

State of automation

Insights into the changing landscape of technology,
productivity, and process-driven differentiation

NOVEMBER 11, 2020

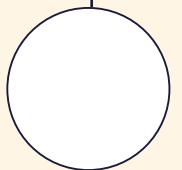
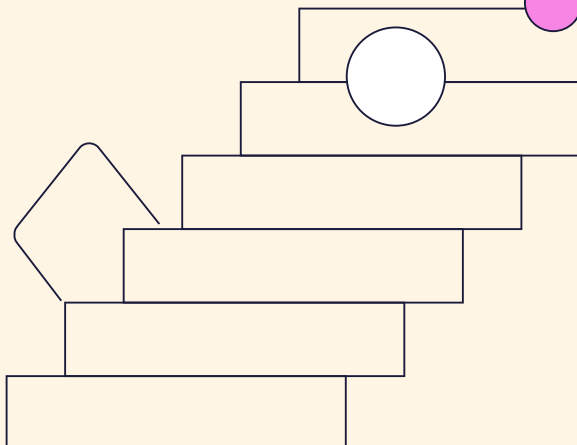
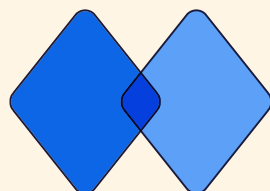


TABLE OF CONTENTS

Why automation?	3
Survey methodology	4
Evolving business initiatives	6
Growing software stacks	9
Growing stacks fuel a need for integration	13
From integrations to automation	18
Implications and recommendations	27
About this guide	29



Why automation?

Perhaps a better way to start would be with “What is automation?” Automation is a method or system of operations, controlled by electronic or other automatic means, to reduce the amount of required human intervention. In other words, automation is a way of making process operation smoother and more efficient. Today, for most organizations, making processes more efficient revolves around software. In many ways, software is both a creator of, and solution to, automation needs. As software stacks grow, business processes end up spanning multiple applications, and the need to orchestrate activities and data flows across them increases.

To better understand the needs that are driving automation projects, we surveyed 200 business professionals across 13 different industries. We asked about their major business initiatives, how and when they acquire software, where they struggle with manual, inefficient work, and the extent to which they make investments in automation. The results paint a picture of a changing business landscape:

- Employee productivity, and especially sales and marketing efficiency, are significant drivers of technology investments. Companies across the board are looking to do more with less.
- Growing tech stacks do not always lead to growing efficiencies. Professionals across departments report spending significant amounts of time on manual tasks rather than higher-value work.
- Almost all organizations are investing in some level of automation, but most of it is around ad-hoc projects rather than formal, structured programs.
- As automation programs mature, organizations are more likely to empower business users with tooling to build their own automations, and less likely to rely on outside consultants.
- Regardless of maturity, organizations typically see greater efficiency gains through automation programs compared to packaged software applications.

This e-book details these and other findings from the survey, including what organizations see as the biggest hurdles to successful automation initiatives, and their expectations for automation growth in the coming years. While companies experience definite challenges, most expect their investments in automation to increase in coming years.



Survey methodology

We surveyed a wide range of professionals across organizations in North America. Company profiles varied widely, with the exception of very small organizations (less than 50 employees). While these organizations have valid use cases and need for automation initiatives, their approach and outcomes from automation are likely to be less relevant to larger organizations.

Participants responded to questions about their organizational and business priorities, their use of software applications, their approaches to integrating information across applications, and their challenges and successes with automation projects.

Companies surveyed

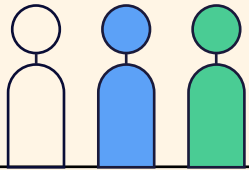
Respondents were from 13 different industries, with the largest concentrations representing the technology sector (17%), retail and e-commerce (15%), financial services (14%), and healthcare (12%). Companies varied in size from large enterprises—10,000+ employees and/or \$2+ billion in revenue, to small companies with between 50 to 100 employees and less than half a million dollars in revenue. The largest group of companies (20%) reported between 10 and 100 million dollars in revenue.

Departments and roles

One of the key objectives of the survey was to explore the differences between departments and roles within organizations. Typically technology and automation initiatives (at least automation related to technology) have been the province of information technology (IT) teams. We were curious to see if this was still the case, and if there were any disparities in approaches or outcomes across teams.

Survey responses were collected from 10 different organizational departments. The largest groups of respondents were IT professionals (22%), executive leaders (22%), sales (11%), and marketing (9%). Respondents were also reasonably spaced across seniority levels with 41% individual contributors, 32% managers & directors, and 26% executive leaders (VP level and above).

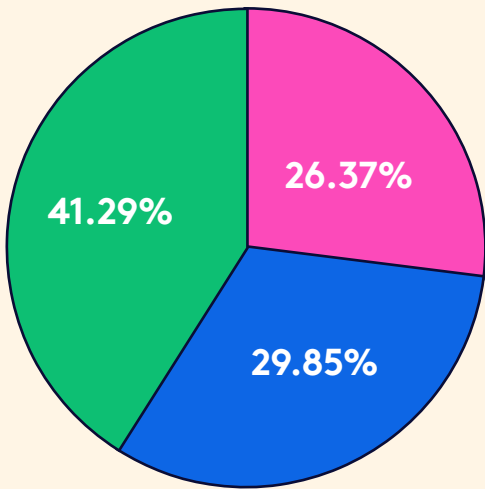
Even within departments, roles were widely varied. Respondents reported having 42 different job roles, giving us a broad perspective of the state of automation across the business landscape.



13

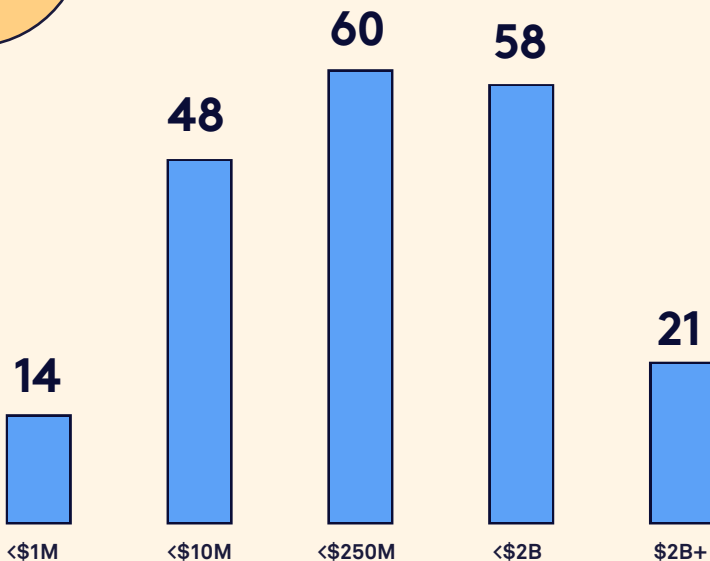
different industries are represented

Roles



- Executive (VP/C-Suite)
- Manager/Director
- Individual Contributor

Revenue



42

different job roles across 11 different departments gave us a broad perspective on automation across the business landscape



Evolving business initiatives

Companies typically make investments in automation, and more broadly in technology, as part of major business initiatives. While it's true that most employees would jump at the opportunity to make their roles more efficient, companies typically allocate budgets and headcount based on their strategic goals. To that end, we began the survey by asking about major business initiatives.

We asked respondents for which key initiatives they were increasing investment (in either budget or headcount). Companies were most likely to be increasing investment in security and compliance, customer experience, and sales and marketing efficiency. Other areas of growing investment included analytics and operational efficiency.

The results show an interesting mix of technology-focused initiatives such as analytics, AI, and security; growth-oriented initiatives such as customer experience; and cost-saving initiatives such as sales, marketing, and operational efficiency. It goes without saying that 2020 has been an unusual year, so perhaps this mix was the result of changing priorities in the wake of the COVID-19 pandemic.

