2022

State of Application Development in Enterprises

Improve your bottom-line by putting app-development strategy
at the forefront of your digital transformation goals

kissflow

Table of Contents

Key Findings

78%
of the business and technology leaders foresee a massive impact that the adoption of low-code no-code platforms could create in their digital transformation journey.

57%
of C-levels reported that their app-development process is siloed, traditional and is burning out IT. It can be postulated that these folks need to revisit their app-development methodology.

41%
of leaders reported it takes about 2-3 months to build a custom in-house app.

45%
of the respondents want to become an organization that's digitally ready and agile enough to outperform their competitors.

56%
of respondents are wrongly identifying citizen developers.

kissflow

Introduction

Digital transformation is now a key differentiator between companies, a top consideration for growth, and a profit generating force in its own right. However, to build a stronger, more successful business in this new environment, leaders need only to look into their own technology they use.

It's impossible to overstate the imperative role that your app-development approach will play in your digital transformation journey. Especially, if you're a well-established enterprise, a well-thought out app-development strategy can help build a productive team, decrease time to develop, and boost IT productivity savings as opposed to traditional methods of development.

While going on a hiring spree to onboard a bunch of skilled developers could help businesses kickstart their digital transformation journey, inefficient workflows and burned-out teams are just a few of the things that can undermine long-term success and growth in the venture.

Besides, comes the onus on the business and technology leaders to promote a meaningful, institution-wide shift to get digital transformation buy-in at every level. Most importantly, changes to tools, processes, and mindset, need to be done, no matter how hard it might be to get started.

To help companies do some self-reflection on their app-development methodologies, we have surveyed C-levels including CTOs, CFOs, CEOs, and Heads/Directors of different lines of business.

We believe this report will bring to you some insightful information about the current app-development strategy, focus areas, digital transformation goals and what enables or derails these companies from accomplishing them.

Finding the Right Areas of Focus for Digital Transformation

50%

percent of business and technology leaders report that they are highly focused on three core areas — Internal process automation, Digitizing operations, and Modernizing core applications.
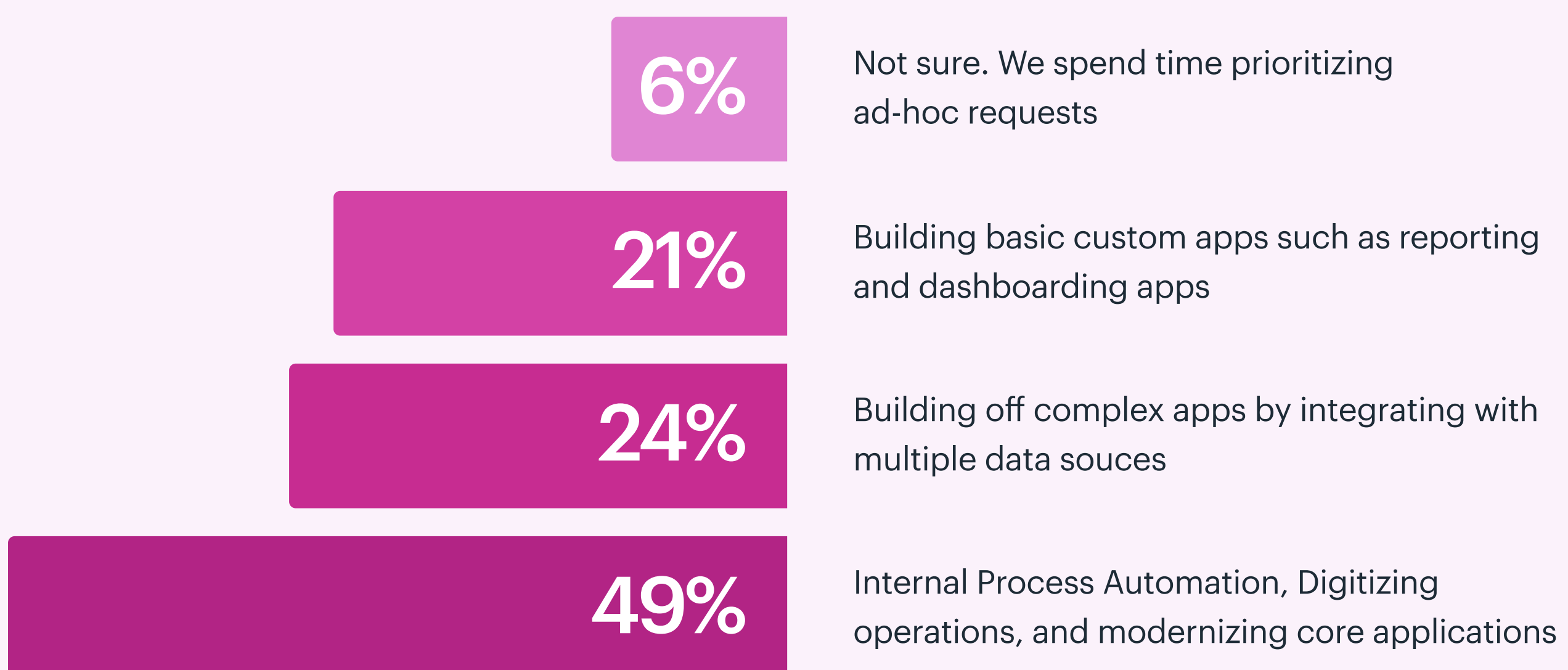
21%

percent of leaders claim that their core area of focus is still building custom reporting and dashboarding apps.

21%

percent of leaders report that their core area of focus is to build off complex apps by integrating with multiple data sources.

It's definitely a high-stakes game for IT development. With so much to focus on and so little time in hand, enterprises ought to adopt app-development platforms that can quickly deliver time to value. One sustainable way to do so is by establishing citizen development programs in their existing organization. The underlying idea is to enable both IT and business to co-create solutions thus alleviating the burden on IT. This opens up to a new paradigm of development technology called low-code no-code. More on that later.

What are the core areas of focus when it comes to application development?

6% — Not sure. We spend time prioritizing ad-hoc requests

21% — Building basic custom apps such as reporting and dashboarding apps

24% — Building off complex apps by integrating with multiple data souces

49% — Internal Process Automation, Digitizing operations, and modernizing core applications

It's a trend likely to continue with leaders from Finance and Oil & Gas in the US

69%

of the respondents said Internal Process Automation, Digitizing operations, and modernizing core applications are their core areas of focus.

7%

of them said their area of focus is building off complex apps by integrating with multiple data sources.

23%

reported that the next major area of focus is observed to be building basic custom apps such as reporting and dashboarding apps. Looks like these companies are still struggling to figure out how to build basic applications required to monitor their operations. And, all of them belong to managers of different lines of business.

While the individual focus areas of each industry segment are quite different from one another, the overarching goal is to enable a seamless and sustainable digital transformation experience. As seen earlier, it is of prominence that all these areas of focus converge to one central point - **application development.**

But how do you know if your application development methodologies are making or breaking your company's digital transformation journey?

