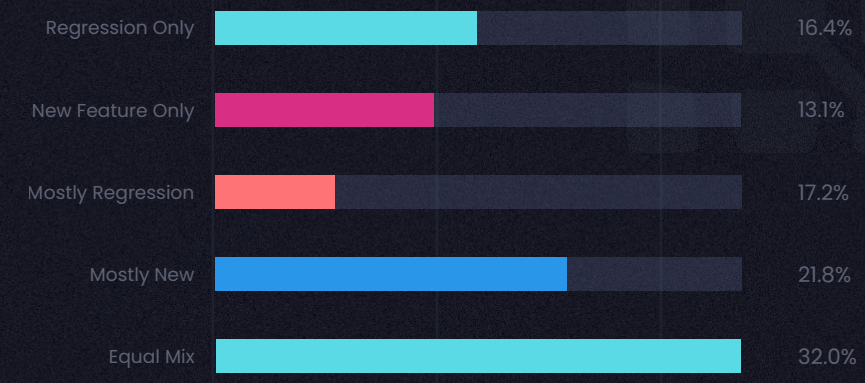
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

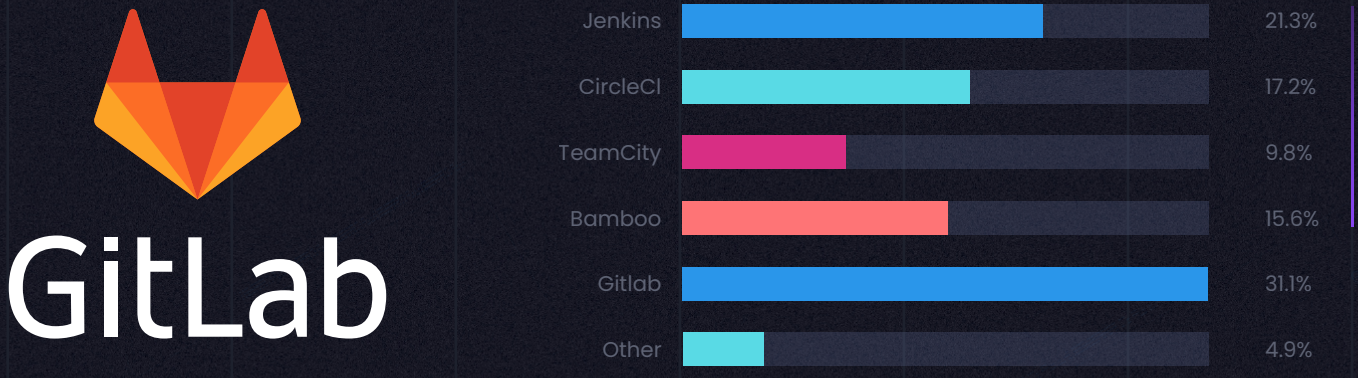
What are you using test automation primarily for?



SUMMARY

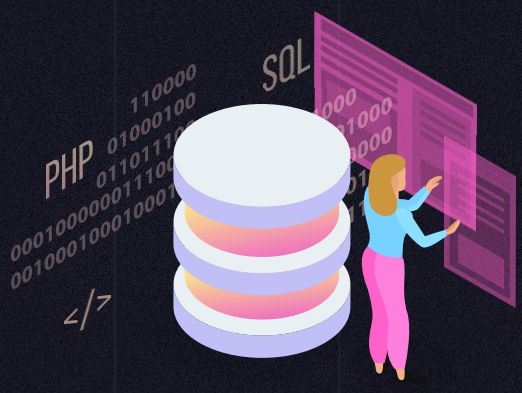
Most respondents are using test automation to verify the functionality of an equal mix of new and existing app features.

Which CI/CD tools does your organization use?



SUMMARY

Gitlab was listed as the preferred CI/CD tool amongst respondents with 31.1% indicating its use. At 21.3% Jenkins is the second most frequently used tool.

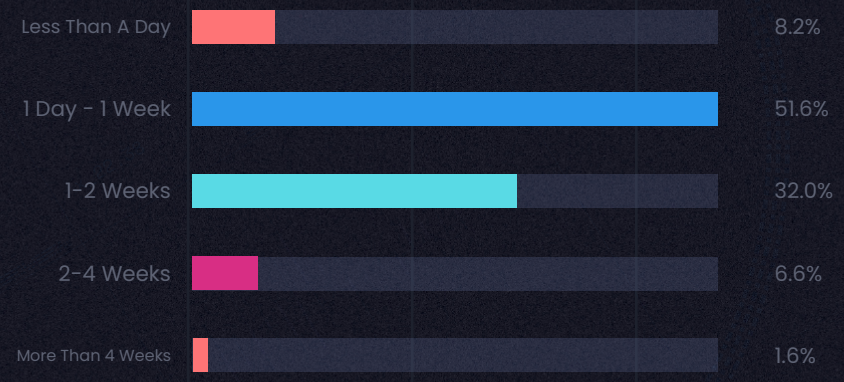


Which of the following metrics best indicates successful test automation implementation?

SUMMARY

Respondents indicated a preference for quantifying test automation success by measuring the number of bugs found.

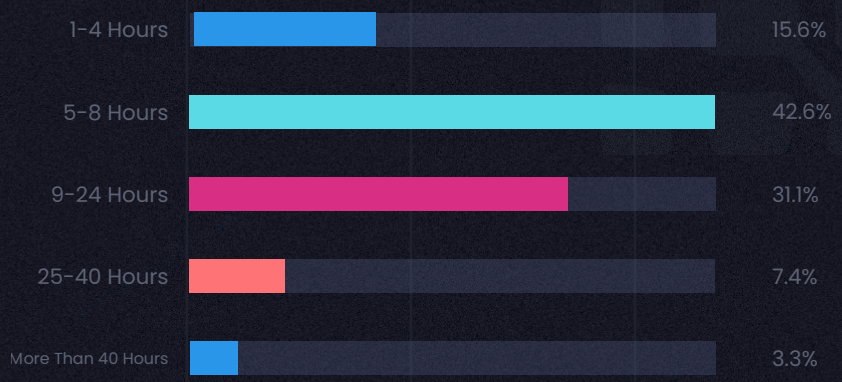
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts within 1 Day - 1 Week.

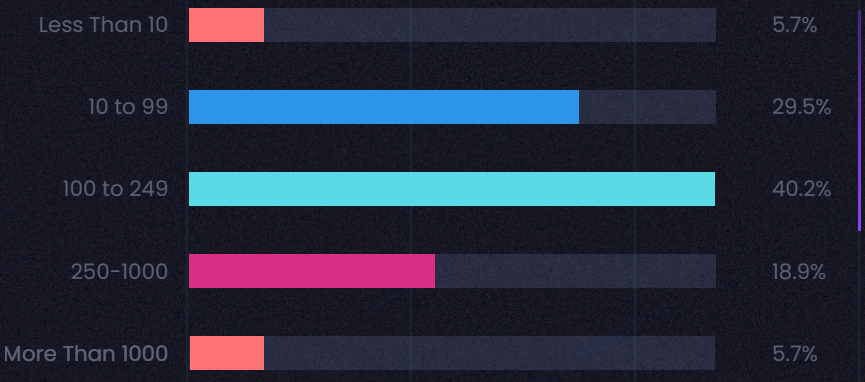
On average, how long does it take to code a test case using the framework of your choice?



SUMMARY

Survey respondents indicated that their test cases are typically coded within a 5-8 hour span.

Approximately how many manual test cases are you executing with each app release?



SUMMARY

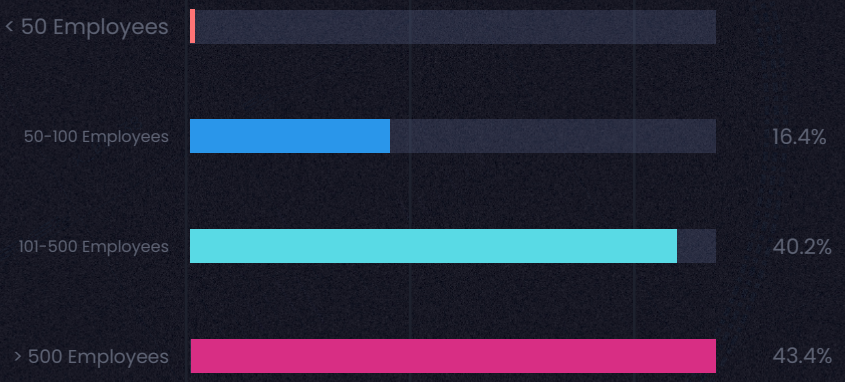
There's plenty of room for automation. 40.2% of respondents indicated that test teams perform 100-249 manual test cases with each app release.

Approximately how long does it take to manually test your app before every release?

SUMMARY

Manual testing is time consuming. 32.8% of respondents indicated an average manual testing time period of 3-5 days with every release.

Company Size



SUMMARY

43.4% of survey respondents indicated that the company they worked for had more than 500 employees.

NEGATIVE SURPRISES

Code Complexity: The coding complexity of developing test scripts

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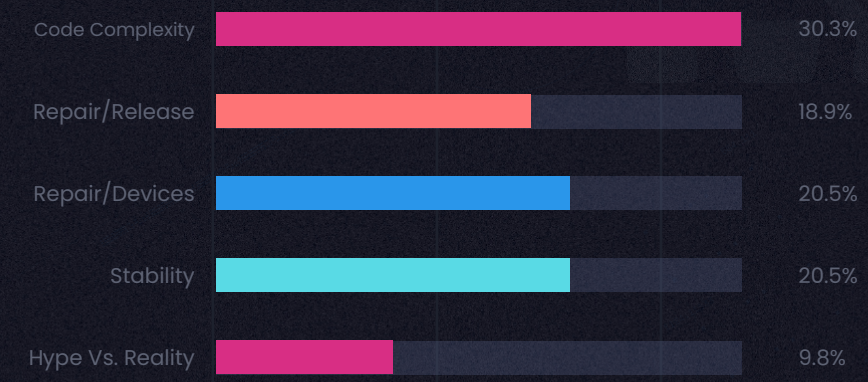
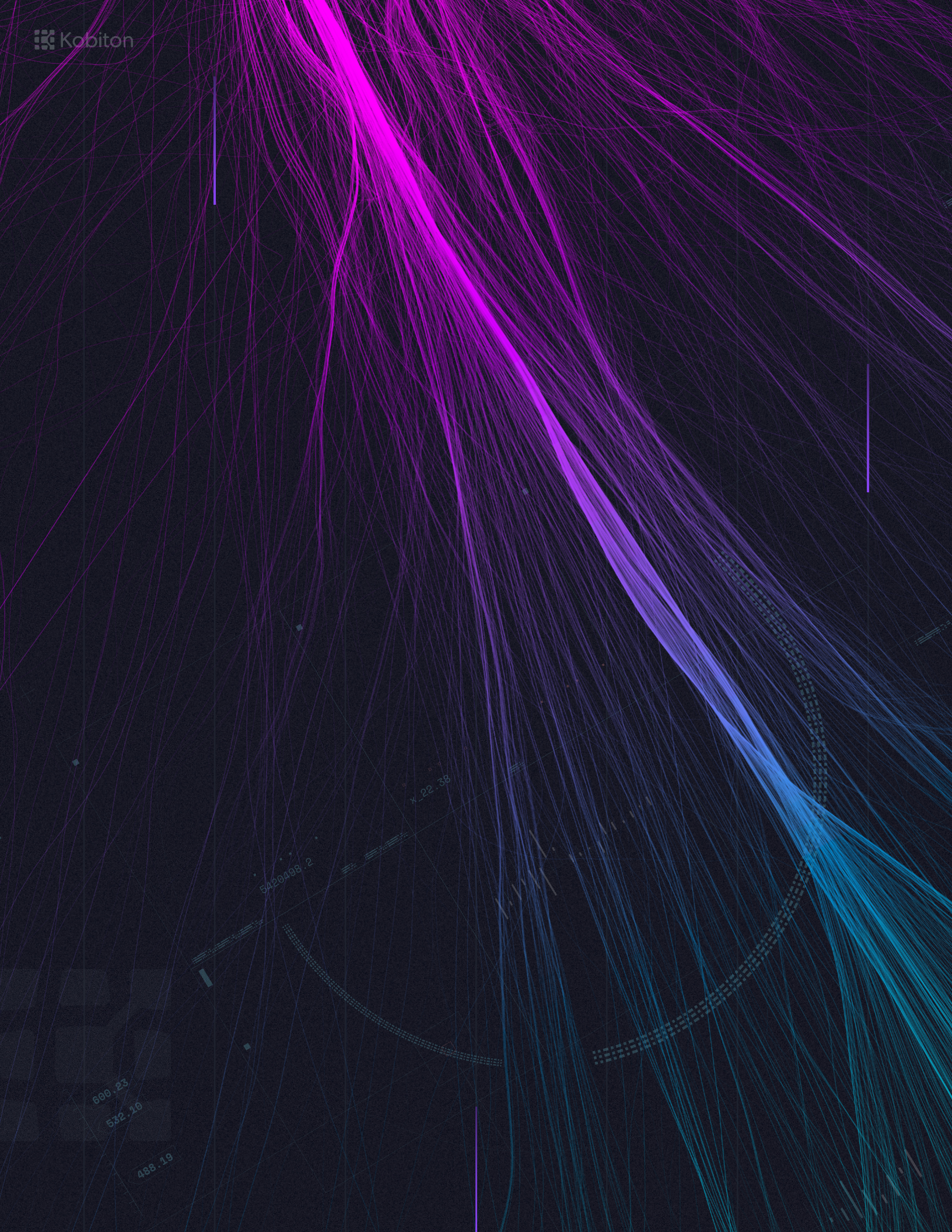
What was the biggest negative surprise you encountered as part of your test automation implementation?



SUMMARY

The largest gripe with implementing a test automation strategy is code complexity for test scripts.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x_22.38
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Kobiton

AUTOMATION BUDGET

30–49%

Automation Budget

Of all the companies that identify as Mobile Critical (*where the app is essential to revenue*), **none** spend less than 10% of their QA budget on mobile test automation, whereas those who claim to be Mobile Strategic (*app is non-essential to company survival*) are more likely to invest below the 10% mark.

Improving app quality is the primary reason cited by all budget ranges for making the move to automation. Time-to-market becomes increasingly important for those with heavier investment, but still secondary to app quality.

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MOBILE STRATEGIES

Mobile Critical: Our business model is centered around a mobile app

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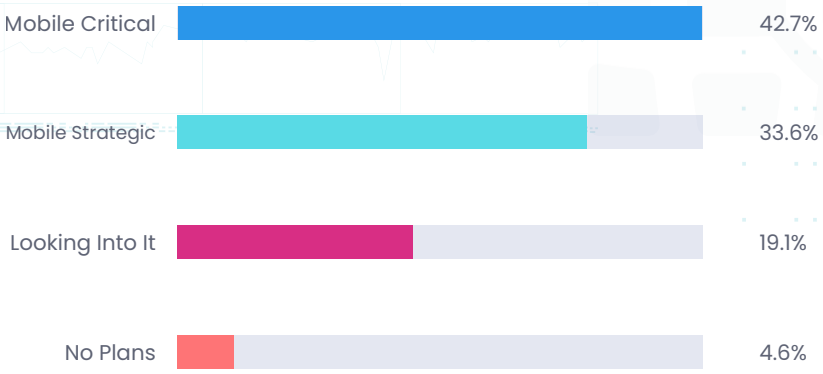
Looking Into It: Mobile is an initiative we're looking to pursue

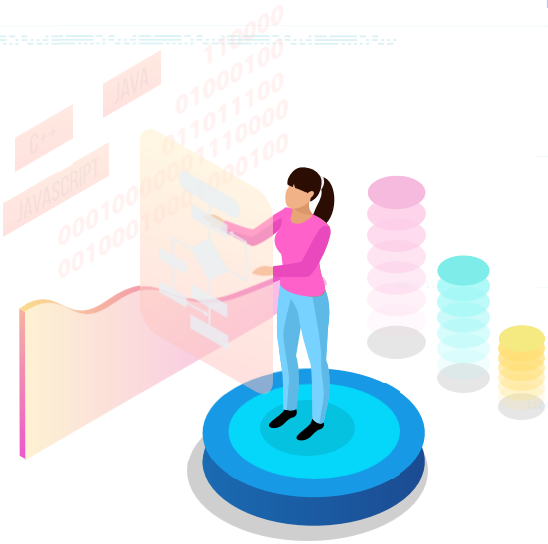
No Plans: We don't have a mobile app or any plans to implement one

Mobile Strategies

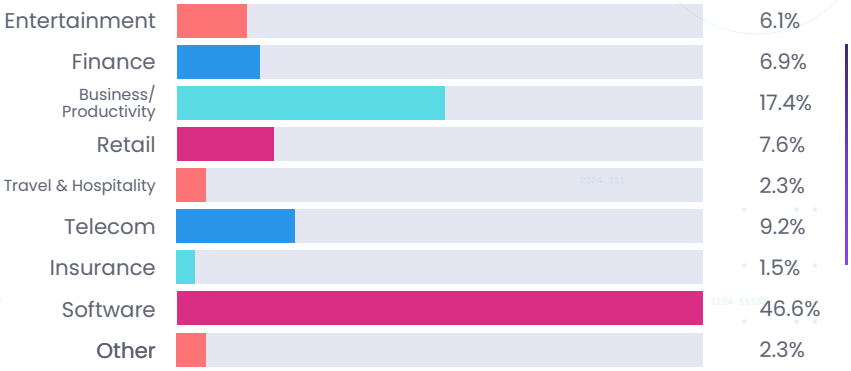


SUMMARY

The majority of respondents indicated that mobile was an important component in their business model.



Industry/App Categories

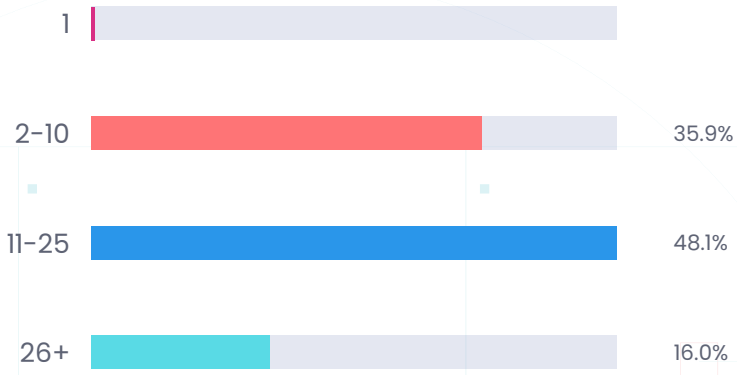


SUMMARY

The majority of responses collected in this survey were from software companies.

Automation Budget: 30% - 49%

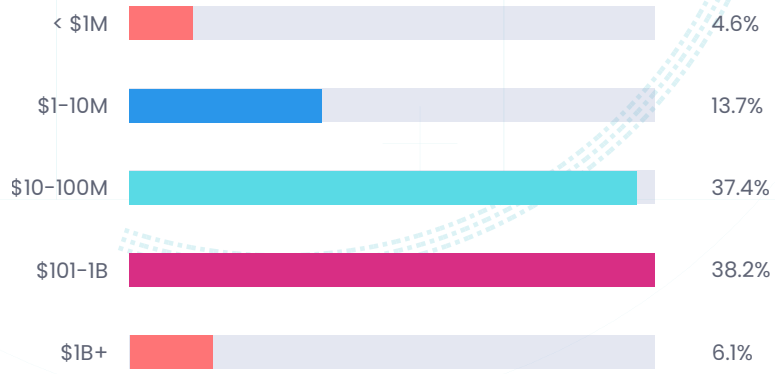
How many testers are on your team?



SUMMARY

Most of the companies surveyed have test teams of 2-25 people. 16.0% had teams of more than 26 people.

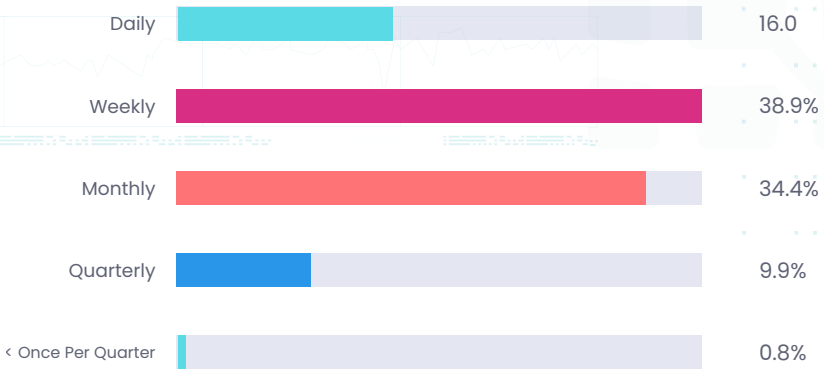
Annual Company Revenue



SUMMARY

38.2% of companies surveyed had an annual revenue of $101-1B. Just 4.6% of respondents indicated an annual revenue of less than $1M.

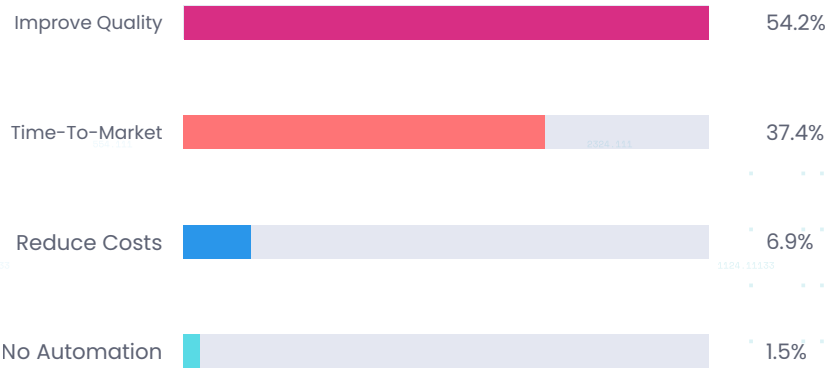
How often do you release app updates?



SUMMARY

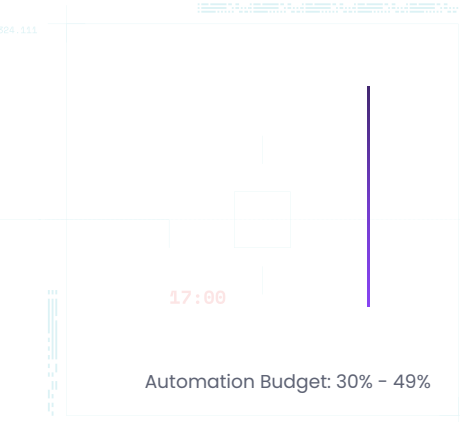
Respondents indicated a preference for semi-frequent updates, with most responses indicating app update releases on a weekly or monthly schedule.

What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

The majority of respondents indicated that a desire to improve overall app quality was the primary strategic driver in choosing to pursue test automation.



Automation Budget: 30% - 49%

TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

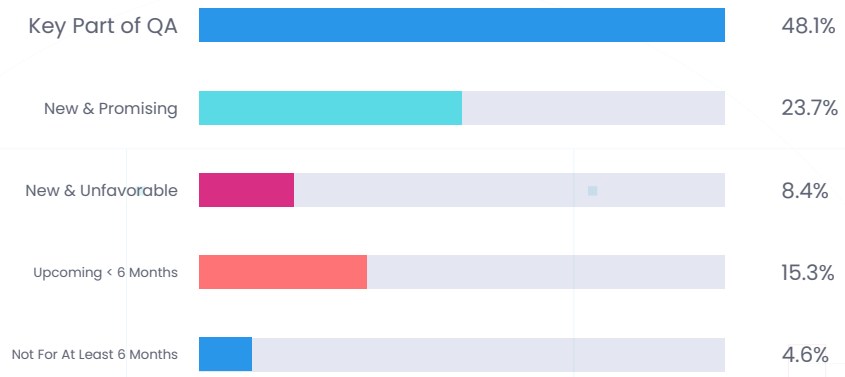
New and Promising: Our automation initiatives are relatively new and promising

New and Unfavorable: Our automation initiatives are relatively new and the results are not what we hoped for

Upcoming <6 months: Automation is an initiative we hope to start within the next 6 months

Not for at least 6 months: Automation will not happen within 6 months

Where would you rate your current test automation maturity?



SUMMARY

48.1% of respondents indicated that test automation was a key part of their quality assurance process.

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

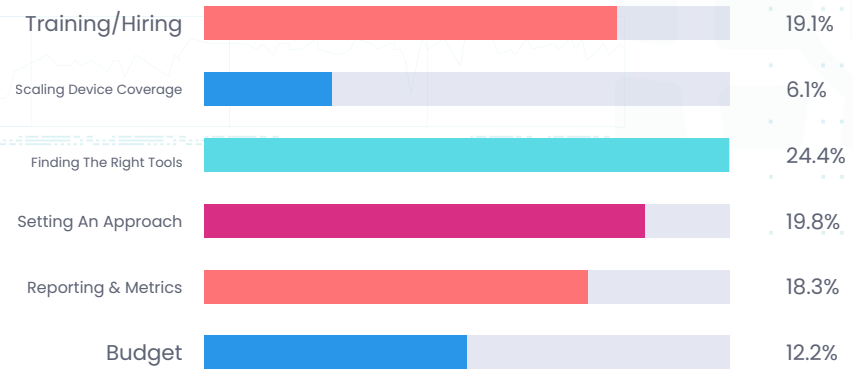
Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

Budget: Convincing the organization of the need to invest in automation

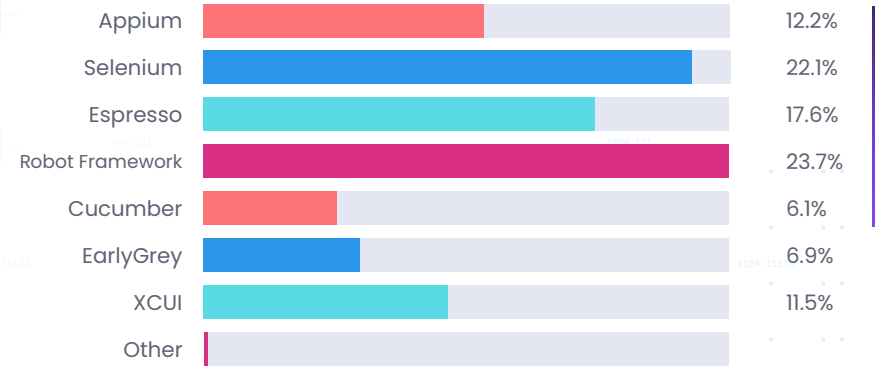
What is your biggest struggle/pain point with using or starting test automation today?



SUMMARY

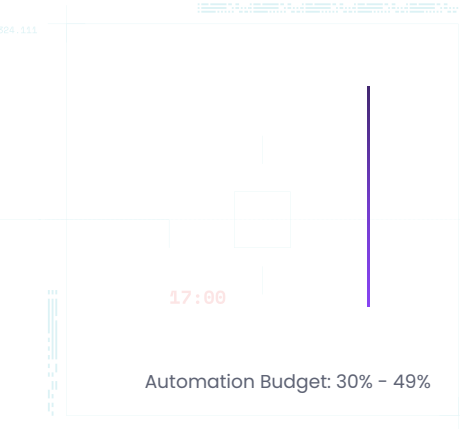
The survey respondents indicated that the largest barrier to entry for test automation is finding the right tools.

Test automation framework usage



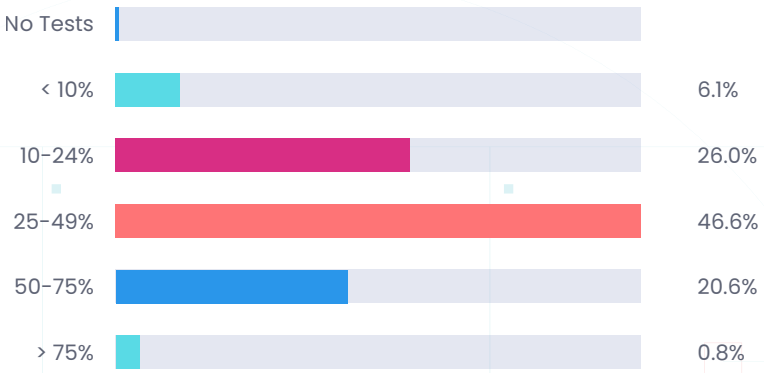
SUMMARY

Responses indicate that Robot Framework is the preferred automation framework.



Automation Budget: 30% - 49%

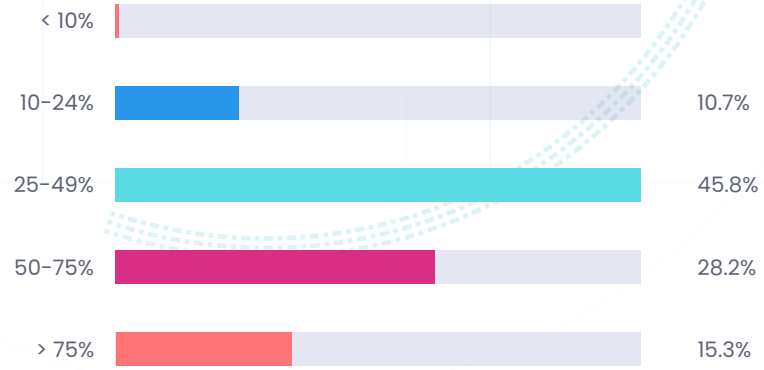
What percentage of your test cases are automated?



SUMMARY

100% of respondents indicated that they are performing some test automation. 46.6% of respondents specified that 25-49% of their test cases are automated.

What percentage of test cases would you like to have automated?



SUMMARY

45.8% of respondents chose 25-49% as their target percentage of automated test cases.

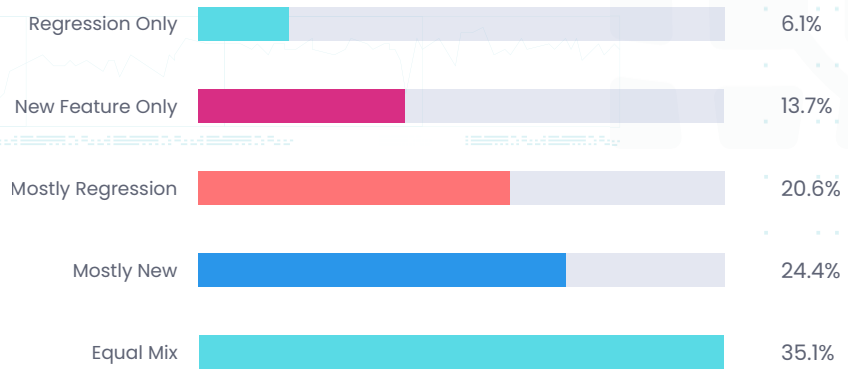
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

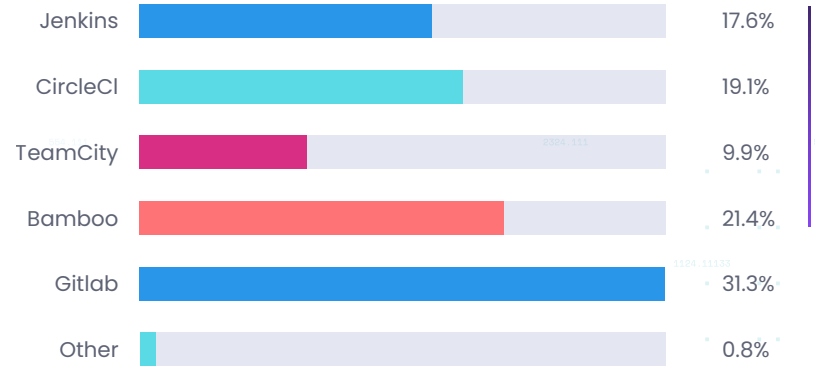
What are you using test automation primarily for?



SUMMARY

Most respondents are using test automation to verify the functionality of an equal mix of new and existing app features.

Which CI/CD tools does your organization use?