Many firms had to transition business models, shift to remote work, and scramble to retain customers in response to the pandemic, and survey respondents indicated that their businesses had made changes. 45% said that their organizations had implemented a remote work/work-from-home policy, 45% also reported launching new customer retention programs, and 33% indicated that they had reduced headcount.

Companies were most likely to be increasing investment in security and compliance, customer experience, and sales and marketing efficiency.



Retention has always been important to us, but this year the focus has really intensified. We introduced several new customer health programs and got very creative with renewals. It's a challenging environment for everyone, but companies should always double down on whatever it takes to make their customers successful.

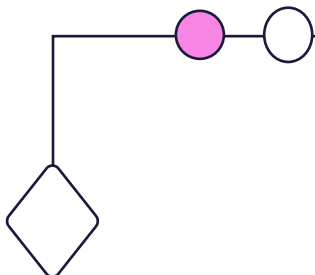
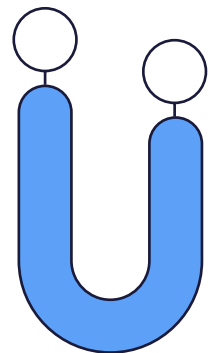
Justin Tung, Head of Business Technology, Segment



To gauge the impact of the pandemic on their key business initiatives, we asked respondents how much their investments in strategic initiatives had changed as a result of COVID-19. Interestingly, although responses did show an impact, most of the key investments this year were planned ahead of time, rather than driven by pandemic-related changes.

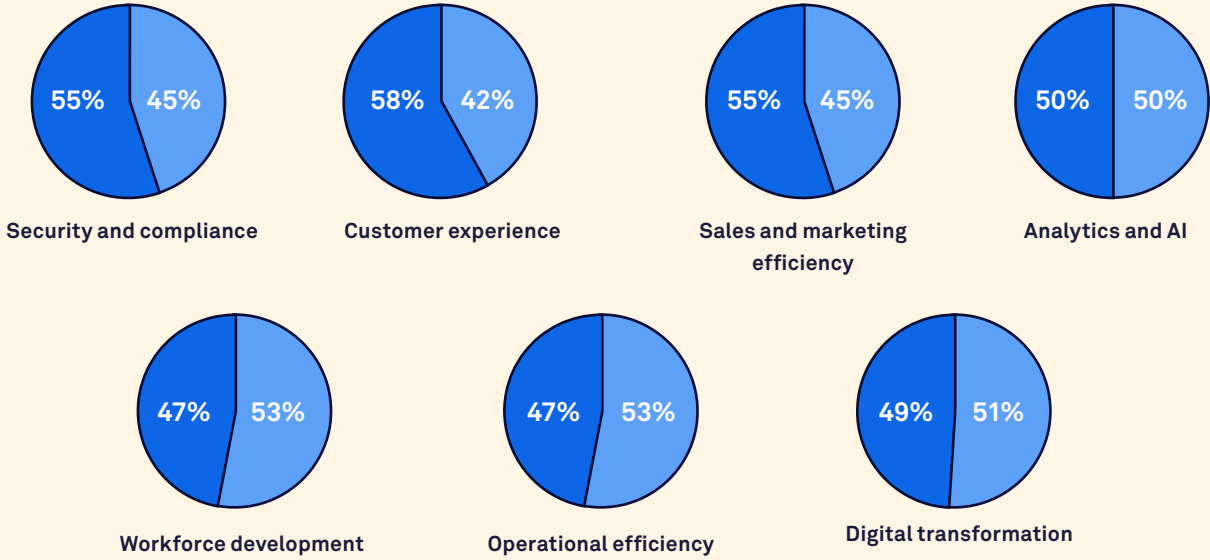
The most significant change driven by COVID-19 was the investment in sales and marketing efficiency. This makes sense as high customer acquisition costs are typically associated with a high-growth mindset. As companies re-focused on cost savings and customer retention, growing efficiencies in go-to-market processes became a larger priority.

While some of the key initiatives were clearly technology-focused, there was a technology component to all the investments that survey respondents reported. Customer experience, marketing, sales, and operational efficiency were drivers of investments in new software and new automation projects. Subsequent survey questions looked to explore various organizations' approaches to these investments, as well as the results they are seeing.



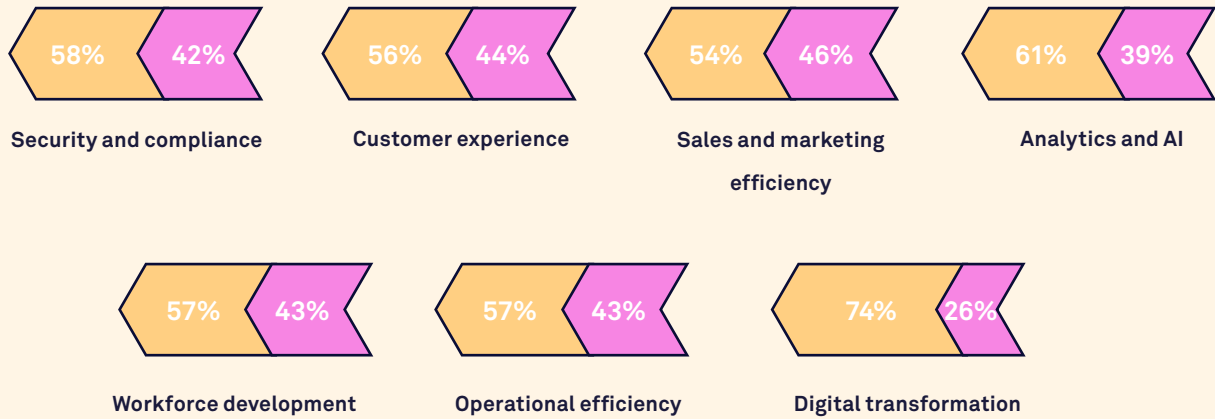
2020 strategic investments compared to the previous year

● Increased
 ● Significantly Increased



Changes in investment priorities driven by the COVID pandemic

● Planned
 ● COVID



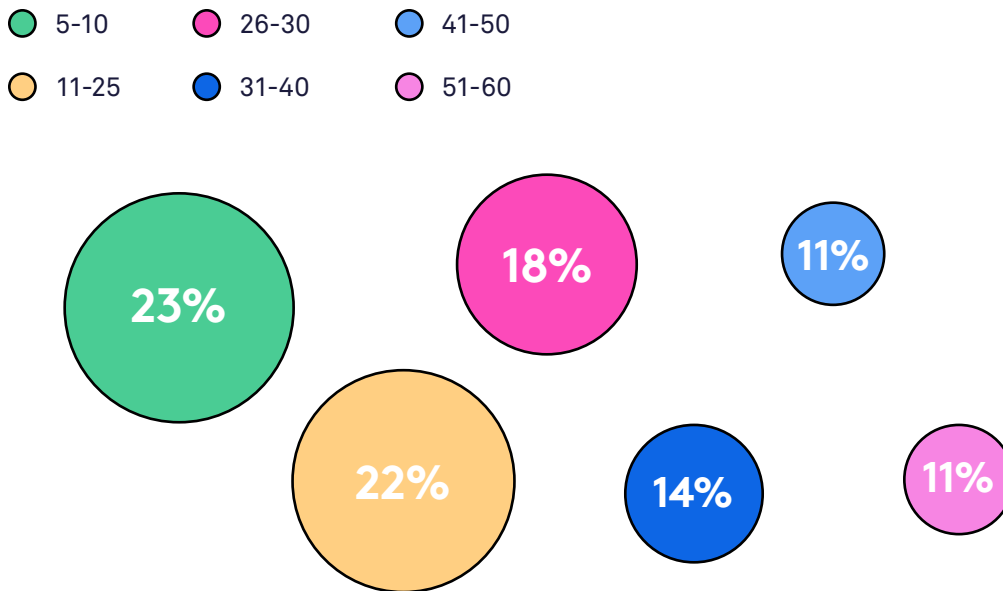
Growing software stacks

It's no surprise that the number of software applications that businesses use is increasing. Shifts in technology budgets have driven the increase in software usage. Technology budgets for line-of-business (non-IT) teams are growing by 6.9%, while IT-owned budgets are only growing at 3.3%. Business teams have used these budgets to acquire more and more-specialized software to support their specific workflows and job roles.

