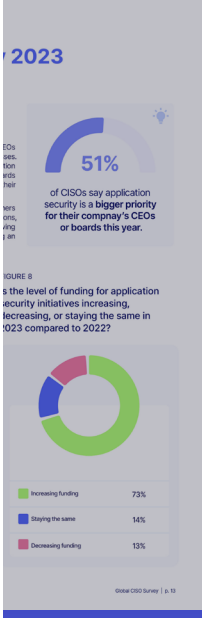
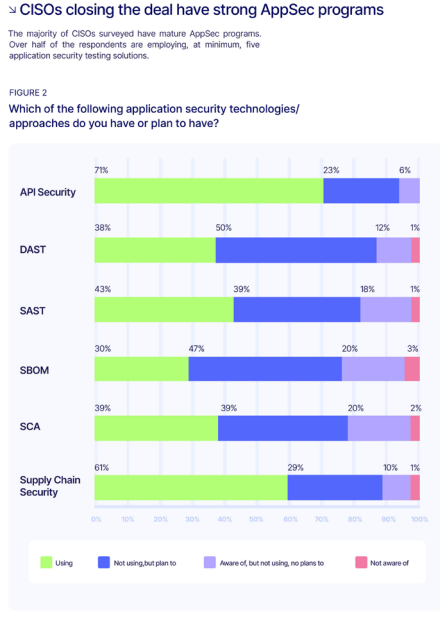
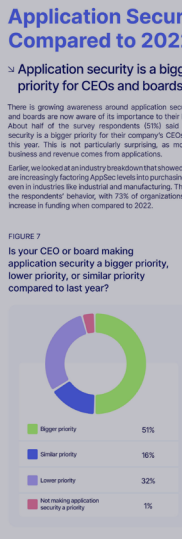


Global CISO Survey: The Growing Impact of AppSec on Business

Gain insights from over 200 CISOs on AppSec maturity, DevOps, and business growth



Introduction

Digital transformation continues to disrupt and accelerate every industry's business operation.

Source: McKinsey

A McKinsey Global Survey of executives found that companies have accelerated the digital transformation of their customer and supply-chain interactions as well as their internal operations by as much as three to four years.

Cybercrime continues to rise and is now considered to be among the top business risks.

Source: Forbes

There are other factors that have contributed to rising security vulnerabilities in recent years, including the increased volume of network connections to multiple devices with varying levels of application security. Securing digital transformation is therefore quickly becoming the number one priority for CISOs.

CISOs have traditionally been focused more on risk management while the rest of the business is focused on generating revenue. Security is often seen as a cost center and a drag on the business, instead of an important enabler of business growth.

This survey shows that AppSec is becoming far more important in driving sales. CISOs are increasingly called to demonstrate the security of their business' products in sales engagements and are presented with more opportunities to shape organizational processes. This survey aims to provide a snapshot of the application security industry — both to help reduce cyber threats and support business growth.



Findings at a Glance

According to 200+ CISOs ...

84%

Are frequently **pulled into sales engagements** related to closing sales of their company's products and services.



96%

Find that buyers want to know that **the products they're purchasing are secure.**



42%

Make their application security reports public, and 44% are willing to show their AppSec reports upon request from a prospective buyer.



77%

Stated that at least half of their company's business **runs on applications they are responsible for securing.**

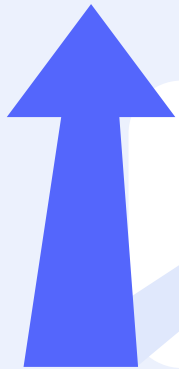


51%

Said **application security is a bigger priority** for their company's CEOs or boards this year.

 High

Low 



73%

Saw an **increase in AppSec funding** when compared to 2022.

82%

Saw an increase in the **percentage of applications covered by their company's AppSec** program in the past year.



44%

Are "shifting AppSec everywhere."



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Survey Report Findings

Sales Engagements Related to Closing Sales

↳ CISOs are often brought in as the "closer"

As a result of digital transformation efforts, an increased percentage of software products contain applications, are applications, or are services built on applications. But with rising cybercrime and the expanding application attack surface brought about by modern development trends, application security (AppSec) is more important than ever.

Organizations developing software are not the only ones recognizing the need for strong application security; buyers are also becoming increasingly vigilant about the security of the products and services they are purchasing. As a result, organizations are starting to bring CISOs into sales engagements to attest to the level of security that goes into their products.

The results of our survey support this finding. We asked, "How often are you pulled into sales engagements?" Around 84% of CISOs answered that they are pulled into sales engagements "very often" or "often" to help close sales of their company's products and services (RFPs, questionnaires, surveys).

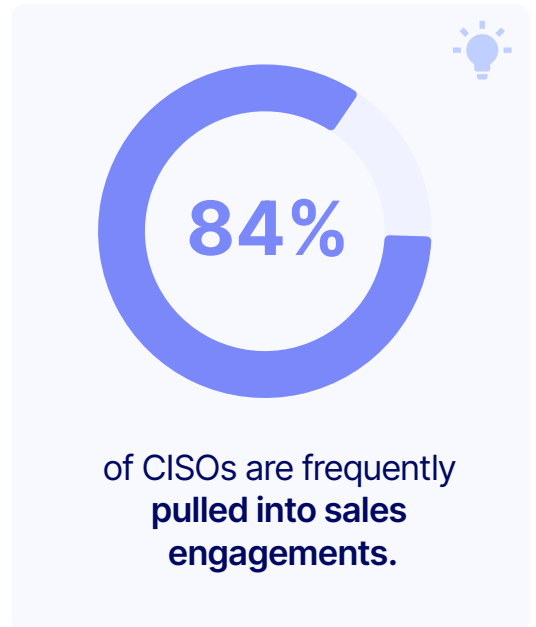
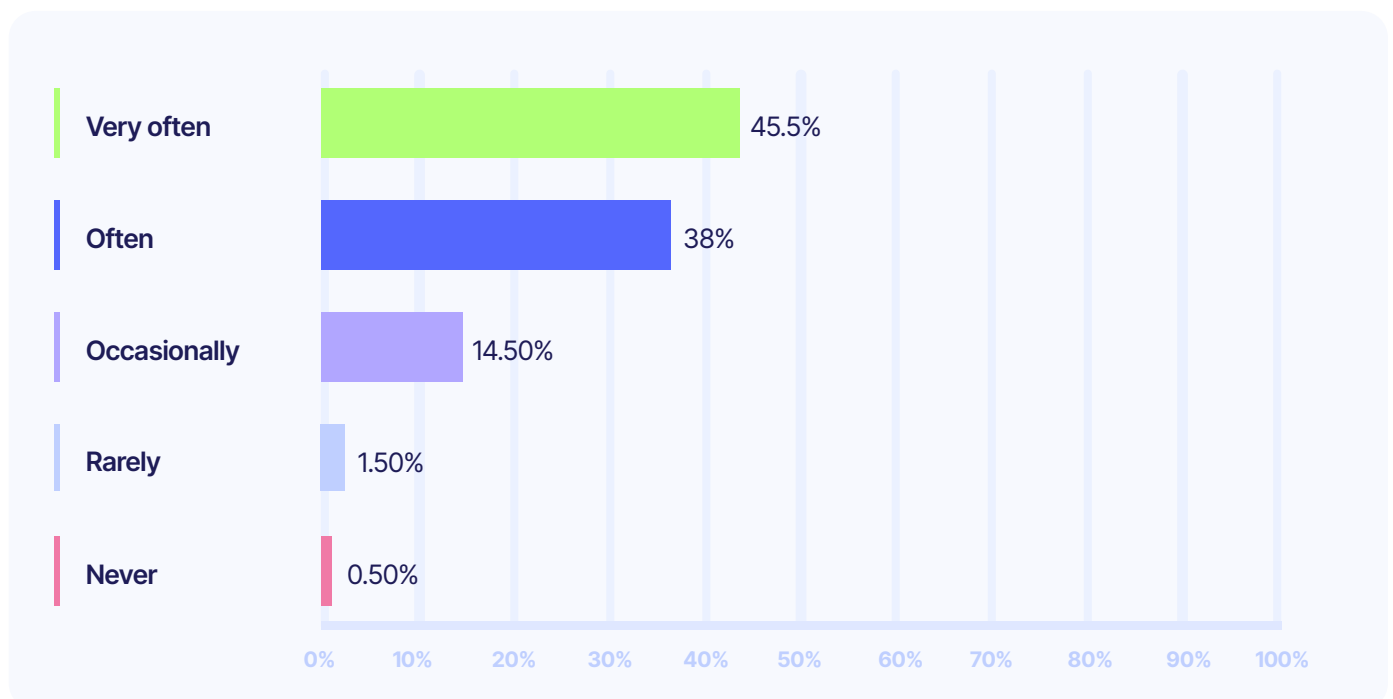


FIGURE 1

How often have you been pulled into sales engagements related to closing sales of your company's products and services?