Well, the best place to start is by identifying the type of app-development methodology your company has in place.
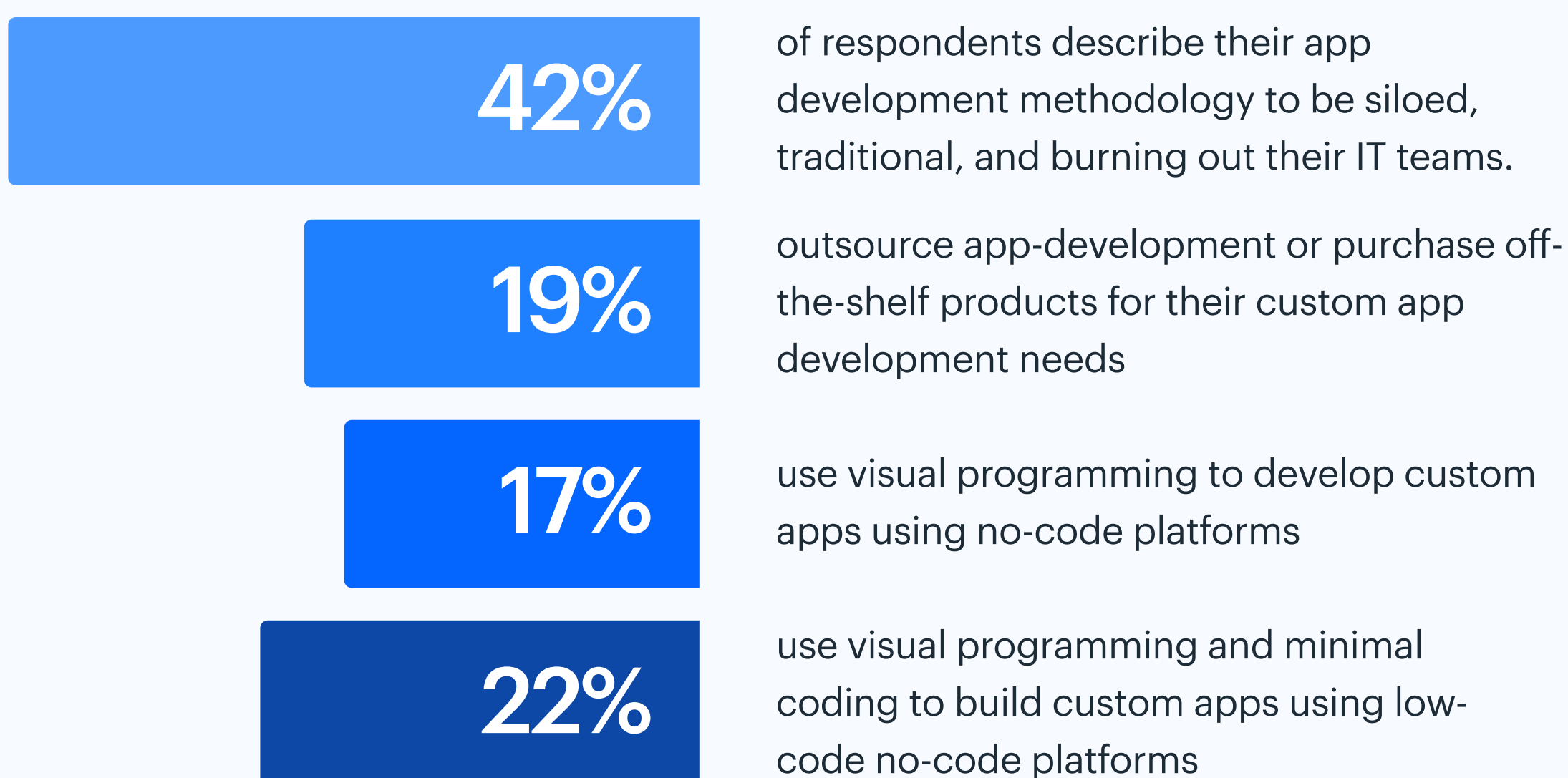
Traditional App-Development Approaches Are Jeopardizing Digital Transformation Journeys

Why?

Research shows that companies from major industries like Oil & Gas, Finance, Healthcare etc claim that their app development process is traditional - still siloed and ineffective.

How Technology and Business Leaders Describe their App Development Process

42% of respondents describe their app development methodology to be siloed, traditional, and burning out their IT teams.

19% outsource app-development or purchase off-the-shelf products for their custom app development needs

17% use visual programming to develop custom apps using no-code platforms

22% use visual programming and minimal coding to build custom apps using low-code no-code platforms

The major missing link - Business and technology leaders must be actively engaged together in reviewing, and acting on the app-development approaches to more closely align with their digital transformation wants and needs.

Outsourcing custom app requirements or using an off-the-shelf solution might not be scalable in the long run as the internal needs keep scaling as your business grows

kissflow

Technology and Business Leaders in Finance and O&G are Frustrated with their App Development Methods

50% of the Director and above level of respondents from the Finance, and Oil & Gas segments in the US agree that their app development methodology to be siloed, traditional, and burning out their IT teams

45% of the enterprises (employee size > 5000) report that their app development process is siloed.

What companies don't realize is that the complexity of these traditional and siloed app-development approaches could also directly affect the rate of innovation and bottom-line profits.

Companies that don't move swiftly to make much-needed changes within their organization risk falling behind those who already are.

Efforts to continue traditional app-development approaches largely need to take a back seat to more easy to use, citizen development approaches. And more so, with the adoption of right app-development platforms such as the low-code no-code ones.

And though they seem to understand the potential value of doing so, only 24 percent report they use low-code platforms to do visual programming with minimal coding to build apps. 19 percent say they outsource custom app development or purchase off-the-shelf products which could eventually lead to dysfunctional systems and tamper the cohesivity of their application stack.
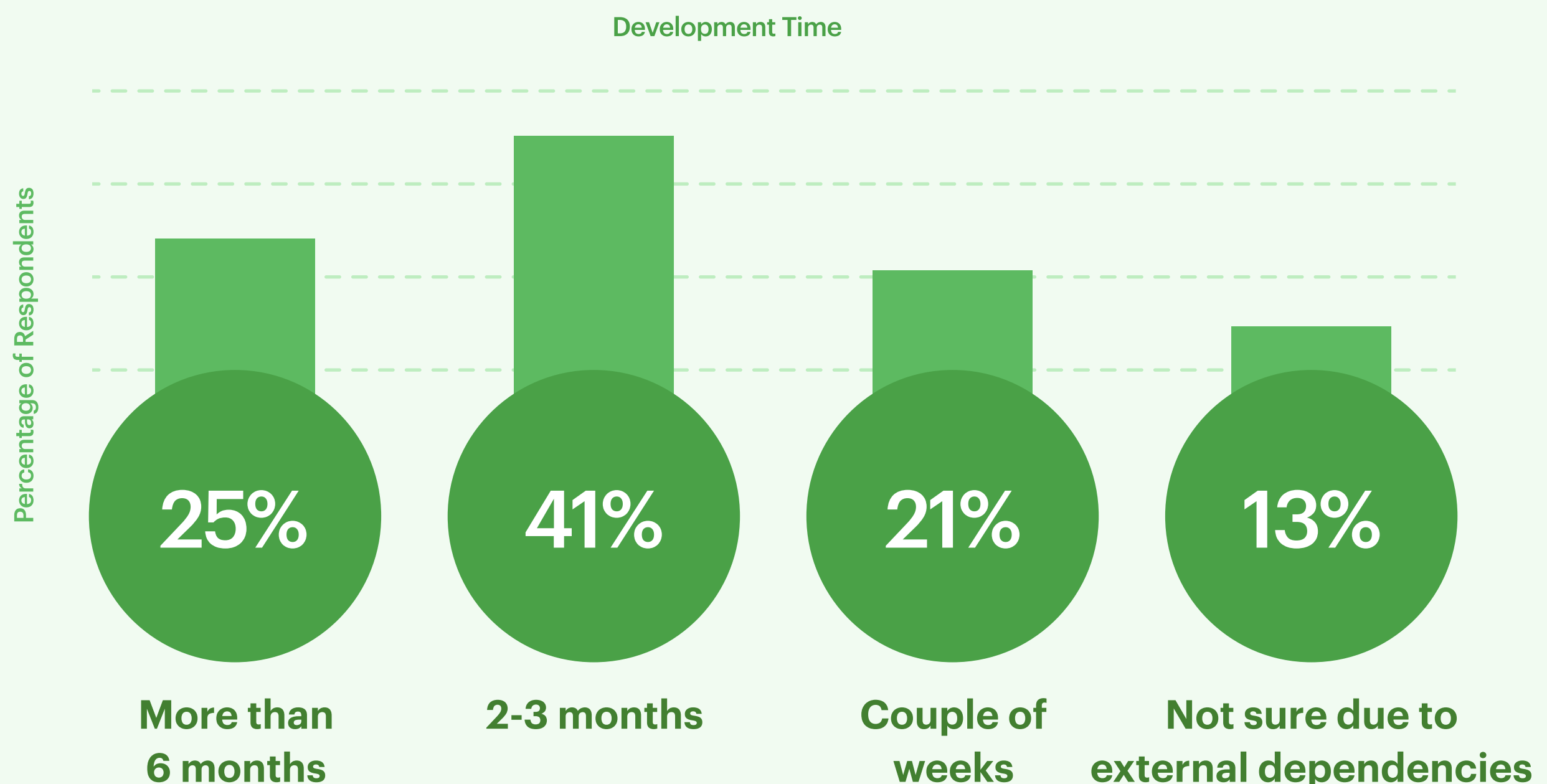
Of course, implementing a low-code no-code platform requires firm action from top to bottom. Without a clear commitment at the very top, companies risk missing opportunities to weave the right app-development approaches into their larger digital transformation strategic framework.