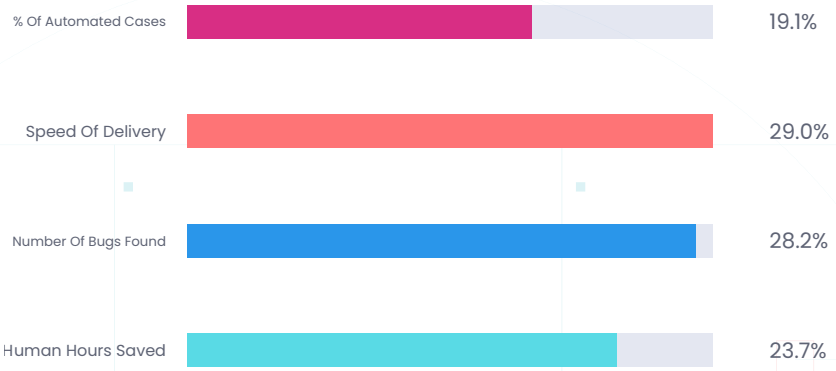


SUMMARY

Gitlab was listed as the preferred CI/CD tool amongst respondents with 28.8% indicating its use.

Automation Budget: 30% - 49%

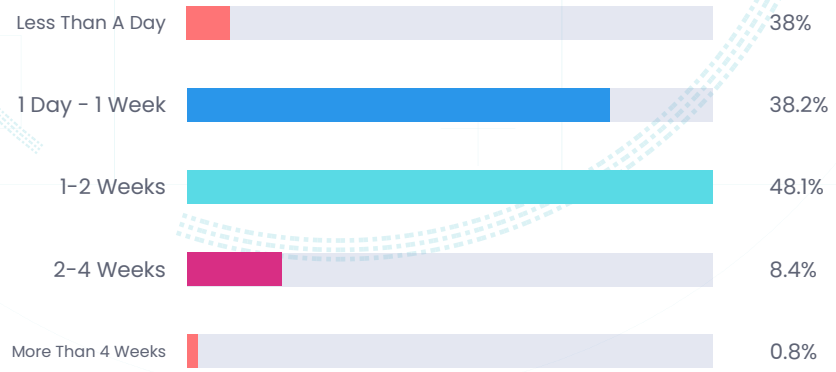
Which of the following metrics best indicates successful test automation implementation?



SUMMARY

Respondents indicated a preference for quantifying test automation success by measuring delivery speed.

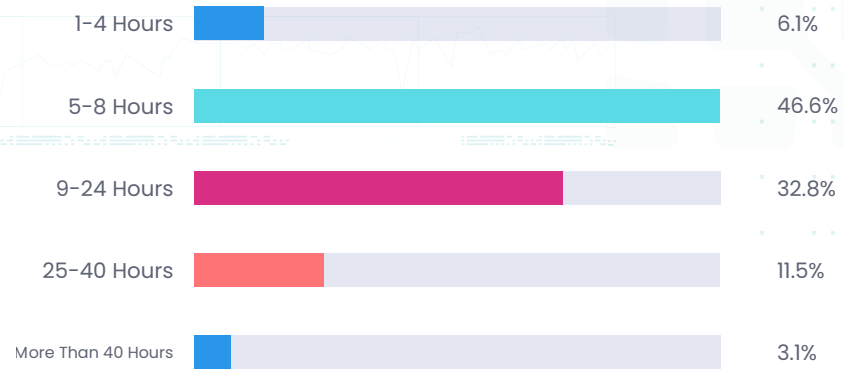
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts within 1 - 2 Weeks.

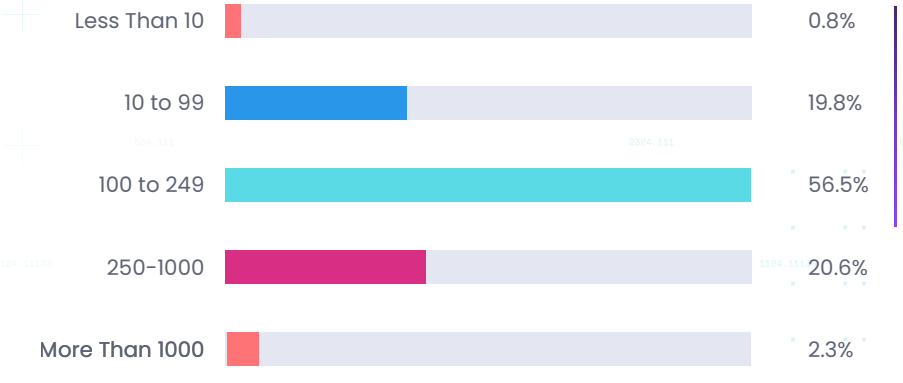
On average, how long does it take to code a test case using the framework of your choice?



SUMMARY

Survey respondents indicated that their test cases are typically coded within a 5-8 hour span.

Approximately how many manual test cases are you executing with each app release?

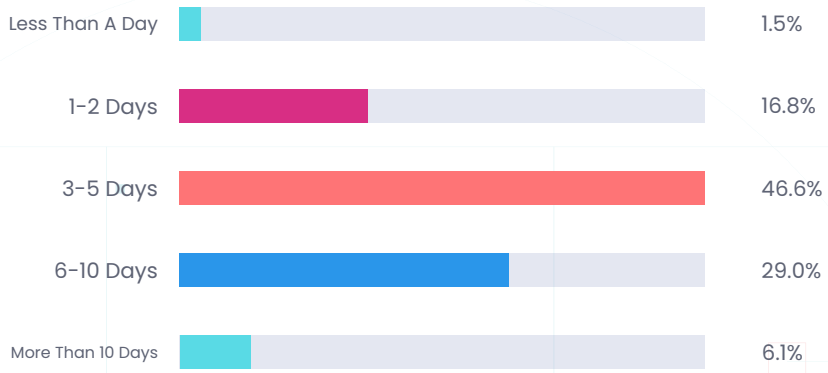


SUMMARY

There's plenty of room for automation. 56.5% of respondents indicated that test teams perform 100-249 manual test cases with each app release.

Automation Budget: 30% - 49%

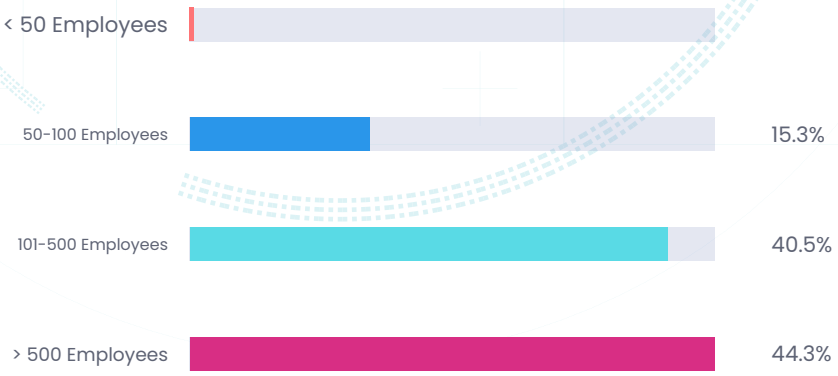
Approximately how long does it take to manually test your app before every release?



SUMMARY

Manual testing is time consuming. 46.6% of respondents indicated an average manual testing time period of 3-5 days with every release.

Company Size



SUMMARY

44.3% of survey respondents indicated that the company they worked for had more than 500 employees.

NEGATIVE SURPRISES

Code Complexity: The coding complexity of developing test scripts

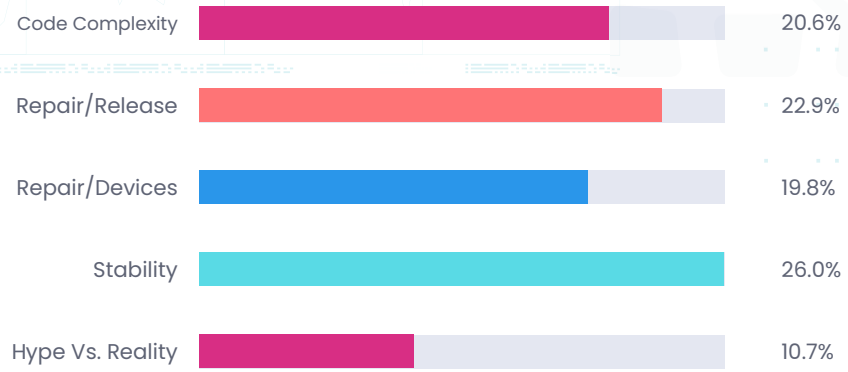
Repair/Release: The need to continually fix test scripts with every release

Repair/Devices: The need to continually fix test scripts to work across more devices

Stability: Having a stable test environment with predictable data

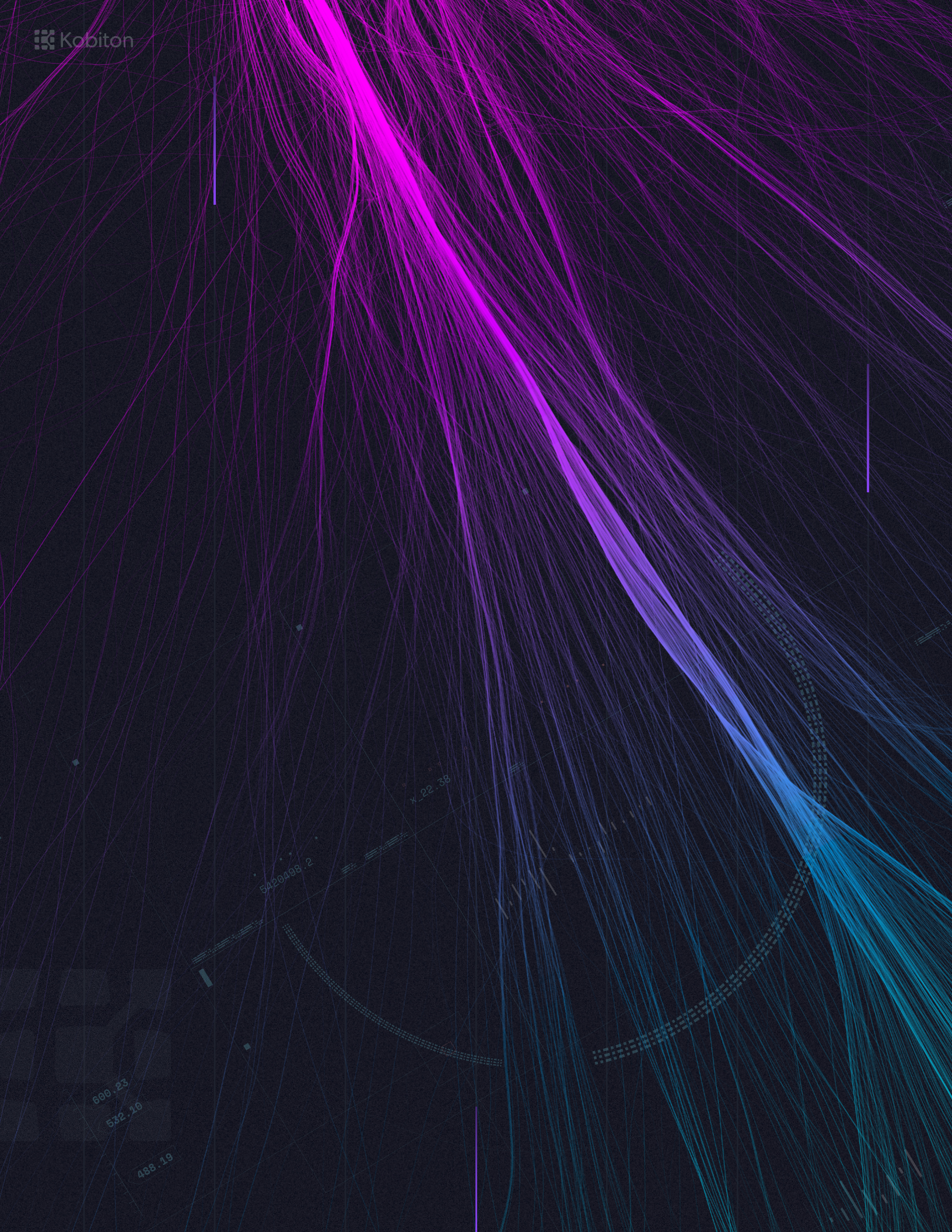
Hype vs. Reality: Vendor products not living up to their claims or hype

What was the biggest negative surprise you encountered as part of your test automation implementation?



SUMMARY

Stability issues are rampant in the test automation implementations used by most respondents.


Kobiton
x_22.38
5420498.2
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532.10
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Kobiton

AUTOMATION BUDGET

50–75%

Automation Budget

Of all the companies that identify as Mobile Critical (*where the app is essential to revenue*), **none** spend less than 10% of their QA budget on mobile test automation, whereas those who claim to be Mobile Strategic (*app is non-essential to company survival*) are more likely to invest below the 10% mark.

Improving app quality is the primary reason cited by all budget ranges for making the move to automation. Time-to-market becomes increasingly important for those with heavier investment, but still secondary to app quality.

In terms of app release frequency, ~68% of all respondents release on a monthly or weekly basis, with only 16% reaching the elite status of daily releases. However, this number changes dramatically for companies spending 50-75% of their budget on automation. Every company with this level of investment is able to release at least weekly, with 50% achieving daily releases. Those who need to release on a daily basis place more emphasis on test automation to accomplish that goal, and therefore spend a greater percentage of their overall QA budget on automation.

Across the board the primary obstacle causing organizations in every budget range to stumble is the difficulty in evaluating and selecting the right tools. More than 10% of all respondents say that vendors who overpromise and underdeliver is one of the biggest negative surprises of the software procurement process. **This should serve as a cautionary note for vendors:** prospects struggle with selecting tools, and when they do select them, they *certainly* don't want to be disappointed at the product not living up to its hype. Test Leads, Managers, and QA Directors should be vigilant and do thorough due diligence when engaging vendors on fairly rigorous proof-of-concepts.

When looking at success criteria for test automation, smaller budgets place more emphasis on the number of bugs found, whereas speed of delivery becomes proportionally more critical as the budget allocation increases. Additionally, there appears to be a linear relationship between the percentage of budget allocated to test automation and the number of test cases automated. Those spending 10% of their QA budget on automation have automated about 10% of test cases, and those spending 10-25% of their QA budget have automated roughly 10-25% of their test cases, etc.

MOBILE STRATEGIES

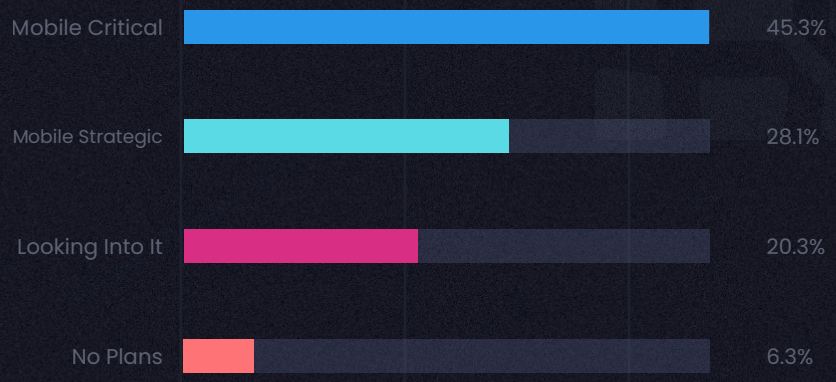
Mobile Critical: Our business model is centered around a mobile app

Mobile Strategic: Mobile is an important channel for our company, but we would survive without it

Looking Into It: Mobile is an initiative we're looking to pursue

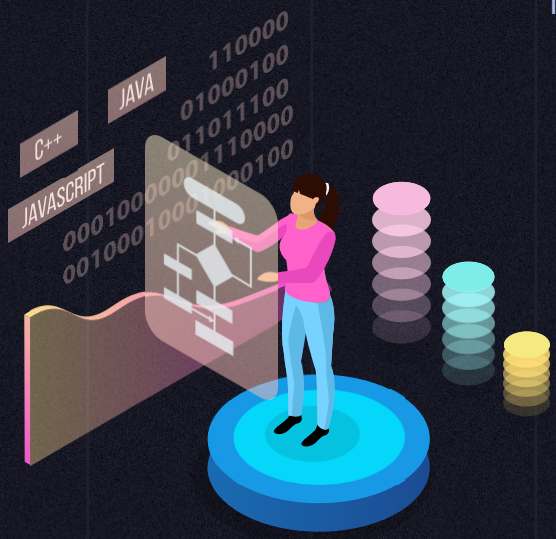
No Plans: We don't have a mobile app or any plans to implement one

Mobile Strategies

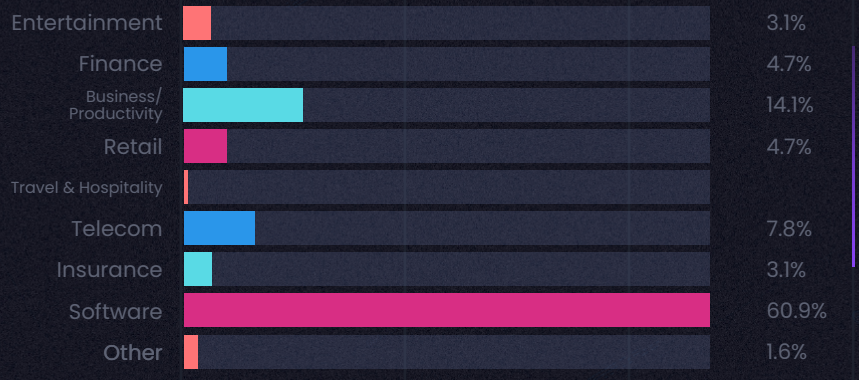


SUMMARY

The majority of respondents indicated that mobile was an important component in their business model.



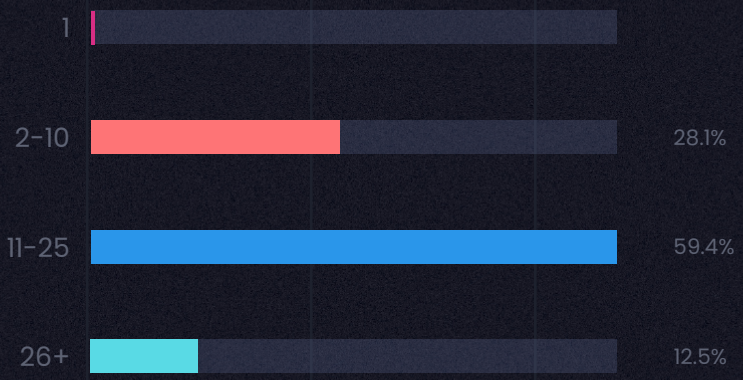
Industry/App Categories



SUMMARY

At 60.9%, the majority of responses collected in this survey were from software companies.

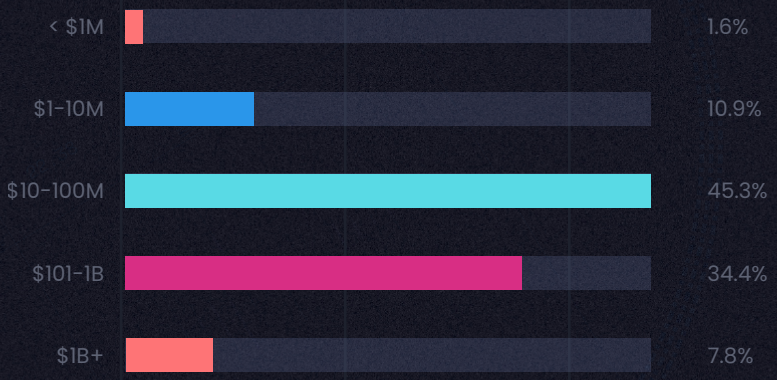
How many testers are on your team?



SUMMARY

Most of the companies surveyed have test teams of 2-25 people.

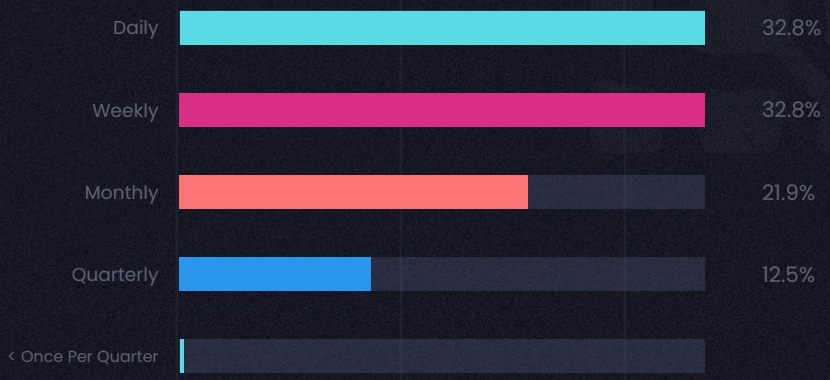
Annual Company Revenue



SUMMARY

45.3% of companies surveyed had an annual revenue of $10-100M. Just 1.6% of respondents indicated an annual revenue of less than $1M.

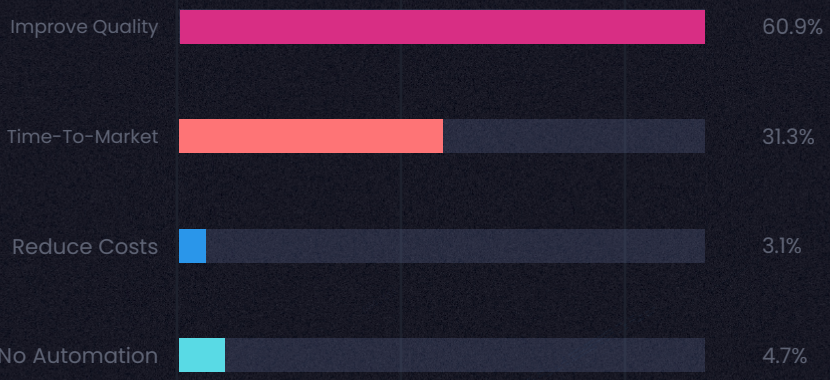
How often do you release app updates?



SUMMARY

Respondents indicated a preference for semi-frequent updates, with most responses indicating app update releases on a weekly or monthly schedule.

What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

The majority of respondents indicated that a desire to improve overall app quality was the primary strategic driver in choosing to pursue test automation.

TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

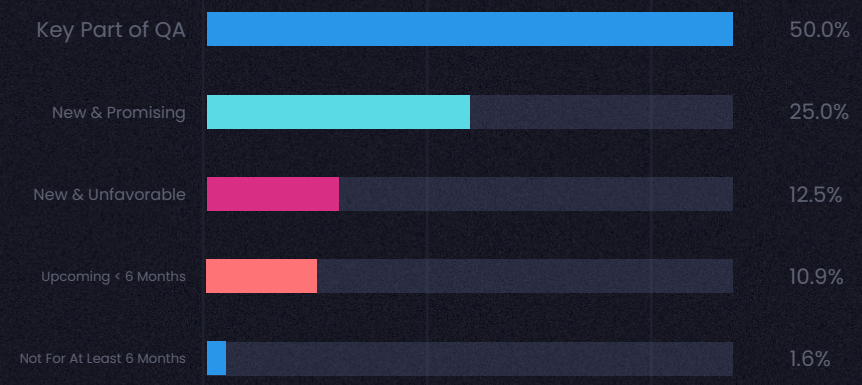
New and Promising: Our automation initiatives are relatively new and promising

New and Unfavorable: Our automation initiatives are relatively new and the results are not what we hoped for

Upcoming <6 months: Automation is an initiative we hope to start within the next 6 months

Not for at least 6 months: Automation will not happen within 6 months

Where would you rate your current test automation maturity?



SUMMARY

50.0% of respondents indicated that test automation was a key part of their quality assurance process.

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

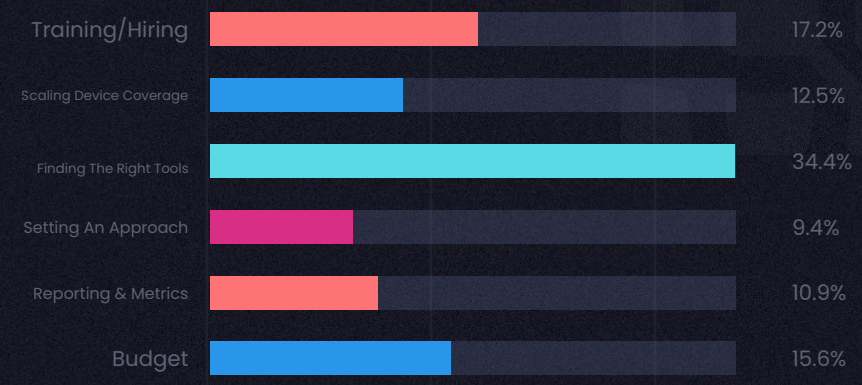
Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

Budget: Convincing the organization of the need to invest in automation

What is your biggest struggle/pain point with using or starting test automation today?



SUMMARY

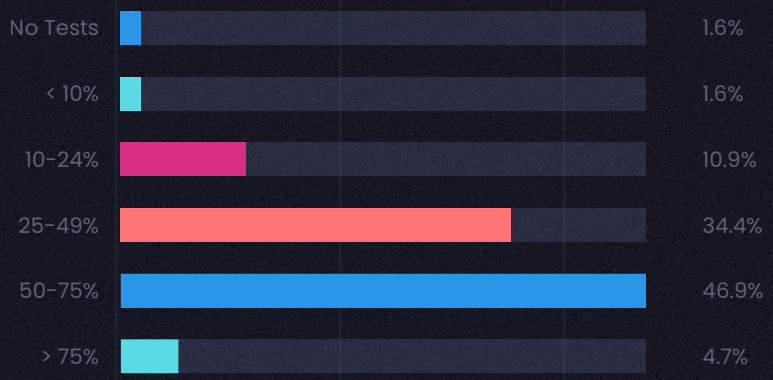
The survey respondents indicated that the largest barrier to entry for test automation is finding the right tools.

Test automation framework usage

SUMMARY

Responses indicate that Robot Framework is the preferred automation framework.

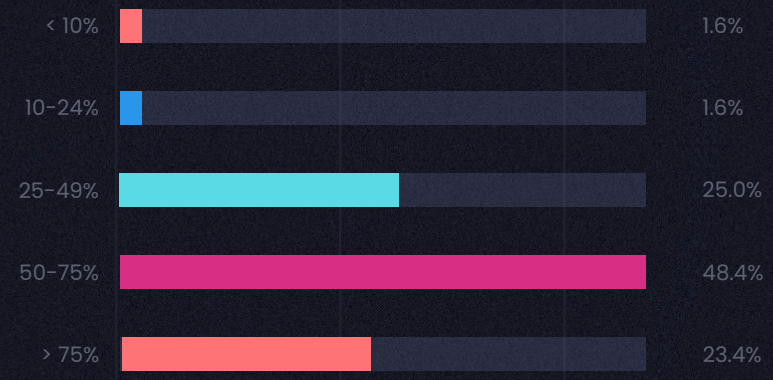
What percentage of your test cases are automated?



SUMMARY

98.4% of respondents indicated that they are performing some test automation. 46.9% of respondents specified that 50-75% of their test cases are automated.

What percentage of test cases would you like to have automated?



SUMMARY

Most respondents clearly see the value of test automation, with a noteworthy 23.4% seeking to automate more than 75% of their test cases. Comparing this graph with the one above shows a clear trend toward desired increases in test automation.

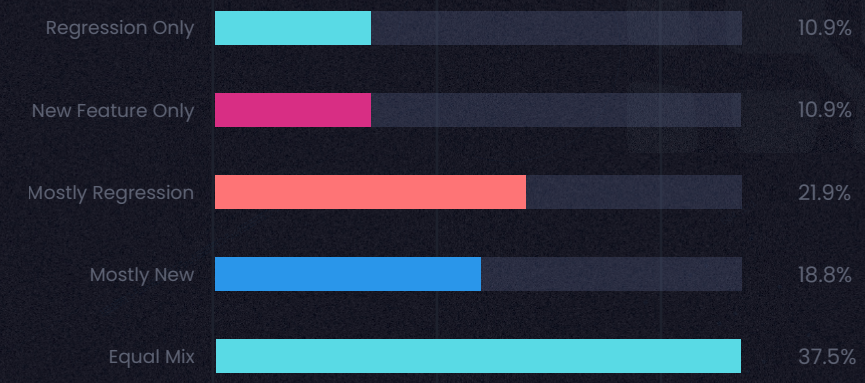
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

What are you using test automation primarily for?



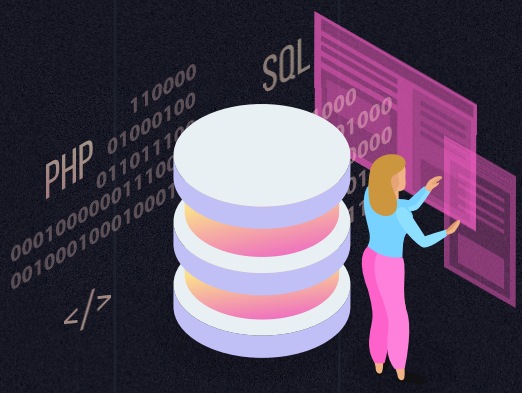
SUMMARY

Most respondents are using test automation to verify the functionality of an equal mix of new and existing app features.

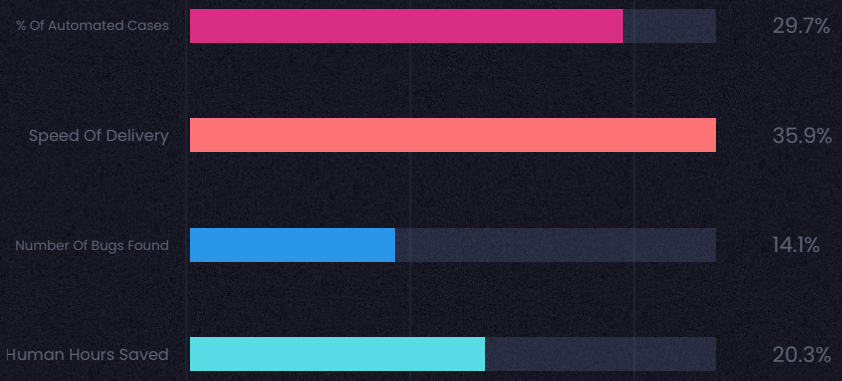
Which CI/CD tools does your organization use?

SUMMARY

Gitlab was listed as the preferred CI/CD tool amongst respondents with 26.6% indicating its use.



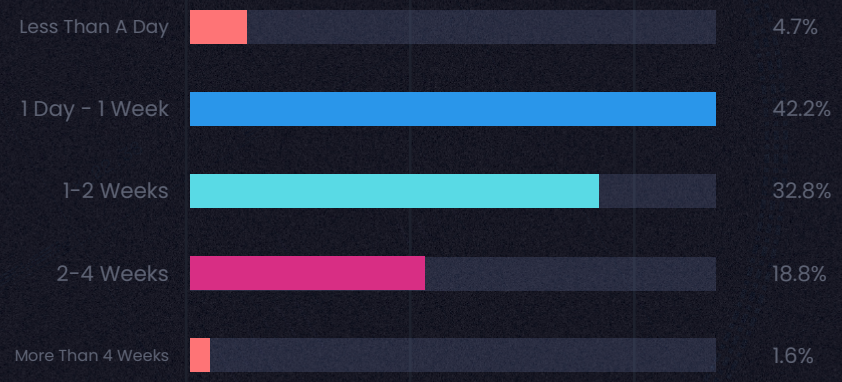
Which of the following metrics best indicates successful test automation implementation?



SUMMARY

Respondents indicated a preference for quantifying test automation success by measuring delivery speed.

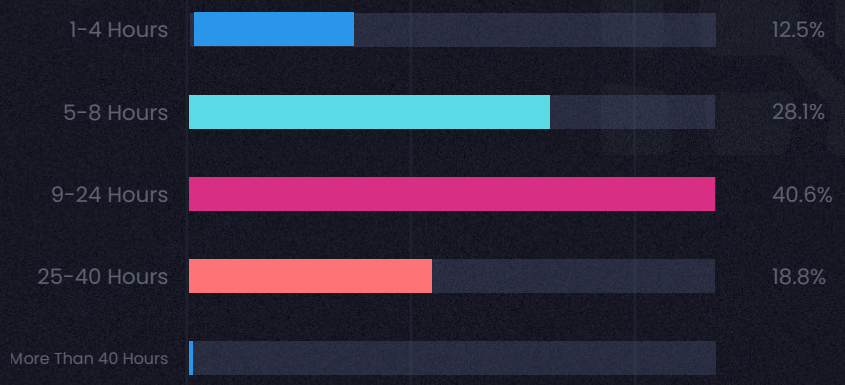
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts within 1 Day - 1 Week.