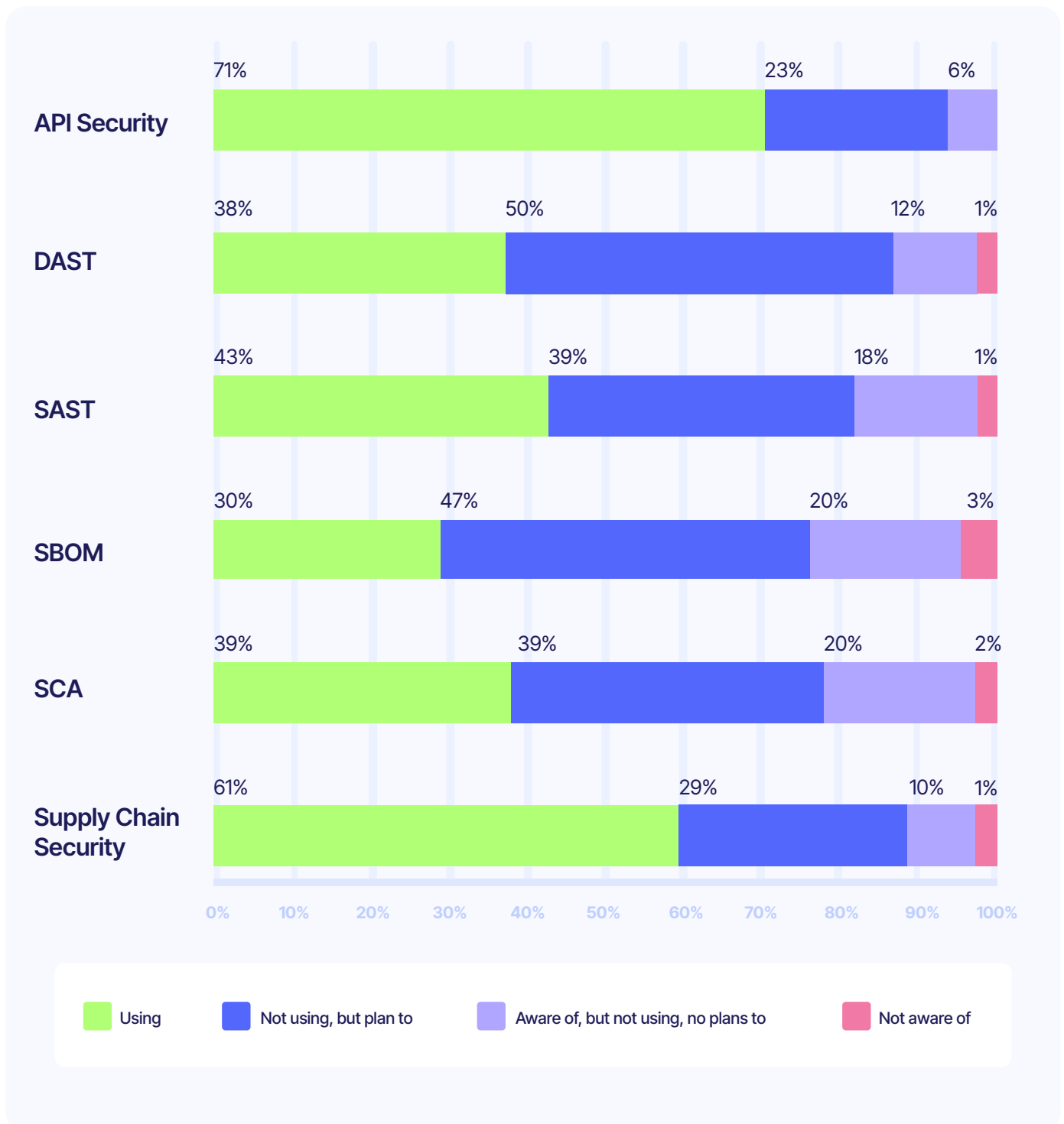


↳ CISOs closing the deal have strong AppSec programs

The majority of CISOs surveyed have mature AppSec programs. Over half of the respondents are employing, at minimum, five application security testing solutions.

FIGURE 2

Which of the following application security technologies/ approaches do you have or plan to have?

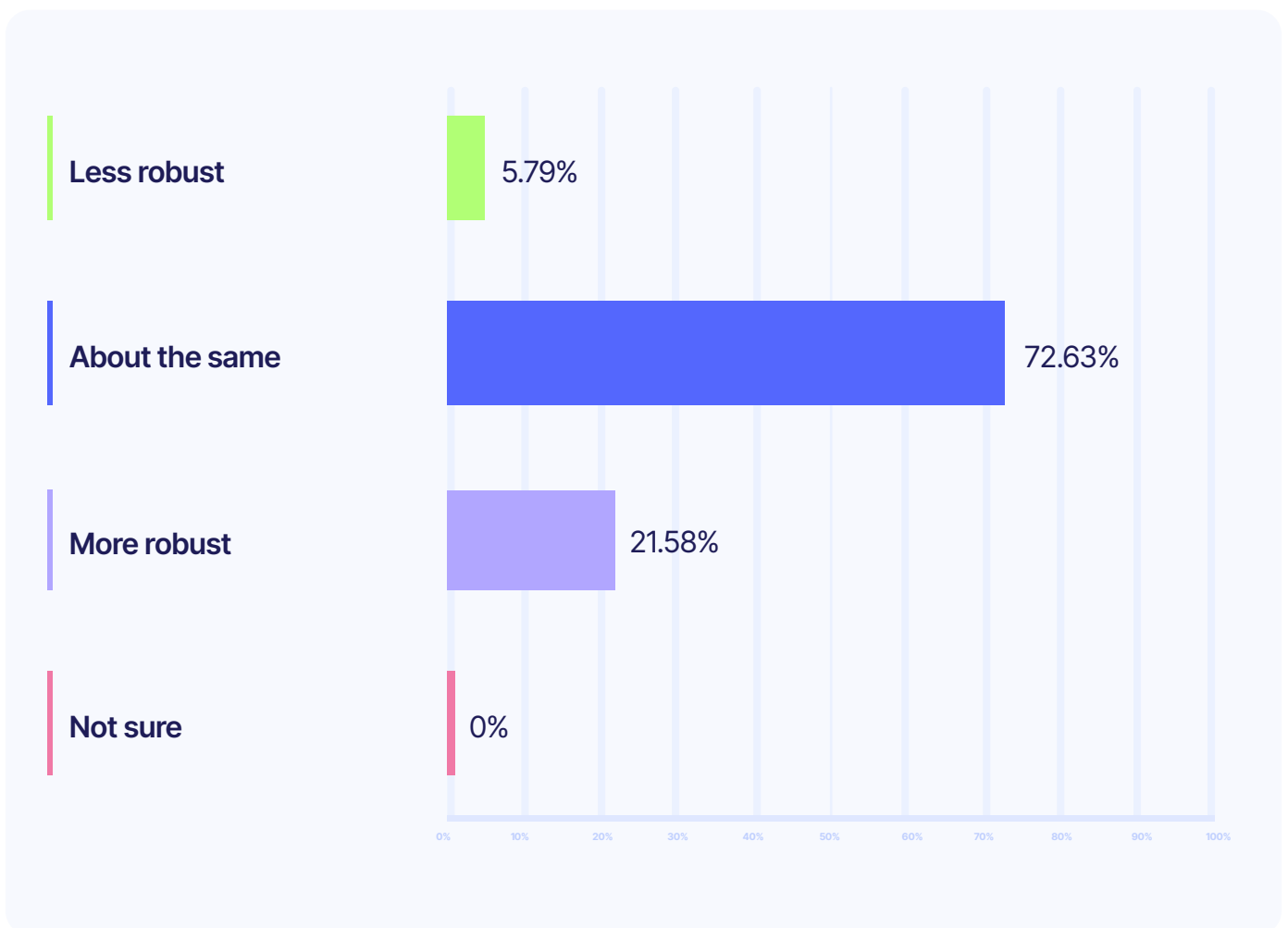


And when asked to compare their AppSec program to competing companies in their industry, approximately 94% answered that their program is “as robust” as or “more robust” than their peers.

This makes sense because sales probably wouldn’t want to bring the CISO into a discussion around application security with buyers if they didn’t have a strong AppSec program in place.

FIGURE 3

Do you believe that your application security posture is less robust than other companies in your industry?