kissflow

State of App Development - Low-Code Methodology to Accelerate Development

In this new business reality, whether the digital transformation journey exceeds or falls short of business expectations is often directly tied to the kind of technology the IT and business teams are equipped with. And, trying to accelerate application-development without the right technology is one of the major mistakes that enterprises commit.

Development time taken by enterprises to build an app from scratch

Development Time

Percentage of Respondents

25% More than 6 months

41% 2-3 months

21% Couple of weeks

13% Not sure due to external dependencies

With so much on the line, IT teams face increased pressure to deliver on the business's application needs—both from operation and innovation standpoint.

3 tips to help you reduce app-development time and costs

1

Doubling down on low-code no-code platforms to accelerate app-development

Low-Code No-Code is redefining what's possible with app-development. From constantly taking more than 2-3 months, to doing a few quick drag and drops to triage a lot of IT requests, this versatile technology has quickly raised business expectations on what it means to build custom in-house applications.

Advanced users understand the inherent value of their low-code no-code platforms. Not only are these platforms more likely to accelerate time to develop, but they're also more likely to expedite innovation through tech democratization.

2

Getting a strategic buy-in at the top

Companies that are leading in digital transformation have buy-in for low-code no-code platforms from top to bottom. Instead of encouraging just the IT teams to take part in development, leadership takes an active role in enabling anyone on the team to create an impact through app building. In most cases, the operational excellence that results out of low-code no-code adoption is directly tied to digital transformation.

Tapping into full potential of citizen developers

Citizen developers could directly have an impact on how you're faring in your process of improving your app-development methodology. In the last few years, IT and business teams have adapted to new tools, and processes—all while managing security,compliance, time to deliver. Companies in the advanced stage of the maturity scale, understand the need for more training, more user-friendliness in the UI, and more investment to reduce the IT burnout caused due to obsolete methods of development.

When it comes to optimizing on the backend, companies have some catching up to do. And, by not identifying the right skills to work on the platform, many businesses are falling short.

How Familiar is Your Organization with Low-Code Development Tools?

Not everyone has fallen into these traditional app development traps. In fact, some companies are standing head and shoulders above the rest. How? By drawing clear links between app development and citizen developers.
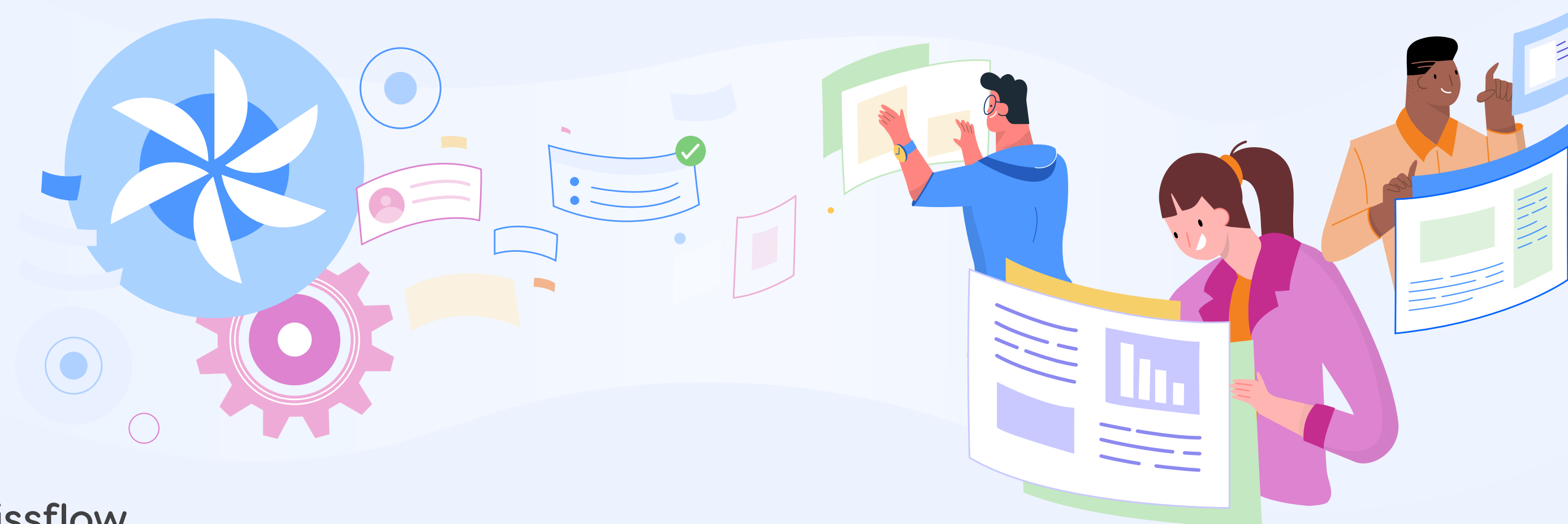
Most importantly, they are well aware of what kind of tools and technology could enable the right folks on their team to participate in the digital transformation journey.