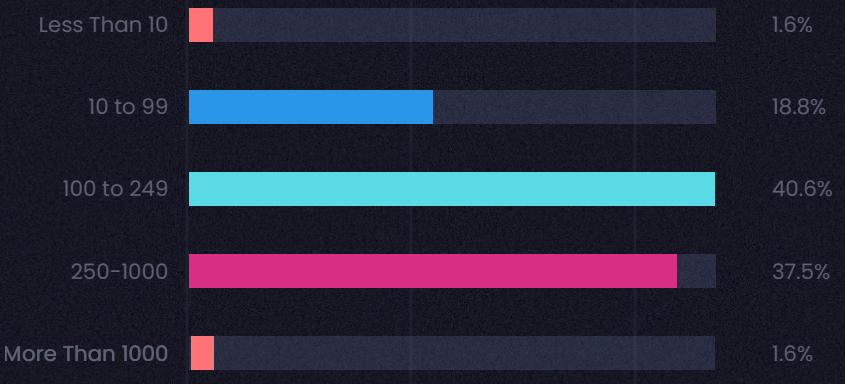
On average, how long does it take to code a test case using the framework of your choice?



SUMMARY

Survey respondents indicated that their test cases are typically coded within a 9-24 hour span.

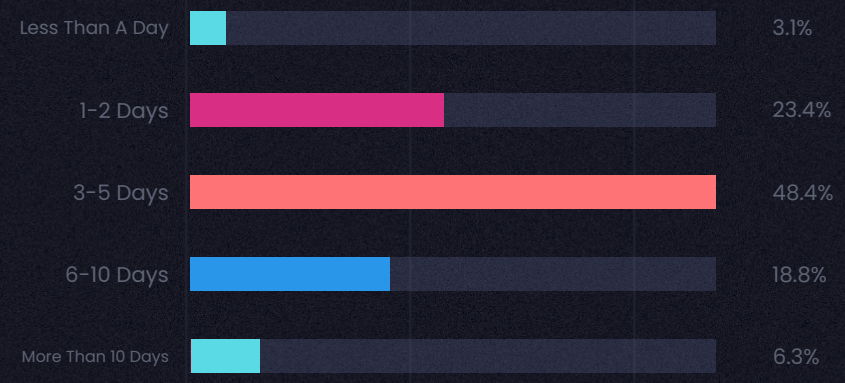
Approximately how many manual test cases are you executing with each app release?



SUMMARY

There's plenty of room for automation. 40.6% of respondents indicated that test teams perform 100-249 manual test cases with each app release.

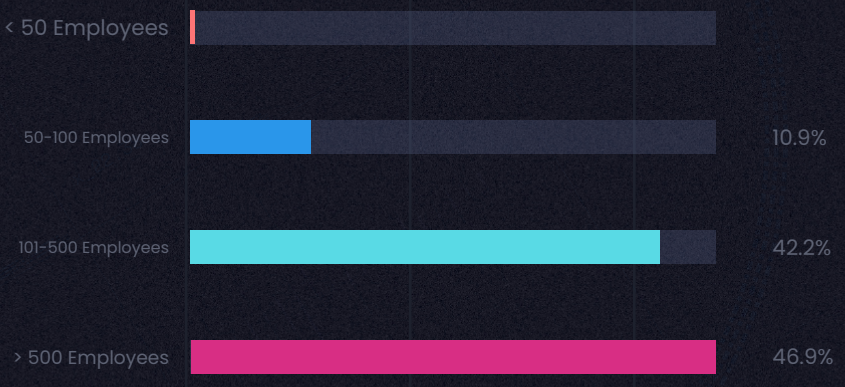
Approximately how long does it take to manually test your app before every release?



SUMMARY

Manual testing is time consuming. 48.4% of respondents indicated an average manual testing time period of 3-5 days with every release.

Company Size



SUMMARY

46.9% of survey respondents indicated that the company they worked for had more than 500 employees.

NEGATIVE SURPRISES

Code Complexity: The coding complexity of developing test scripts

Repair/Release: The need to continually fix test scripts with every release

Repair/Devices: The need to continually fix test scripts to work across more devices

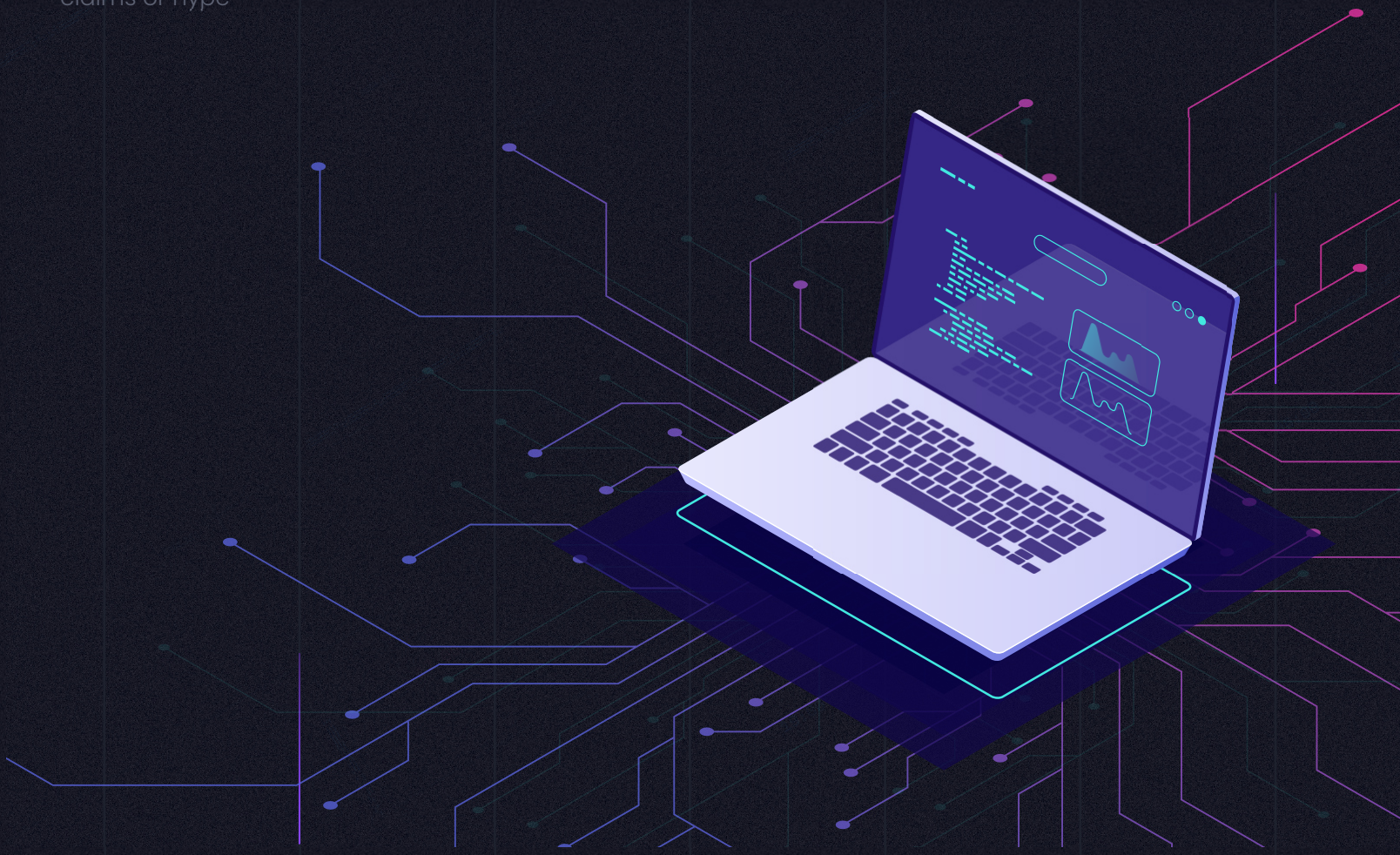
Stability: Having a stable test environment with predictable data

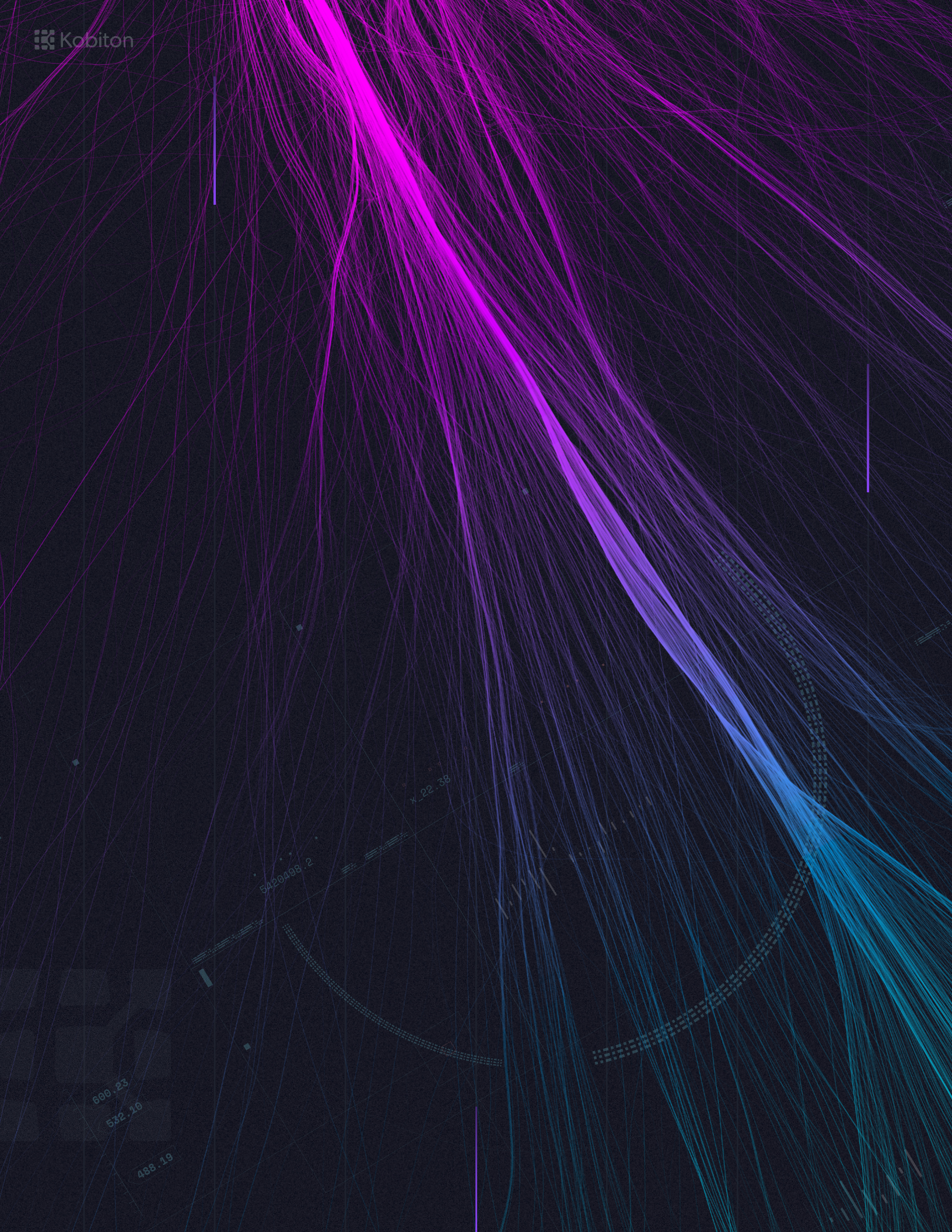
Hype vs. Reality: Vendor products not living up to their claims or hype

What was the biggest negative surprise you encountered as part of your test automation implementation?

SUMMARY

The largest gripe with implementing a test automation strategy is the need to continually fix test scripts to work across more devices.

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Kobiton

AUTOMATION BUDGET

MORE THAN 75%

Automation Budget

Of all the companies that identify as Mobile Critical (*where the app is essential to revenue*), **none** spend less than 10% of their QA budget on mobile test automation, whereas those who claim to be Mobile Strategic (*app is non-essential to company survival*) are more likely to invest below the 10% mark.

Improving app quality is the primary reason cited by all budget ranges for making the move to automation. Time-to-market becomes increasingly important for those with heavier investment, but still secondary to app quality.

In terms of app release frequency, ~68% of all respondents release on a monthly or weekly basis, with only 16% reaching the elite status of daily releases. However, this number changes dramatically for companies spending 50-75% of their budget on automation. Every company with this level of investment is able to release at least weekly, with 50% achieving daily releases. Those who need to release on a daily basis place more emphasis on test automation to accomplish that goal, and therefore spend a greater percentage of their overall QA budget on automation.

Across the board the primary obstacle causing organizations in every budget range to stumble is the difficulty in evaluating and selecting the right tools. More than 10% of all respondents say that vendors who overpromise and underdeliver is one of the biggest negative surprises of the software procurement process. **This should serve as a cautionary note for vendors:** prospects struggle with selecting tools, and when they do select them, they *certainly* don't want to be disappointed at the product not living up to its hype. Test Leads, Managers, and QA Directors should be vigilant and do thorough due diligence when engaging vendors on fairly rigorous proof-of-concepts.

When looking at success criteria for test automation, smaller budgets place more emphasis on the number of bugs found, whereas speed of delivery becomes proportionally more critical as the budget allocation increases. Additionally, there appears to be a linear relationship between the percentage of budget allocated to test automation and the number of test cases automated. Those spending 10% of their QA budget on automation have automated about 10% of test cases, and those spending 10-25% of their QA budget have automated roughly 10-25% of their test cases, etc.

MOBILE STRATEGIES

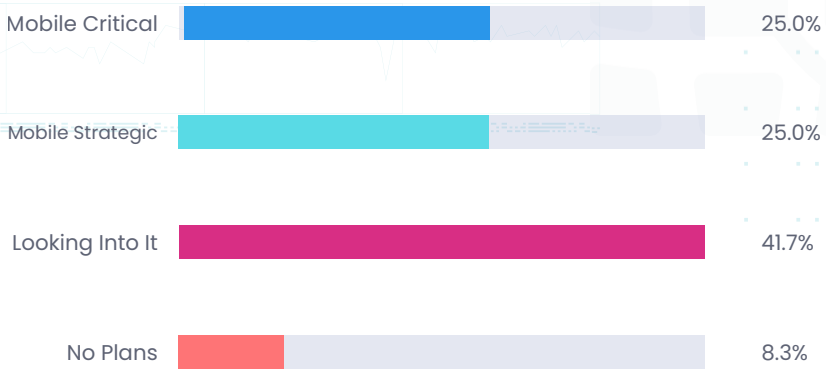
Mobile Critical: Our business model is centered around a mobile app

Mobile Strategic: Mobile is an important channel for our company, but we would survive without it

Looking Into It: Mobile is an initiative we're looking to pursue

No Plans: We don't have a mobile app or any plans to implement one

Mobile Strategies



SUMMARY

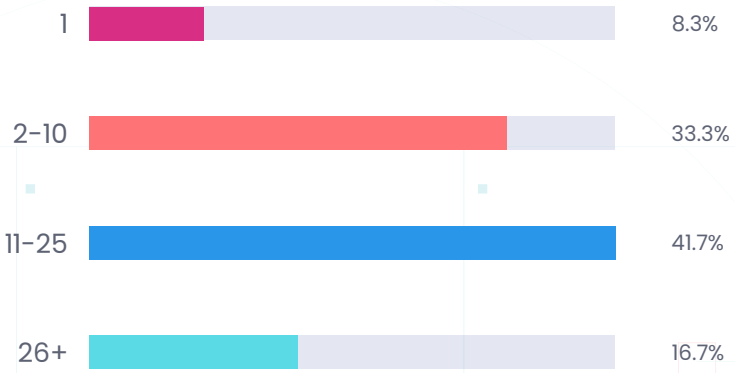
The majority of respondents indicated that mobile is an initiative they're looking to pursue.

Industry/App Categories

SUMMARY

At 75%, the majority of responses collected in this survey were from software companies.

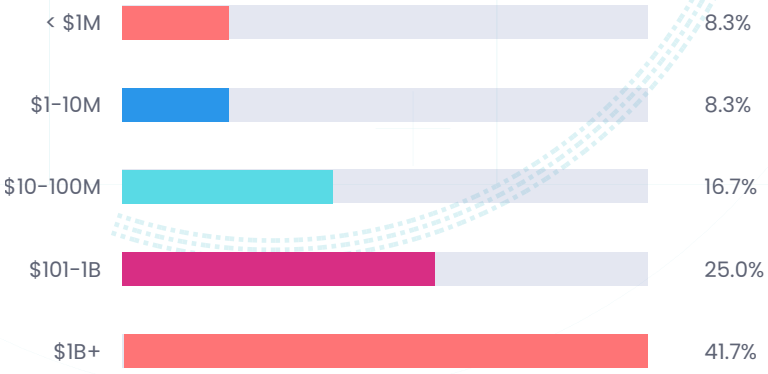
How many testers are on your team?



SUMMARY

Most of the companies surveyed have test teams of 2-25 people. 8.3% of respondents had 1 tester, while 16.7% had teams of more than 26 people.

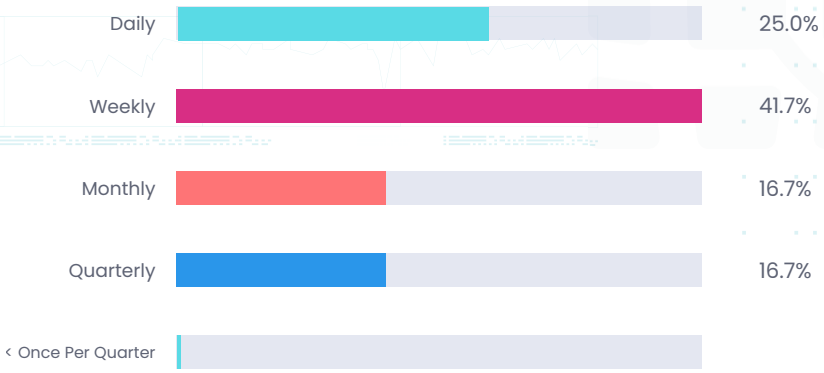
Annual Company Revenue



SUMMARY

41.7% of respondents had annual company revenues of more than $1 billion.

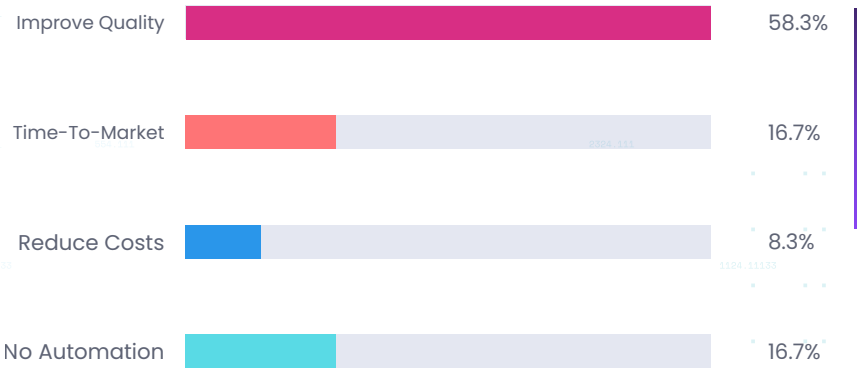
How often do you release app updates?



SUMMARY

Respondents indicated a preference for semi-frequent updates, with most responses indicating app update releases on a daily or weekly schedule.

What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

The majority of respondents indicated that a desire to improve overall app quality was the primary strategic driver in choosing to pursue test automation.

TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

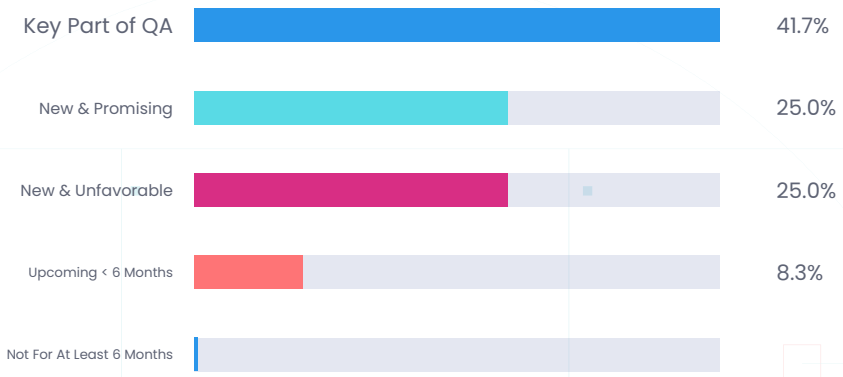
New and Promising: Our automation initiatives are relatively new and promising

New and Unfavorable: Our automation initiatives are relatively new and the results are not what we hoped for

Upcoming <6 months: Automation is an initiative we hope to start within the next 6 months

Not for at least 6 months: Automation will not happen within 6 months

Where would you rate your current test automation maturity?



SUMMARY

41.7% of respondents indicated that test automation was a key part of their quality assurance process.

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

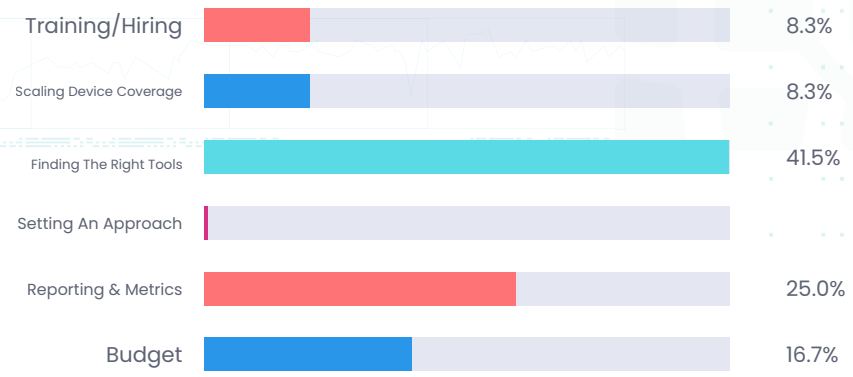
Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

Budget: Convincing the organization of the need to invest in automation

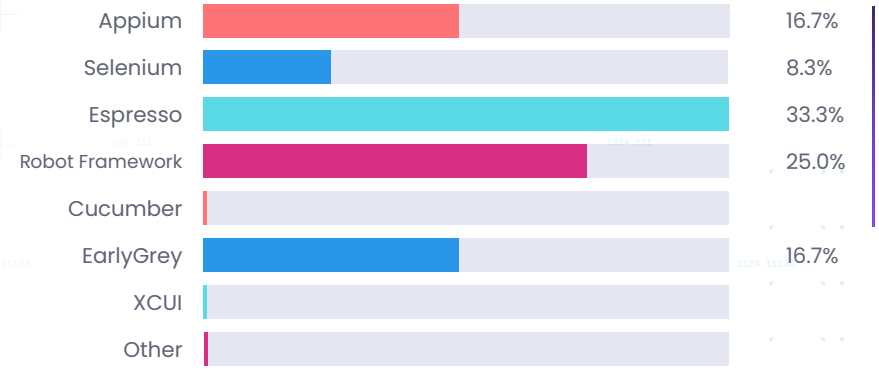
What is your biggest struggle/pain point with using or starting test automation today?



SUMMARY

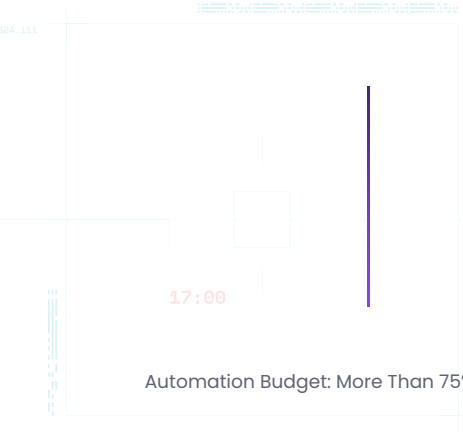
The survey respondents indicated that the largest barrier to entry for test automation is finding the right tools.

Test automation framework usage



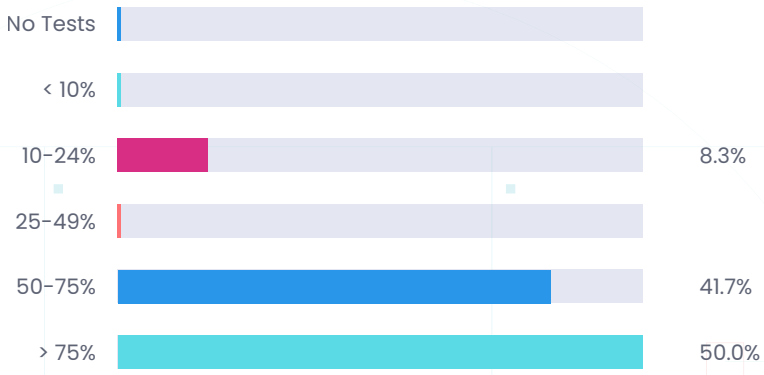
SUMMARY

Responses indicate that Espresso is the preferred automation framework.



Automation Budget: More Than 75%

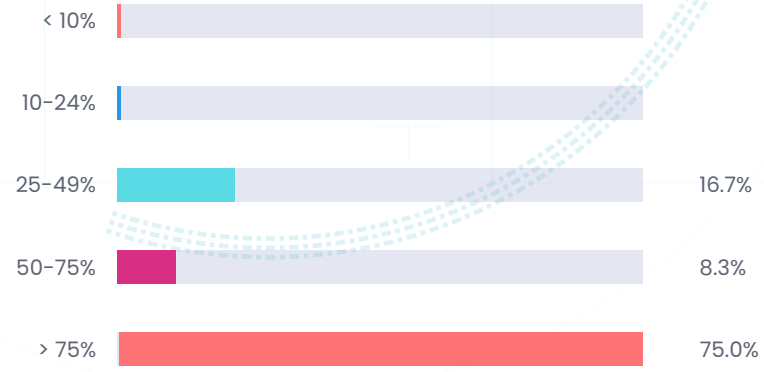
What percentage of your test cases are automated?



SUMMARY

50% of respondents indicated that more than 75% of their test cases are automated.

What percentage of test cases would you like to have automated?



SUMMARY

Most respondents clearly see the value of test automation, with a noteworthy 75% of respondents seeking to automate more than 75% of their test cases.

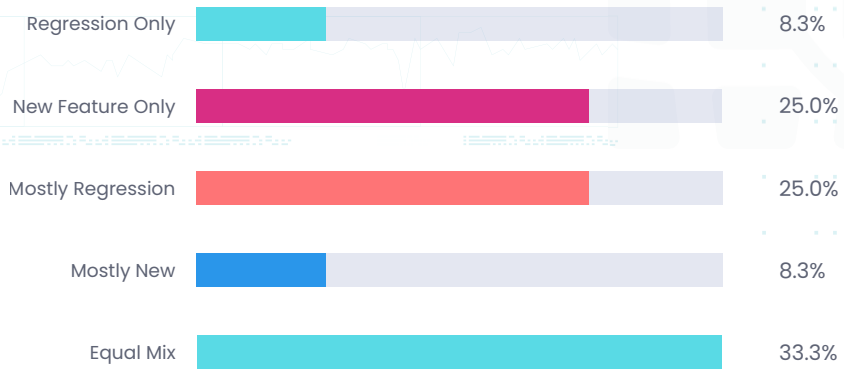
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

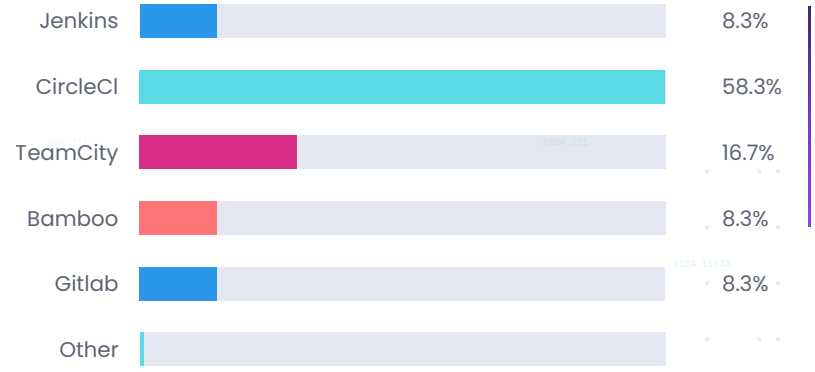
What are you using test automation primarily for?



SUMMARY

Most respondents are using test automation to verify the functionality of an equal mix of new and existing app features.

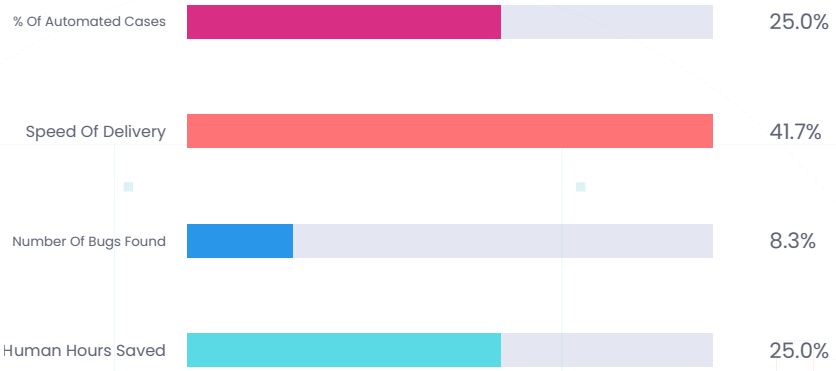
Which CI/CD tools does your organization use?



SUMMARY

CircleCI was listed as the preferred CI/CD tool amongst respondents with 58.3% indicating its use.

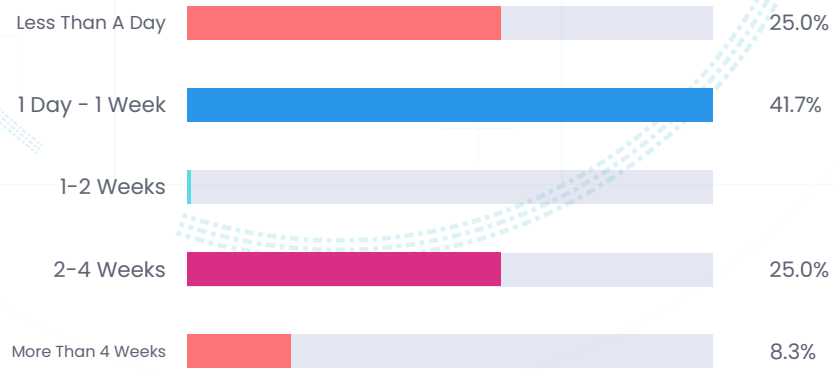
Which of the following metrics best indicates successful test automation implementation?



SUMMARY

Respondents indicated a preference for quantifying test automation success by measuring delivery speed.

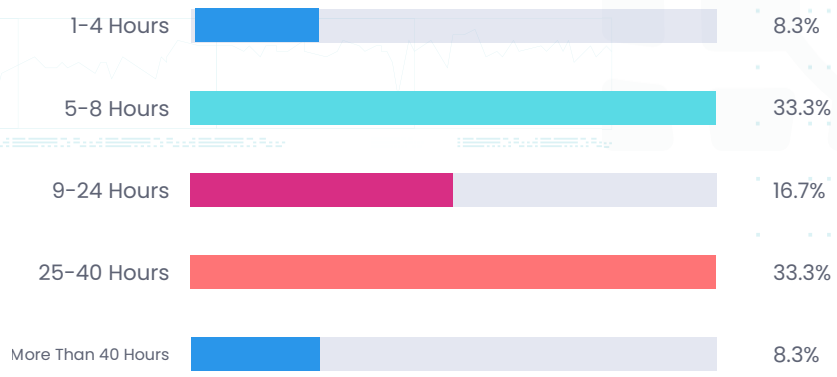
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts within 1 Day - 1 Week.