Applications owned

The survey responses also reflected the trend of increased software usage. Most respondents indicated that their functional departments oversee a growing array of software applications, and 40% indicated that their department currently licenses more than 40 different software applications.

Number of departmental software applications owned/licensed

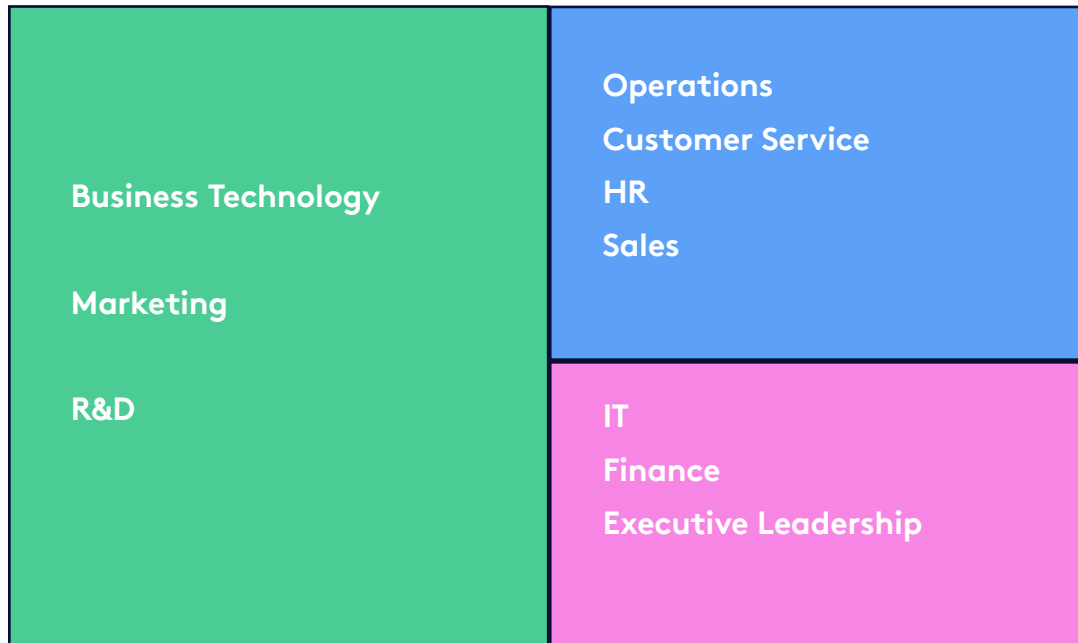


The total number of applications varied across departments. Teams reporting the largest number of applications included business technology, marketing, and research and development. Teams more likely to have the fewest number of applications were HR and general operations.

IDC Worldwide Semiannual IT Spending Guide: Line of Business, 2018

Departments with more than 40 software applications

● 25-30 ● 31-49 ● 50-62.5



The business technology response was interesting. An emerging role, business technologists often serve as a bridge between traditional IT teams and line-of-business teams. They can report into either side, and have primary implementation, operation, and maintenance responsibilities for the applications that support line-of-business teams.



My team oversees core sales, marketing and finance technologies as well as our G&A solutions. I am a huge fan of being strategic in our application investments, and am actively working to cut down on the 'bloat' in many of our software stacks.

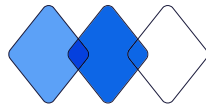
Wendy Stockholm, Sr. Director of Business Technology, Invision



Based on the survey responses, it seems likely that business technology teams view themselves as the “department owner” for the applications they oversee. As such, the actual number of applications that line-of-business teams use may be higher than the number they purport to “own.”

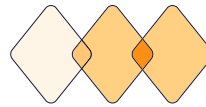
Daily software usage

Based on the survey responses, organizations actively use much of the software they license through business technology teams or their own departments. Most respondents indicated that a wide suite of software applications were an integral part of their work. 73% of respondents reported that they use more than five applications every day, and 36% said that they use more than ten.



73%

of respondents use more than 5 applications every day

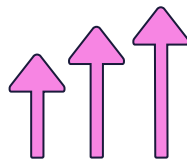


36%

of respondents use more than 10 applications every day

Software isn't slowing down

Despite the large volume of applications they currently own and use, most respondents only expect the amount of software their organization acquires to increase in the coming years. 83% of respondents expect the number of applications to increase, and nearly 30% expect the volume to significantly increase.



83%

expect the number of software applications they use to increase



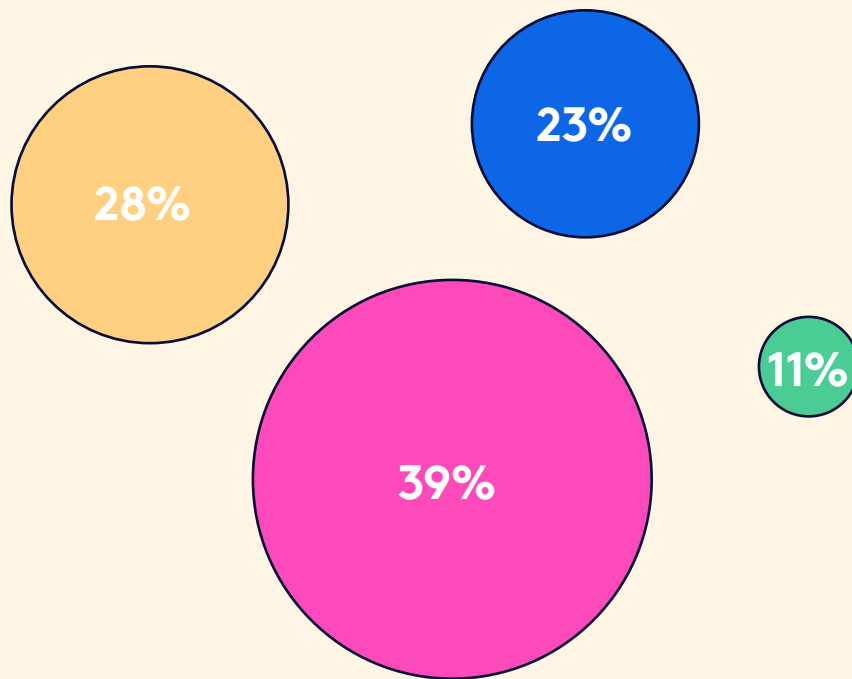
30%

expect the volume of software they use to significantly increase

The primary reasons that respondents expect their software stacks to grow include improving employee productivity, supporting new products or business initiatives, and improving customer experience.