The result is a well-thought through app-development approach capable of democratizing technology, enabling business teams to build custom apps, implementing new custom solutions, and ultimately ending up the business and IT war.
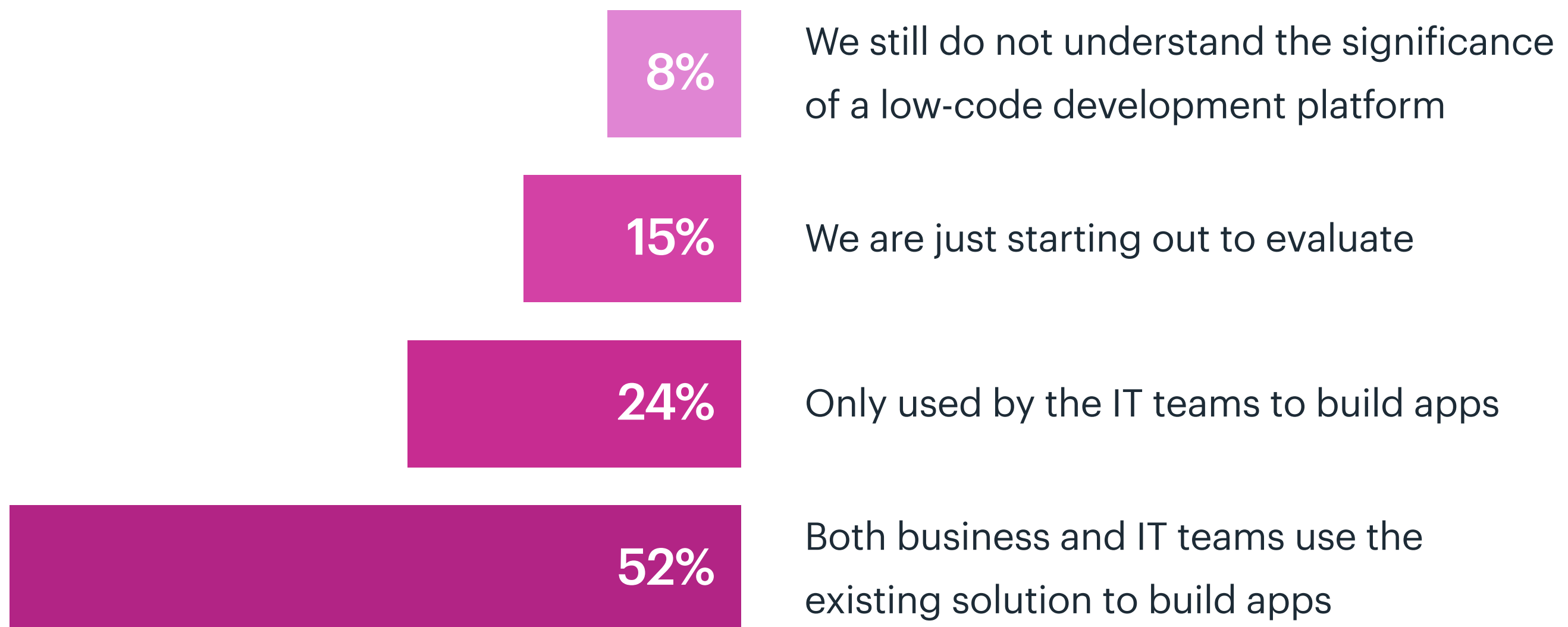
And, "How?", you may ask.

Well, enter Low-code.

In essence, low-code platforms shouldn't be trying to solve problems that require real professional developer's involvement. Similarly, IT developers shouldn't be bogged down trying to respond to all internal app and automation requests to build custom apps, or automate their team's operations.
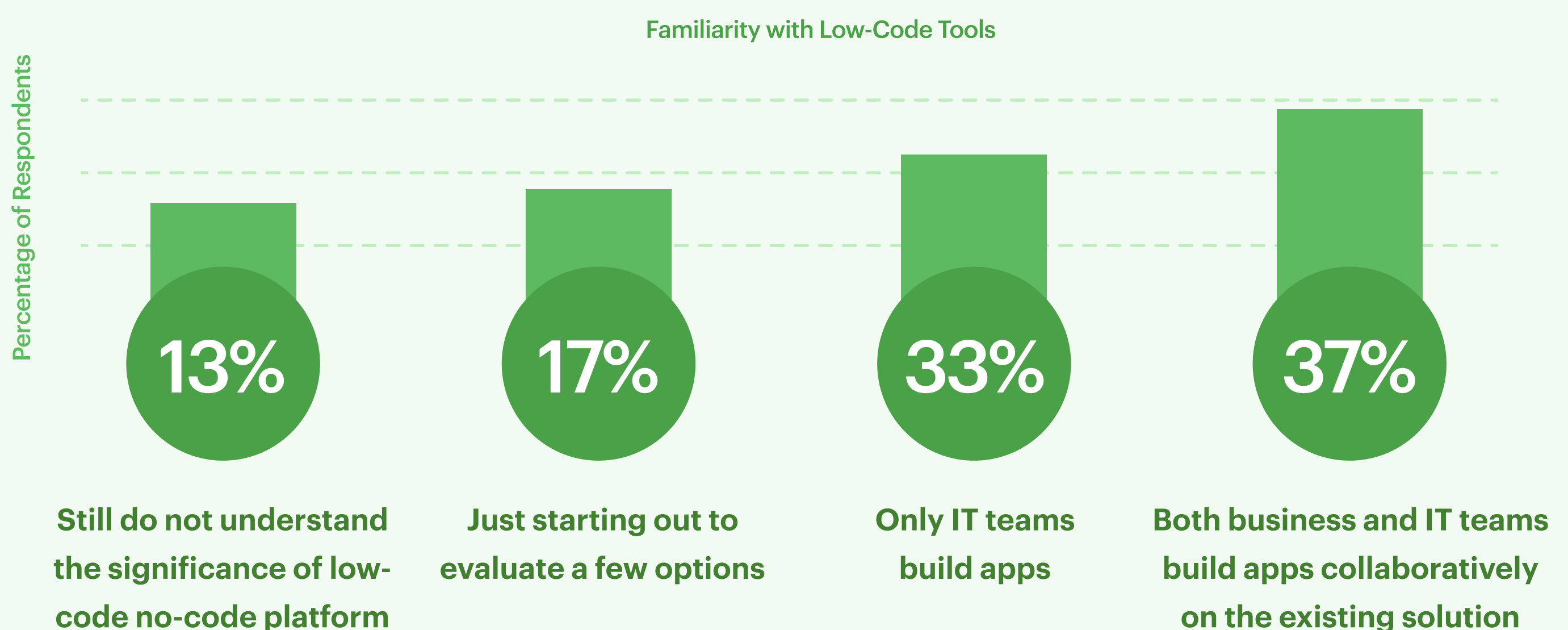
kissflow

Responses of leaders based on their organization's familiarity with low-code no-code tools

8% — We still do not understand the significance of a low-code development platform

15% — We are just starting out to evaluate

24% — Only used by the IT teams to build apps

52% — Both business and IT teams use the existing solution to build apps

With the below data, it can be safely postulated that business and technology leaders are leaning more towards a low-code no-code paradigm and in turn empower citizen developers to play a vital role in the app-development process.

Finance, and O&G Companies are starting to invest more in citizen development platforms

Familiarity with Low-Code Tools

Percentage of Respondents

13% — Still do not understand the significance of low-code no-code platform

17% — Just starting out to evaluate a few options

33% — Only IT teams build apps

37% — Both business and IT teams build apps collaboratively on the existing solution

kissflow

Markers of Different Stages of the
App-Development Maturity Model

Based on their familiarity with low-code no-code tools

Use the below table to map yourself against a specific stage in the app development maturity model.