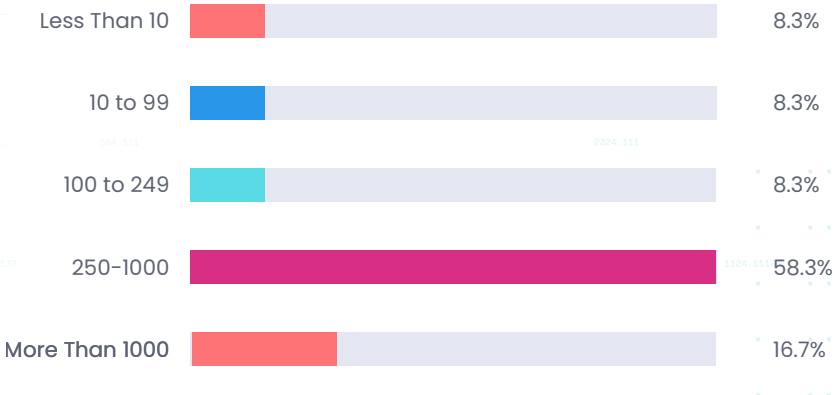
On average, how long does it take to code a test case using the framework of your choice?



SUMMARY

Survey respondents indicated that their test cases are typically coded within a 5-8 hour span.

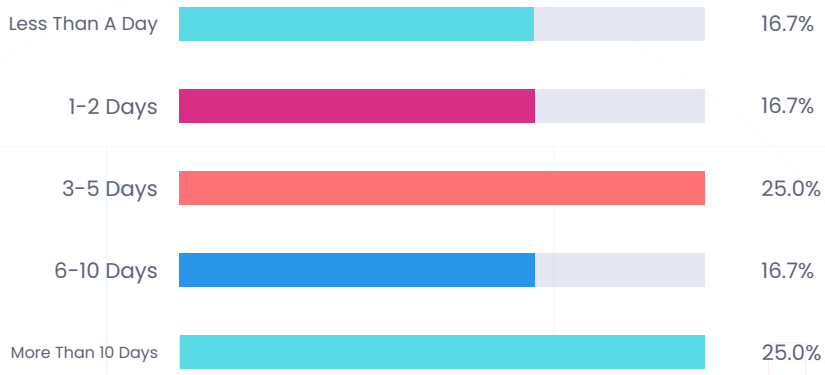
Approximately how many manual test cases are you executing with each app release?



SUMMARY

There's plenty of room for automation. 58.3% of respondents indicated that test teams perform 250-1000 manual test cases with each app release.

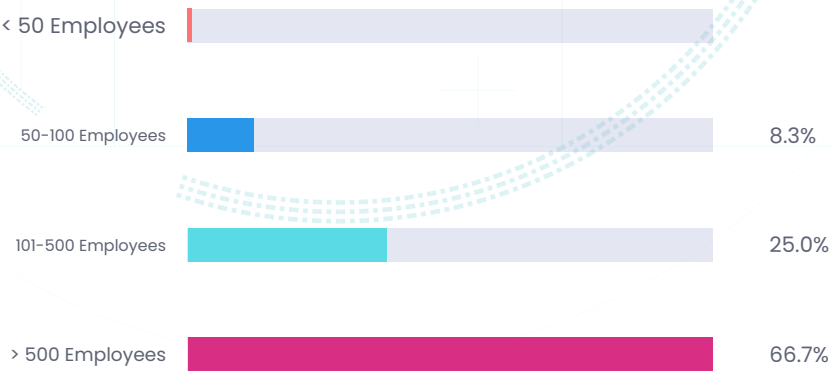
Approximately how long does it take to manually test your app before every release?



SUMMARY

Manual testing is time consuming. 25% of respondents indicated an average manual testing time period of more than 10 days with every release.

Company Size



SUMMARY

66.7% of survey respondents indicated that the company they worked for had more than 500 employees.

NEGATIVE SURPRISES

Code Complexity: The coding complexity of developing test scripts

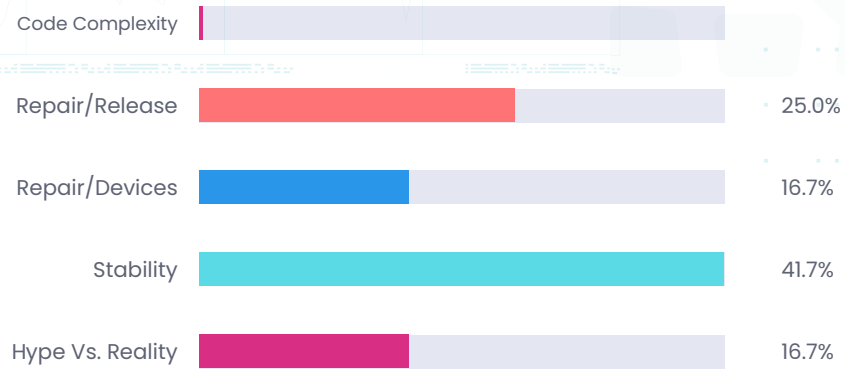
Repair/Release: The need to continually fix test scripts with every release

Repair/Devices: The need to continually fix test scripts to work across more devices

Stability: Having a stable test environment with predictable data

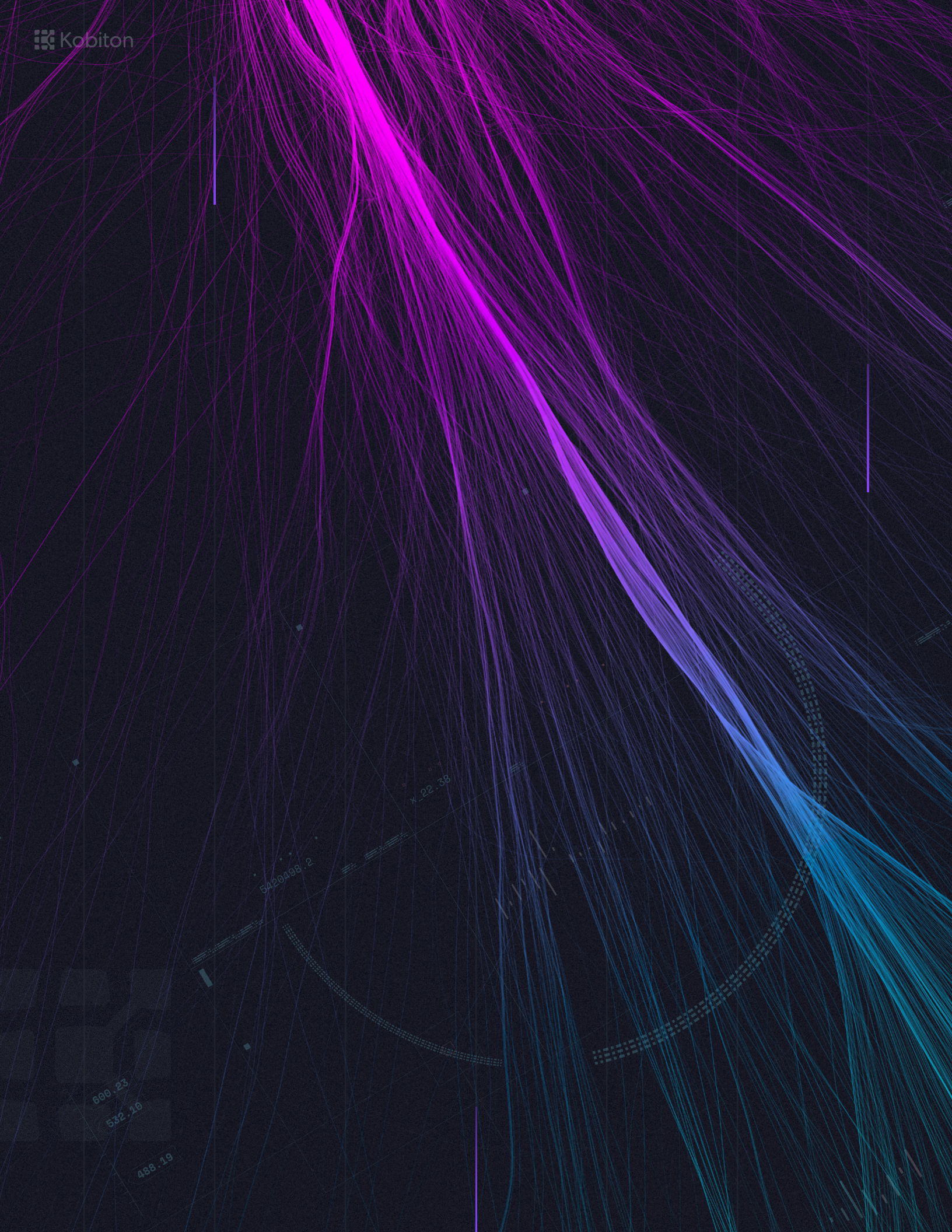
Hype vs. Reality: Vendor products not living up to their claims or hype

What was the biggest negative surprise you encountered as part of your test automation implementation?



SUMMARY

Stability issues are rampant in the test automation implementations used by most respondents.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Kobiton

RELEASE FREQUENCY

DAILY RELEASE SCHEDULE

Release Frequency

In predictable fashion, release frequency is a direct measure of the importance of a mobile app to an organization. Companies that self-identify as Mobile Critical (*app is essential to revenue*) overwhelmingly release on a weekly or daily basis. Companies that classify as Mobile Strategic (*app is non-essential to company survival*), are more likely to release on a monthly or quarterly basis.

Release frequency also correlates to the overall percentage of QA budget spent on test automation. Those with a demand for daily or weekly releases make automation a critical part of their process. 72% of respondents who release on a daily basis spend between 30-75% of their overall QA budget on automation, while 80.7% who release on a monthly basis spend less than 49% of their budget on automation.

A hidden irony manifests itself when teams who release on a quarterly basis are asked what percentage of test cases they would like to have automated. Ironically, they have the highest ambitions, with 43.5% stating that they'd like to automate 50-75% of their test cases. This is likely due to the fact that companies in this group are still working in the theoretical realm of test automation, and have not yet implemented enough scale to understand its inherent complexities.

MOBILE STRATEGIES

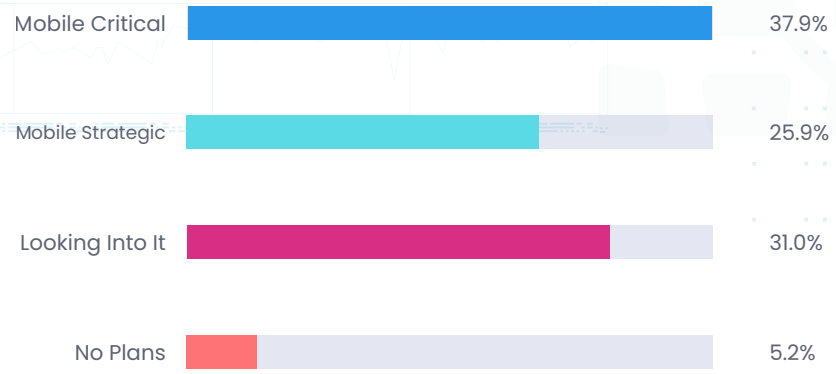
Mobile Critical: Our business model is centered around a mobile app

Mobile Strategic: Mobile is an important channel for our company, but we would survive without it

Looking Into It: Mobile is an initiative we're looking to pursue

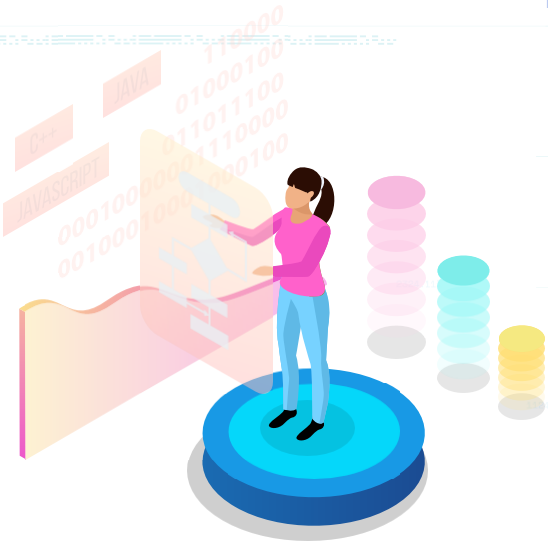
No Plans: We don't have a mobile app or any plans to implement one

Mobile Strategies

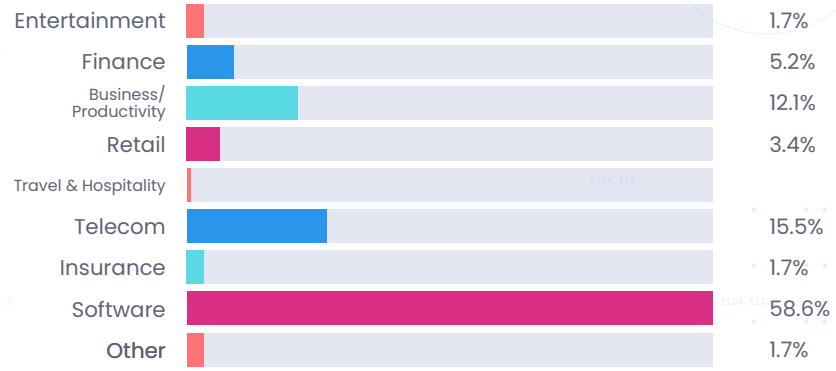


SUMMARY

The majority of respondents indicated that mobile was an important component in their business model. 37.9% of respondents said that their business was centered around a mobile app.



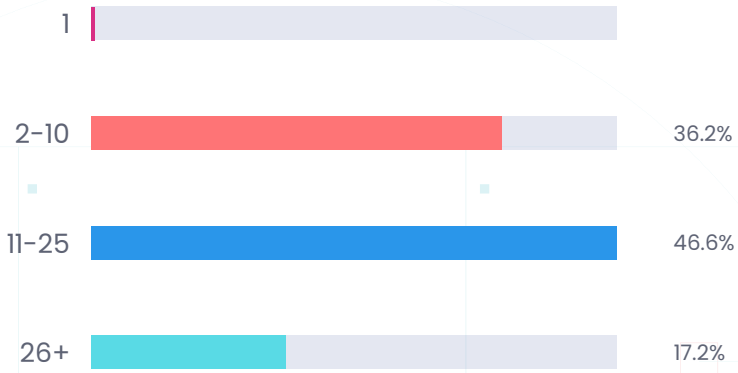
Industry/App Categories



SUMMARY

At 58.6%, the majority of responses collected in this survey were from software companies. The survey received the fewest responses from companies in the Travel and Hospitality vertical.

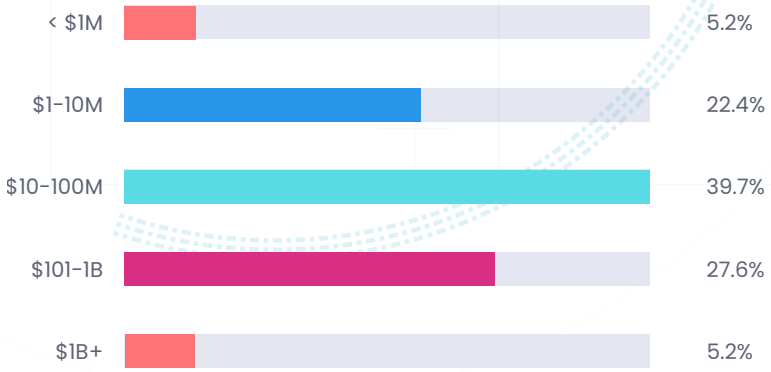
How many testers are on your team?



SUMMARY

Most of the companies surveyed have test teams of 11-25 people. 17.2% had teams of more than 26 people.

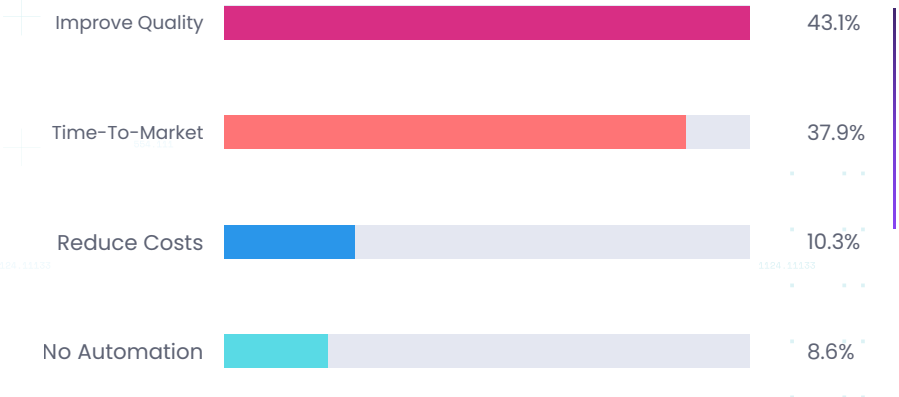
Annual Company Revenue



SUMMARY

39.7% of companies surveyed had an annual revenue of $10-100M. Just 5.2% of respondents indicated an annual revenue of less than $1M.

What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

The majority of respondents indicated that a desire to improve overall app quality was the primary strategic driver in choosing to pursue test automation.

TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

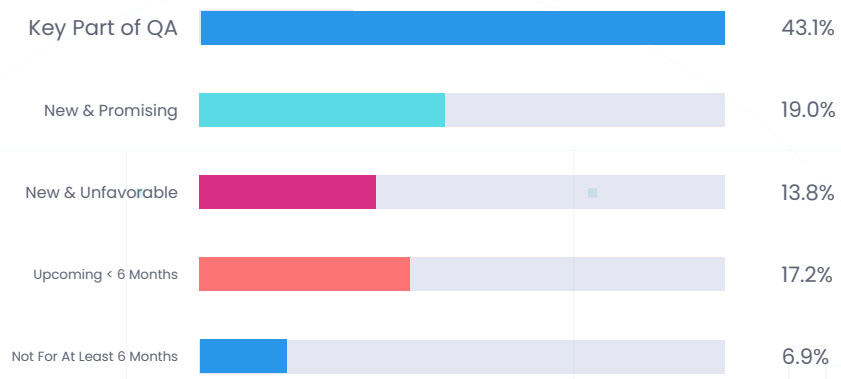
New and Promising: Our automation initiatives are relatively new and promising

New and Unfavorable: Our automation initiatives are relatively new and the results are not what we hoped for

Upcoming <6 months: Automation is an initiative we hope to start within the next 6 months

Not for at least 6 months: Automation will not happen within 6 months

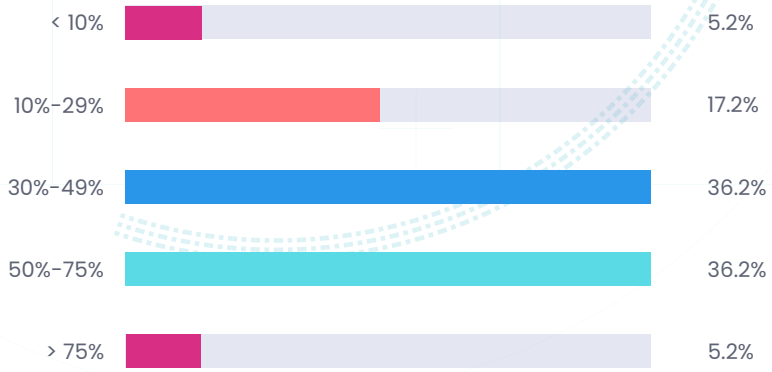
Where would you rate your current test automation maturity?



SUMMARY

43.1% of respondents indicated that test automation was a key part of their quality assurance process.

Based on the overall quality assurance budget in your organization, what percentage is spent on test automation when factoring in employees, tools, and other resources?



SUMMARY

Most respondents indicated that their companies allocate between 30 and 75% of their overall QA budget to test automation related expenditures.

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

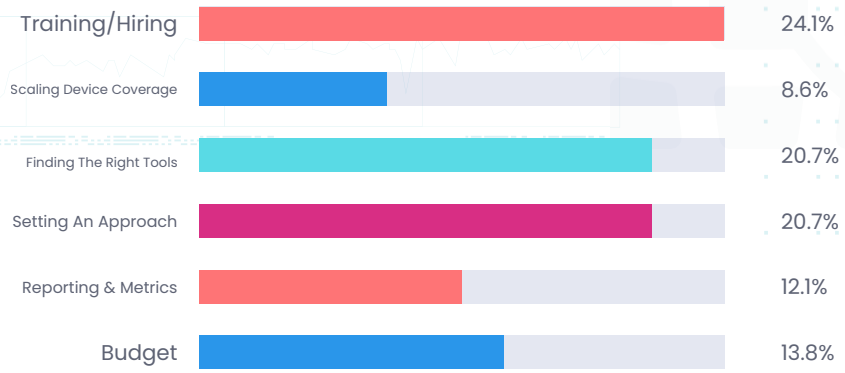
Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

Budget: Convincing the organization of the need to invest in automation

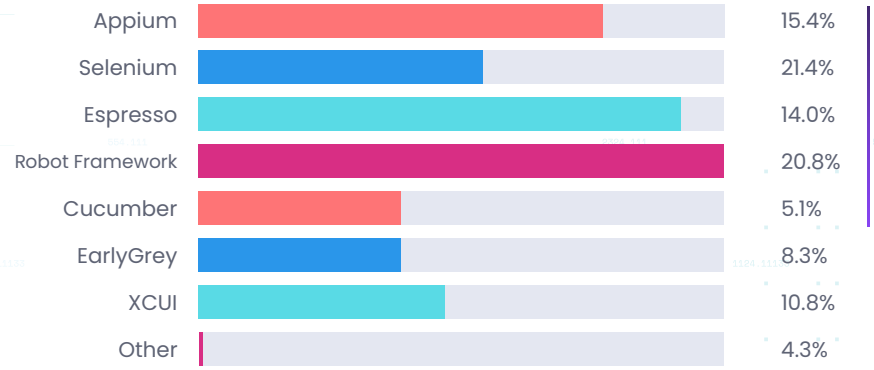
What is your biggest struggle/pain point with using or starting test automation today?



SUMMARY

The survey respondents indicated that the largest barrier to entry for test automation is training/hiring.

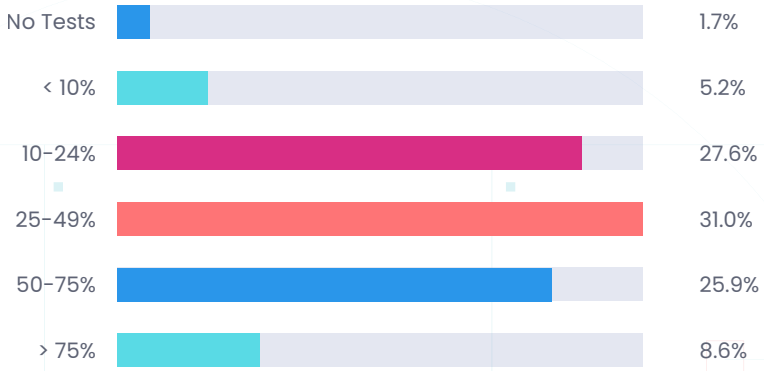
Test automation framework usage



SUMMARY

Responses indicate that Robot Framework is the preferred automation framework.

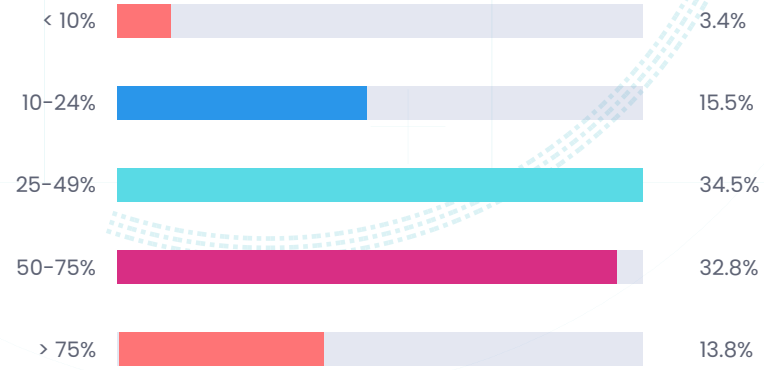
What percentage of your test cases are automated?



SUMMARY

98.3% of respondents indicated that they are performing some test automation. 31% of respondents specified that 25-49% of their test cases are automated.

What percentage of test cases would you like to have automated?



SUMMARY

Most respondents clearly see the value of test automation, with a noteworthy 32.8% seeking to automate 50-75% of their test cases. Comparing this graph with the one above shows a clear trend toward desired increases in test automation.

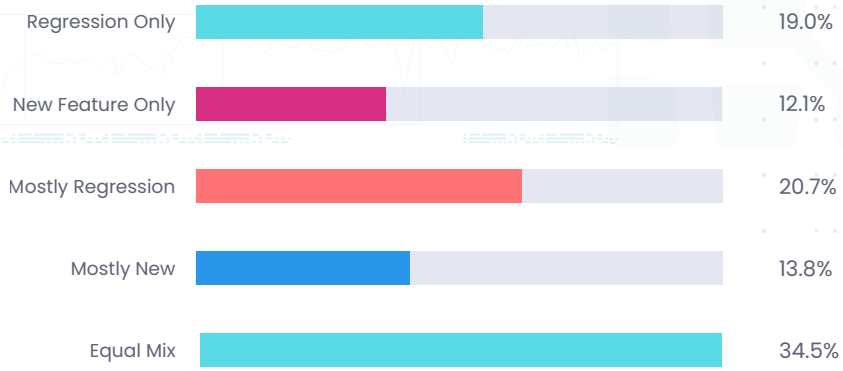
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

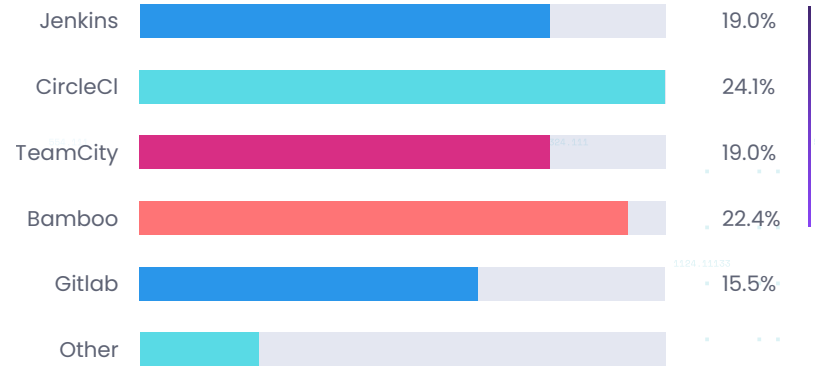
What are you using test automation primarily for?



SUMMARY

Most respondents are using test automation to verify the functionality of an equal mix in new and existing app features.

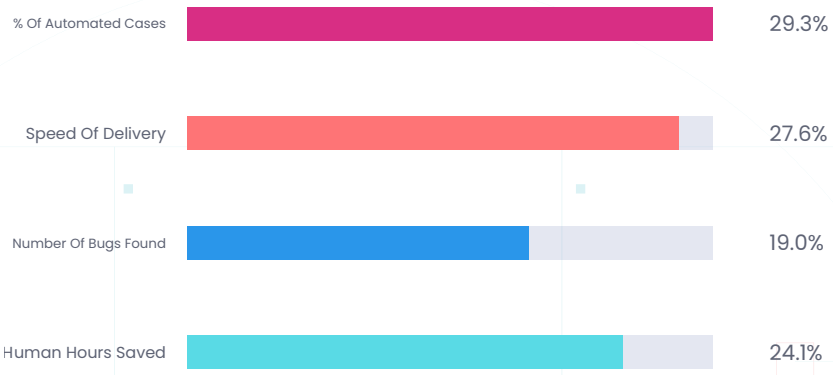
Which CI/CD tools does your organization use?



SUMMARY

CircleCI was listed as the preferred CI/CD tool amongst respondents with 24.1% indicating its use. At 22.4% Bamboo is the second most frequently used.

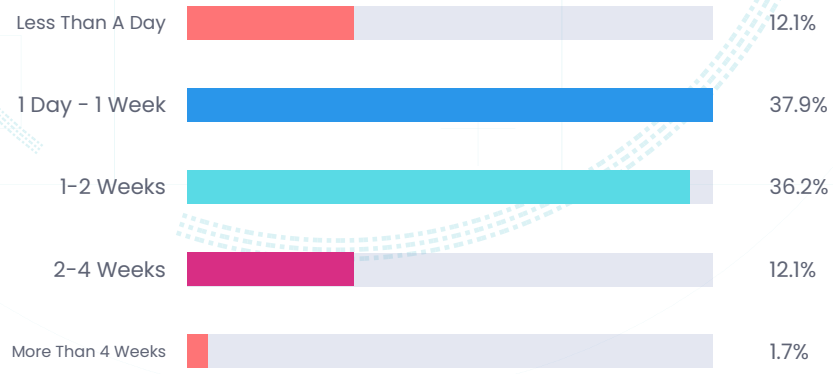
Which of the following metrics best indicates successful test automation implementation?



SUMMARY

Respondents indicated a preference for quantifying test automation success by measuring the percent of automated cases.

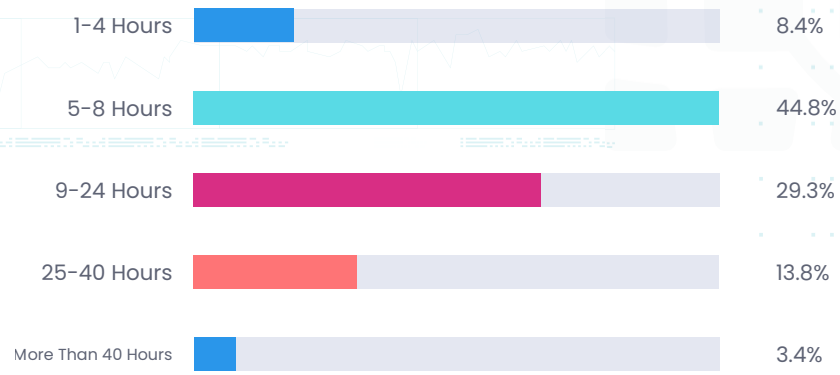
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts within 1 Day - 1 Week.

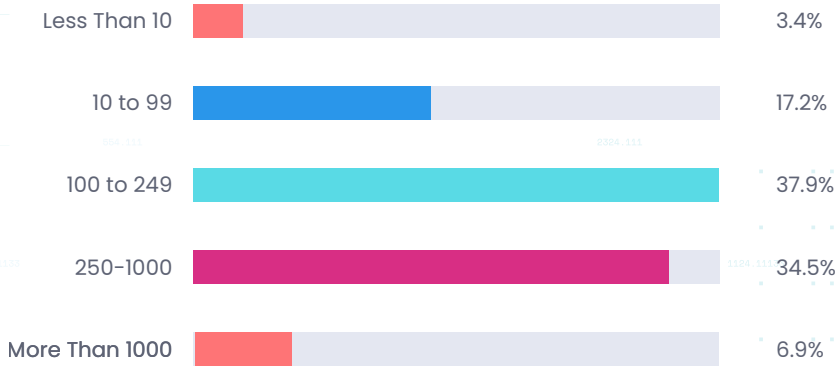
On average, how long does it take to code a test case using the framework of your choice?



SUMMARY

Survey respondents indicated that their test cases are typically coded within a 5-8 hour span.

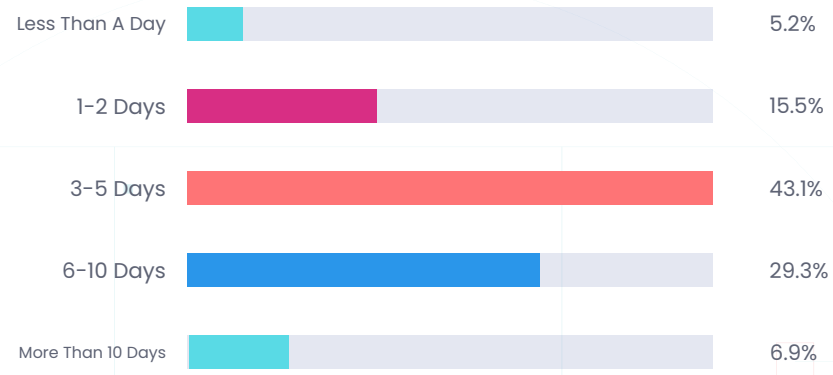
Approximately how many manual test cases are you executing with each app release?



SUMMARY

There's plenty of room for automation. 37.9% of respondents indicated that test teams perform 100-249 manual test cases with each app release.