Level of Application Security and Purchasing Decisions

Buyers want to know that the products they're purchasing are secure

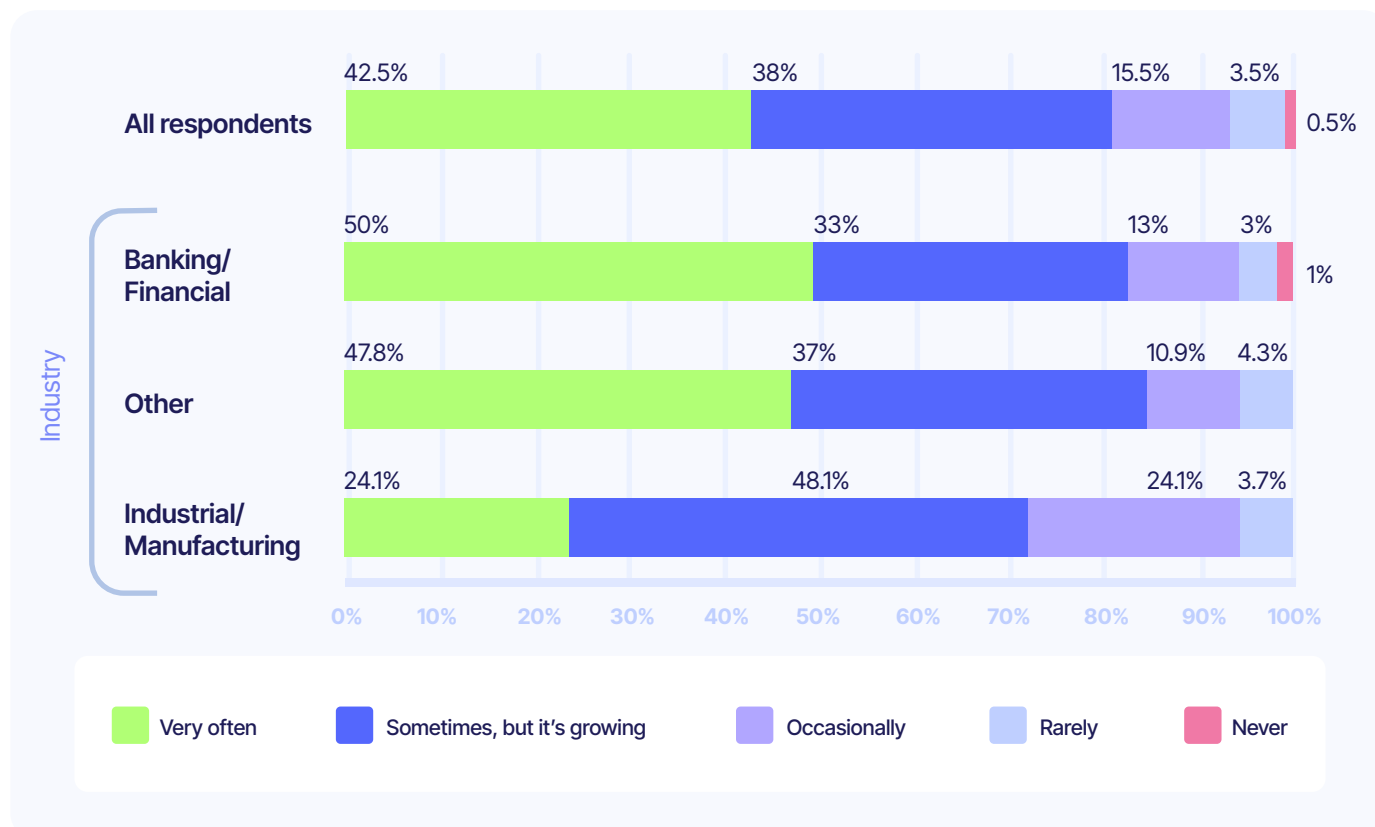
When asked "Do your prospects consider your level of application security when they make purchasing decisions?" 96% responded "very often," "sometimes, but it's growing," or "occasionally."

Respondents in the banking or financial services industry encounter this request more often. 50% of CISOs in the banking and financial industry said AppSec is considered "very often" in purchasing decisions, compared to 24% in the industrial and manufacturing industry. It could be argued that this result is due to the fact that banking and financial services organizations tend to be further along in their digital transformation efforts than other organizations.



FIGURE 4

Do your prospects consider your level of application security when they make purchasing decisions regarding your company's products?



That said, it's important to not overlook that for all industries, especially industrial and manufacturing, the number of prospects wanting to know the level of application security prior to a purchase is growing.

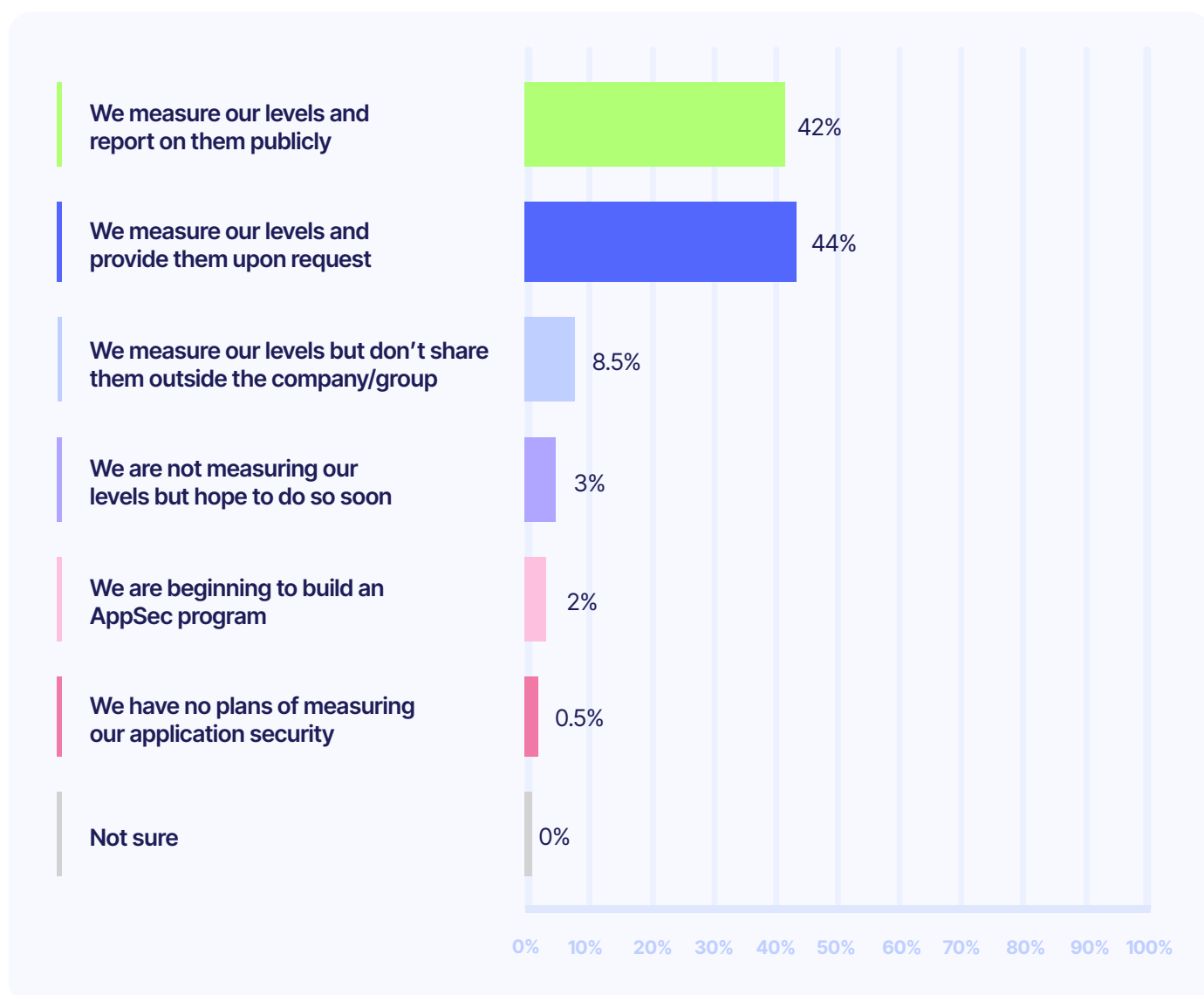
CISOs in the industrial and manufacturing industry, or any industry for that matter, should be preparing for this question to arise more frequently.

Organizations are willing to show their AppSec scan reports.

The survey showed that most organizations are already preparing to show the security of their software products. 42% of organizations make their application security reports public, and 44% are willing to show their AppSec reports upon request from a prospective buyer.

FIGURE 5

How do you demonstrate to your customers that your application security levels are meeting or exceeding their expectations?



Estimated Percentage of Business Applications That CISOs Are Responsible for Securing

↳ CISOs are responsible for securing most applications that their businesses run on

We know organizations are well into their digital transformation journey when their business and revenue become tied to applications. 77% of survey respondents stated that at least half of their company's business runs on applications that they are responsible for securing.

It goes without saying, as revenue is increasingly linked to applications, it's becoming even more important for CISOs to communicate their products' level of security.