Novice ★

These are the businesses that do not understand the significance of a low-code development platform

Intermediate ★★

These are businesses who are just starting out to evaluate low-code options in the market

Adept ★★★

Businesses that said their app-development platform was only used by the IT teams to build apps

Advanced ★★★★

Businesses wherein both business and IT teams use the existing solution to build apps to build apps collaboratively

Future Innovation Doesn't Completely Hinge on Hiring Expensive Talent

Even the most successful IT teams are only as good as their app-development stack. And while having the best people can help, there's only so much they can do even with the right technologies in place.

Now is not the time to settle for "hiring skilled developers".

Percentage of Respondents   **Hiring Strategy**

25%   Hire only experienced developers

17%   Outsource app development as hiring skillful developers is not cost effective

26%   Hire and train slightly experienced developers who have an attitude to learn

32%   Enable business users to build apps using low-code app development platforms under IT governance

About 28 percent of the leaders surveyed are enabling business users to build apps using low-code development platforms under IT governance. That's great news. But how about implementing a platform that can take care of IT governance too? That's where a unified low-code no-code work platform like Kissflow comes in.

A far cry from the Finance and Oil & Gas leaders in the US: a whopping 31 percent of them responded that they outsource app development as hiring skillful developers is not cost effective. While 15 percent of them are still hiring only experienced developers.

Internal customers and stakeholders want on-demand apps that are available when they need it. They want to have the freedom to tailor it however they can according to their needs.

In essence, they don't want to waste valuable time translating ideas to IT teams, following up tirelessly to speed up on their needs. This means that businesses looking to drive and sustain innovation—both now and in the future—need to focus on two emerging aspects:

Identify more citizen developers who have the willingness to build apps within the organization

Equip those users with the right tech to fuel their interest

Now is not the time to settle for "hiring skilled developers". Businesses want the best —and they increasingly see citizen development as the key to reaching their lofty app-development and hence digital transformation goals.

Unfortunately, many non-IT users are struggling to build new apps from scratch all by themselves due to the complexity of these low-code platforms in the market. With this research, we're helping companies of all stripes get on the right track by explaining how these gaps can be plugged, what the current low-code platforms claim, what needs to be evaluated and why they're a key ingredient in any digital transformation strategy.
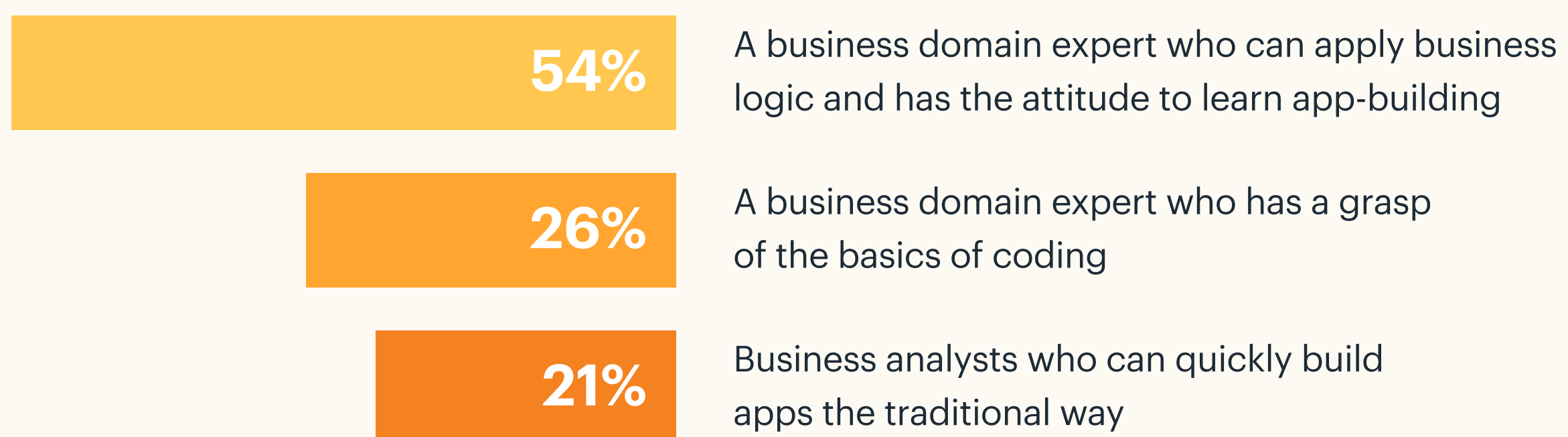
Identify Citizen Developers. It's a Good Time to Get them Onboard.

How businesses leverage their internal talent charts their course for the future. And where they place their bets, what they choose to prioritize, and how they adapt to changing market expectations will determine their growth trajectory in the years ahead.

Business and IT Users in Action

Companies may be upping their low-code and other tech investments, but challenges with identifying the existing citizen developers paint a less rosy picture.

How C-levels Identify Citizen Developers in their Organization

54%	A business domain expert who can apply business logic and has the attitude to learn app-building
26%	A business domain expert who has a grasp of the basics of coding
21%	Business analysts who can quickly build apps the traditional way

21% percent saying they'd identify a business domain expert who has a grasp of the basics of coding and another 17 percent identifying them as Business analysts who can quickly build apps the traditional way.

57% percent of the leaders responded that they'd identify citizen developers as someone who has domain expertise, applies business logic and has the attitude to learn app-building.

However, it's of prominence that leaders across industries are largely shooting in the dark even with high-end low-code platforms in hand thus only going skin deep with their approach.

The likely result is a less-than-ideal app-development experience for all involved.

With so much riding on identifying citizen developers, businesses must put together a smart app development strategy that lets everyone on the team put their best foot forward.

Here's where your citizen developers should play a starring role

Translating their ideas into apps readily without depending on IT

Building a more productive digital workplace through their ideas and apps

Expand the room for innovation and make it your competitive edge

Leaders in the Finance and Oil & Gas Industry in the US identify citizen developers as follows

How would you identify citizen developers in your organization?

Three Low-Code Development Traps that Could Derail Citizen Development Experience