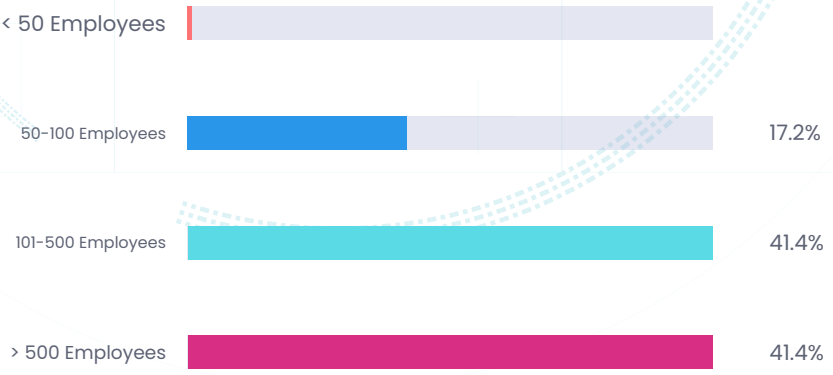
Approximately how long does it take to manually test your app before every release?



SUMMARY

Manual testing is time consuming. 43.1% of respondents indicated an average manual testing time period of 3-5 days with every release.

Company Size



SUMMARY

82.8% of survey respondents indicated that the company they worked for has at least 101 employees.

NEGATIVE SURPRISES

Code Complexity: The coding complexity of developing test scripts

Repair/Release: The need to continually fix test scripts with every release

Repair/Devices: The need to continually fix test scripts to work across more devices

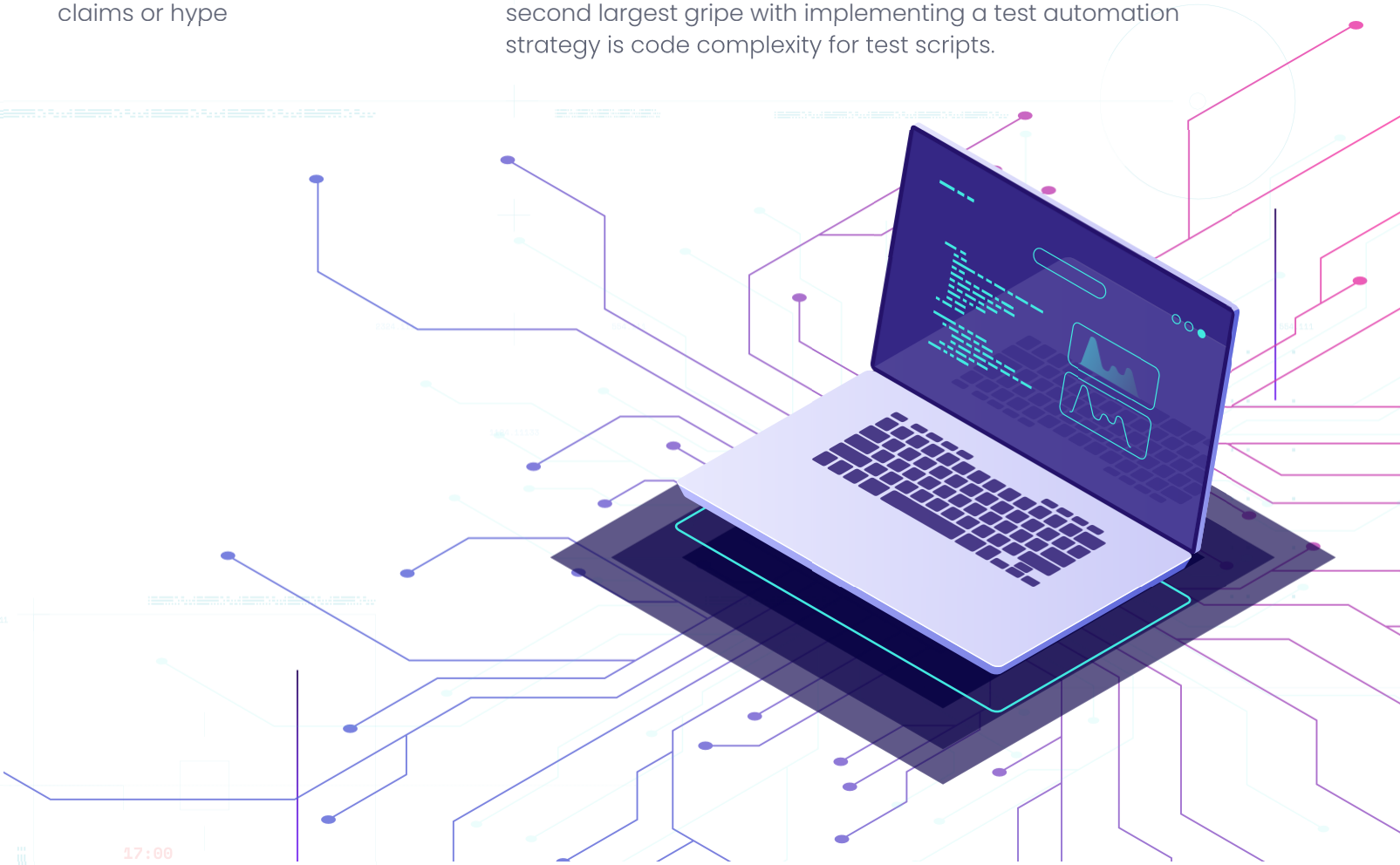
Stability: Having a stable test environment with predictable data

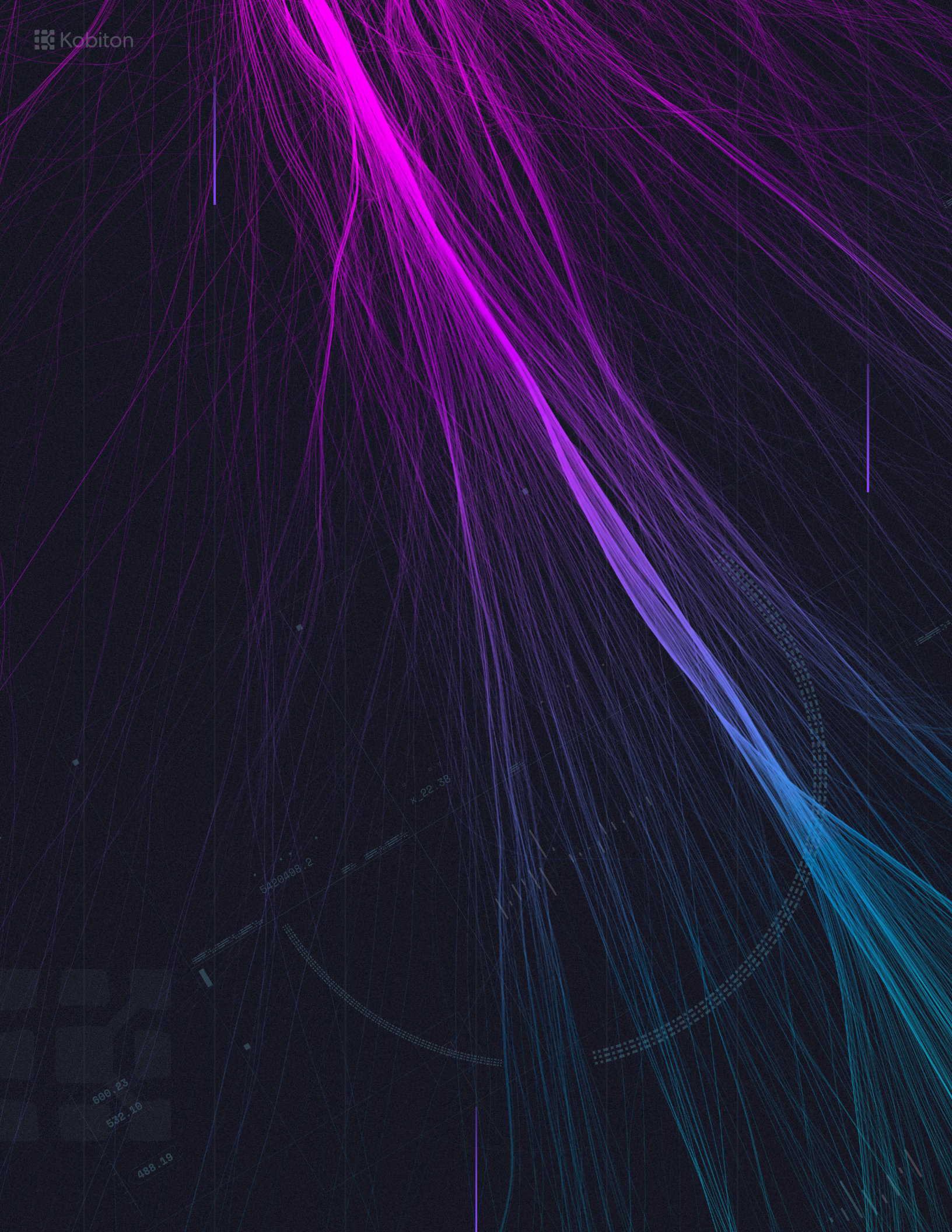
Hype vs. Reality: Vendor products not living up to their claims or hype

What was the biggest negative surprise you encountered as part of your test automation implementation?

SUMMARY

Stability and expectation issues are rampant in the test automation implementations used by most respondents. The second largest gripe with implementing a test automation strategy is code complexity for test scripts.

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x_22.38
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RELEASE FREQUENCY

WEEKLY RELEASE SCHEDULE

Release Frequency

In predictable fashion, release frequency is a direct measure of the importance of a mobile app to an organization. Companies that self-identify as Mobile Critical (*app is essential to revenue*) overwhelmingly release on a weekly or daily basis. Companies that classify as Mobile Strategic (*app is non-essential to company survival*), are more likely to release on a monthly or quarterly basis.

Release frequency also correlates to the overall percentage of QA budget spent on test automation. Those with a demand for daily or weekly releases make automation a critical part of their process. 72% of respondents who release on a daily basis spend between 30-75% of their overall QA budget on automation, while 80.7% who release on a monthly basis spend less than 49% of their budget on automation.

A hidden irony manifests itself when teams who release on a quarterly basis are asked what percentage of test cases they would like to have automated. Ironically, they have the highest ambitions, with 43.5% stating that they'd like to automate 50-75% of their test cases. This is likely due to the fact that companies in this group are still working in the theoretical realm of test automation, and have not yet implemented enough scale to understand its inherent complexities.

MOBILE STRATEGIES

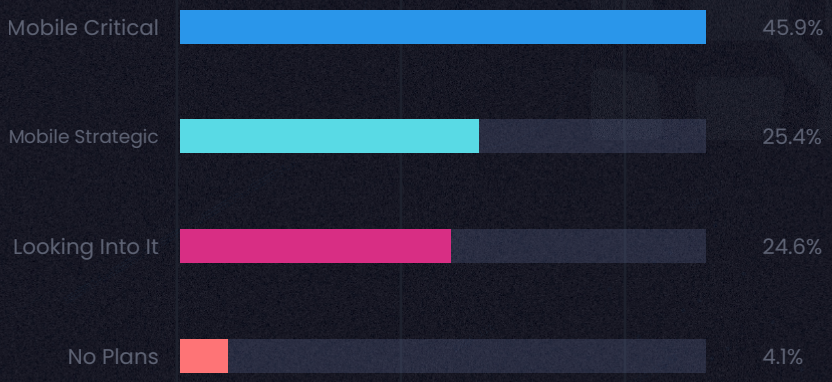
Mobile Critical: Our business model is centered around a mobile app

Mobile Strategic: Mobile is an important channel for our company, but we would survive without it

Looking Into It: Mobile is an initiative we're looking to pursue

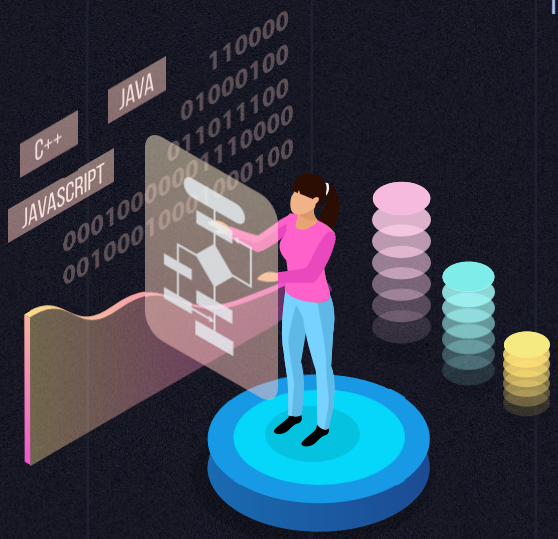
No Plans: We don't have a mobile app or any plans to implement one

Mobile Strategies

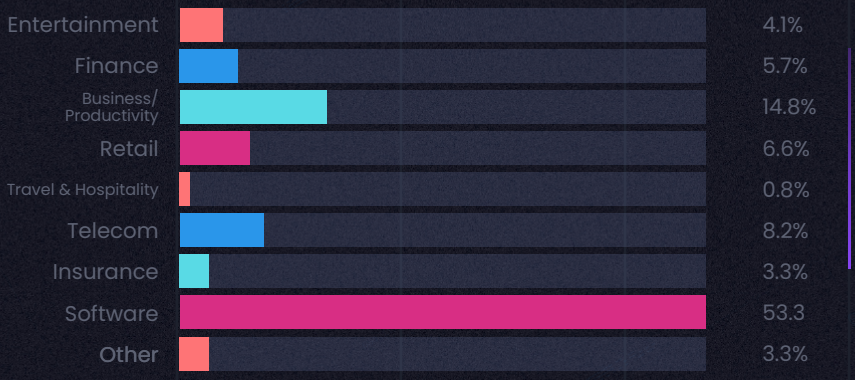


SUMMARY

The majority of respondents indicated that mobile was an important component in their business model. 45.9% of respondents said that their business was centered around a mobile app.



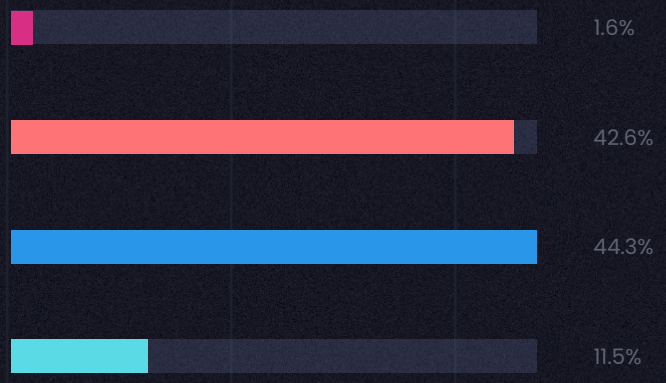
Industry/App Categories



SUMMARY

At 53.3%, the majority of responses collected in this survey were from software companies. The survey received the fewest responses from companies in the Travel and Hospitality vertical.

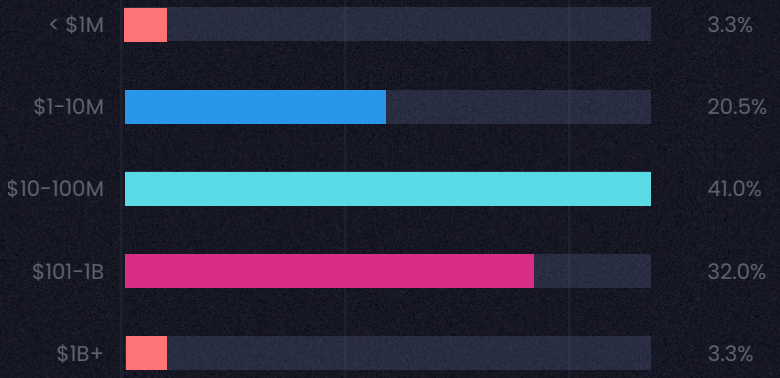
How many testers are on your team?



SUMMARY

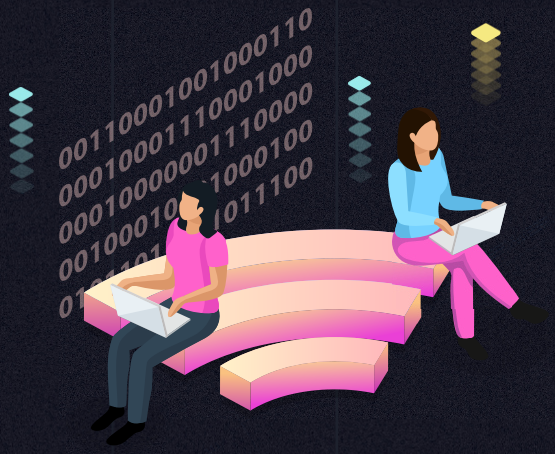
Most of the companies surveyed have test teams of 2-25 people. Only 1.6% of respondents had 1 tester, while 11.5% had teams of more than 26 people.

Annual Company Revenue

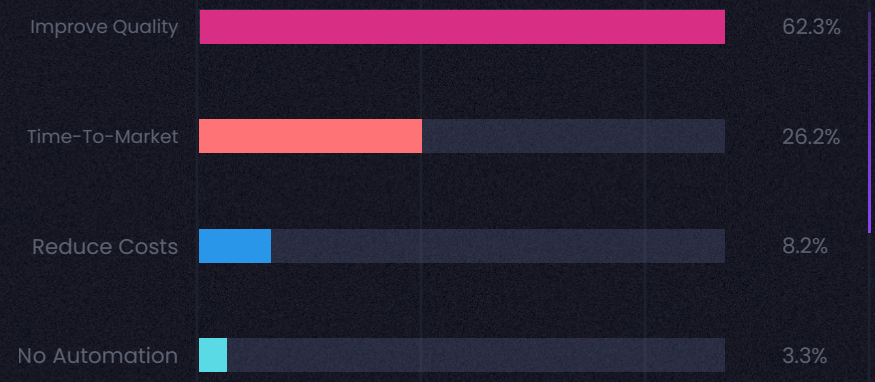


SUMMARY

41% of companies surveyed had an annual revenue of $10-100M. Just 3.3% of respondents indicated an annual revenue of less than $1M.



What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

The majority of respondents indicated that a desire to improve overall app quality was the primary strategic driver in choosing to pursue test automation.

TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

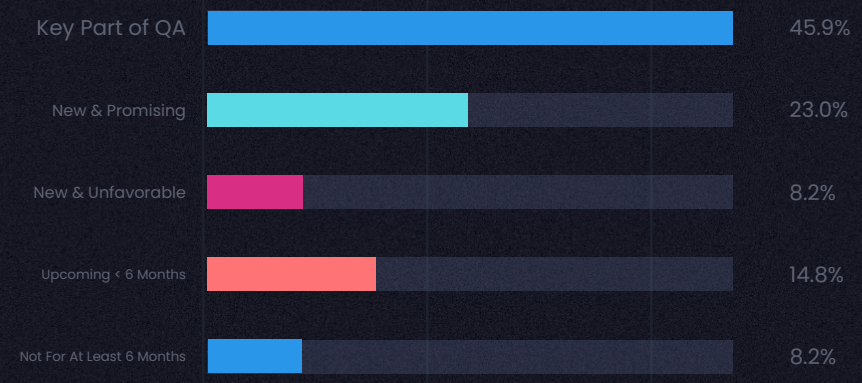
New and Promising: Our automation initiatives are relatively new and promising

New and Unfavorable: Our automation initiatives are relatively new and the results are not what we hoped for

Upcoming <6 months: Automation is an initiative we hope to start within the next 6 months

Not for at least 6 months: Automation will not happen within 6 months

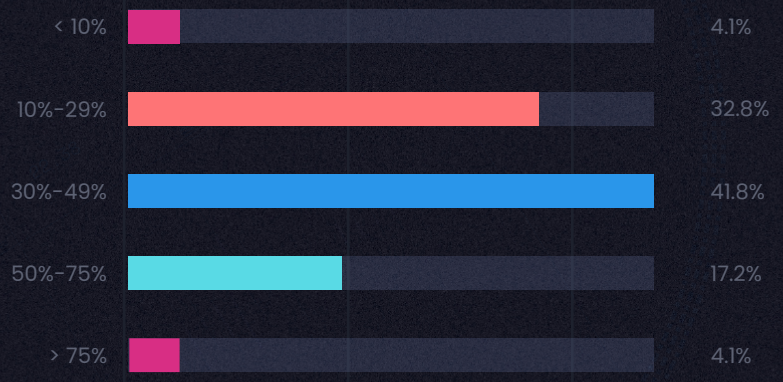
Where would you rate your current test automation maturity?



SUMMARY

45.9% of respondents indicated that test automation was a key part of their quality assurance process.

Based on the overall quality assurance budget in your organization, what percentage is spent on test automation when factoring in employees, tools, and other resources?



SUMMARY

Most respondents indicated that their companies allocate between 30 and 49% of their overall QA budget to test automation related expenditures.

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

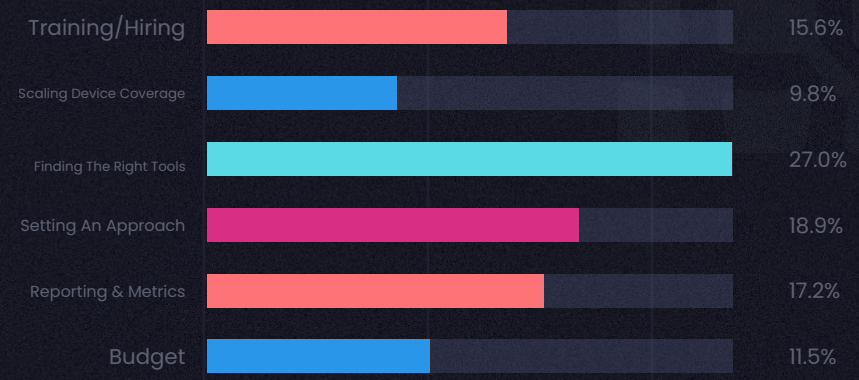
Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

Budget: Convincing the organization of the need to invest in automation

What is your biggest struggle/pain point with using or starting test automation today?



SUMMARY

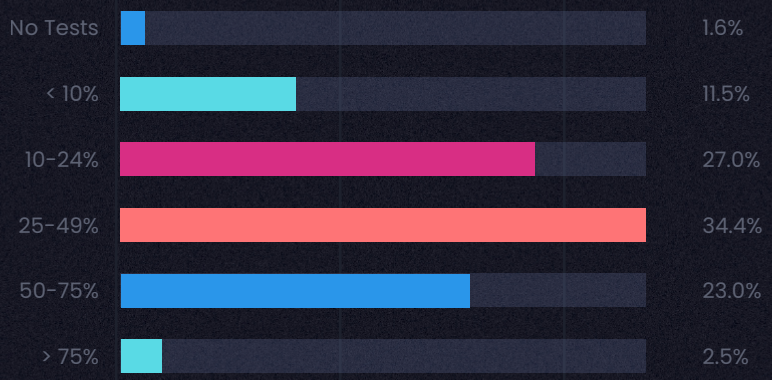
The survey respondents indicated that the largest barrier to entry for test automation is finding the right tools.

Test automation framework usage

SUMMARY

Responses indicate that Selenium is the preferred automation framework.

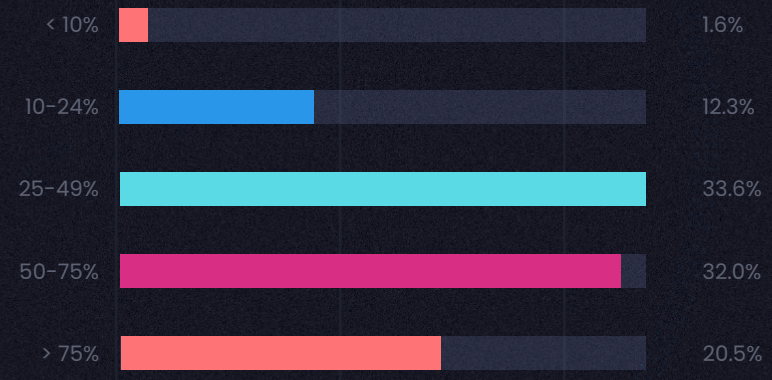
What percentage of your test cases are automated?



SUMMARY

98.4% of respondents indicated that they are performing some test automation. 34.4% of respondents specified that 25-49% of their test cases are automated.

What percentage of test cases would you like to have automated?



SUMMARY

Most respondents clearly see the value of test automation, with a noteworthy 33.6% seeking to automate 25-49% of their test cases. Comparing this graph with the one above shows a clear trend toward desired increases in test automation.

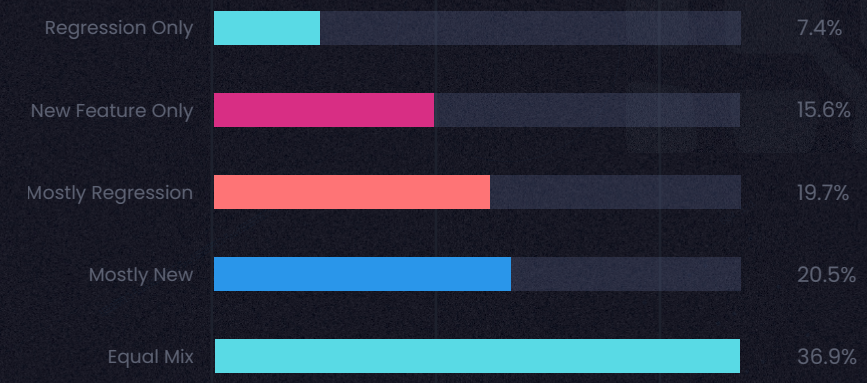
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

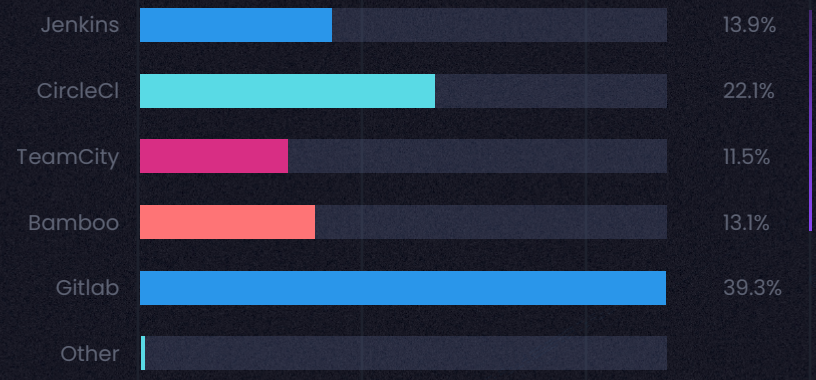
What are you using test automation primarily for?



SUMMARY

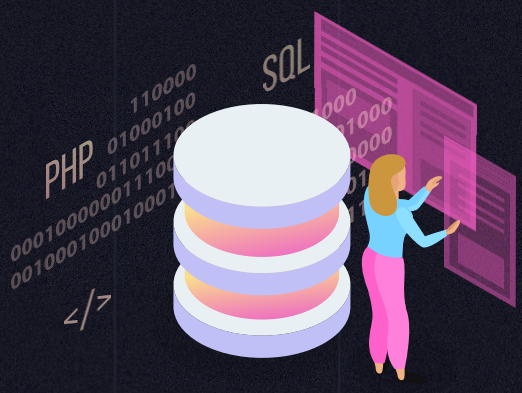
Most respondents are using test automation to verify the functionality of an equal mix in new and existing app features.

Which CI/CD tools does your organization use?



SUMMARY

Gitlab was listed as the preferred CI/CD tool amongst respondents with 39.3% indicating its use. At 22.1% CircleCI is the second most frequently used.

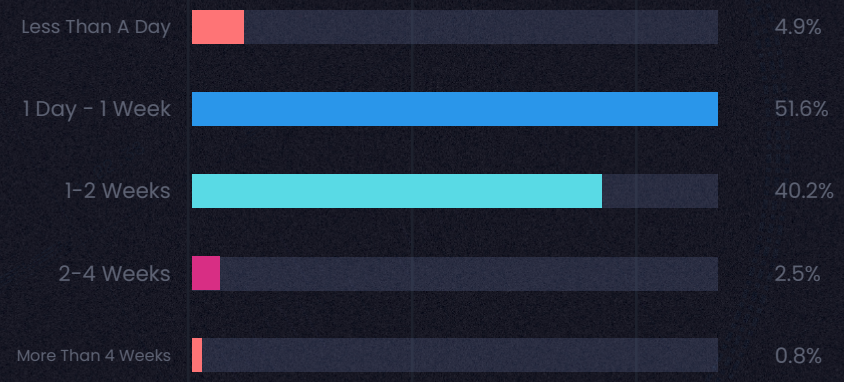


Which of the following metrics best indicates successful test automation implementation?

SUMMARY

Respondents indicated an equal preference for quantifying test automation success by measuring delivery speed and number of bugs found.

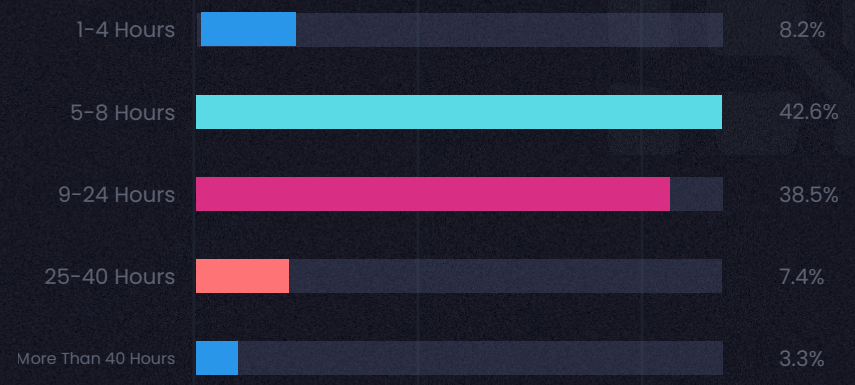
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts within 1 Day - 1 Week.

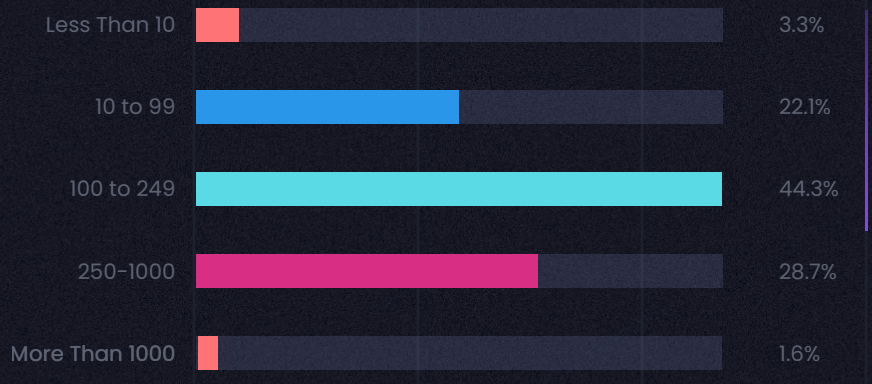
On average, how long does it take to code a test case using the framework of your choice?



SUMMARY

Survey respondents indicated that their test cases are typically coded within a 5-8 hour span.

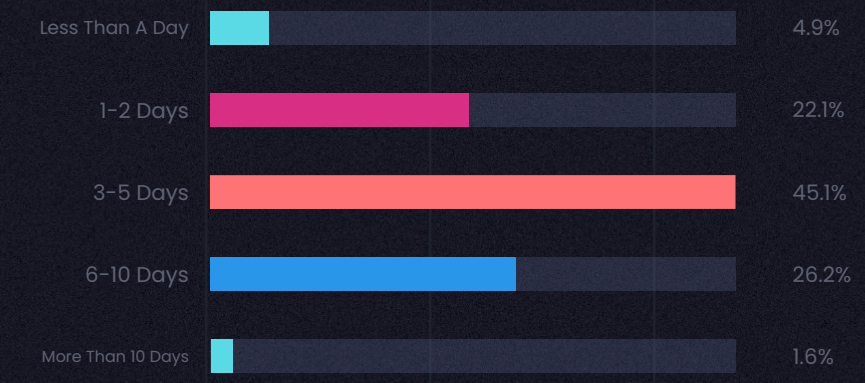
Approximately how many manual test cases are you executing with each app release?



SUMMARY

There's plenty of room for automation. 44.3% of respondents indicated that test teams perform 100-249 manual test cases with each app release.