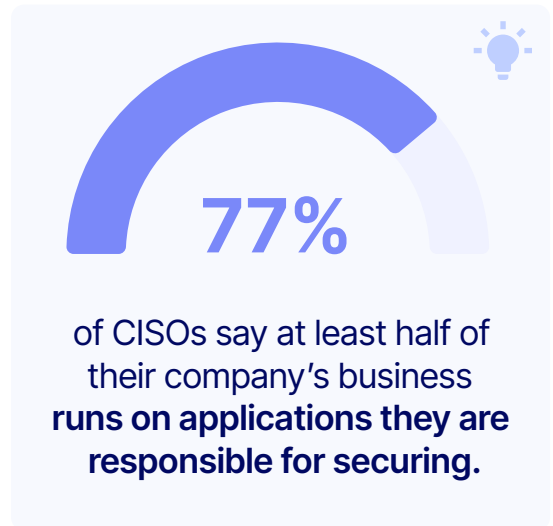
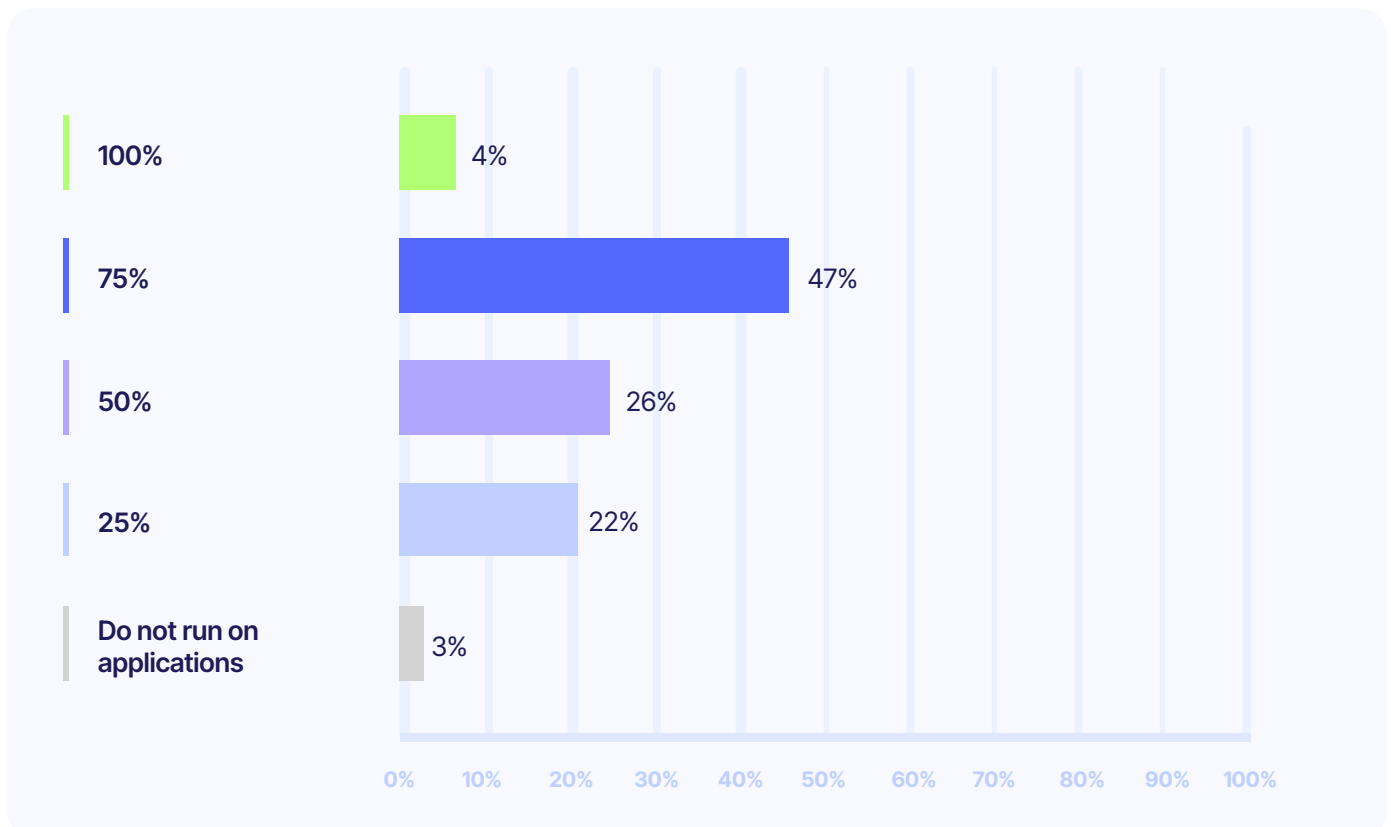


FIGURE 6

If you were to estimate, what percentage of your company's business or revenue runs on applications that you are responsible for securing?



Application Security 2023 Compared to 2022

Application security is a bigger priority for CEOs and boards

There is growing awareness around application security. CEOs and boards are now aware of its importance to their businesses. About half of the survey respondents (51%) said application security is a bigger priority for their company's CEOs or boards this year. This is not particularly surprising, as more of their business and revenue comes from applications.

Earlier, we looked at an industry breakdown that showed customers are increasingly factoring AppSec levels into purchasing decisions, even in industries like industrial and manufacturing. This is driving the respondents' behavior, with 73% of organizations seeing an increase in funding when compared to 2022.

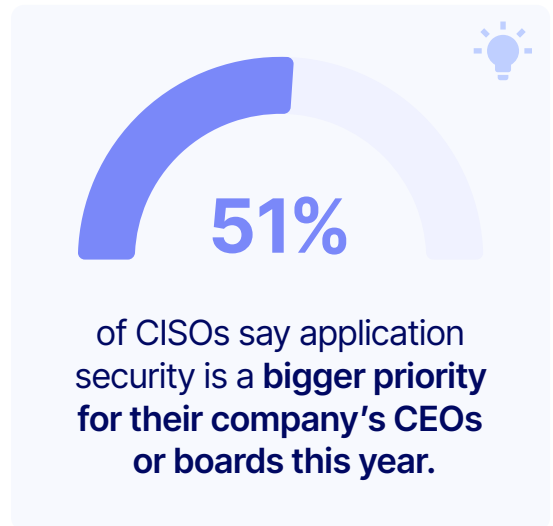


FIGURE 7

Is your CEO or board making application security a bigger priority, lower priority, or similar priority compared to last year?

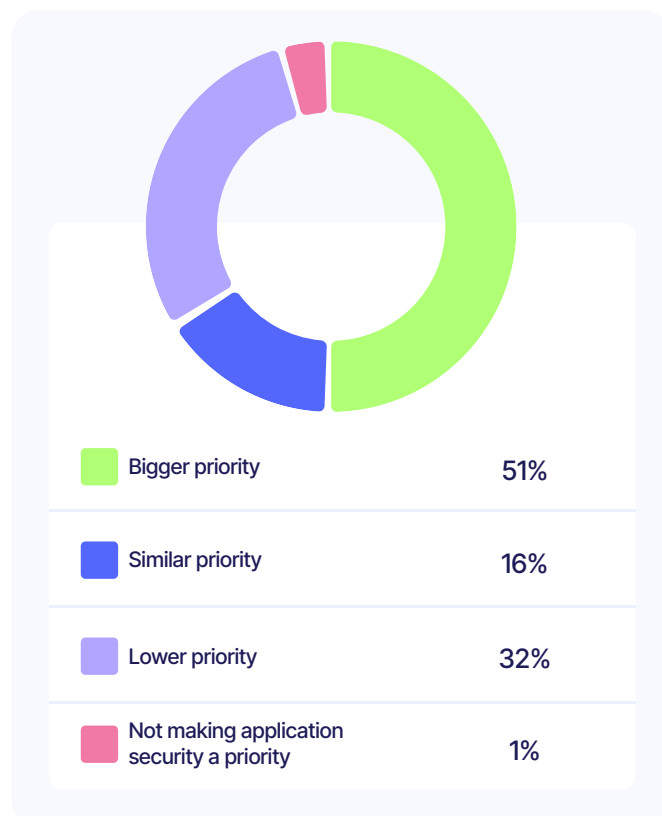
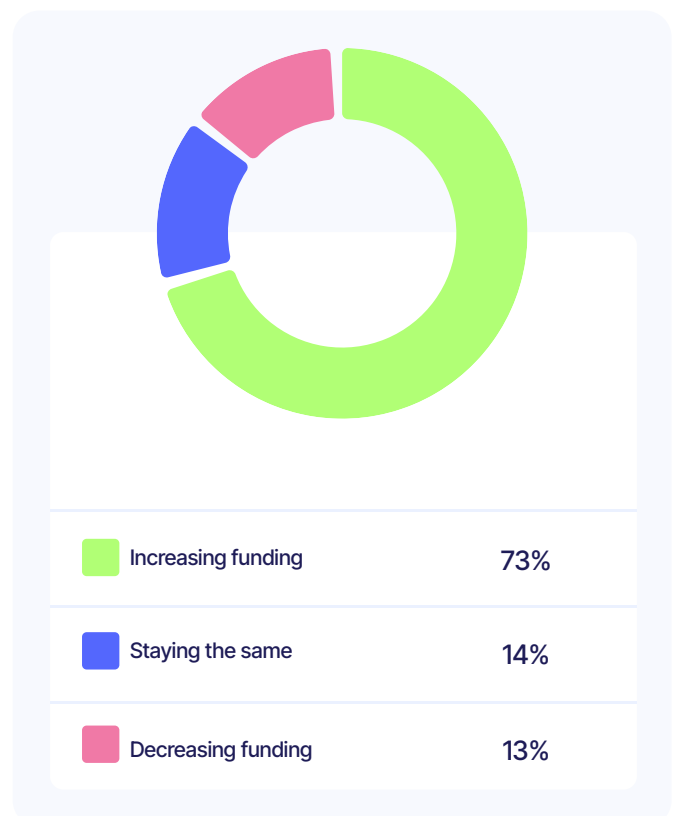


FIGURE 8

Is the level of funding for application security initiatives increasing, decreasing, or staying the same in 2023 compared to 2022?