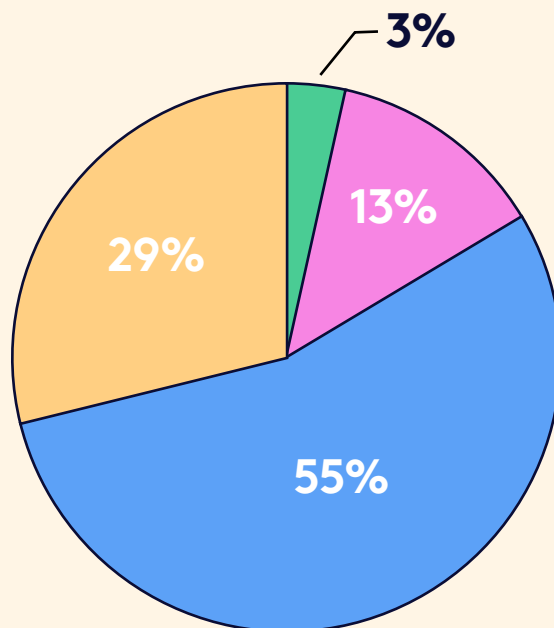
Software applications used on a daily basis

2-5 6-10 11-15 16-20



Expected growth of software stacks in the next 3-5 years

Decrease Neither decrease or increase Increase Significantly Increase

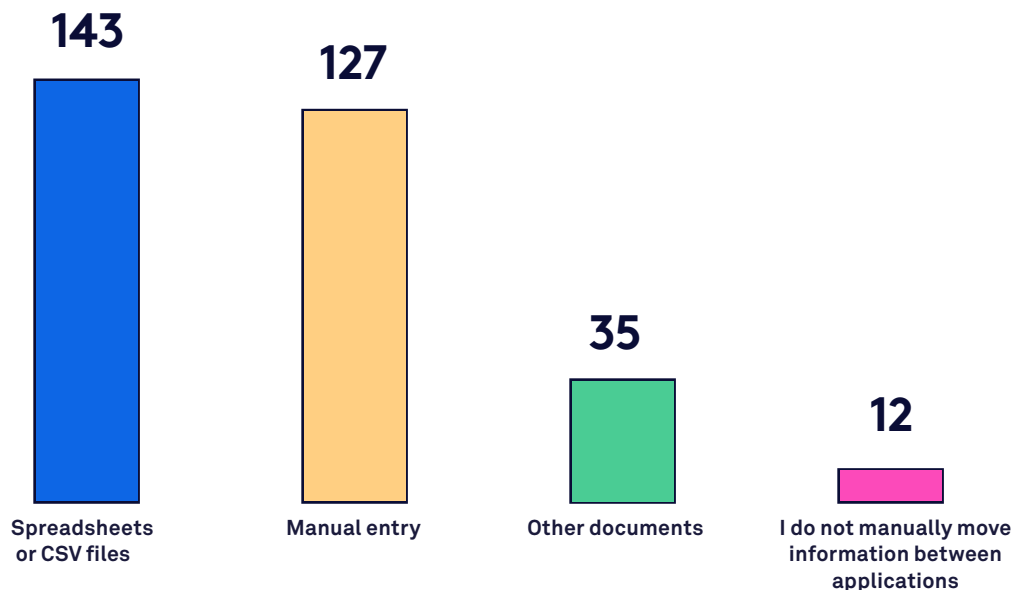


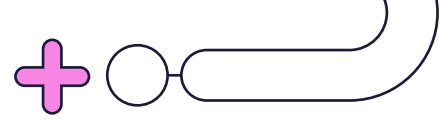
Growing stacks fuel a need for integration

Given that one of the primary reasons companies acquire software is improving employee productivity, it's important to explore both the benefits and the impact of a growing software stack. As companies use more software applications, they also experience increasing need to maintain context across them. Put simply, teams need to move data from one application to another.

Survey respondents indicated that today, they typically rely on manual means to move their data. 94% of respondents indicated that they use spreadsheets, other documents, or manually enter information into applications in order to pass data from one to the other.

Manually moving information between applications



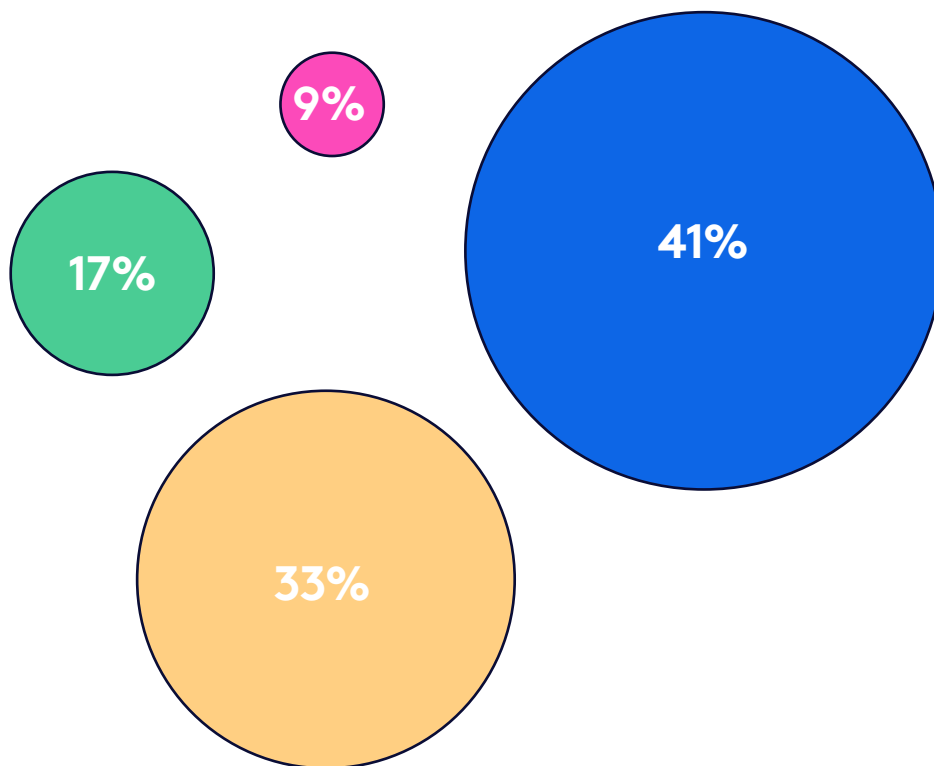


Professionals struggle with manual data transfer

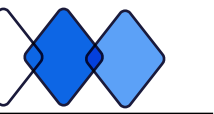
The manual transfer of data isn't a one-off task for most of the survey respondents. They spend several hours per week simply moving information between applications in order to complete their jobs. 62% of respondents said that they spend more than 3 hours per week.

Weekly hours spent moving information between applications

● 1-3 hours ● 3-5 hours ● 5-10 hours ● >10 hours

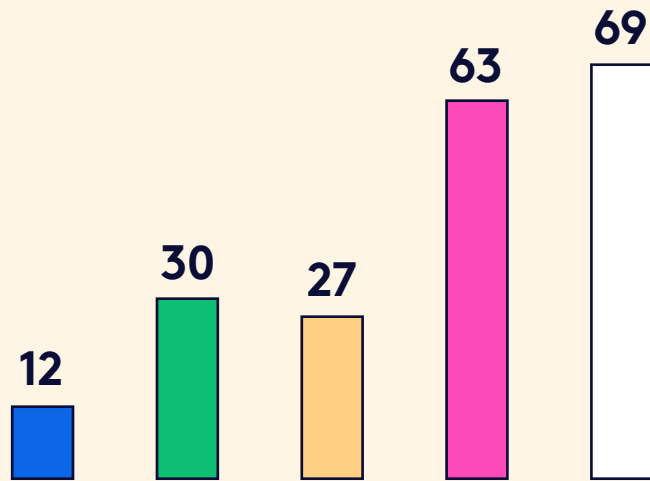


Here's a sentiment that appeared prominently in the survey: Manual work is frustrating, and often gets in the way of more-valuable projects. Respondents indicated that they spend a significant amount of time on manual tasks, which prevents them from pursuing higher-value activities.