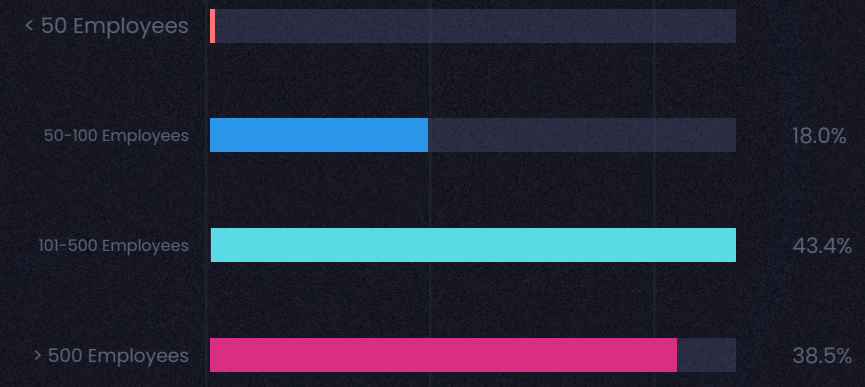
Approximately how long does it take to manually test your app before every release?



SUMMARY

Manual testing is time consuming. 45.1% of respondents indicated an average manual testing time period of 3-5 days with every release.

Company Size



SUMMARY

43.4% of survey respondents indicated that the company they worked for has 101-500 employees.

NEGATIVE SURPRISES

Code Complexity: The coding complexity of developing test scripts

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Stability: Having a stable test environment with predictable data

Hype vs. Reality: Vendor products not living up to their claims or hype

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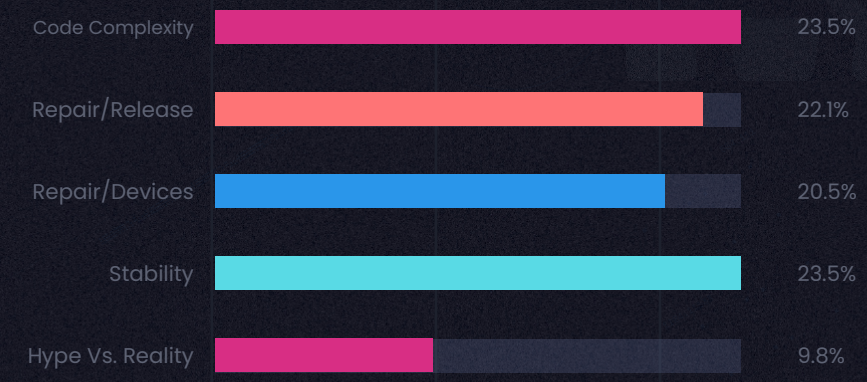
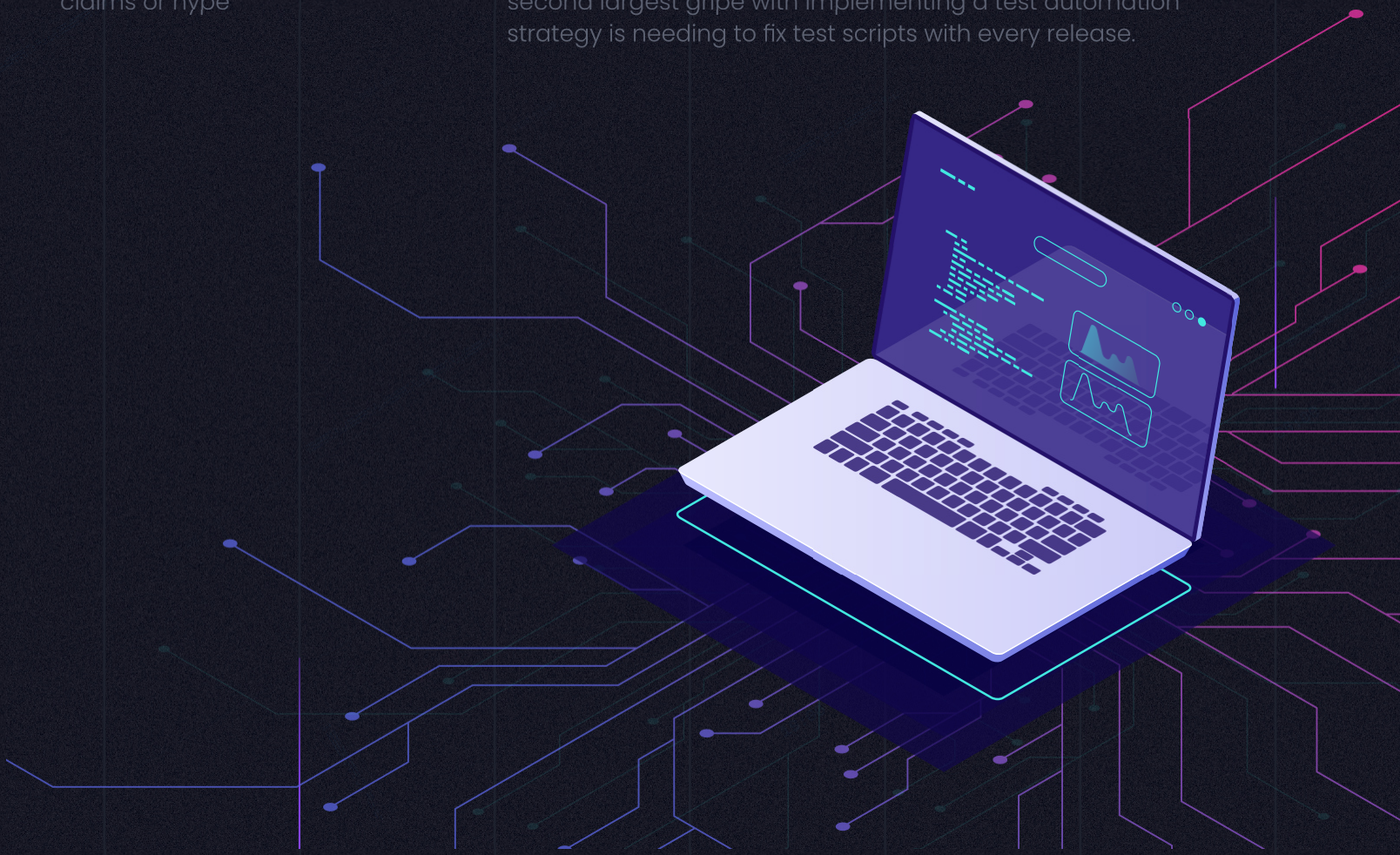
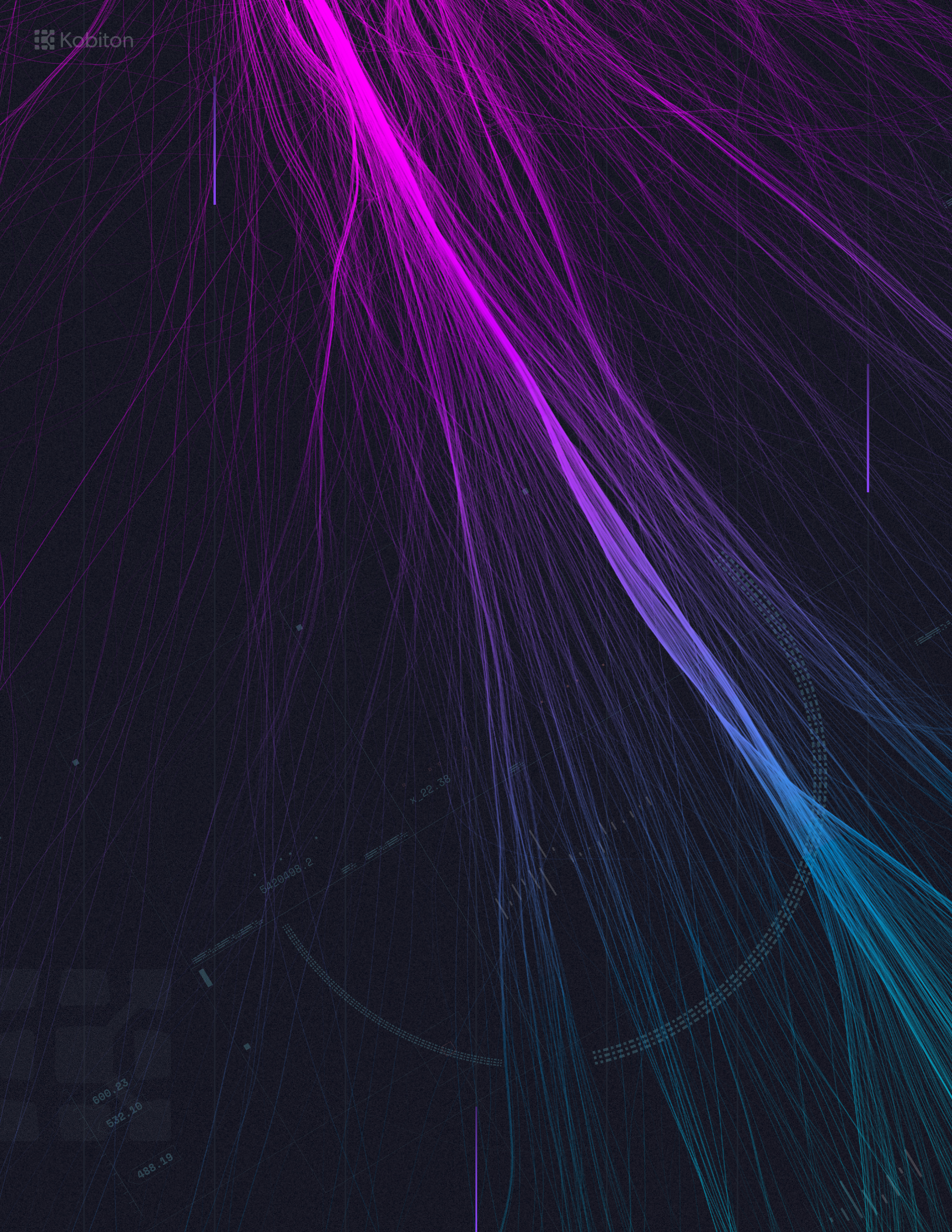


SUMMARY

Code complexity and stability issues are rampant in the test automation implementations used by most respondents. The second largest gripe with implementing a test automation strategy is needing to fix test scripts with every release.




Kobiton
x_22.38
5420498.2
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Kobiton

RELEASE FREQUENCY

MONTHLY RELEASE SCHEDULE

Release Frequency

In predictable fashion, release frequency is a direct measure of the importance of a mobile app to an organization. Companies that self-identify as Mobile Critical (*app is essential to revenue*) overwhelmingly release on a weekly or daily basis. Companies that classify as Mobile Strategic (*app is non-essential to company survival*), are more likely to release on a monthly or quarterly basis.

Release frequency also correlates to the overall percentage of QA budget spent on test automation. Those with a demand for daily or weekly releases make automation a critical part of their process. 72% of respondents who release on a daily basis spend between 30-75% of their overall QA budget on automation, while 80.7% who release on a monthly basis spend less than 49% of their budget on automation.

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MOBILE STRATEGIES

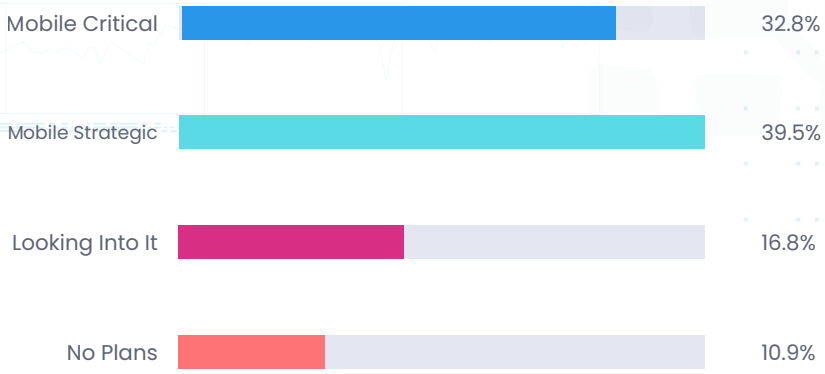
Mobile Critical: Our business model is centered around a mobile app

Mobile Strategic: Mobile is an important channel for our company, but we would survive without it

Looking Into It: Mobile is an initiative we're looking to pursue

No Plans: We don't have a mobile app or any plans to implement one

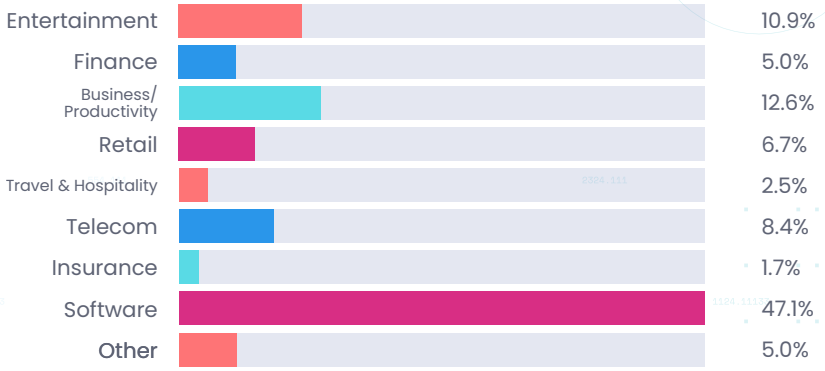
Mobile Strategies



SUMMARY

The majority of respondents indicated that mobile was an important component in their business model. 32.8% of respondents said that their business was centered around a mobile app.

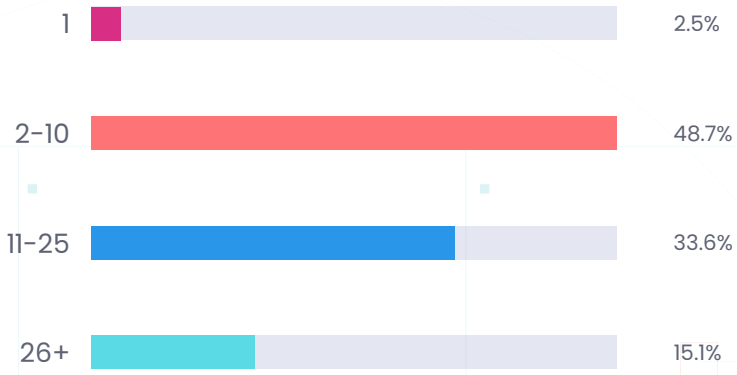
Industry/App Categories



SUMMARY

At 47.1%, the majority of responses collected in this survey were from software companies. The survey received the fewest responses from companies in the Travel and Hospitality vertical.

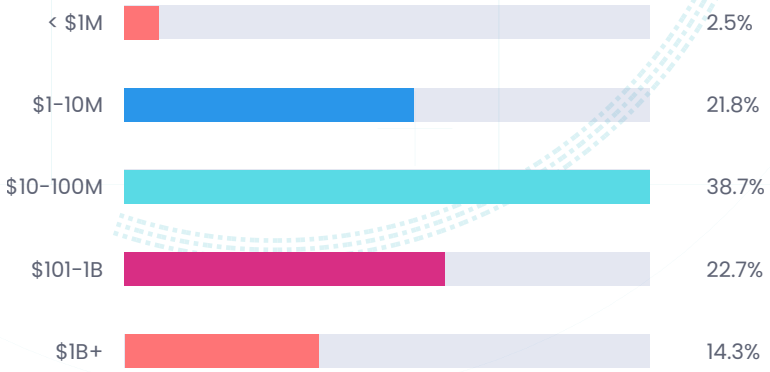
How many testers are on your team?



SUMMARY

Most of the companies surveyed have test teams of 2-10 people. Only 2.5% of respondents had 1 tester, while 15.1% had teams of more than 26 people.

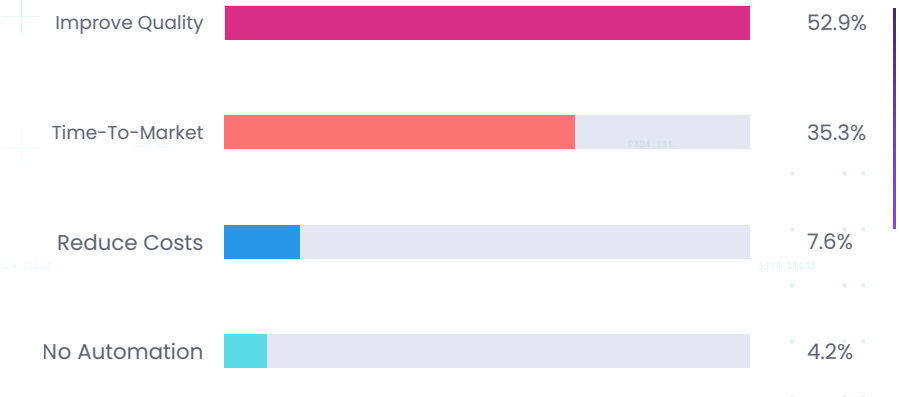
Annual Company Revenue



SUMMARY

38.7% of companies surveyed had an annual revenue of $10-100M. Just 2.5% of respondents indicated an annual revenue of less than $1M.

What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

The majority of respondents indicated that a desire to improve overall app quality was the primary strategic driver in choosing to pursue test automation.

TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

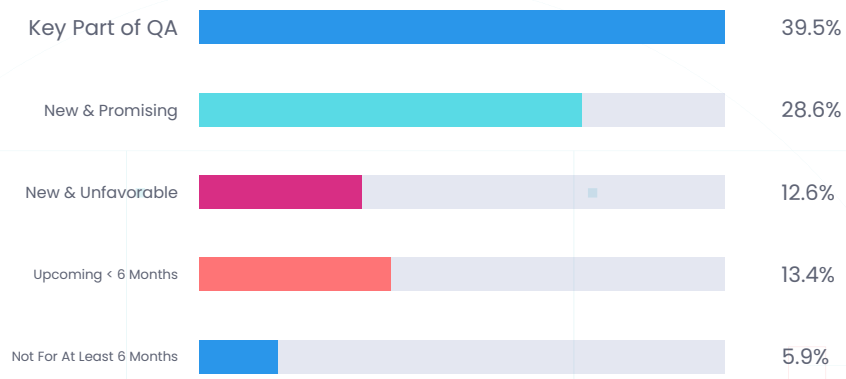
New and Promising: Our automation initiatives are relatively new and promising

New and Unfavorable: Our automation initiatives are relatively new and the results are not what we hoped for

Upcoming <6 months: Automation is an initiative we hope to start within the next 6 months

Not for at least 6 months: Automation will not happen within 6 months

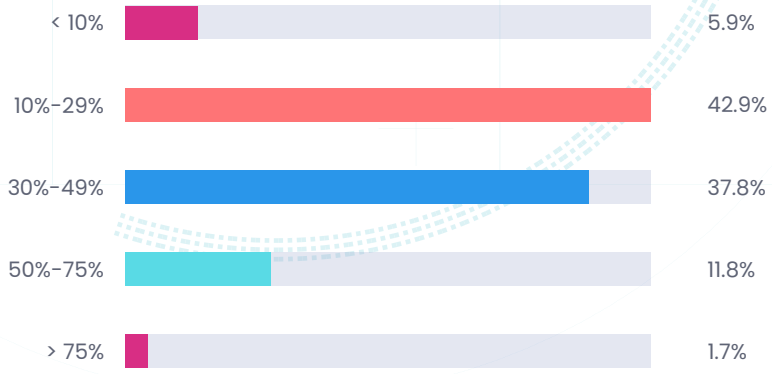
Where would you rate your current test automation maturity?



SUMMARY

39.5% of respondents indicated that test automation was a key part of their quality assurance process.

Based on the overall quality assurance budget in your organization, what percentage is spent on test automation when factoring in employees, tools, and other resources?



SUMMARY

Most respondents indicated that their companies allocate between 10 and 29% of their overall QA budget to test automation related expenditures.

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

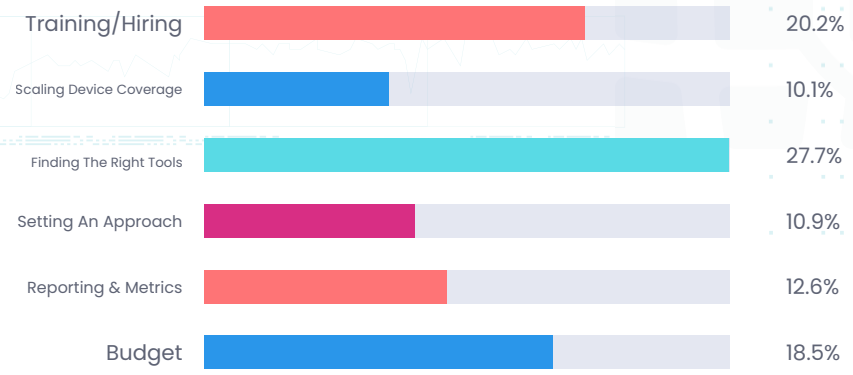
Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

Budget: Convincing the organization of the need to invest in automation

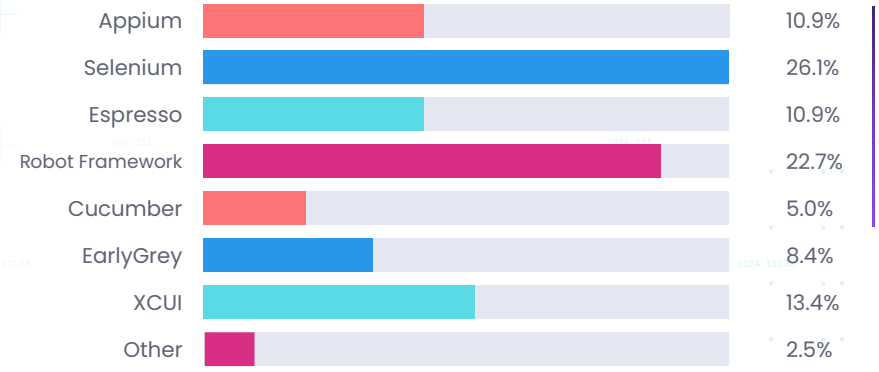
What is your biggest struggle/pain point with using or starting test automation today?



SUMMARY

The survey respondents indicated that the largest barrier to entry for test automation is finding the right tools.

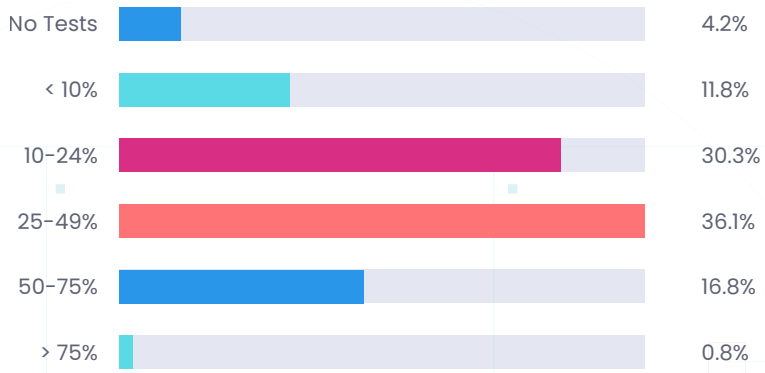
Test automation framework usage



SUMMARY

Responses indicate that Selenium is the preferred automation framework.

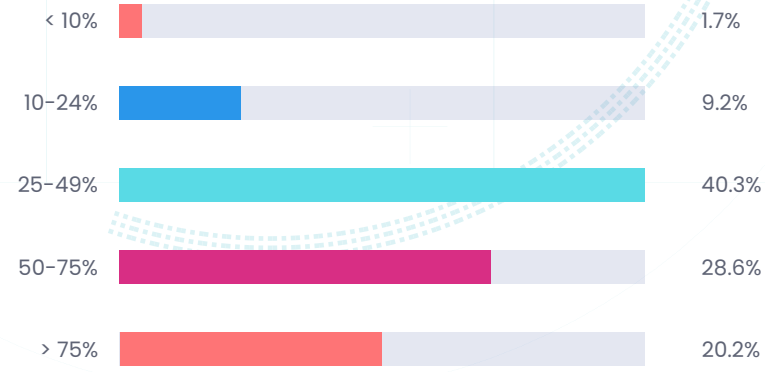
What percentage of your test cases are automated?



SUMMARY

95.8% of respondents indicated that they are performing some test automation. 36.1% of respondents specified that 25-49% of their test cases are automated.

What percentage of test cases would you like to have automated?



SUMMARY

Most respondents clearly see the value of test automation, with a noteworthy 40.3% seeking to automate 25-49% of their test cases. Comparing this graph with the one above shows a clear trend toward desired increases in test automation.

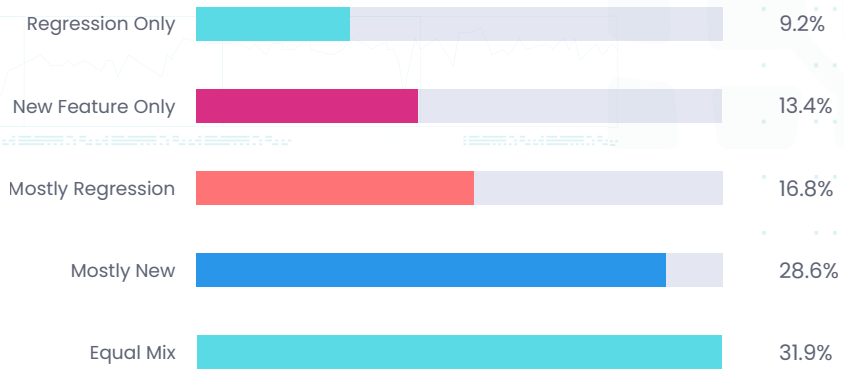
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

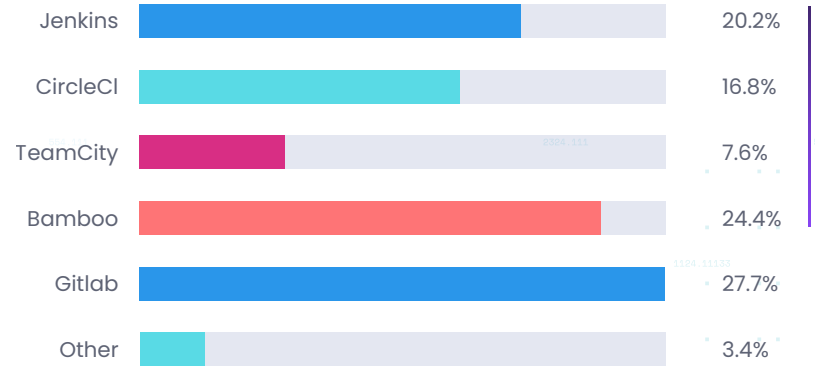
What are you using test automation primarily for?



SUMMARY

Most respondents are using test automation to verify the functionality of an equal mix in new and existing app features.

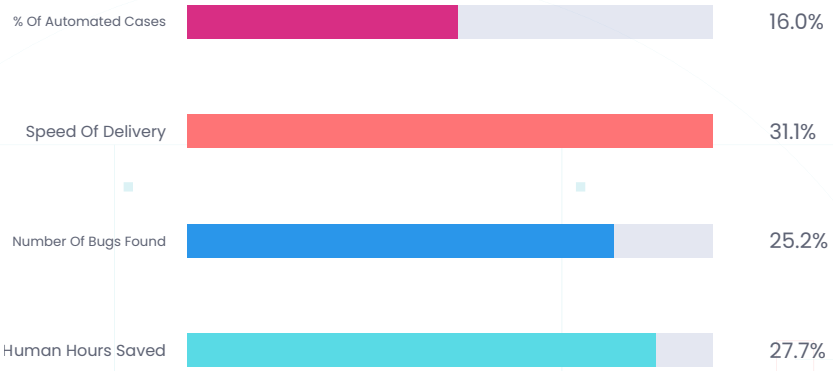
Which CI/CD tools does your organization use?



SUMMARY

Gitlab was listed as the preferred CI/CD tool amongst respondents with 27.7% indicating its use. At 24.4% Bamboo is the second most frequently used.

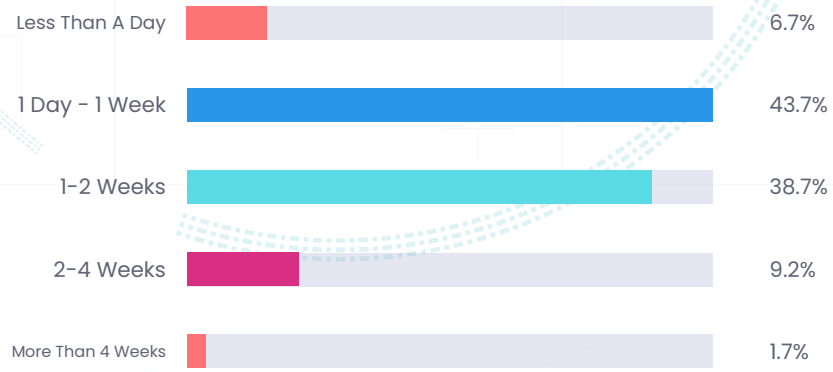
Which of the following metrics best indicates successful test automation implementation?



SUMMARY

Respondents indicated a preference for quantifying test automation success by measuring delivery speed.

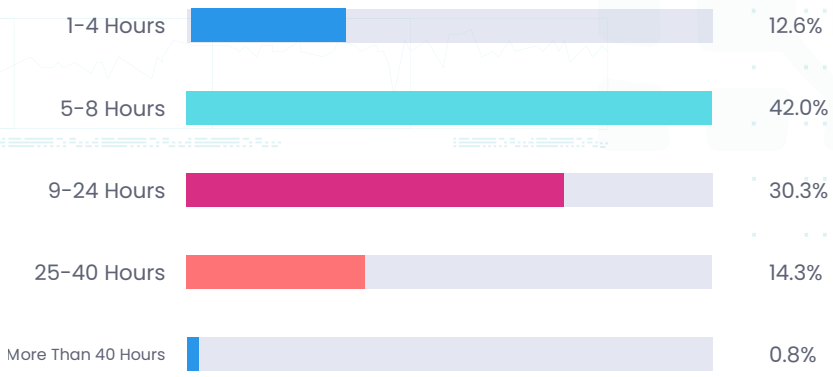
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts within 1 Day - 1 Week.

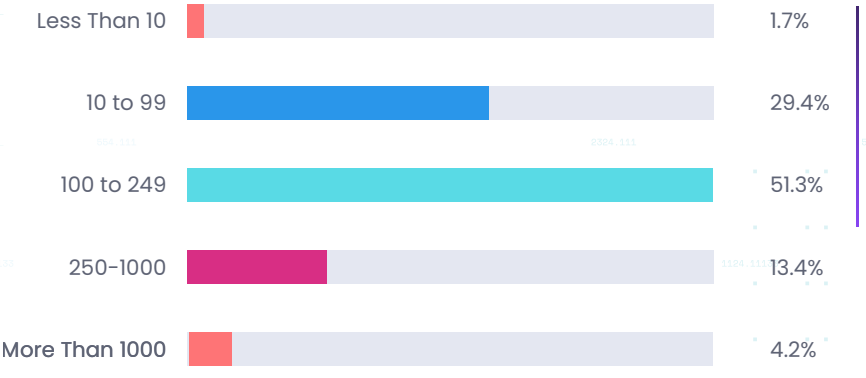
On average, how long does it take to code a test case using the framework of your choice?



SUMMARY

Survey respondents indicated that their test cases are typically coded within a 5-8 hour span.

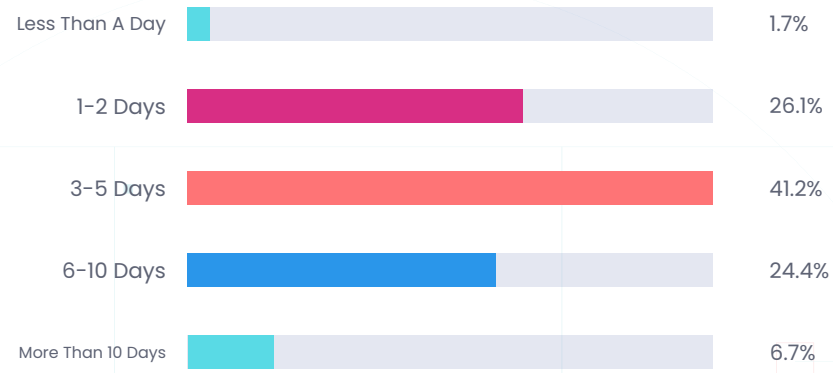
Approximately how many manual test cases are you executing with each app release?