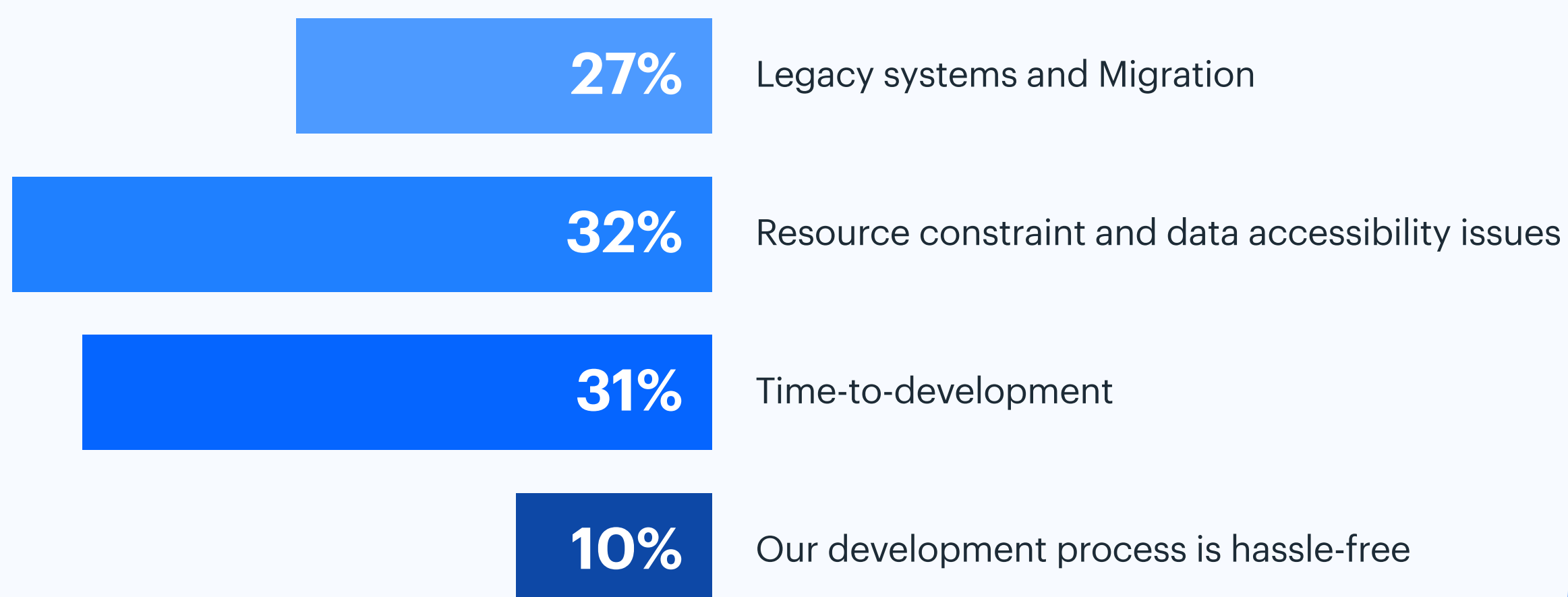## 1 Resource Constraint and Data Accessibility Issues

What does it mean to democratize data access and have enough resources on the team?

Without an overarching strategy or a clear understanding of the potential benefits or pitfalls of the technology, businesses are standing in their own way of realizing the full benefits of citizen development.
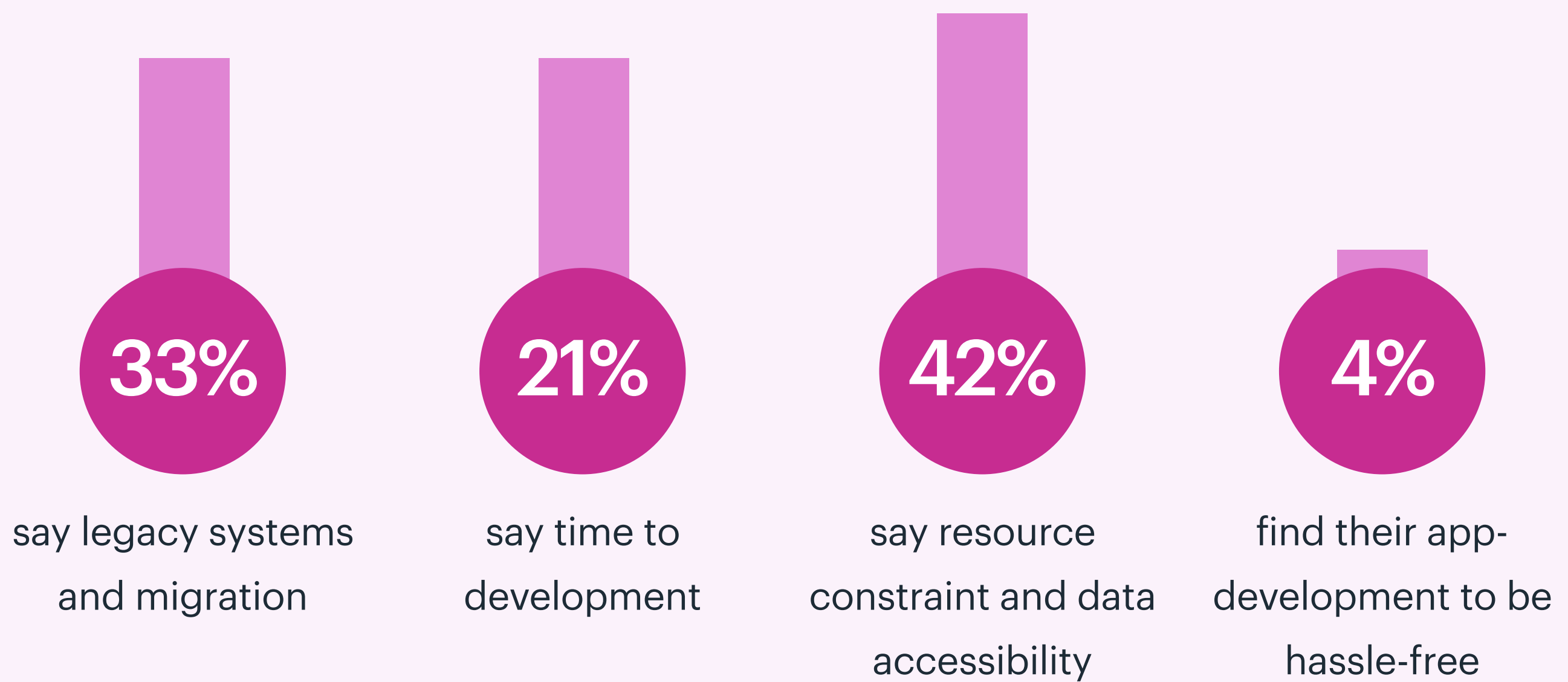
While 32 percent of companies surveyed reported they were facing data accessibility and resource constraint issues, 31 percent of them say time-to-develop is their underlying challenge.

Organizations admit that they have resource constraint and data accessibility issues

What challenges do you currently encounter when you want to build your own custom apps?

27%	Legacy systems and Migration
32%	Resource constraint and data accessibility issues
31%	Time-to-development
10%	Our development process is hassle-free

Here's what leaders from Finance and O&G in the US say

33%
say legacy systems and migration

21%
say time to development

42%
say resource constraint and data accessibility

4%
find their app-development to be hassle-free

2 Legacy systems and migration is still their best friend

27 percent of respondents report that migrating legacy systems is one of their major challenges in building custom apps. This indicates that scaling and maintenance seem more like an afterthought for most of the businesses that go by the traditional approaches.

3 Time to Develop

Despite the increased low-code no-code adoption, the risk of shadow IT is high. Heavier customizations, more integrations, complexity of platforms have many citizen developers feeling overwhelmed and dependent on IT. About 31 percent of respondents regard time-to-development as a challenge when it comes to building custom apps, while a mere 9 percent report a hassle-free development process in their organization. Taking all factors together, almost 91 percent of the respondents feel less empowered with the app-development approaches their organizations take.

To Bring Citizen Developers to the Forefront, Business Must

Without an overarching strategy or a clear understanding of the potential benefits or pitfalls of the technology, businesses are standing in their own way of realizing the full benefits of citizen development.

Enable Workplace Collaboration

Colleagues can discuss and perform work together through Kissflow's unified digital workspace. Regardless of IT know-how, they can streamline work, brainstorm, and problem-solve together.