Percentage of Applications Covered by an AppSec Program

Not all applications are covered by an AppSec program

The good news is that companies are recognizing the importance of application security and adding more applications to their AppSec programs. When asked, "What proportion of applications in your company are covered by an AppSec program?" 83% of CISOs selected "most" or "every" application.

Given that our respondents represent large-scale enterprises with robust development teams, we were surprised to find that 33 respondents either don't have an AppSec program in place or haven't fully onboarded their applications.

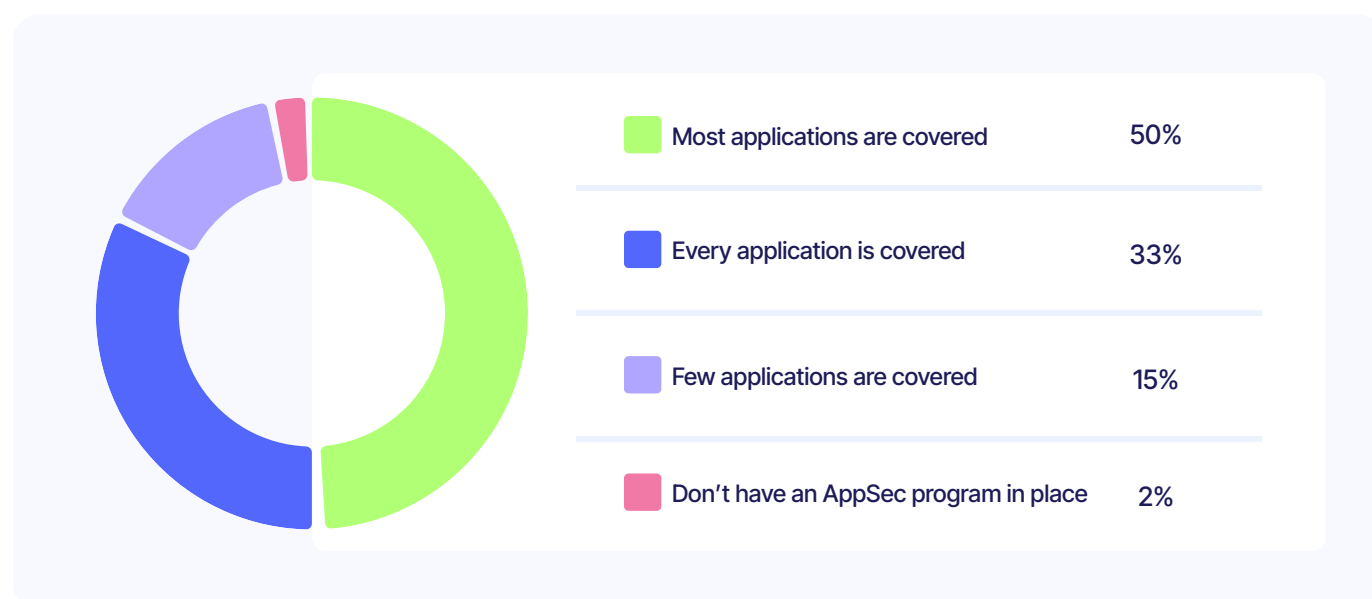
Checkmarx AppSec Program Methodology Assessment (APMA) is a free and efficient way to mature your current program.

Answer **11 quick questions** and receive a blueprint with steps you can take to move your AppSec program from its current state to your desired state.

[Get Your Free Assessment →](#)

FIGURE 9

What percentage of your organization's applications are covered by your AppSec program today?



➤ Compared to last year, more applications are covered by an AppSec program

Much like the previous year-over-year comparison, we are seeing an industry-specific shift in the percentage of applications covered by AppSec programs. Most companies (82%) are making progress on this front.

While it's not surprising that 81% of companies in banking and financial services say the percentage of applications covered by an AppSec program is increasing every year,

it is surprising that 84% of respondents in the industrial and manufacturing vertical say the percentage of applications protected by their AppSec program is increasing. This shows that digital transformation is impacting all verticals, and not just those that tend to be early adopters of security programs.

FIGURE 10

Is the percentage of your organization's applications covered by your AppSec program increasing, decreasing, or about the same when compared year-over-year?



Factors Affecting the Selection of an Application Security Solution

Multiple factors go into selecting an AppSec solution

When asking respondents what factors they consider when selecting application security solutions, we expected the overwhelming majority to select, "If the solutions will measurably reduce risk."

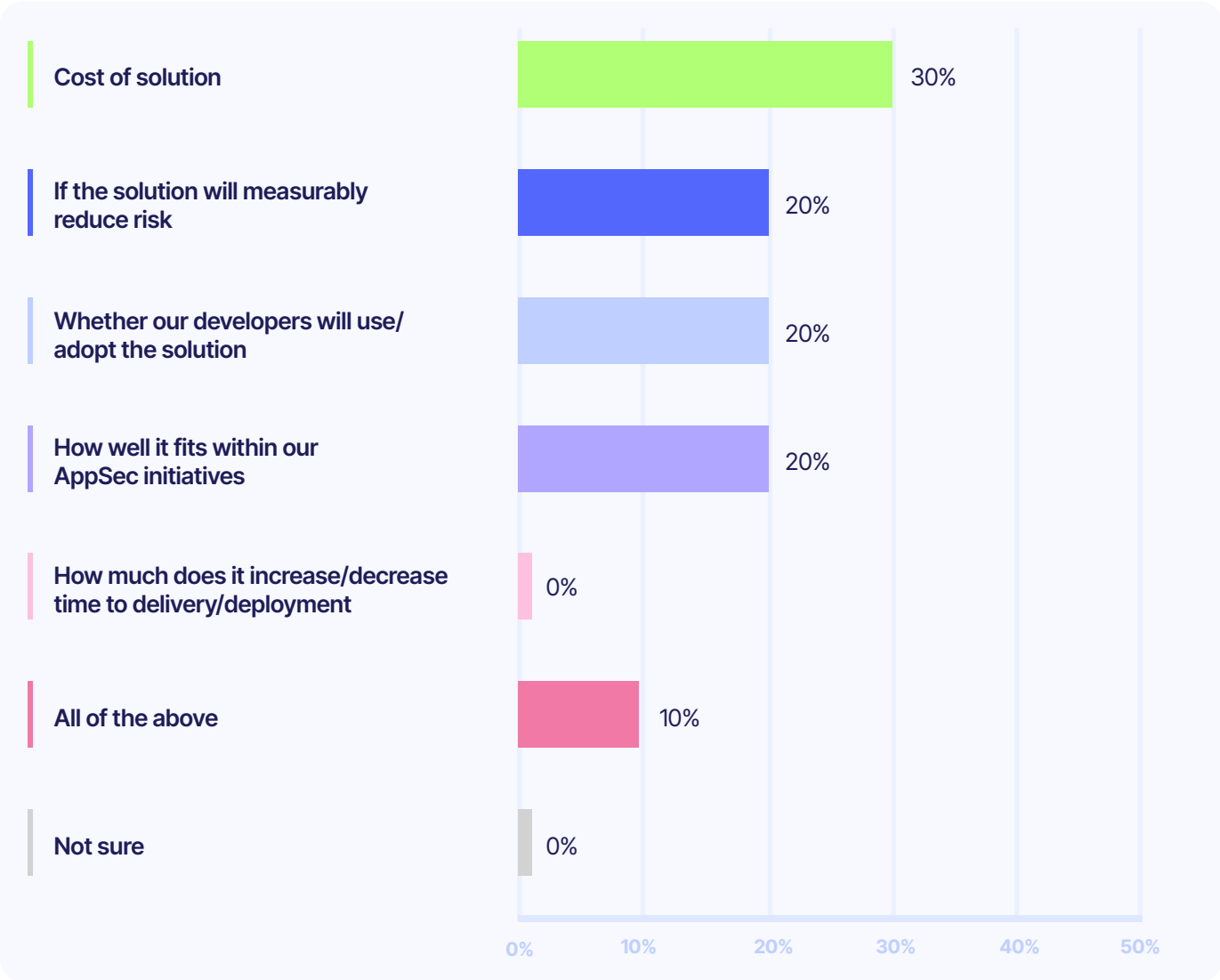
Although it's likely part of the criteria for every organization selecting an AppSec solution, it's clear now that's not the only factor.