SUMMARY

There's plenty of room for automation. 51.3% of respondents indicated that test teams perform 100-249 manual test cases with each app release.

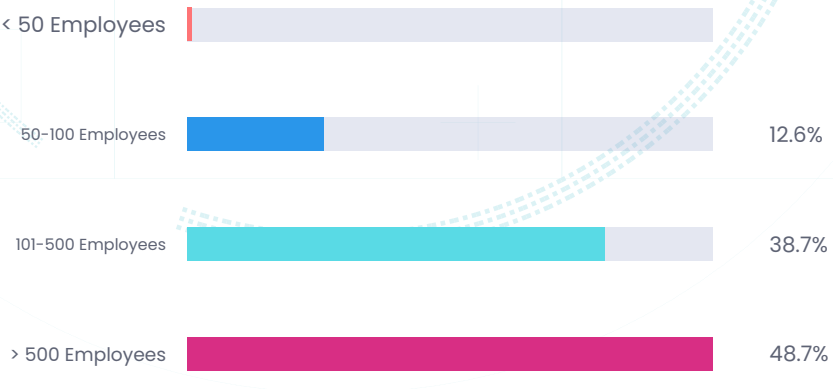
Approximately how long does it take to manually test your app before every release?



SUMMARY

Manual testing is time consuming. 41.2% of respondents indicated an average manual testing time period of 3-5 days with every release.

Company Size



SUMMARY

48.7% of survey respondents indicated that the company they worked for had more than 500 employees.

NEGATIVE SURPRISES

Code Complexity: The coding complexity of developing test scripts

Repair/Release: The need to continually fix test scripts with every release

Repair/Devices: The need to continually fix test scripts to work across more devices

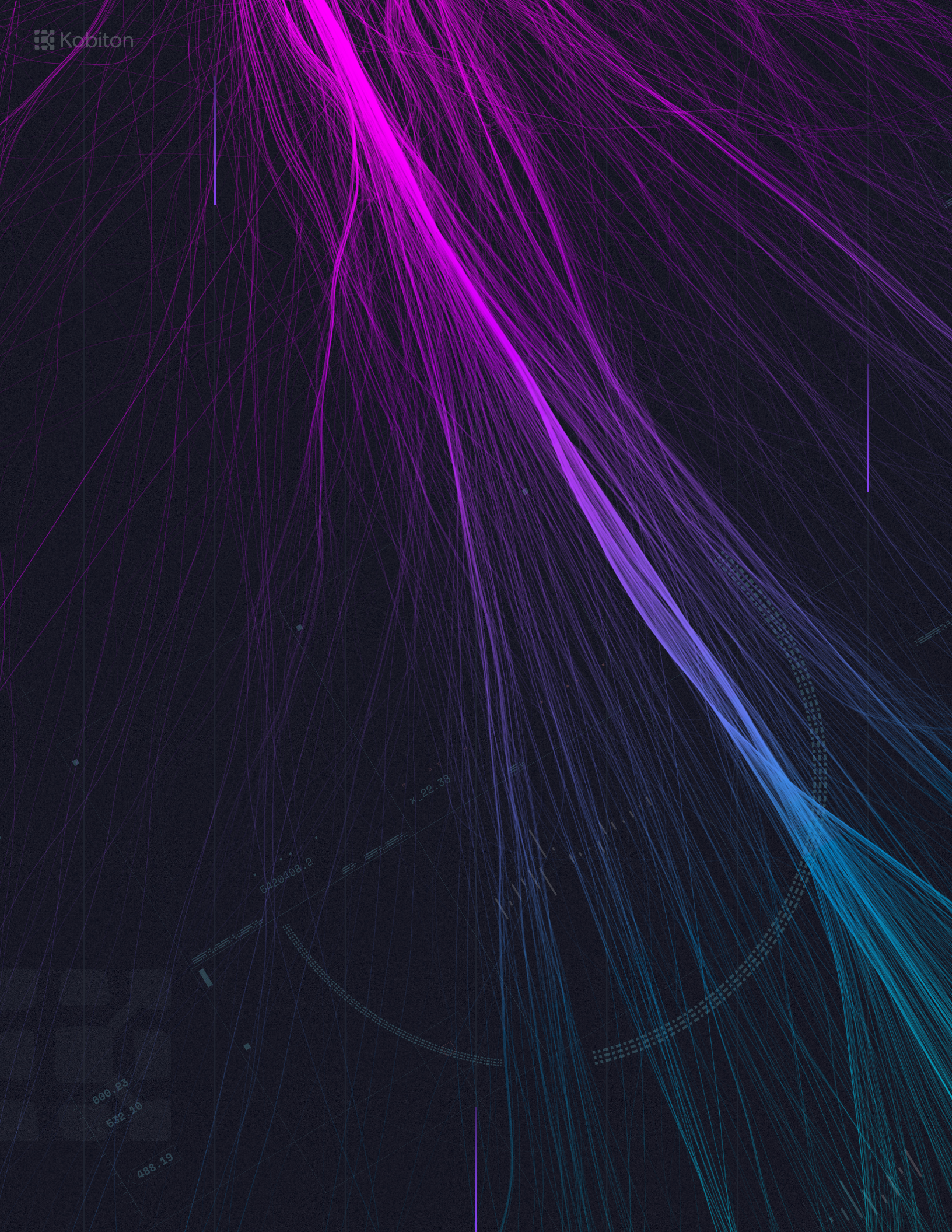
Stability: Having a stable test environment with predictable data

Hype vs. Reality: Vendor products not living up to their claims or hype

What was the biggest negative surprise you encountered as part of your test automation implementation?

SUMMARY

Stability issues are rampant in the test automation implementations used by most respondents. The second largest gripe with implementing a test automation strategy is the need to continually fix test scripts with every release.


Kobiton
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RELEASE FREQUENCY

QUARTERLY RELEASE SCHEDULE

Release Frequency

In predictable fashion, release frequency is a direct measure of the importance of a mobile app to an organization. Companies that self-identify as Mobile Critical (*app is essential to revenue*) overwhelmingly release on a weekly or daily basis. Companies that classify as Mobile Strategic (*app is non-essential to company survival*), are more likely to release on a monthly or quarterly basis.

Release frequency also correlates to the overall percentage of QA budget spent on test automation. Those with a demand for daily or weekly releases make automation a critical part of their process. 72% of respondents who release on a daily basis spend between 30-75% of their overall QA budget on automation, while 80.7% who release on a monthly basis spend less than 49% of their budget on automation.

A hidden irony manifests itself when teams who release on a quarterly basis are asked what percentage of test cases they would like to have automated. Ironically, they have the highest ambitions, with 43.5% stating that they'd like to automate 50-75% of their test cases. This is likely due to the fact that companies in this group are still working in the theoretical realm of test automation, and have not yet implemented enough scale to understand its inherent complexities.

MOBILE STRATEGIES

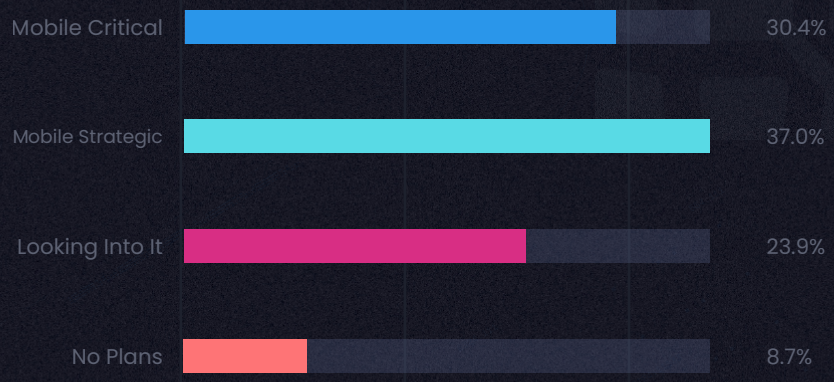
Mobile Critical: Our business model is centered around a mobile app

Mobile Strategic: Mobile is an important channel for our company, but we would survive without it

Looking Into It: Mobile is an initiative we're looking to pursue

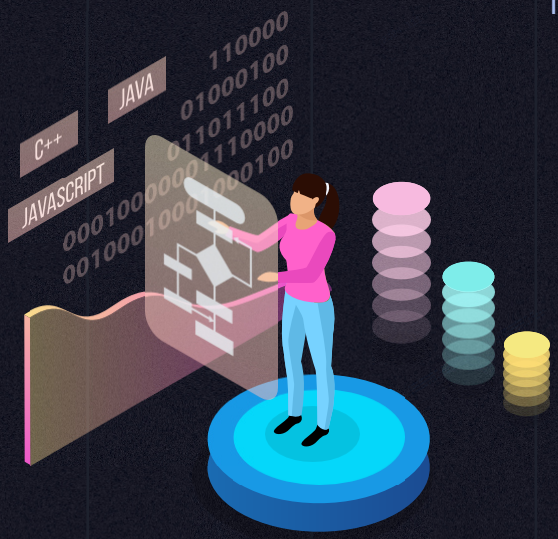
No Plans: We don't have a mobile app or any plans to implement one

Mobile Strategies



SUMMARY

The majority of respondents indicated that mobile was an important component in their business model. 30.4% of respondents said that their business was centered around a mobile app.

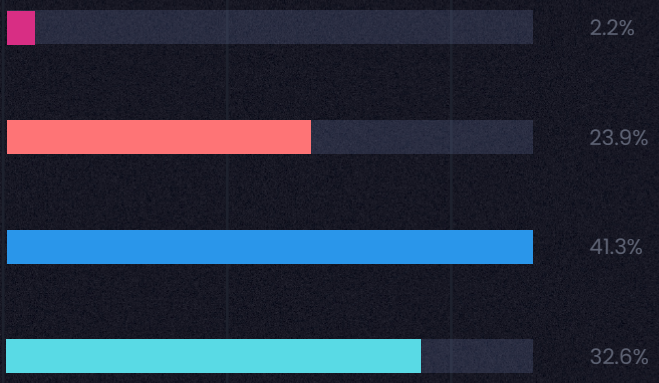


Industry/App Categories

SUMMARY

At 39.1%, the majority of responses collected in this survey were from software companies. The survey received the fewest responses from companies in the Travel and Hospitality vertical.

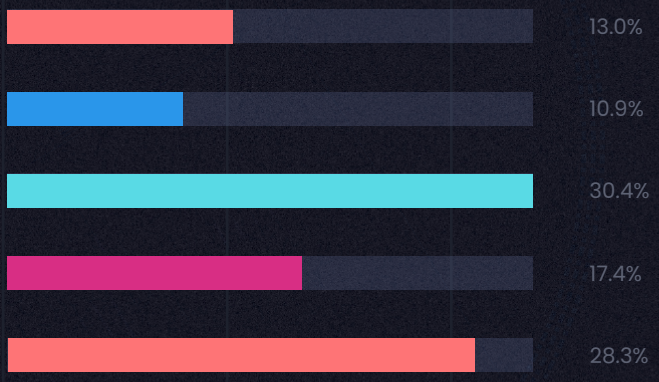
How many testers are on your team?



SUMMARY

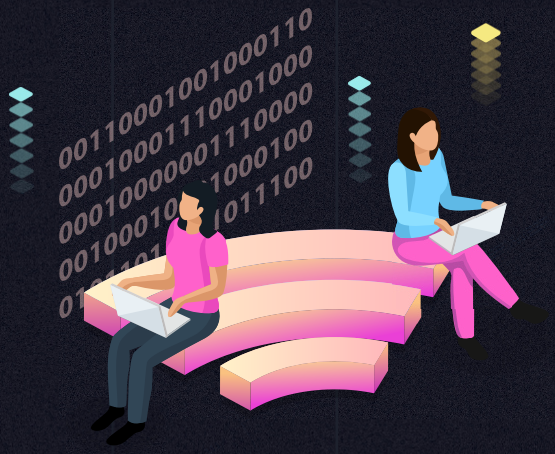
Most of the companies surveyed have test teams of 11-25 people. Only 2.2% of respondents had 1 tester, while 32.6% had teams of more than 26 people.

Annual Company Revenue

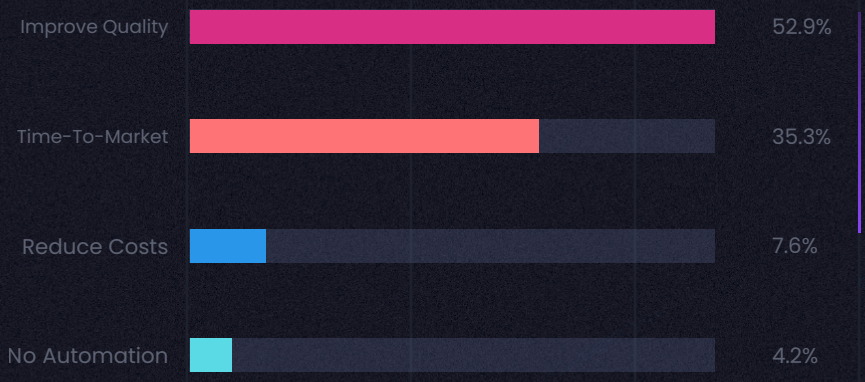


SUMMARY

30.4% of companies surveyed had an annual revenue of $10-100M.



What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

The majority of respondents indicated that a desire to improve overall app quality was the primary strategic driver in choosing to pursue test automation.

TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

New and Promising: Our automation initiatives are relatively new and promising

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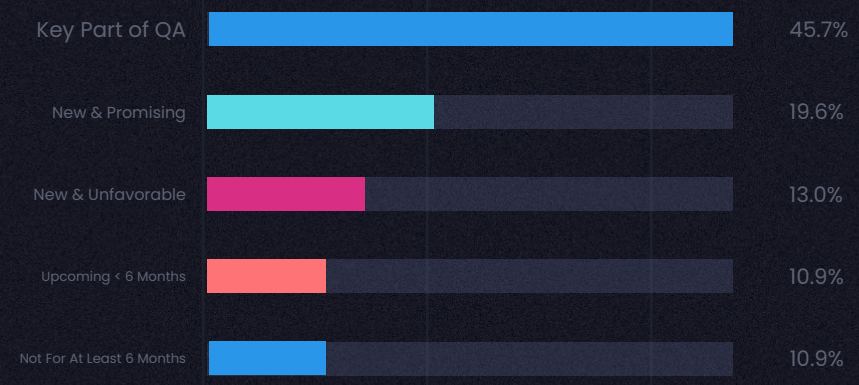
Upcoming <6 months: Automation is an initiative we hope to start within the next 6 months

Not for at least 6 months: Automation will not happen within 6 months

Where would you rate your current test automation maturity?



SUMMARY

45.7% of respondents indicated that test automation was a key part of their quality assurance process.

Based on the overall quality assurance budget in your organization, what percentage is spent on test automation when factoring in employees, tools, and other resources?

SUMMARY

Most respondents indicated that their companies allocate between 10 and 29% of their overall QA budget to test automation related expenditures.

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

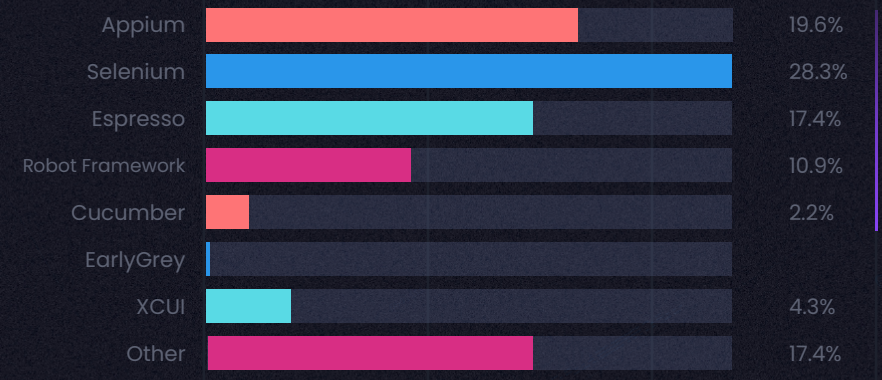
Budget: Convincing the organization of the need to invest in automation

What is your biggest struggle/pain point with using or starting test automation today?

SUMMARY

The survey respondents indicated that the largest barrier to entry for test automation is finding the right tools.

Test automation framework usage



SUMMARY

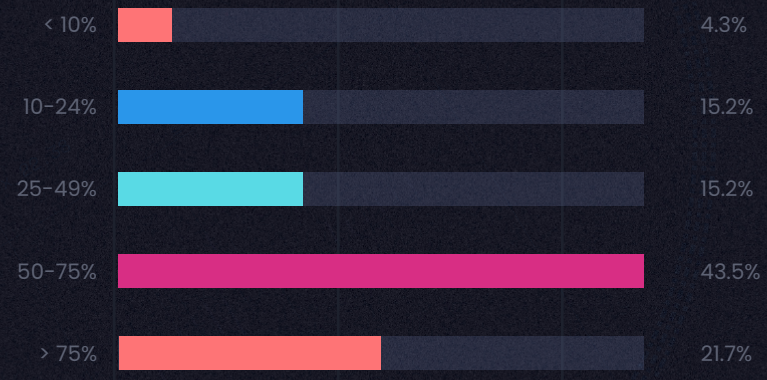
Responses indicate that Selenium is the preferred automation framework.

What percentage of your test cases are automated?

SUMMARY

93.5% of respondents indicated that they are performing some test automation. 26.1% of respondents specified that 25-49% of their test cases are automated.

What percentage of test cases would you like to have automated?



SUMMARY

Most respondents clearly see the value of test automation, with a noteworthy 43.5% seeking to automate 50-75% of their test cases. Comparing this graph with the one above shows a clear trend toward desired increases in test automation.

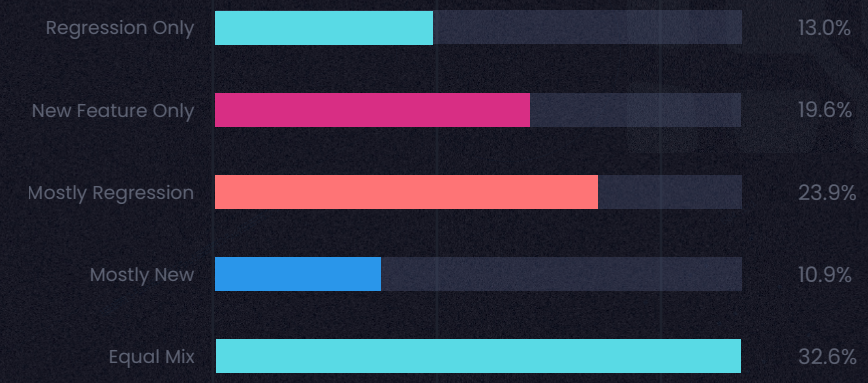
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

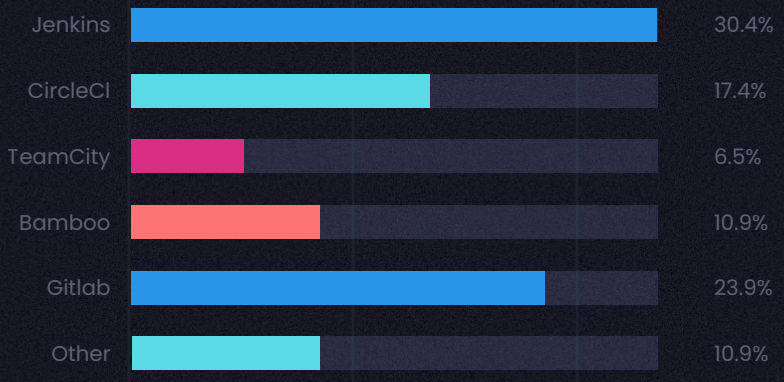
What are you using test automation primarily for?



SUMMARY

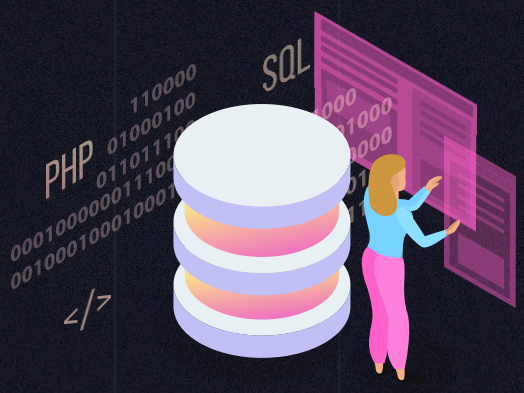
Most respondents are using test automation to verify the functionality of an equal mix in new and existing app features.

Which CI/CD tools does your organization use?

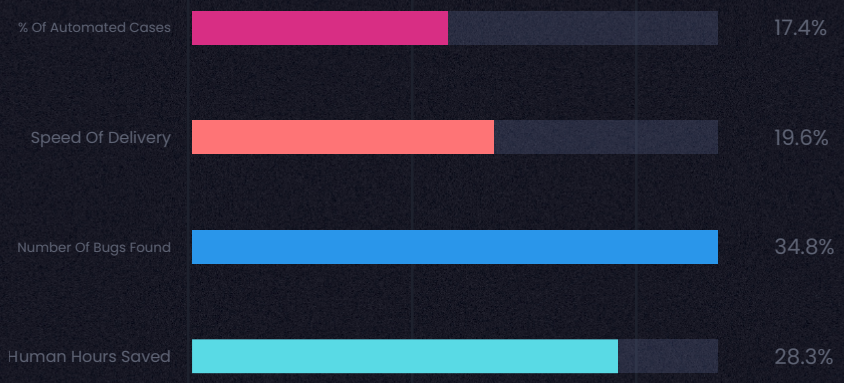


SUMMARY

Jenkins was listed as the preferred CI/CD tool amongst respondents with 30.4% indicating its use. At 23.9% Gitlab is the second most frequently used.



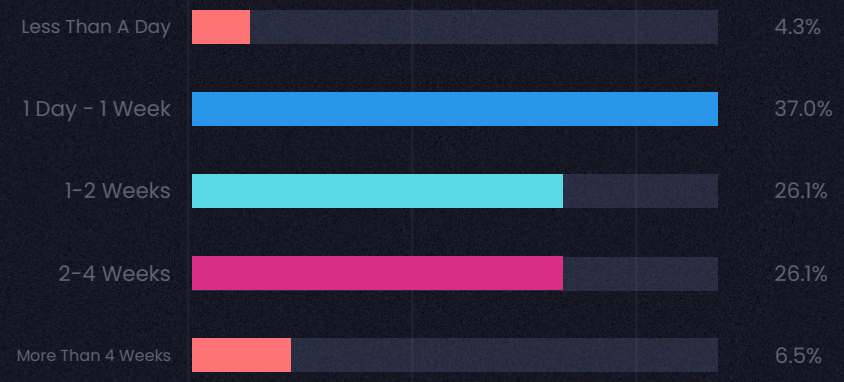
Which of the following metrics best indicates successful test automation implementation?



SUMMARY

Respondents indicated a preference for quantifying test automation success by measuring numbers of bugs found.

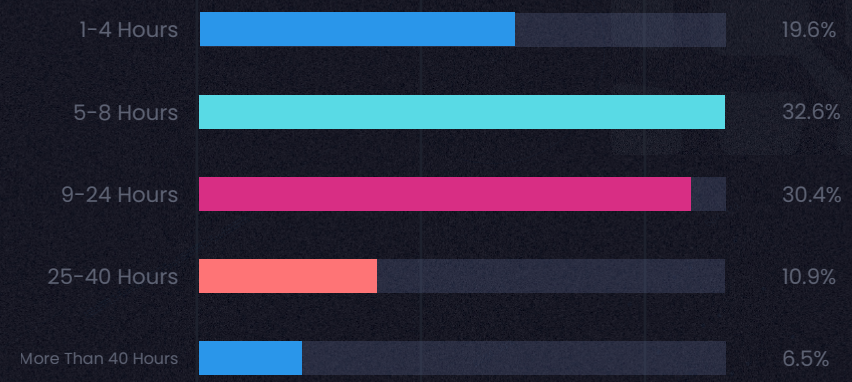
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts within 1 Day - 1 Week.

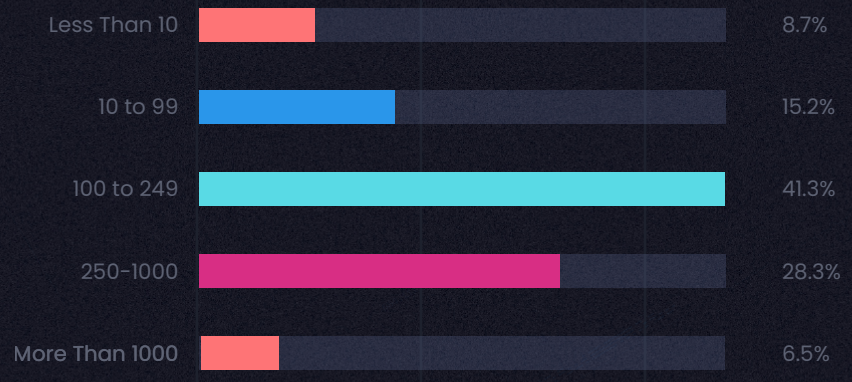
On average, how long does it take to code a test case using the framework of your choice?



SUMMARY

Survey respondents indicated that their test cases are typically coded within a 5-8 hour span.

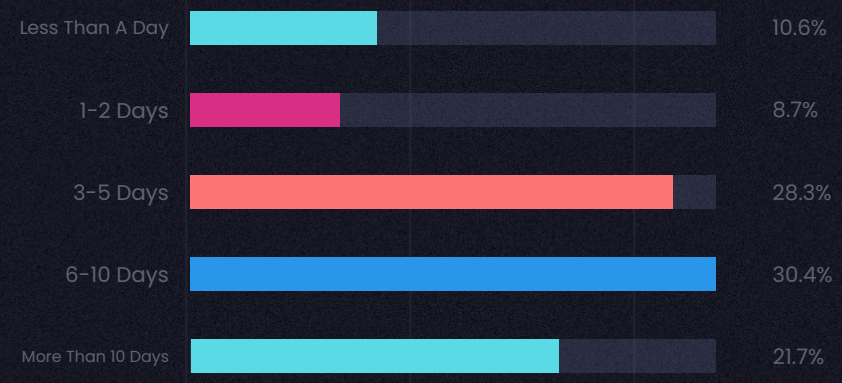
Approximately how many manual test cases are you executing with each app release?



SUMMARY

There's plenty of room for automation. 41.3% of respondents indicated that test teams perform 100-249 manual test cases with each app release.

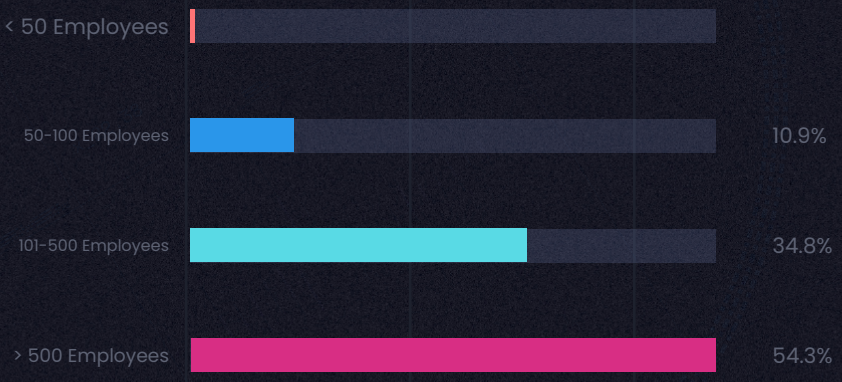
Approximately how long does it take to manually test your app before every release?



SUMMARY

Manual testing is time consuming. 30.4% of respondents indicated an average manual testing time period of 6-10 days with every release.

Company Size



SUMMARY

54.3% of survey respondents indicated that the company they worked for had more than 500 employees.