Practice Inclusivity

Include your citizen developers in every relevant digital transformational conversation you may have. This would help them recognize their bigger goals and advancement opportunities.
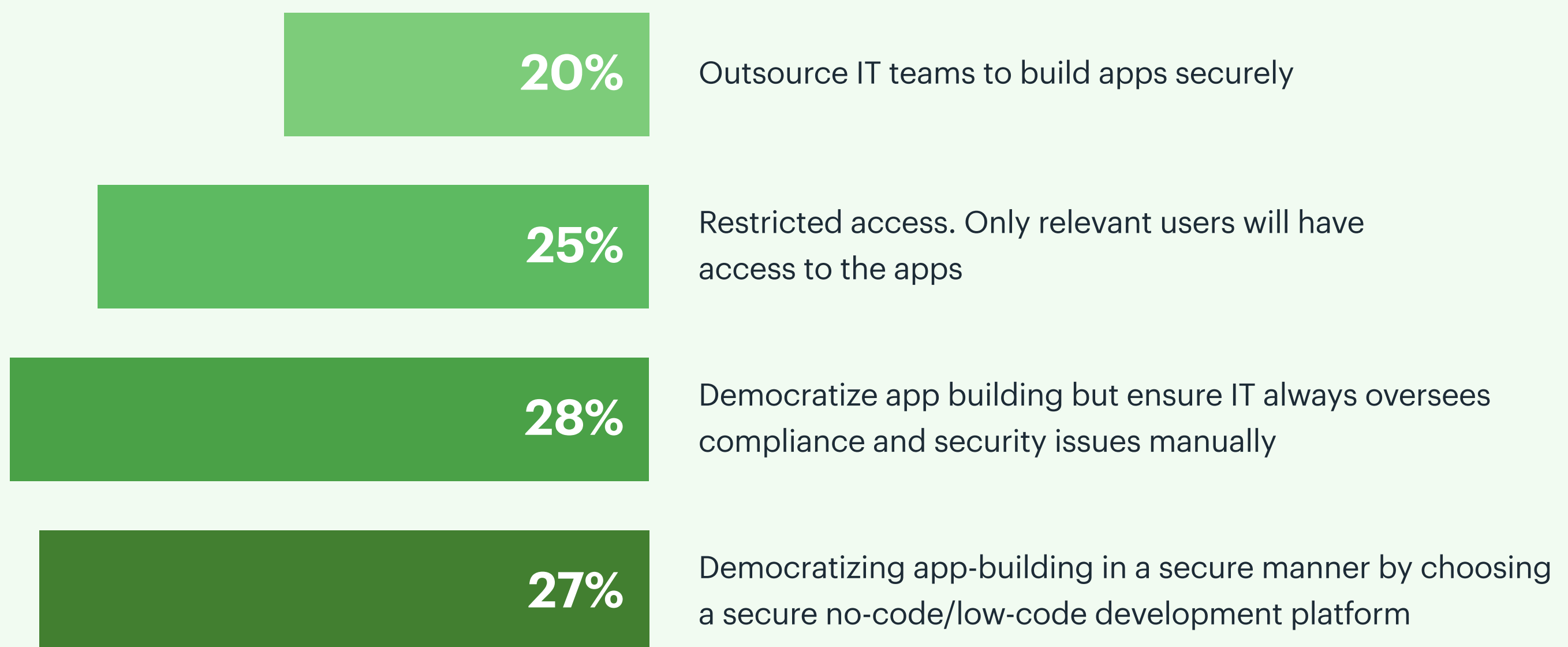
Provide Right Tech

Enable digital integration, agile processes, and workforce readiness with the right tools to gain clarity and reach your digital transformation destination with the low-code/no-code tools which will help to redefine the way you work.
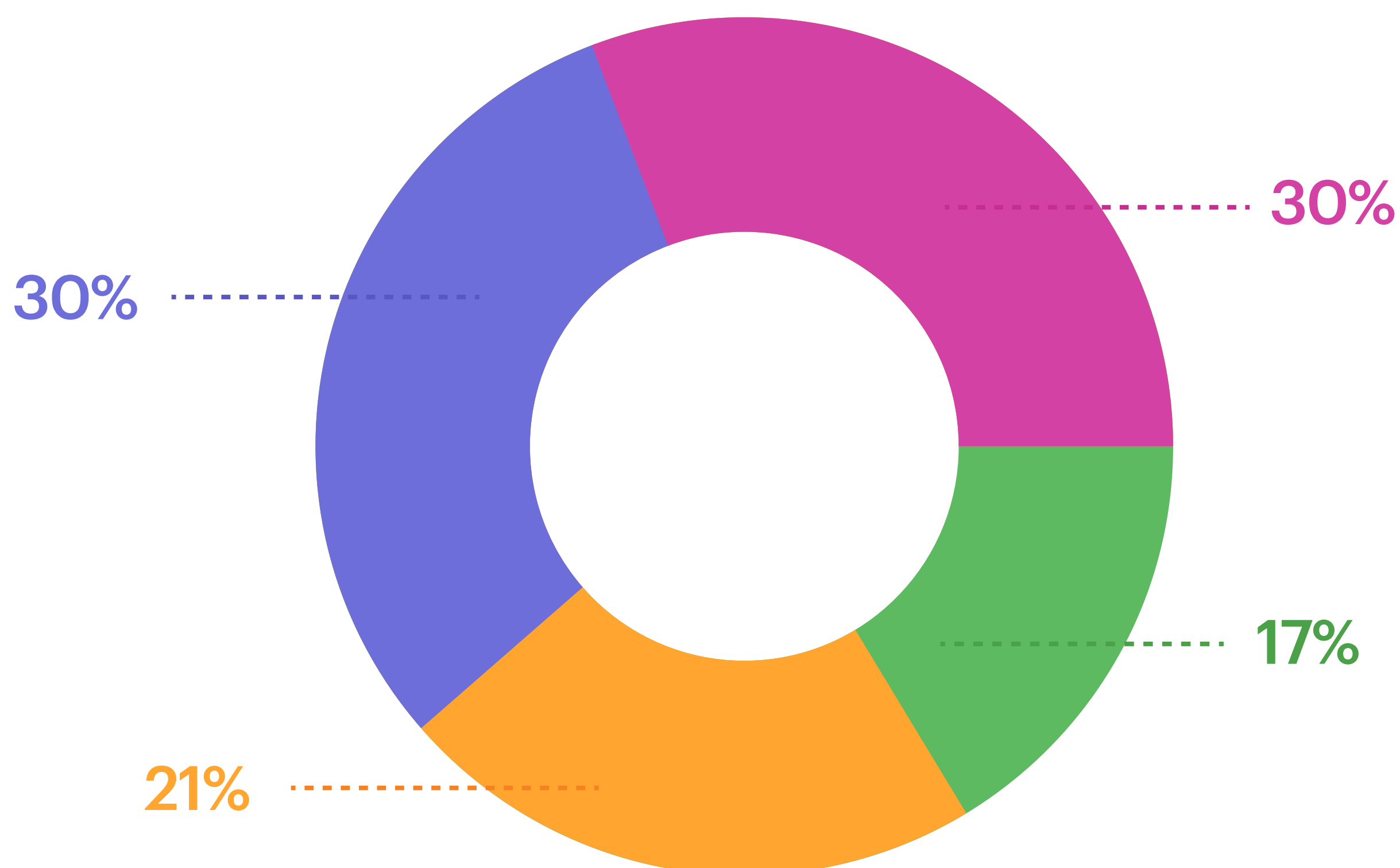
Managing Shadow IT

Leaders are increasingly willing to turn to custom in-house apps for simple problems. More apps built in-house by citizen developers means more time for IT teams to focus on complex problems. But leaders are concerned about security too: if business users are building an app, how are they supposed to know what regulations to comply with? That's when they need IT to intervene in the process again.