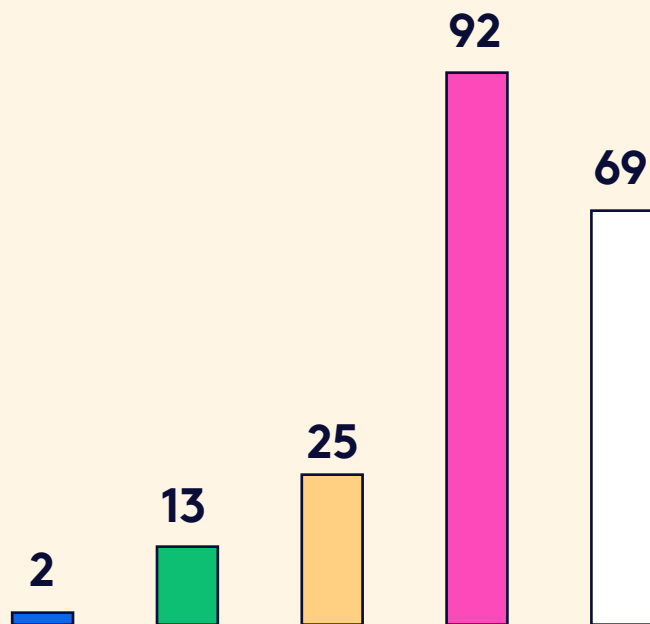
I spend a significant amount of time on repetitive manual work

● Strongly disagree ● Disagree ● Neither agree or disagree ● Agree ● Strongly agree



Automating more tedious or mundane aspects of my job would increase my productivity

● Strongly disagree ● Disagree ● Neither agree or disagree ● Agree ● Strongly agree



15

While most respondents felt that the software they use is effective at boosting employee productivity, repetitive manual data transfer is not. As tech stacks grow, the burden of manually transferring data across applications also grows, causing professionals to lose more time. Ultimately, the need to spend hours manually transferring data across an increasing number of applications reduces the utility of software as a productivity aid.



We have good, useful software tools, but no matter how sophisticated your stack is, there are always gaps in processes where you're cutting and pasting information to get things done. These are the areas where we should be integrating and automating things.



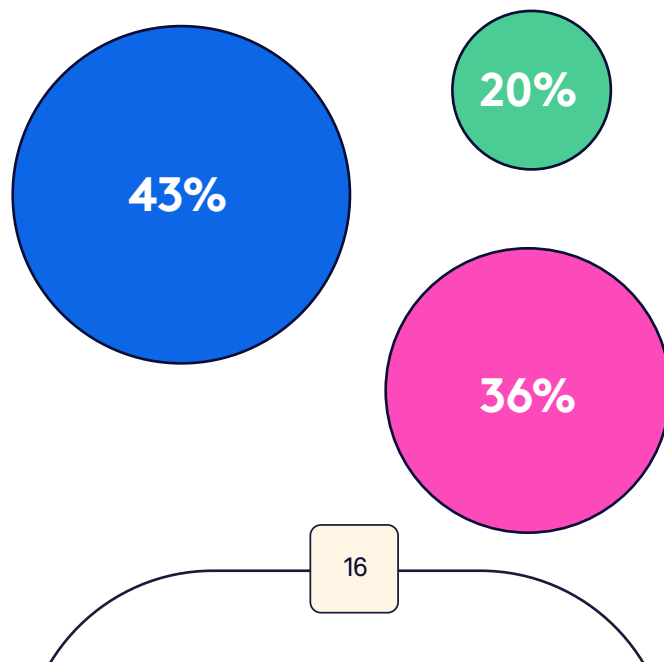
Dan Ahmadi, Sr. Director Demand Generation, Branch

Building software integrations

Obviously, manual data movement isn't the only potential area of improvement for organizations that use many software applications together. We asked respondents how they build or set up integrations—software-level connections—between the applications in their stacks. Most reported relying on internal resources—either having their IT team build integrations, or using the native integration features within their applications.

Building integrations between applications

- Our development, IT, or operations team builds them
- We use built-in product features (native integration capabilities)
- We use third-party integration software

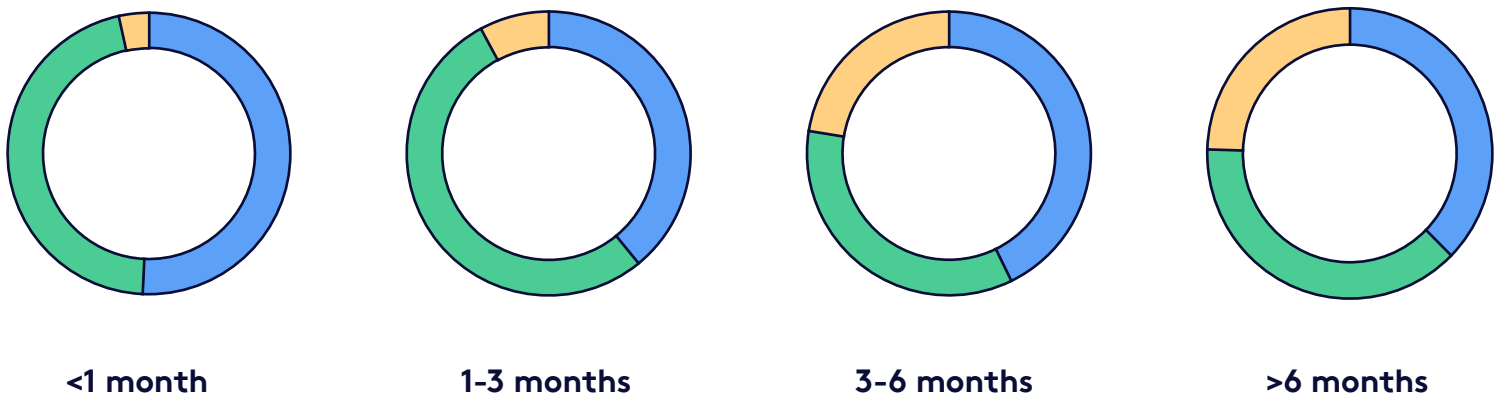


Less than a third of respondents reported that they use specialized software to build or manage integrations. 40% reported waiting for more a month for new integrations to be delivered, likely because they rely on internal resources to set up new integrations.

IT teams, the primary deliverer of integrations, were also likely to overestimate their speed of integration delivery. Members of IT teams were more likely to indicate shorter integration delivery times than their counterparts in line-of-business teams or company executives.

Time to set up new integrations

● IT & BizTech ● Executive leadership ● LOB



The gap in delivery time perception is small, but important. The difference between having a functional software integration, and employees manually moving data between applications, can have a significant impact on both productivity and employee morale. Many organizations may be relying on an over-stretched IT department to deliver integrations when an outside resource or tool could deliver them much more quickly.

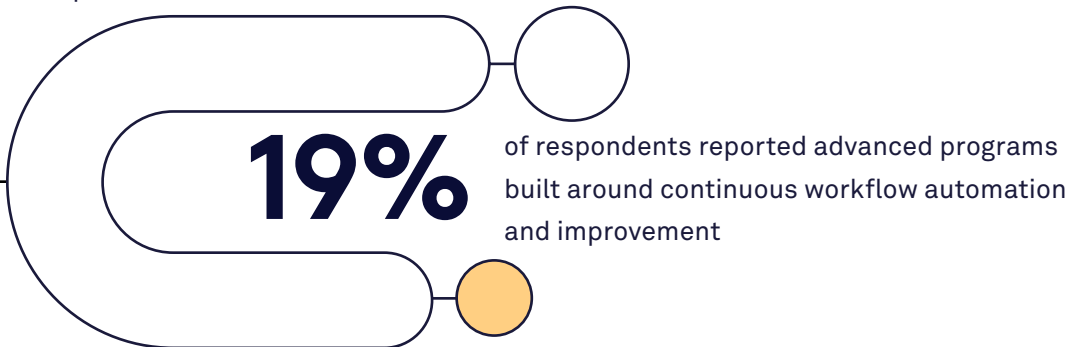
From integrations to automation

Lack of integration between software applications is a big driver of manual work, but it's not the only factor. The growth and increasing specialization of software tools means that for most organizations, even narrow workflows can end up spanning a fairly significant set of applications. Integrations can address specific hand-off points within a workflow, but the overall orchestration between systems remains largely manual.