Other factors such as cost, fitting in with other AppSec initiatives, time to deployment, and developer adoption seem to hold equal weight.

With the development team increasingly owning application security scanning, it comes as no surprise that developer adoption, and developer experience in general, is an important consideration.

FIGURE 11

What matters most for your organization when selecting an application security solution?



Actions to Improve AppSec Within DevOps Initiatives

↳ CISOs are integrating and automating AppSec solutions

The security function has historically been seen as a bottleneck within organizations. By fully integrating and automating application security into your DevOps initiatives, also known as “DevSecOps,” you can effectively secure applications without interrupting day-to-day operations.

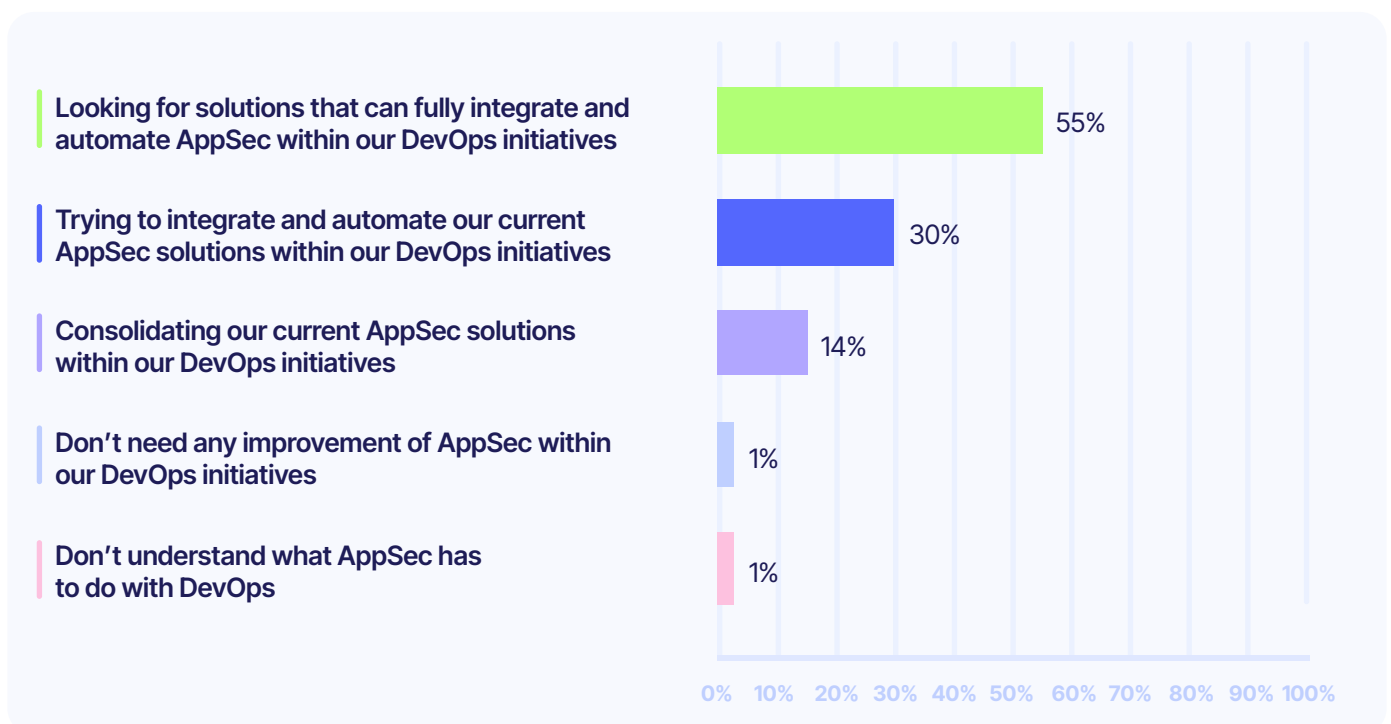
55% of our respondents indicated that they are actively “looking for solutions that can fully integrate and automate AppSec within our DevOps initiatives.” 30% said they are “trying to integrate and automate our current AppSec solutions within our DevOps initiatives.”

It’s positive to see that 85% of CISOs are proactively looking for ways to make AppSec more seamless. That said, the 30% trying to integrate and automate their existing tools may find that they don’t work well with their overall AppSec program. It’s common for organizations to try to make the most of the solutions they already have in place before deciding to upgrade.



FIGURE 12

What are you currently doing to improve AppSec within your DevOps initiatives?



Stage of Application Security Testing Within Software Development

➤ CISOs are starting to adopt “shift everywhere”

In the context of AppSec testing within the software development life cycle (SDLC), companies are at various stages of application security maturity. The previous norm has been to shift left, however, 44% of respondents recognize that they must “shift everywhere,” meaning they must integrate security everywhere in the SDLC.

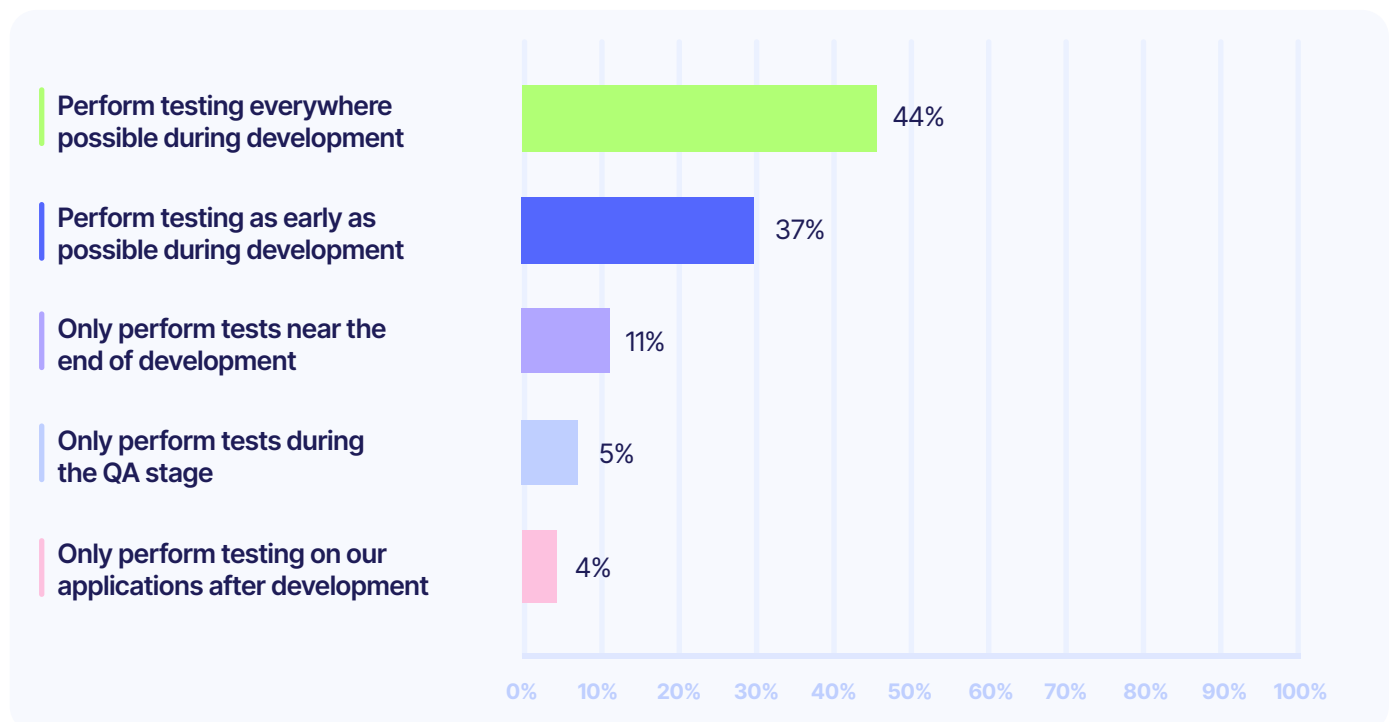
While shifting everywhere is a growing priority, it still isn't practiced by the majority. Of the remaining 56% of respondents, we can see that the majority have at least shifted left — or have started performing testing as early as possible during development.

This demonstrates that there has been progress in integrating AppSec into the SDLC. As AppSec programs mature and find synchronicities with DevOps teams, we can expect more teams shifting everywhere to meet the expectations that businesses and buyers have around AppSec.



FIGURE 13

In the context of application security testing within software development, where are you performing security testing?



Conclusion

The survey uncovered that buyers are more security conscious than ever before. They want proof that software providers have strong AppSec programs in place prior to purchase.

As a CISO, this means that if you're not already involved in sales engagements, you will be soon. It's time to start preparing by maturing your AppSec program and leveraging a comprehensive platform.

Not using an AppSec platform? Here's what to look for when selecting one:



End-to-end coverage

that spans the SDLC to help prevent security gaps.



Correlated scan results

to prioritize the most impactful vulnerabilities first.