When it comes to data security, how do you manage shadow IT?

20% Outsource IT teams to build apps securely

25% Restricted access. Only relevant users will have access to the apps

28% Democratize app building but ensure IT always oversees compliance and security issues manually

27% Democratizing app-building in a secure manner by choosing a secure no-code/low-code development platform

Without an overarching strategy or a clear understanding of the potential benefits or pitfalls of the technology, businesses are standing in their own way of realizing the full benefits of citizen development.

In the Finance and Oil & Gas, leaders are still fanning the security and compliance flames

30%

of the overall respondents said that they have democratized app building but always ensure that IT oversees compliance and security issues manually.

21%

of respondents in the C-level from the Finance, Oil and Gas segments in the US agree that they outsource IT teams to build apps securely.

17%

of the respondents said they outsource IT teams to build apps securely.

30%

of the respondents said they outsource IT teams to build apps securely.
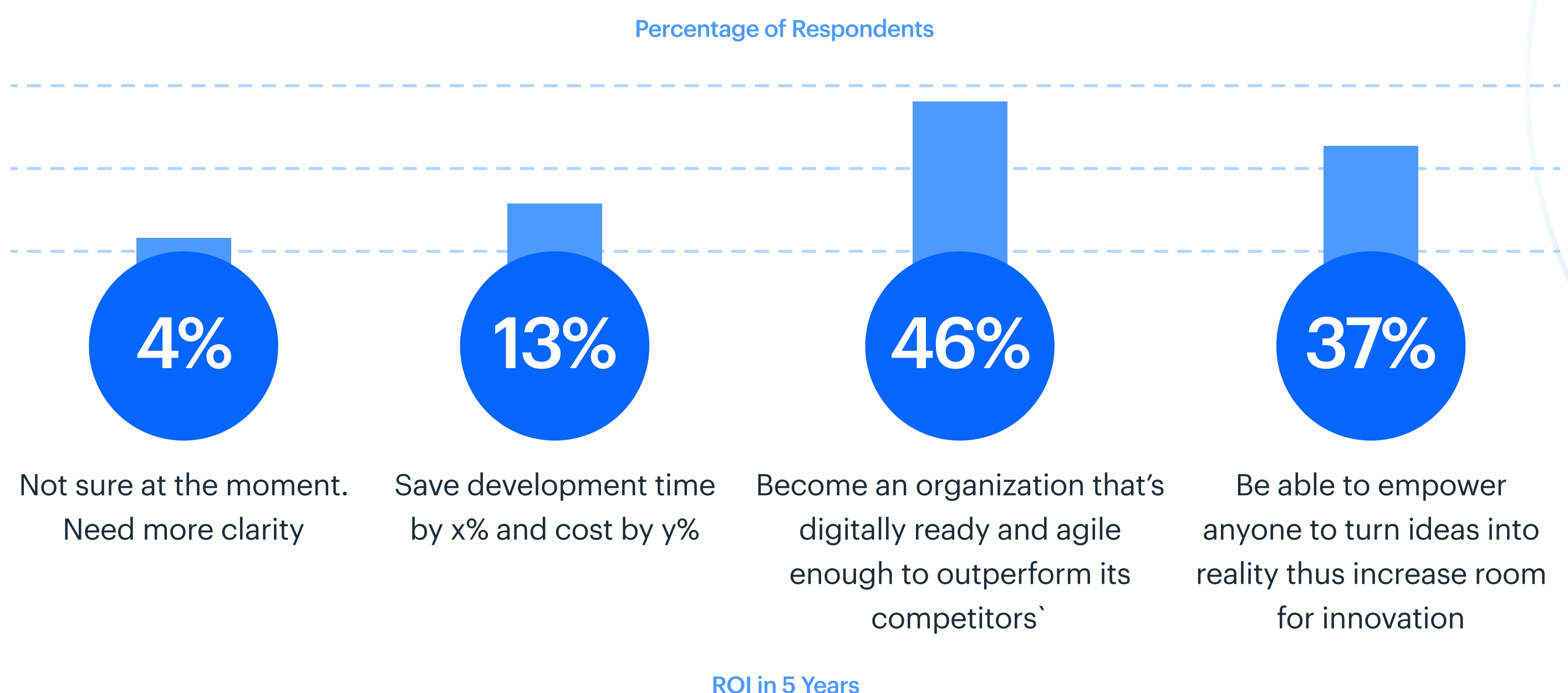
Again, security limitations bear some responsibility here.

It makes sense as IT teams can't spend time on compliance for every app request. By choosing the right low-code no-code platforms that come with built-in security, anyone can build apps, literally. That way, your business team doesn't have to rely on IT when it comes to shadow IT issues

kissflow

How do you measure your 'Perfect ROI' in 5 years?

About 45% of business and technology leaders already recognize that their organization needs to become digitally ready and agile enough to outperform their competitors. Clearly, digitization plays a crucial role in building the types of productive apps and systems that drive bottom-line growth.

ROI that leaders expect in 5 years on investing on IT

Percentage of Respondents

4%

Not sure at the moment. Need more clarity

13%

Save development time by x% and cost by y%

46%

Become an organization that's digitally ready and agile enough to outperform its competitors`

37%

Be able to empower anyone to turn ideas into reality thus increase room for innovation

ROI in 5 Years

While **50%** of the C-level executives in the US - Finance and Oil & Gas industries responded that their perfect ROI would be to be in a place where they could empower anyone to turn their ideas into reality thus increasing the room for innovation.

Undoubtedly, this would lead to a larger room for innovation.

While all of these might look like separate goals, they're largely interconnected with each other. Now, think of that one secret sauce that can arm you to achieve all these goals cohesively?

This is what we mean when we say - ' we can't overstate the importance of your app development methodology.'

kissflow

What are you missing in your current app-development process?

Beyond the changes to tools and technologies, companies must be prepared to take a hard look at their current approach.

Here are three strategic questions every company should be asking to help them build stronger relationships with their customers.

1

What are the cultural barriers that are preventing a better citizen development experience?

Think about your existing app-development approach. How can you make citizen developers feel empowered rather than just ignoring the value they can add by being part of your digital transformation journey? Are there barriers preventing citizen developers from accessing the data they need to get on a more accelerated app-development approach? If so, you're not alone. About 30 percent of the respondents report having data accessibility issues which they see as a massive challenge to build custom apps.

2

What do you want your release management process to look like?

Beyond just monitoring the environment and application health, it's important to have a highly reliable release management process. With citizen developers coming in, you also want to ensure that all your regulatory compliances are met without having to rely on IT teams each time CDs set out to build something.

3

Do you have a holistic work platform to meet your digital transformation needs, empower your citizen developers, and increase IT productivity savings?

If saving your development time and reducing cost are your two success metrics, ensure your team is equipped with what will enable them to achieve these. Ensure you do not get into the trap of deploying multiple point and siloed solutions. Identify a unified low-code no-code work platform that can enable anyone on your team to build custom solutions to improve their productivity. Make sure that this platform is accessible to all and isn't siloed within the IT team.

Experience the Low-Code No-Code

Work Platform

Get Started

kissflow