Orchestration is where automation comes into play. Survey responses showed that organizations are increasingly looking beyond point-to-point integrations and investing in end-to-end automation of workflows across applications. 90% of respondents indicated that they currently implement some level of workflow automation within their departments.

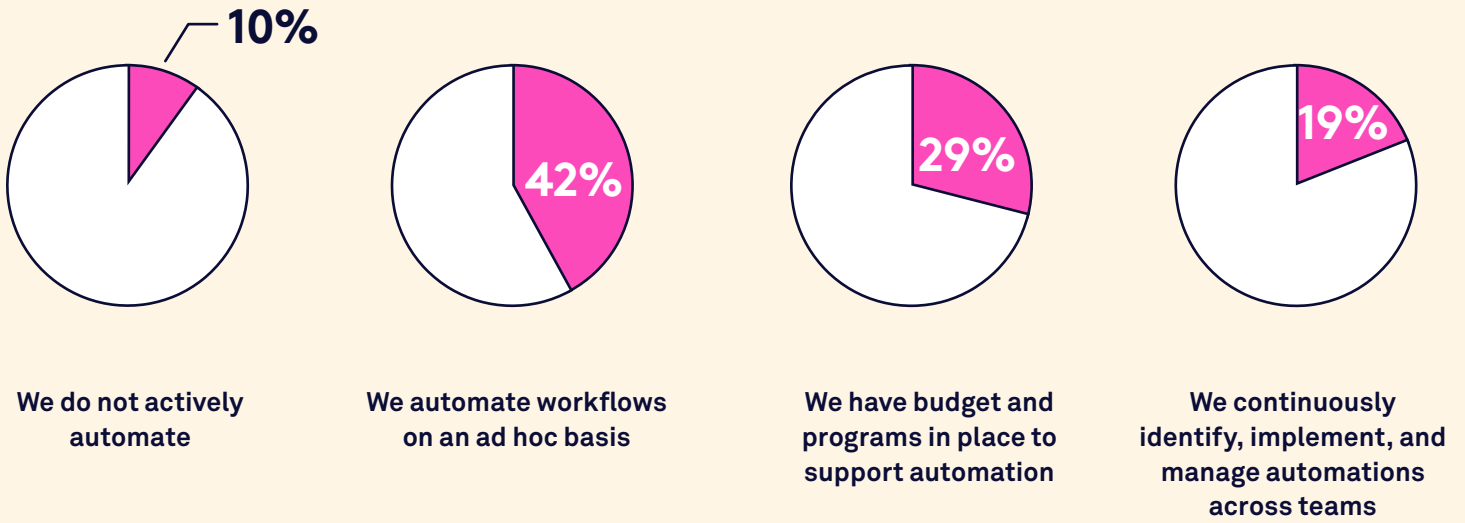
Automation maturity

While most organizations are implementing automation, the maturity of automation programs varies greatly. 42% of respondents indicated that they mostly execute their automation projects on an ad-hoc basis, without consistent planning or budget. 19% reported advanced programs built around continuous workflow automation and improvement.



Automation maturity varies across different industries. Survey respondents in the manufacturing, telecom, real estate, and travel industries were most likely to report mature programs, while the education, media, and advertising industries lag behind. 25% of respondents in the advertising/marketing services industry reported no automation initiatives within their organizations at all.

Automation maturity

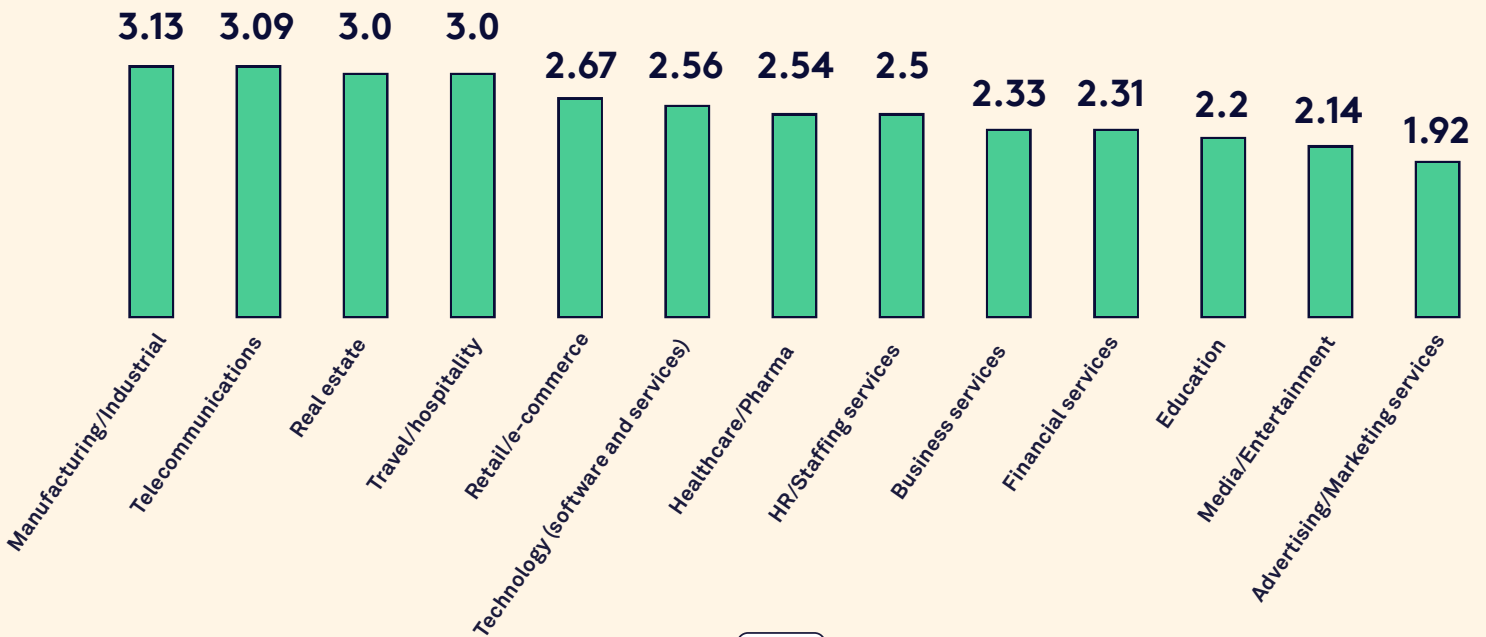


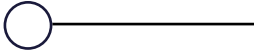
Maturity level by industry

On a scale of 0 to 3

0 = We don't actively automate workflows

3 = We continuously implement and manage automations



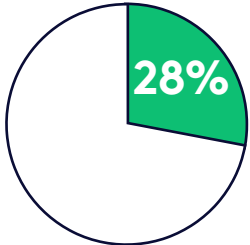


Within these industries, HR teams reported having the most mature automation programs, followed by executive leadership and research and development teams. Finance teams reported the lowest automation adoption rate, with 23% of respondents in this role indicating that their departments do not currently implement any workflow automation.

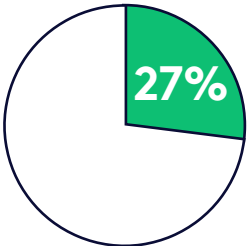
Approaches to automation

As with point-to-point integrations, organizations often look to develop automation in house, with IT-led deployments as the most common implementation method. However, many organizations also look to outside expertise to help with their implementations. 48% of respondents indicated that their organization hires third-party consultants to support automation projects.