Easy-to-read reports

to leverage with buyers, or your CEO and board, to show the depth and breadth of your AppSec program.



Cloud-native platform

to reduce maintenance and enable you to scale your AppSec program as you grow.



Developer-friendly

AppSec solutions that are integrated and automated into the developer's existing tools and processes to increase the chances of adoption.

ARE YOU READY TO
Enable Business Growth?

We're here to help.

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Methodology

To get more insight into current trends in application security, we commissioned a survey of 200 CISOs and other senior security executives to shed some light on their key challenges and priorities.

The survey was conducted online by Global Surveyz Research, an independent survey company. Respondents included a mix of CISOs, CSOs, CIOs, Deputy CISOs, Deputy CSOs, and Deputy CIOs from companies in North America, W. Europe, APAC, and LATAM with an annual revenue of \$750M+, across a variety of industries, including: Banking & Finance, Insurance, Software, Technology, Engineering, Manufacturing, Industrial, and the Public Sector.

The respondents were recruited through a global B2B research panel and invited via email to complete the survey, with all responses collected during March 2023. Answers to most of the non-numerical questions were randomized to prevent order bias in the answers.

200+

CISOs and other senior security executives weighed in on their key challenges and priorities in application security.



APPENDIX

Demographics

Country and Industry

FIGURE 14
Country

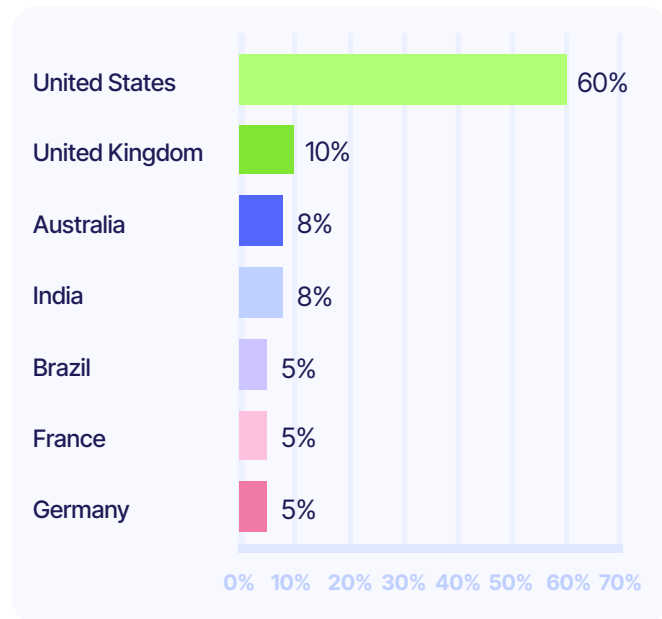


FIGURE 15
Region

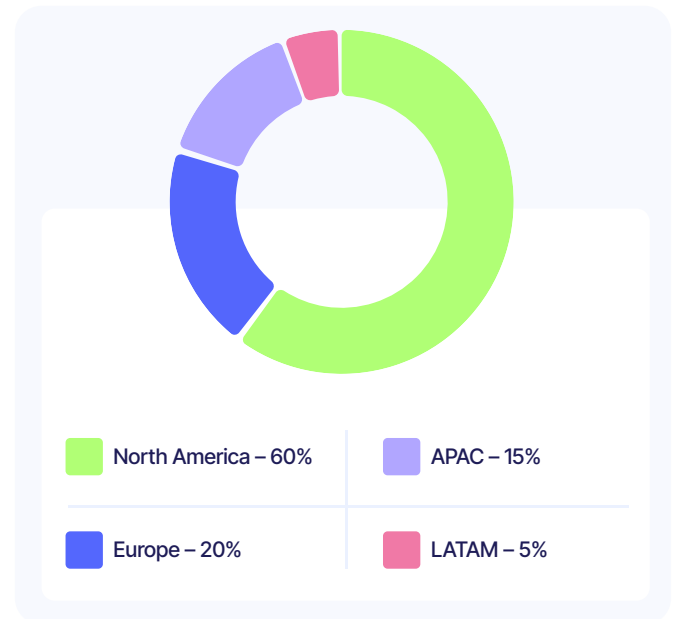


FIGURE 16
Industry

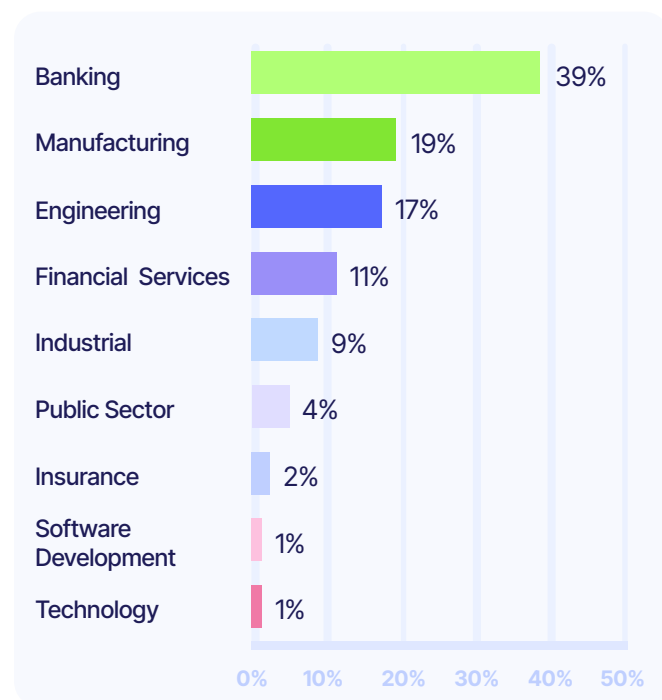
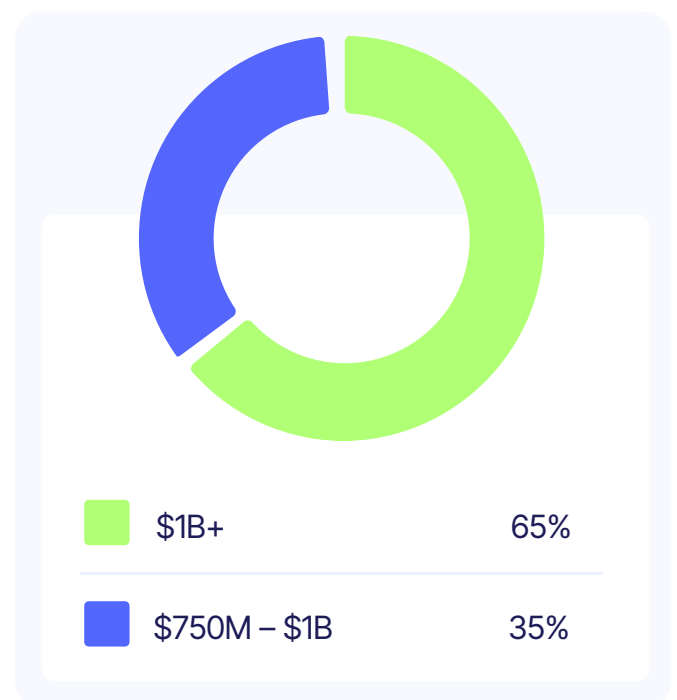