NEGATIVE SURPRISES

Code Complexity: The coding complexity of developing test scripts

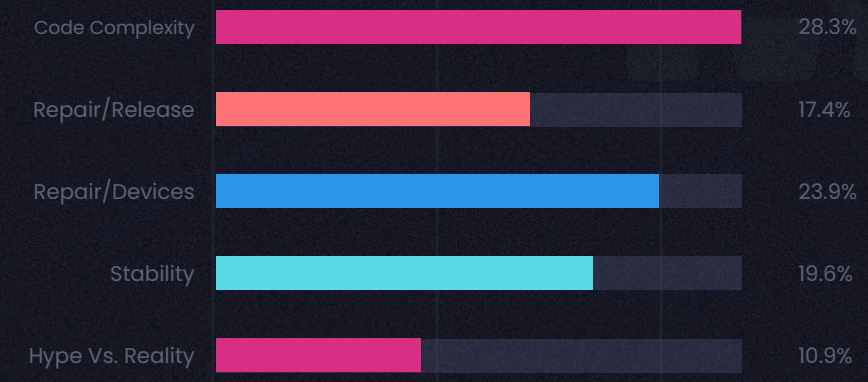
Repair/Release: The need to continually fix test scripts with every release

Repair/Devices: The need to continually fix test scripts to work across more devices

Stability: Having a stable test environment with predictable data

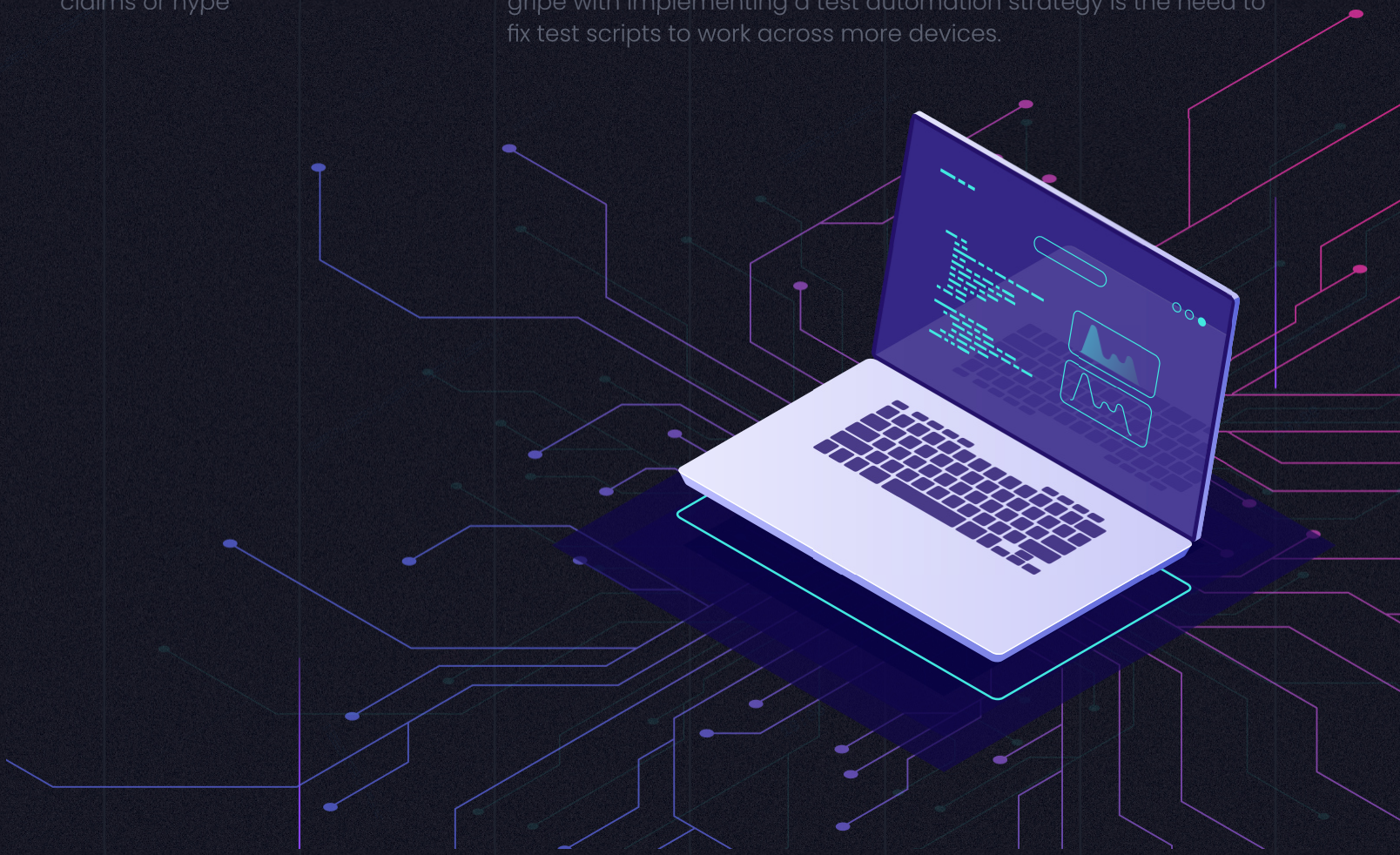
Hype vs. Reality: Vendor products not living up to their claims or hype

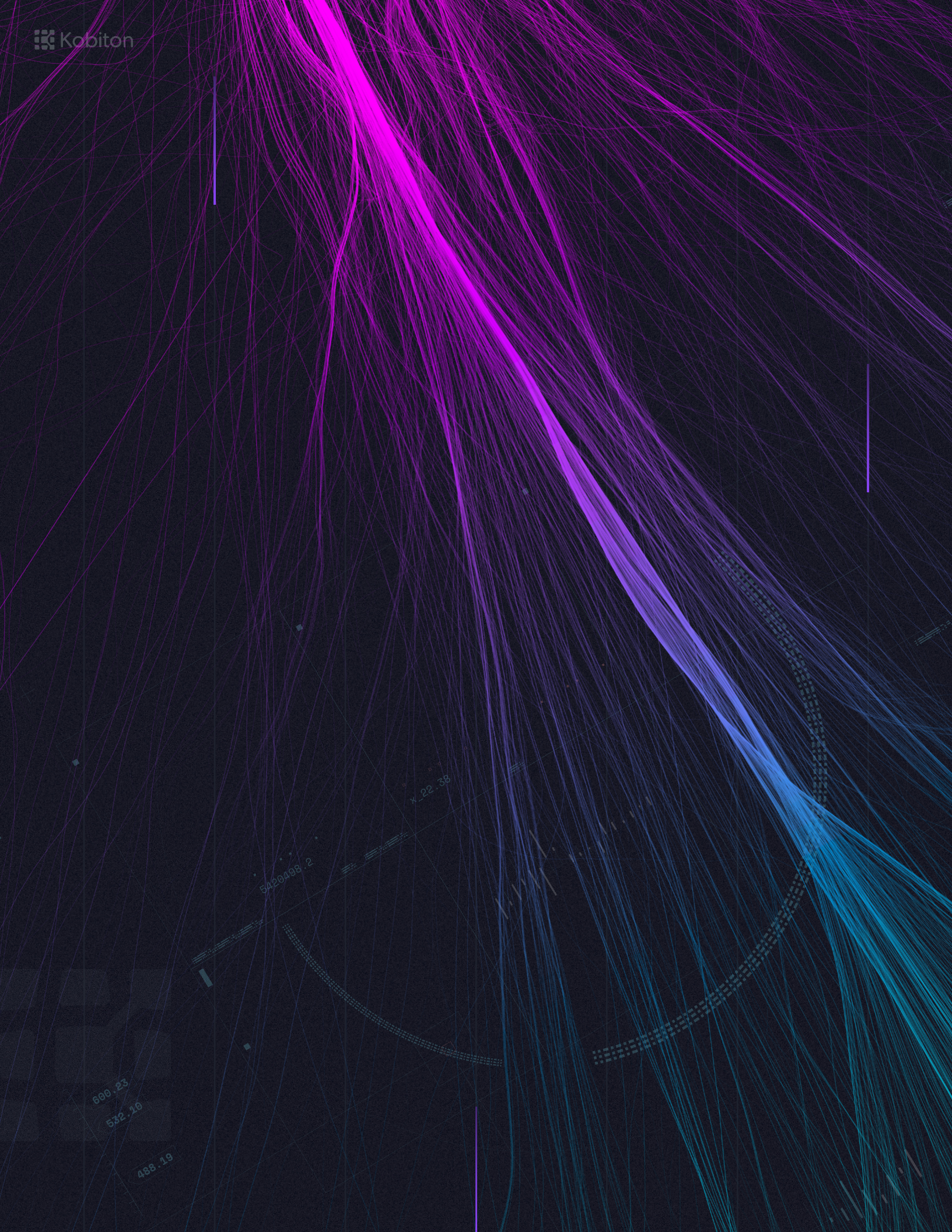
What was the biggest negative surprise you encountered as part of your test automation implementation?



SUMMARY

Code complexity issues are rampant in the test automation implementations used by most respondents. The second largest gripe with implementing a test automation strategy is the need to fix test scripts to work across more devices.

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RELEASE FREQUENCY

LESS THAN QUARTERLY RELEASE SCHEDULE

Release Frequency

In predictable fashion, release frequency is a direct measure of the importance of a mobile app to an organization. Companies that self-identify as Mobile Critical (*app is essential to revenue*) overwhelmingly release on a weekly or daily basis. Companies that classify as Mobile Strategic (*app is non-essential to company survival*), are more likely to release on a monthly or quarterly basis.

Release frequency also correlates to the overall percentage of QA budget spent on test automation. Those with a demand for daily or weekly releases make automation a critical part of their process. 72% of respondents who release on a daily basis spend between 30-75% of their overall QA budget on automation, while 80.7% who release on a monthly basis spend less than 49% of their budget on automation.

A hidden irony manifests itself when teams who release on a quarterly basis are asked what percentage of test cases they would like to have automated. Ironically, they have the highest ambitions, with 43.5% stating that they'd like to automate 50-75% of their test cases. This is likely due to the fact that companies in this group are still working in the theoretical realm of test automation, and have not yet implemented enough scale to understand its inherent complexities.

MOBILE STRATEGIES

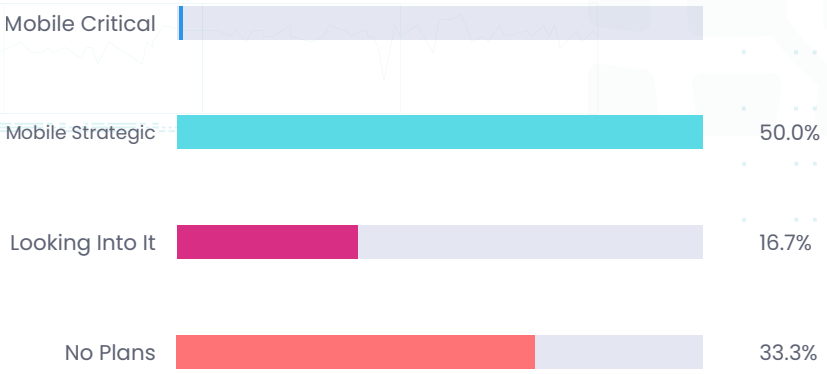
Mobile Critical: Our business model is centered around a mobile app

Mobile Strategic: Mobile is an important channel for our company, but we would survive without it

Looking Into It: Mobile is an initiative we're looking to pursue

No Plans: We don't have a mobile app or any plans to implement one

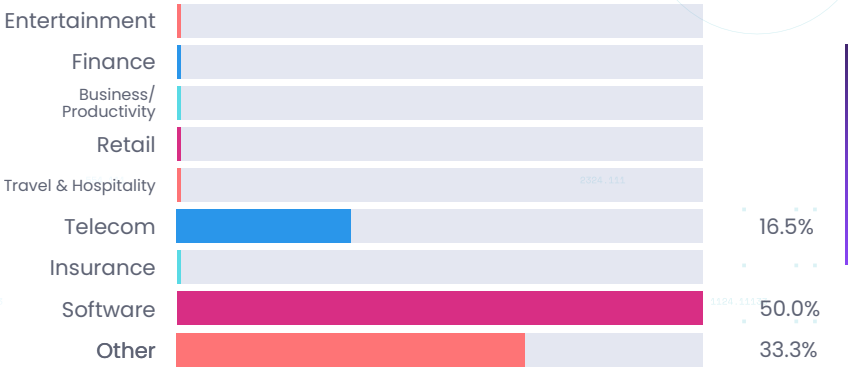
Mobile Strategies



SUMMARY

The majority of respondents indicated that mobile was an important component in their business model. 50% of respondents said that their business has a mobile app implemented.

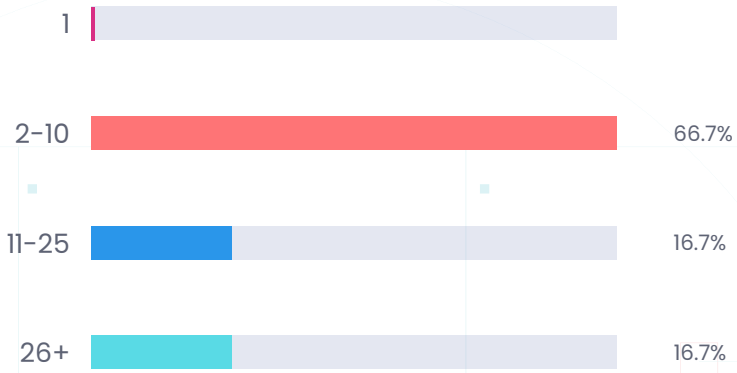
Industry/App Categories



SUMMARY

At 50%, the majority of responses collected in this survey were from software companies. The survey received the fewest responses from companies in the Travel and Hospitality vertical.

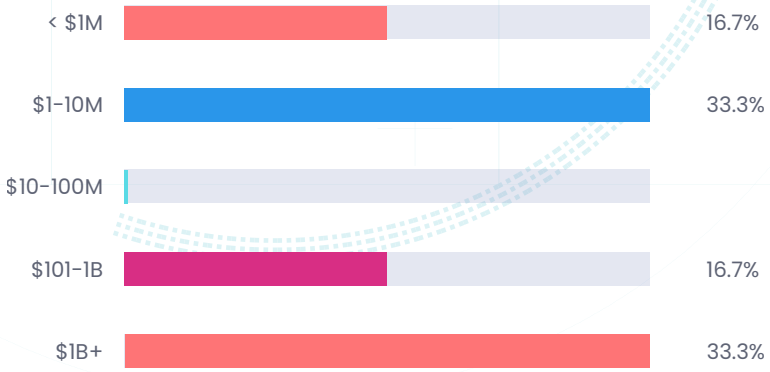
How many testers are on your team?



SUMMARY

Most of the companies surveyed have test teams of 2-10 people. 16.7% had teams of more than 26 people.

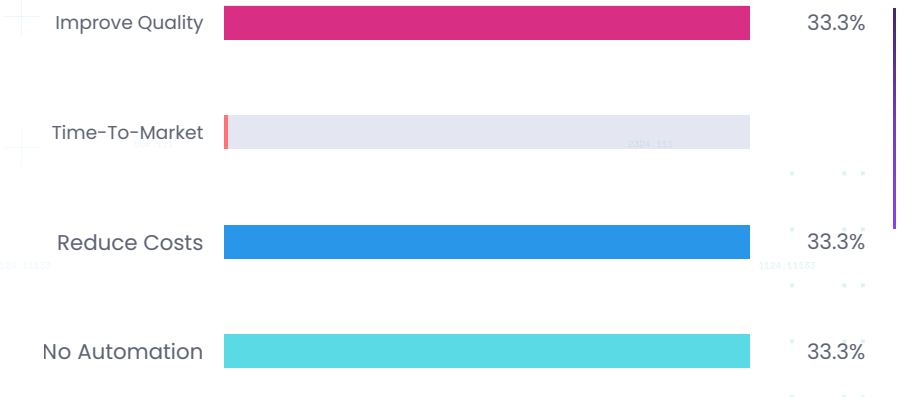
Annual Company Revenue



SUMMARY

33.3% of companies surveyed had an annual revenue of $1-10M.

What is the primary strategic driver for your organization pursuing a test automation strategy?



SUMMARY

The majority of respondents indicated that there is an equal desire to improve overall app quality, reduce costs, but also have no automation strategy.

TEST AUTOMATION MATURITY

Key Part of QA: Automation is a key part of our quality assurance process delivering tangible results

New and Promising: Our automation initiatives are relatively new and promising

New and Unfavorable: Our automation initiatives are relatively new and the results are not what we hoped for

Upcoming <6 months: Automation is an initiative we hope to start within the next 6 months

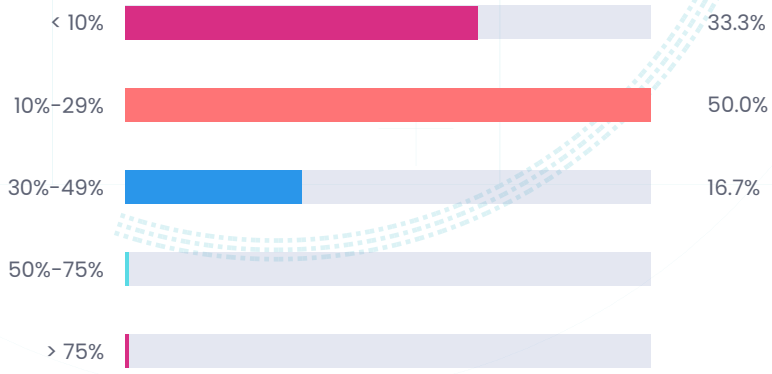
Not for at least 6 months: Automation will not happen within 6 months

Where would you rate your current test automation maturity?

SUMMARY

Respondents indicated low test automation maturity.

Based on the overall quality assurance budget in your organization, what percentage is spent on test automation when factoring in employees, tools, and other resources?



SUMMARY

Most respondents indicated that their companies allocate between 10 and 29% of their overall QA budget to test automation related expenditures.

PAIN POINTS

Training/Hiring: Training/ acquiring skilled automation engineers (scripting expertise)

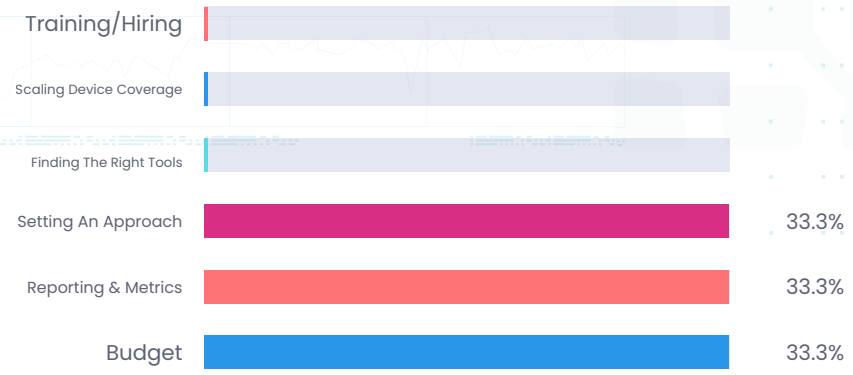
Finding the right tools: Evaluating and choosing the right tools

Setting an Approach: Deciding what to automate

Reporting: Test reporting and metrics

Budget: Convincing the organization of the need to invest in automation

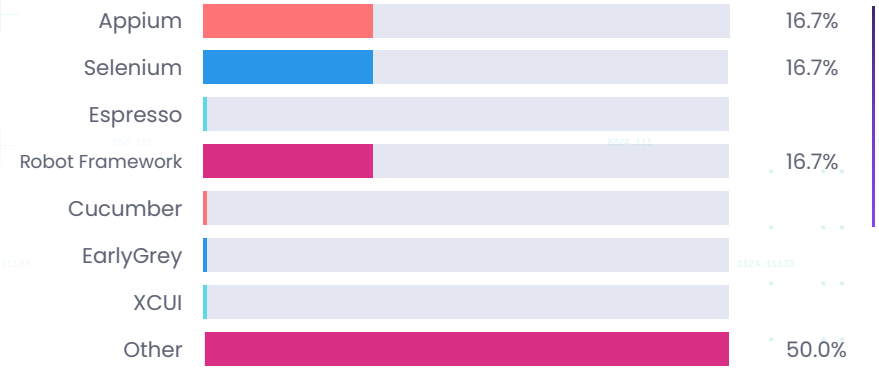
What is your biggest struggle/pain point with using or starting test automation today?



SUMMARY

The survey respondents indicated that the largest barrier for test automation is setting the right approach, reporting/metrics, and budget issues.

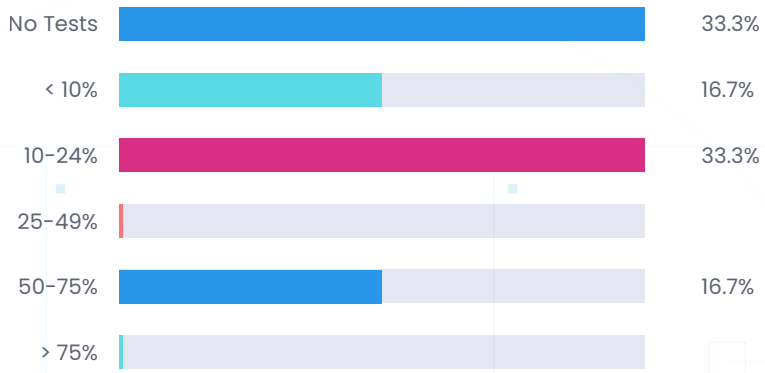
Test automation framework usage



SUMMARY

Responses indicated no clear preference in test automation framework usage.

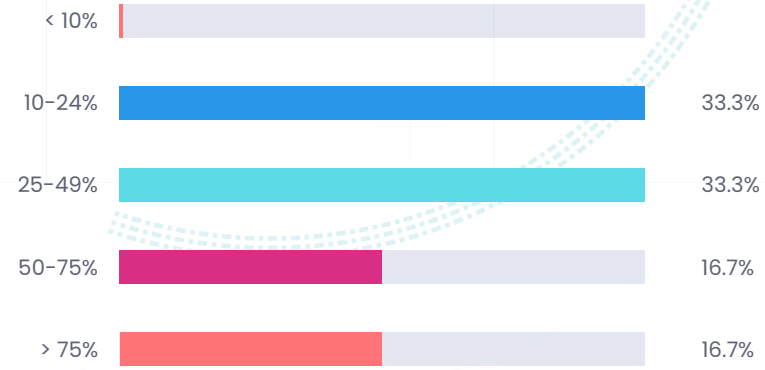
What percentage of your test cases are automated?



SUMMARY

66.7% of respondents indicated that they are performing some test automation. 33.3% of respondents specified that 10-24% of their test cases are automated.

What percentage of test cases would you like to have automated?



SUMMARY

66.6% of respondents are seeking to automate 10-49% of their test cases. Comparing this graph with the one above shows a clear trend toward desired increases in test automation.

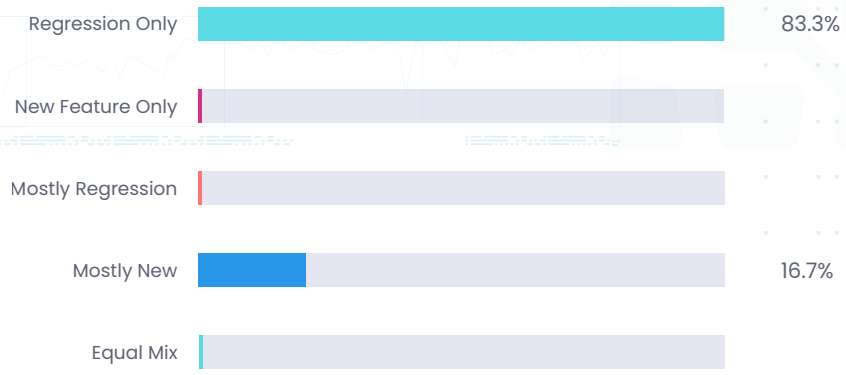
PRIMARY USES

Mostly Regression: Mostly regression testing but some new feature testing too

Mostly New: Mostly new feature testing but some regression testing too

Equal Mix: Equal mix of regression and new feature testing

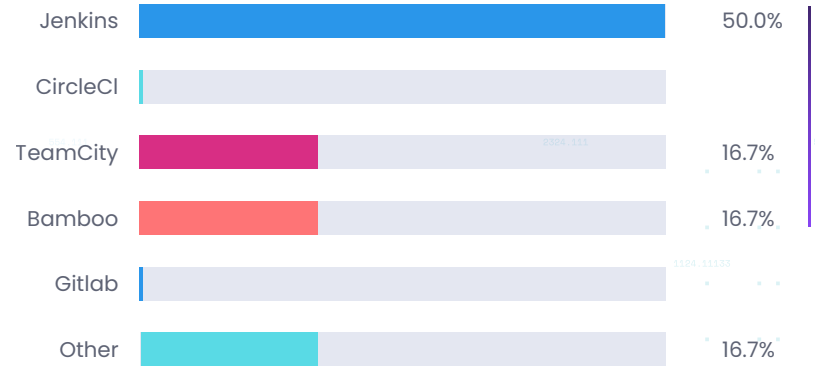
What are you using test automation primarily for?



SUMMARY

Most respondents are using test automation to verify the functionality of regression only in app features.

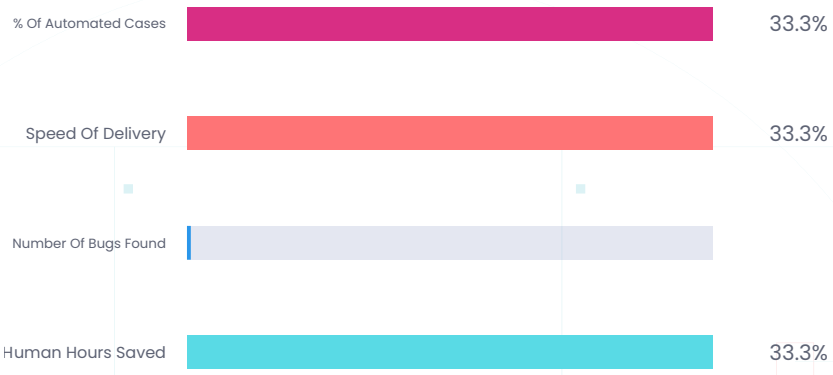
Which CI/CD tools does your organization use?



SUMMARY

Jenkins was listed as the preferred CI/CD tool amongst respondents with 50% indicating its use.

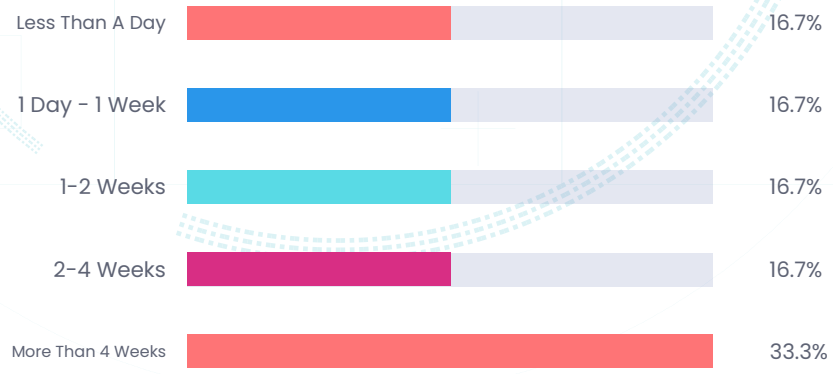
Which of the following metrics best indicates successful test automation implementation?



SUMMARY

Respondents indicated no preference for quantifying test automation success.

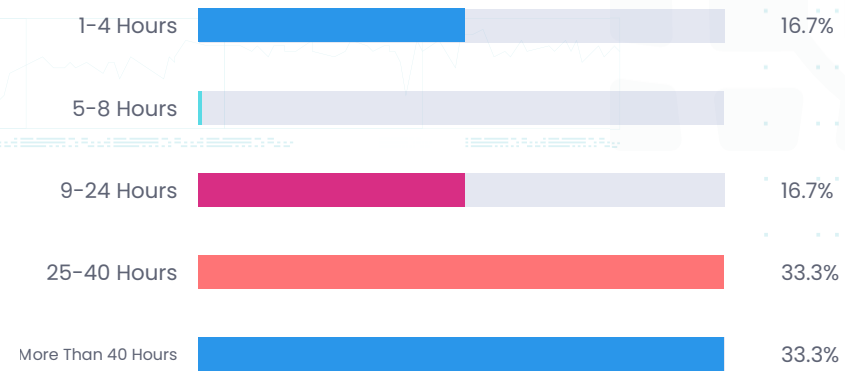
If you have automation testing in place, how long does it take to update automation scripts for a new app release?



SUMMARY

Most respondents indicated that they are able to update automation scripts in more than 4 weeks.

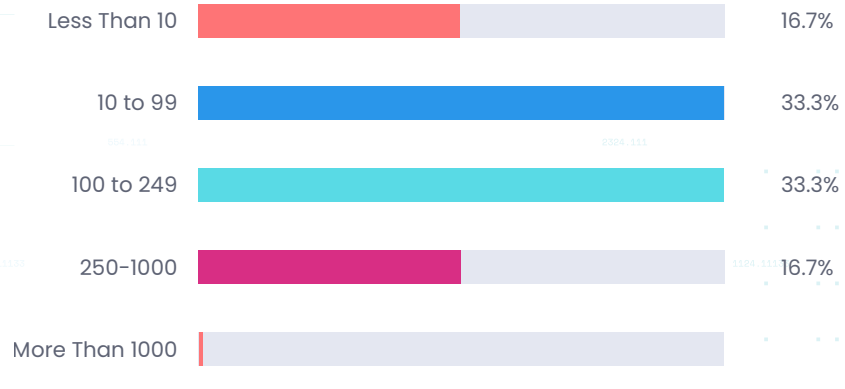
On average, how long does it take to code a test case using the framework of your choice?



SUMMARY

Survey respondents indicated that their test cases are typically coded in 25-40 hours.

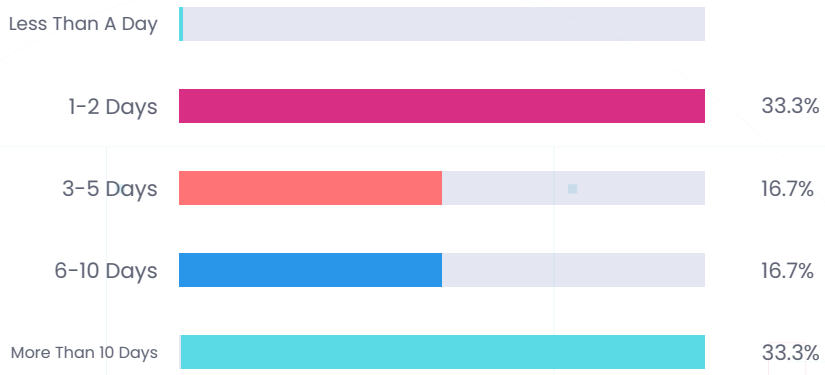
Approximately how many manual test cases are you executing with each app release?



SUMMARY

There's plenty of room for automation. 66.6% of respondents indicated that test teams perform 10-249 manual test cases with each app release.

Approximately how long does it take to manually test your app before every release?



SUMMARY

Equal number of respondents indicated an average manual testing time period of 1-2 days and more than 10 days with every release.

Company Size

SUMMARY

100% of survey respondents indicated that the company they worked for had more than 500 employees.

NEGATIVE SURPRISES

Code Complexity: The coding complexity of developing test scripts

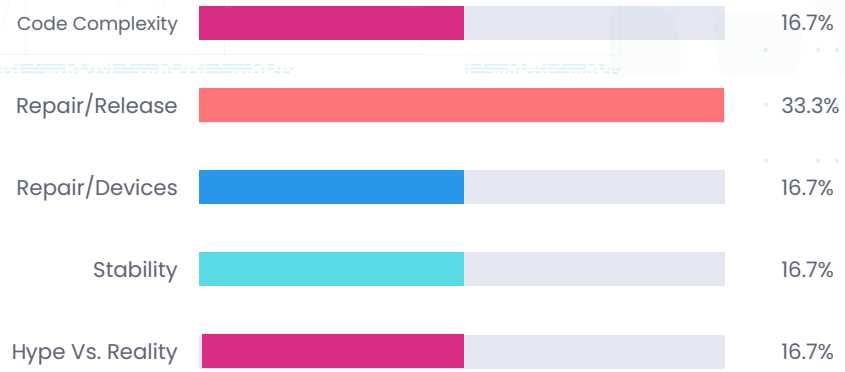
Repair/Release: The need to continually fix test scripts with every release

Repair/Devices: The need to continually fix test scripts to work across more devices

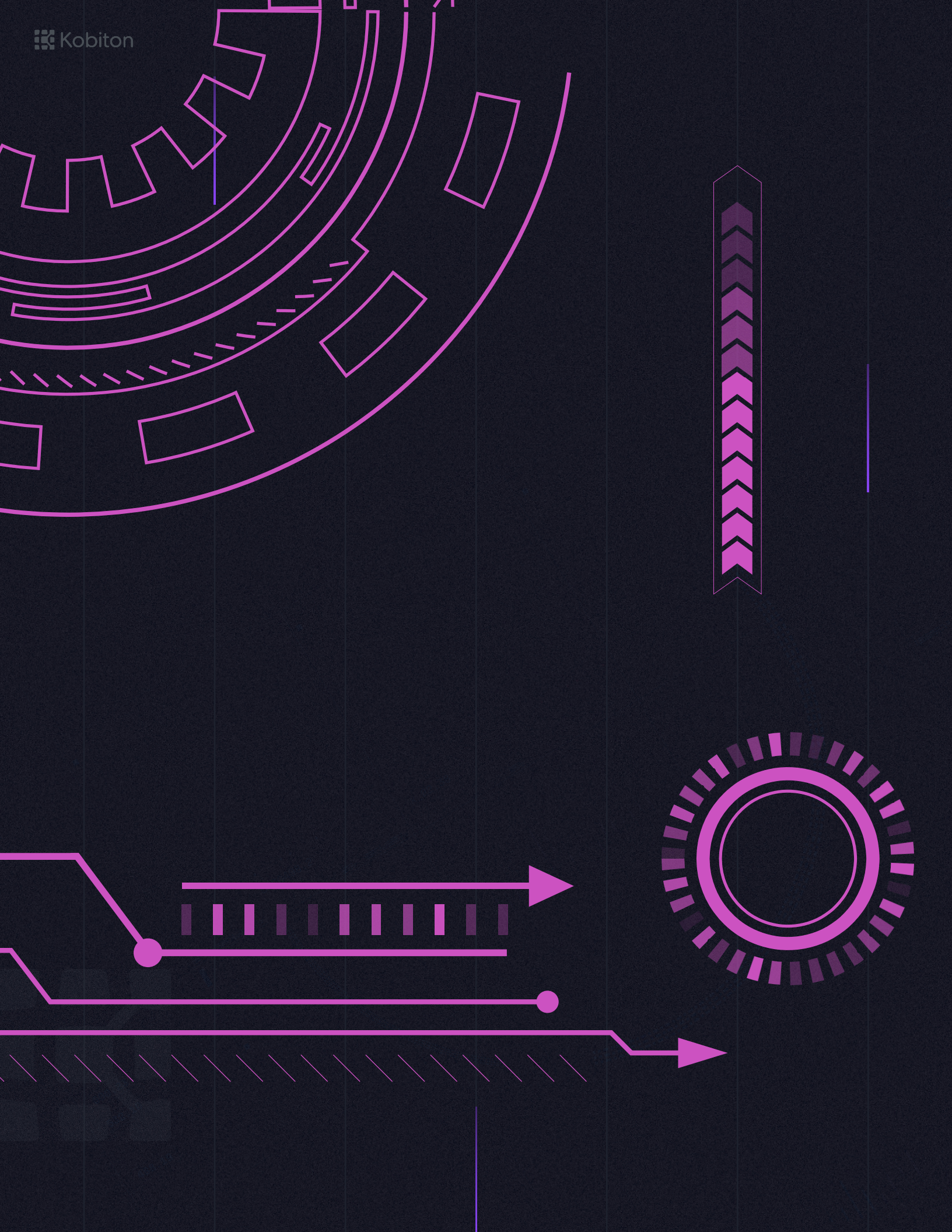
Stability: Having a stable test environment with predictable data

Hype vs. Reality: Vendor products not living up to their claims or hype

What was the biggest negative surprise you encountered as part of your test automation implementation?



SUMMARY

Fixing test scripts with every release is the main issue in the test automation implementations used by most respondents.

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