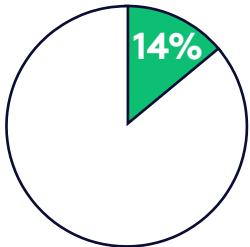
Automation project implementation



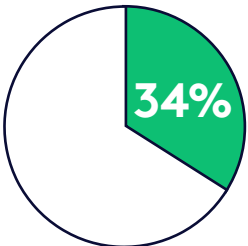
We hire consultants to implement workflow automation



We acquire packaged software applications to automate workflows



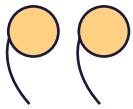
We use software automation platforms to implement workflow automation



Our IT engineering teams develop workflow automation in house



Automation approaches shift as organizations' programs become more mature. Unsurprisingly, companies with very mature programs were much less likely to report using outside consultants to help with implementation. They were also much more likely to use software platforms to support automation.



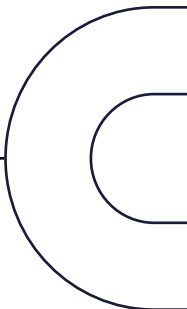
Using an automation platform has been really transformative for us. We've reduced project lead time, and expanded the pool of team members that can build and maintain automations.

Jordan Spivack, Co-founder & CTO, Cue



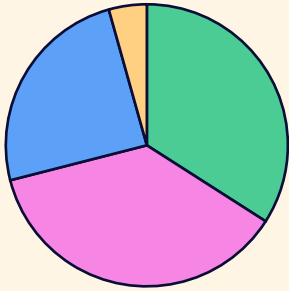
Software platforms likely play an important role in scaling automation programs. As organizations automate more of their workflows, relying on separate development teams to build and maintain them (whether internal or external) becomes increasingly impractical.

Regardless of maturity level, ownership for automation projects tends to reside outside of the IT organization. We asked respondents who in their organizations owns both the decision-making authority for automation projects as well as the implementation responsibility. In both cases, the majority of respondents indicated that either their departmental leadership (VP/SVP functional leaders) or company leadership (C-suite) have primary responsibility for both decision-making and implementation. Only 20% of respondents indicated that their IT organizations have primary responsibility for implementing automation projects.

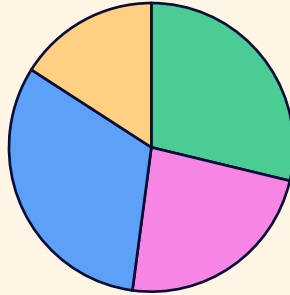


Automation implementation evolves with maturity

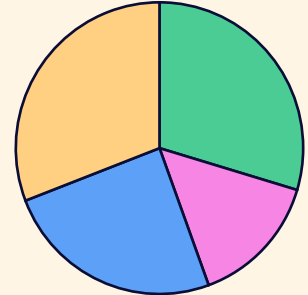
● Develop in-house
 ● Consultants
 ● Packaged applications
 ● Automation software



We automate workflows on an ad hoc basis



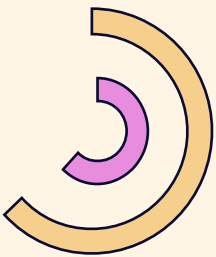
We have budget and programs in place to support automation projects



We continuously identify, implement, and manage workflow automations across teams

Automation project ownership

● Decision-making
 ● Implementation



Department leaders



Company leaders



Operations leaders



IT/Biz technology



General Ops leaders

Automation projects outperform software applications

One of the surprising findings from the survey is that organizations launch automation initiatives and acquire software products for the same reasons. We asked respondents for the primary drivers of their software purchases and why they invest in automation. In both cases, the top reasons were the same. Organizations are looking to improve employee productivity, support new products or business initiatives, and improve customer experience.

Primary drivers of software purchases/automation investments

● Software ● Automation



While the reasons for investment are the same, the return on investment is not. We asked respondents how well their software investments and automation projects performed at addressing their needs. While all solutions generally met expectations, automation projects were more likely to be judged as very effective compared to software applications.

Investments rated “very effective” in delivering outcomes

● Software

● Automation



When asked to evaluate the ROI they’ve realized on software acquisitions, 58% of respondents indicated that less than half of their applications have provided a positive ROI. Why does automation consistently outperform? While the survey results didn’t provide any direct insights, the flexibility associated with automation may be a factor.

Software applications are typically built around a specific workflow, and as a result, they codify aspects of the process in how they operate. While a particular software product may work well for a specific process, it might not necessarily work well for all teams and organizations. Much of what differentiates businesses is how they execute, especially when it comes to launching new products or supporting customers—two of the top-three drivers for investment.

Workflow automation, whether developed by internal developers, third-party consultants, or built using software platforms, are inherently flexible and conform to an individual team’s preferred process. As a result, they are more likely to deliver outsized results, as teams don’t have to work around undesired process flows or gaps that are codified within applications.

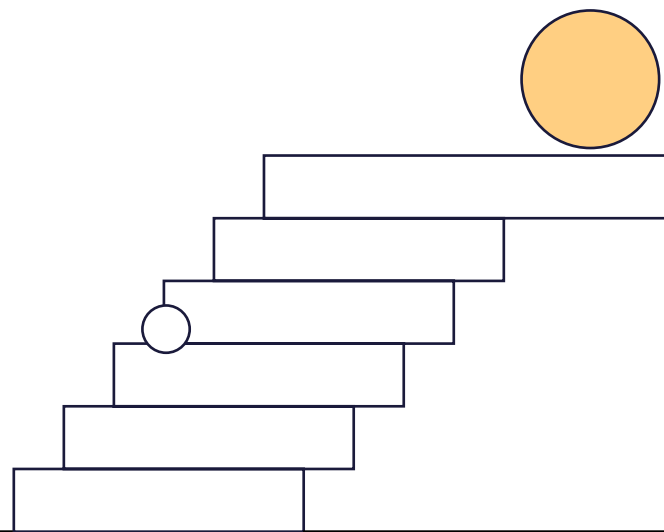
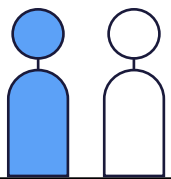
Automation challenges

Respondents also reported a number of challenges that prevent them from effective implementations. According to the survey, the most significant challenges were directly related to resources. In fact, respondents indicated their top two challenges were access to the internal resources needed to support projects and the ability to secure project budget.