FIGURE 17
Company's Annual Revenue



Job Seniority, Role, Company's Annual Revenue, and Number of Developers

FIGURE 18
Job Seniority

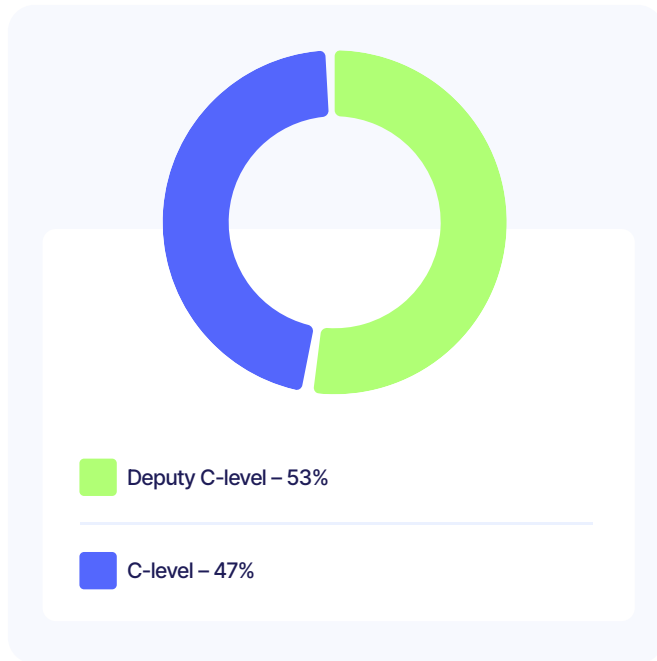


FIGURE 19
Role

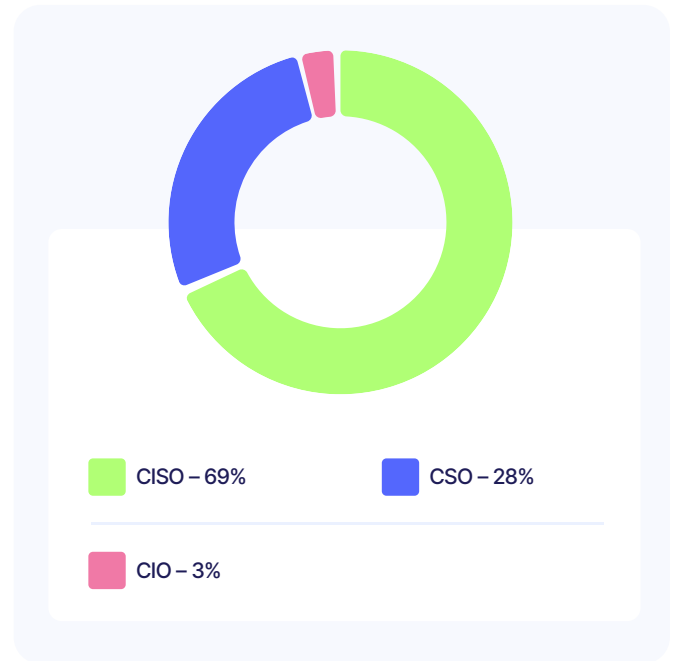


FIGURE 20
Number of Developers

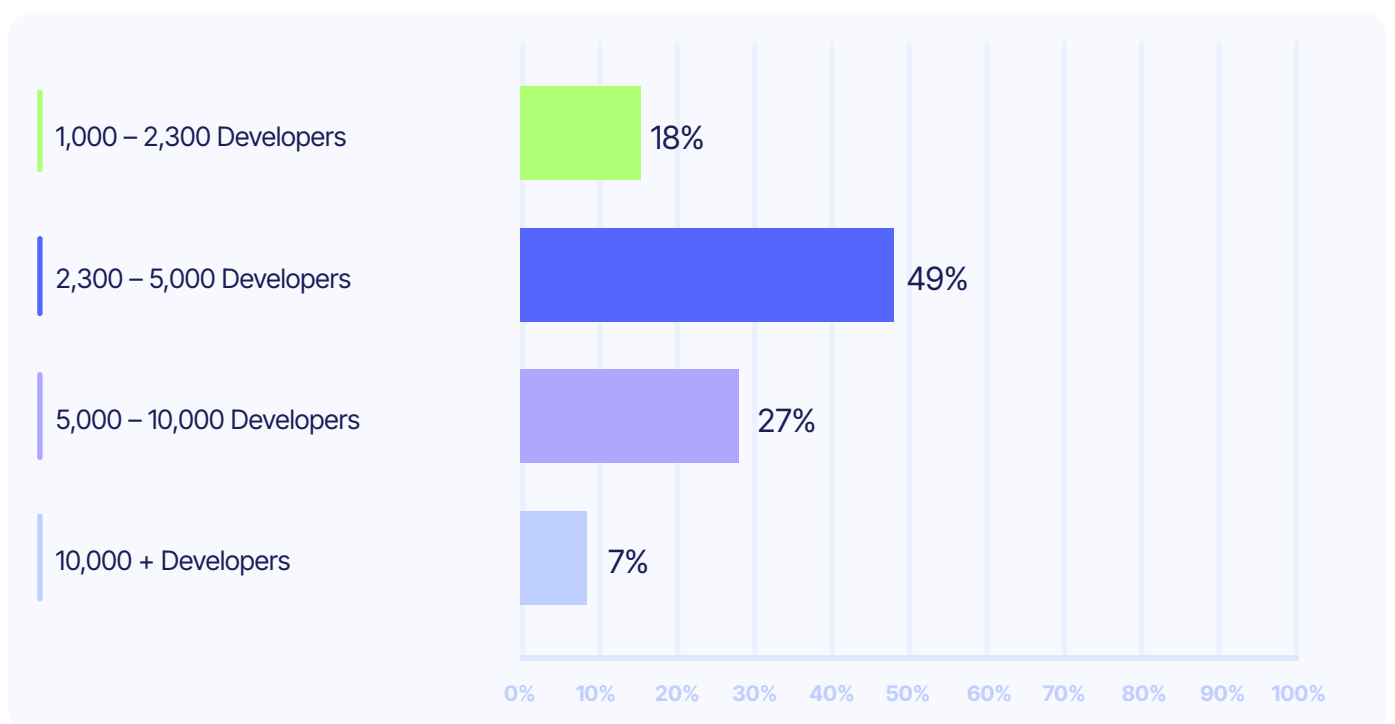
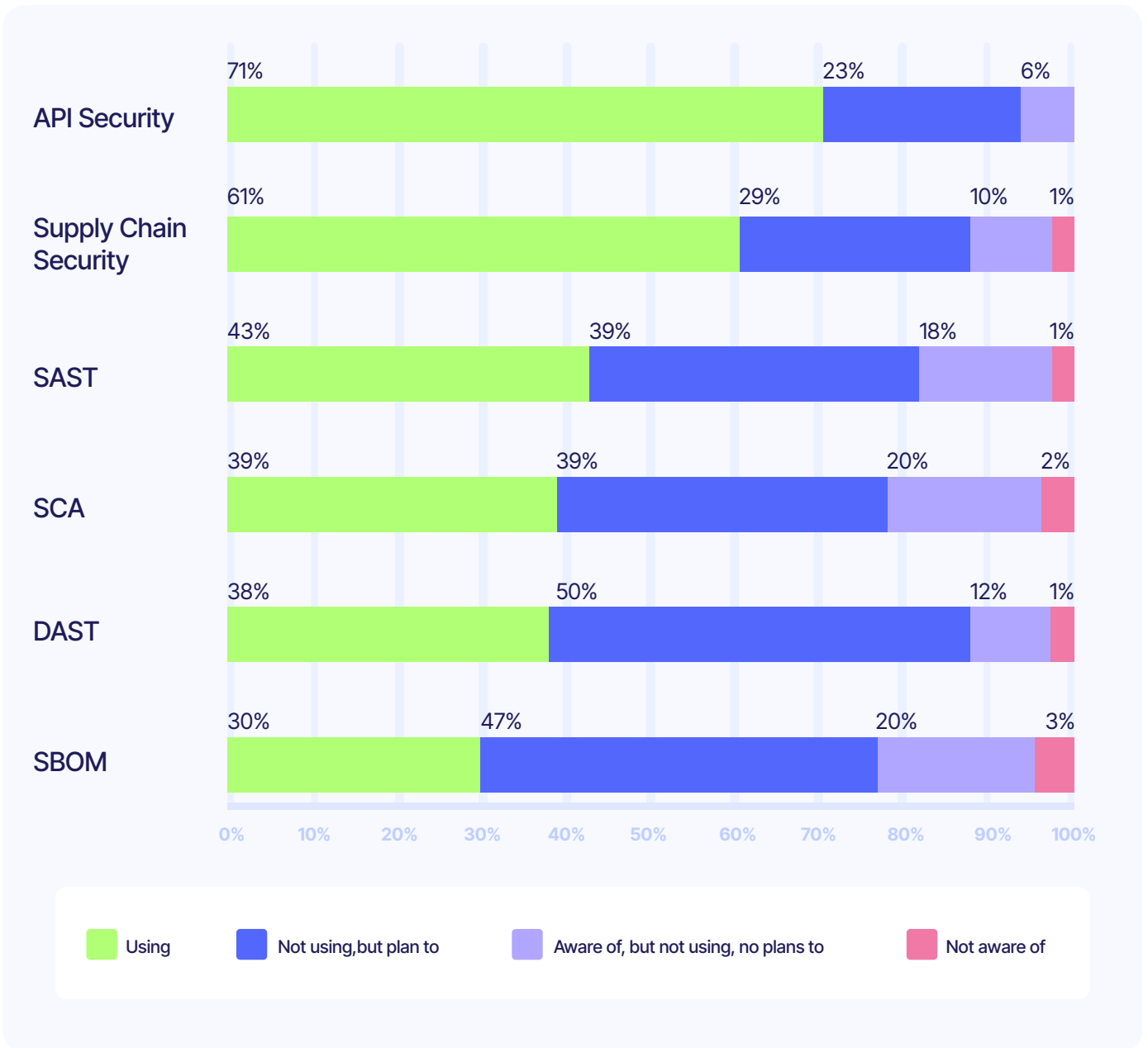


FIGURE 21
Application Security Technologies



Checkmarx

Checkmarx is the leading application security provider, offering the industry's most comprehensive cloud-native platform, Checkmarx One™ with the Codebashing LXP. Our products and services enable enterprises to make shift happen everywhere in order to secure every phase of development for every application while simultaneously balancing the dynamic needs of CISOs, security teams, and development teams. We are honored to serve more than 1,800 customers, including 60 percent of Fortune 100 organizations, and are committed to moving forward with an unwavering dedication to the safety and security of our customers and the applications that power our day-to-day lives.

MAKE SHIFT HAPPEN