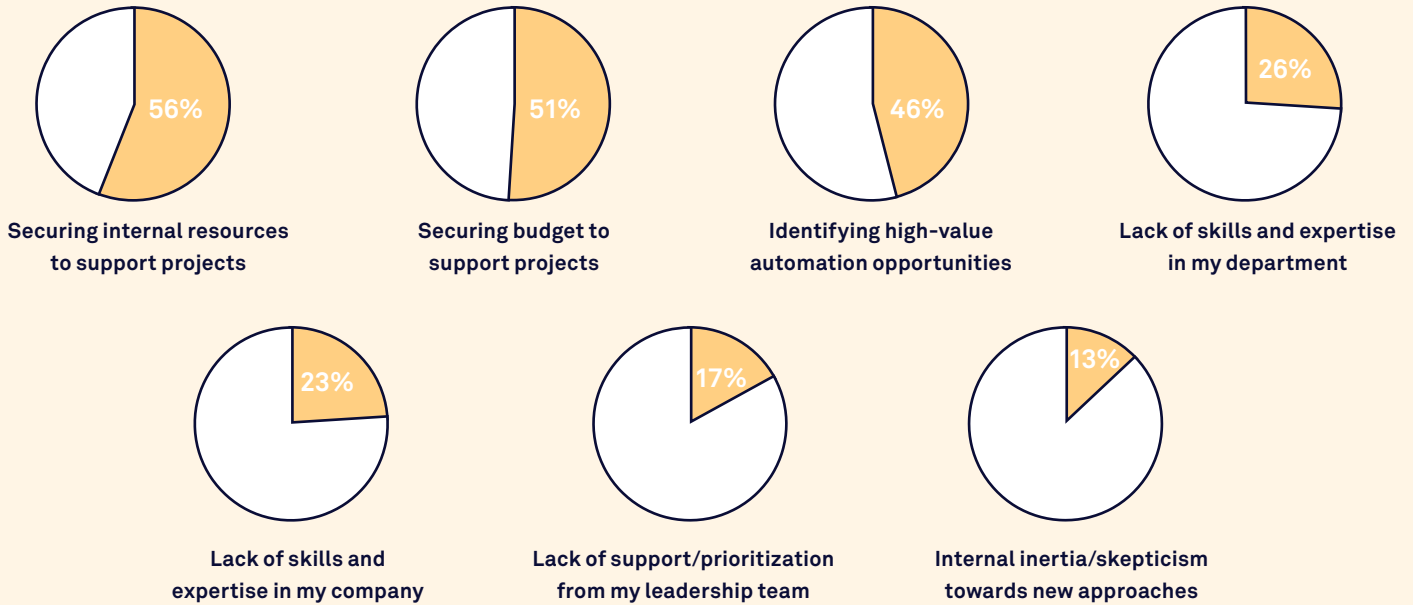
Surprisingly, respondents reported that their third toughest challenge was identifying high-value automation opportunities. Every team has certain areas where manual, repetitive work is an acute pain. Once teams address their immediate pain, finding the next project can be difficult.

While there may not be any immediate pain, there can be unexpected gains from developing new automation. Ongoing upside is the reason the most mature organizations have a program (with allocated budget and resources) to continuously identify and implement automations across teams.

Most respondents expect to resolve their challenges. For each reported roadblock to automation, we asked respondents to rate the likelihood of resolving their challenges within the next three to five years. The results were encouraging.

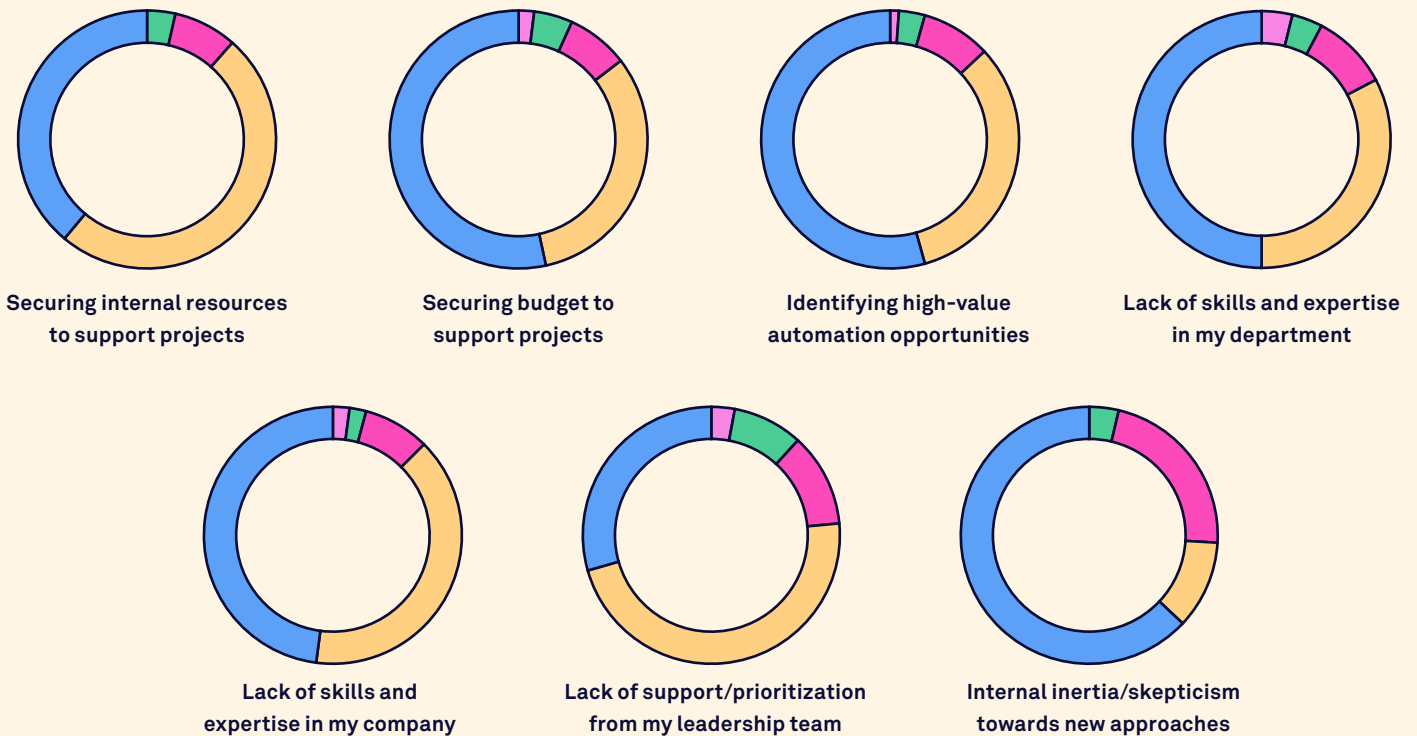


Biggest automation challenges



Likelihood of resolution in the next 3-5 years

● Very unlikely
 ● Somewhat unlikely
 ● Neither unlikely or likely
 ● Somewhat likely
 ● Very likely



Implications and recommendations



Automation projects will clearly be important initiatives to many businesses in the coming years. What are the implications of the findings in this study? First, software stacks aren't getting any smaller. Whatever challenges organizations have with the software applications they use, none of the respondents expected their investments to shrink. As companies continue to acquire more software applications for their business processes, they will experience increasing need for robust integrations between those applications.

Organizations will not have the luxury of waiting months for new integrations to be built, and will have to reckon with the discrepancy between what IT teams believe they can deliver and what they actually provide to line-of-business teams, and when. Applications that don't integrate well will generate increasing amounts of manual work.

Automation is much more than just point-to-point data integrations between applications. Organizations of all sizes, across many industries, are investing in automating the end-to-end workflows that span their applications. Investing in automation is providing outsized returns compared to software implemented for the same reasons. Companies that can develop mature automation programs will be better poised to scale these results.

How can organizations address their future automation needs?

1. Evaluate the breadth of your software stack

Put simply, your teams have a lot of software. The shift of software “ownership” from IT to line-of-business has led to a massive improvement in usability and relevance of business software, but it has also led to application bloat. According to survey respondents, only half of the applications they use are providing a positive ROI. There may be opportunities to consolidate and simplify.

2. Identify manual process pains

Every organization and team has painful manual processes. 60% of survey respondents spend more than three hours a week simply shuttling data between applications. However, each instance of painful manual work represents an opportunity to improve both employee productivity and satisfaction. Prioritize these workflows as candidates for automation.

3. Start automating (more)

Odds are you're already doing this at some level, but even ad-hoc automation projects show significant results. More than 50% of organizations with relatively immature automation programs reported that their projects were very effective at improving employee productivity.

4. Invest in maturity and scale

Lack of resources and budget are the biggest impediments to automation success. Organizations also struggle with what to automate once they've solved their most immediate pain points. Mature approaches take a continuous approach to automation. They establish programs specifically focused on automation, and they invest in tooling that lets line-of-business teams build and manage automation themselves, rather than having to rely on scarce development resources outside of their organization, such as separate IT departments.



Love your work, automate the rest

About this guide

Written by

Michael Peach, Head of Product Marketing, Tray.io

Research conducted by: ReRez Market Research

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+1.415.418.3570 | [WEBSITE](#) | [BLOG](#)

