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Thought Leadership Paper
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Face The Workflow Automation Gap Head On

Leaders Who Don't Face The Reality Of Their
Automation Gaps Are Failing Their Enterprises



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To execute workflows today, most companies depend on considerable human and technology resources and disjointed processes.



79% of IT leaders believe application workflow automation would have a positive impact on their ability to meet their top IT priorities.

Executive Summary

Organizations' automation capabilities are critical to the success of their internal and external operations, including their ability to respond to business and market changes, improve the experience of their customers, and realize efficiencies. As expectations for high-quality, fast, and consistent digital services continue to accelerate, the application workflows on which these services depend cannot keep up without automation as well. However, IT leaders aren't doing enough to connect workflow automation capabilities with automation results, creating unnecessary risk to both the business and operations.

In April 2020, BMC Software commissioned Forrester Consulting to evaluate the state of workflow automation at large companies. To explore this topic, Forrester conducted a survey with 355 global IT leaders from operations, engineering, and DevOps roles involved in application workflow execution at their organizations. We found that IT leaders understand the power workflow automation can yield, but only a minority have been able to successfully scale workflows across the enterprise.

KEY FINDINGS

- › **For many organizations, application workflows miss the mark.** While most organizations have applied workflow automation to some degree, on average, only about a third of any workflow under study is fully automated. The result is subpar workflow execution. Over two-thirds of decision makers say they frequently contend with an inability to deliver services in time for the business, excessive manual work to create or manage workflows between different applications or environments, and an inability to get ahead of services failures before they occur.
- › **Automation success depends on the right people, processes, and technology.** A minority of decision makers say their organizations have been able to automate a number of critical workflows at least mostly. These higher-maturity organizations are far more likely to have processes that are continuous, tools that are connected, and teams that are able to draw from diverse skills and expertise. As a result, they also are more likely to enjoy "significant" improvement on key performance metrics, including reductions in costs, errors, and the number of service interruptions.
- › **The technology to support workflow automation at scale exists.** Supporting workflow execution at many large enterprises requires significant resources today. While 77% of decision makers report their firms are juggling multiple tools to manage their workflows, they see value in a single workflow automation solution, particularly one that also includes high-value capabilities, including the ability to automatically capture and manage workload logs, build in automation without complex scripting, and provide role-based access and views.

Rising Customer Expectations Require Seamless Digital Service Delivery

In their effort to satisfy customers’ demand for high-quality digital experiences, many organizations have sought to modernize their IT systems by embracing the power of cloud computing, internet of things (IoT), mobile, and artificial intelligence (AI). These technologies have given companies new opportunities to develop innovative digital products and services.¹ However, they’ve also greatly increased the complexity of their IT environments. Now, for a digital offering to be delivered, information must pass through multiple heterogenous systems and/or teams. As customers’ rising expectations continue to accelerate, these processes simply can’t keep up if they’re not connected and automated.

IT leaders in our research agree. Sixty-five percent or more say that their organizations’ automation capabilities are “very” or “extremely” important to meeting their most pressing priorities in the coming year, including their ability to respond to business and market changes, improve the experience of customers, and increase IT efficiency (see Figure 1).

Figure 1

“What priority will your organization be placing on the following IT initiatives over the next 12 months?”



Base: 355 global IT leaders from large enterprises involved in application workflow automation at their organizations
 Source: A commissioned study conducted by Forrester Consulting on behalf of BMC Software, June 2020



65% or more say that their organizations’ automation capabilities are “very” or “extremely” important to their ability to meet these objectives

MODERN IT OPERATIONS NEED SCALABLE WORKFLOW EXECUTION

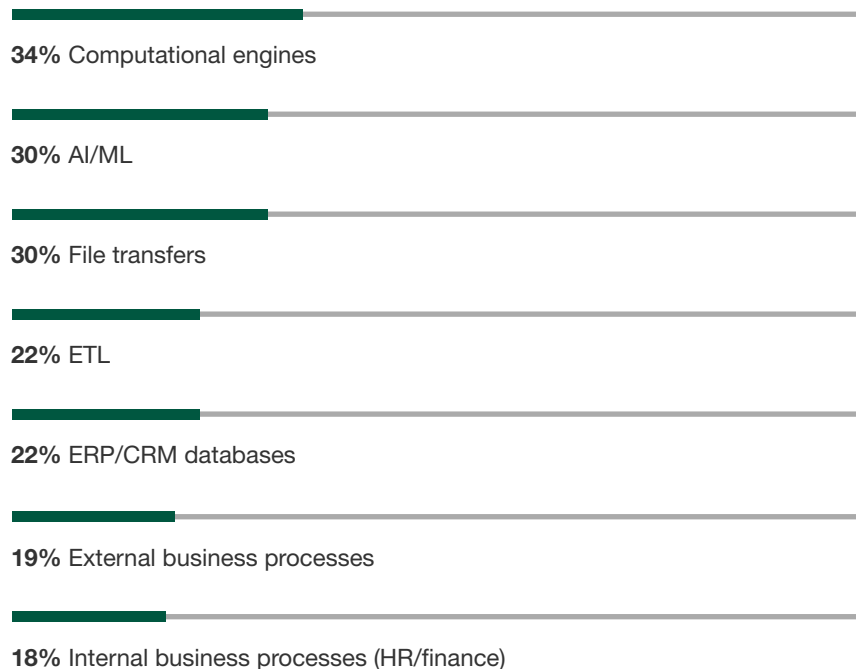
Adaptive organizations engage in a cycle of sensing and adapting to customer needs that relies on gathering and evaluating critical information and acting on those insights. Automating and fine-tuning this cycle can enable digital businesses to more seamlessly respond to the market environment and outpace their competitors, particularly when the cycle is running at enterprise scale.² Surveyed IT leaders see value in a number of automation technologies to bolster their operational agility, including business process automation and DevOps tools. However, topping their list as the most impactful is application workflow automation.

Application workflow automation refers to the design, execution, and automation of processes based on workflow rules where human tasks, data, or files are routed between people or systems based on predefined business parameters.

Done right, application workflow automation moves the burden of workflow execution from people to software, freeing up IT staff to work on strategic initiatives rather than babysitting technology. Seventy-nine percent of IT leaders believe application workflow automation would have a positive impact on their ability to meet their top IT priorities, and 49% describe the impact as “significant.” However, organizations have only harnessed a fraction of the workflow automation that’s possible to attain. Just about a third or less of workflows for various categories under study — e.g., computational engines; file transfers; extract, transform, and load (ETL) — are fully automated today (see Figure 2).

Figure 2

“What degree of automation does your organization have in place to orchestrate the workflows associated with the following application categories?” (Showing “Entirely automated workflows”)



Base: 355 global IT leaders from large enterprises involved in application workflow automation at their organizations
Source: A commissioned study conducted by Forrester Consulting on behalf of BMC Software, June 2020

Festering Workflow Automation Challenges Inhibit Digital Success

Given that companies' most critical business functions are powered by software, to get the most out of their application workflow automation capabilities, firms must reevaluate their application development and delivery approaches. Delivering software applications faster, and with higher quality, is not simply a matter of doing the same things faster; it requires a complete reinvention around a customer-focused approach to software delivery. As part of this reinvention, leaders must bring their people, process, and technology resources together in harmony to drive improvement in their software delivery capabilities.³ This includes having processes that are continuous, tools that are connected, and teams that are able to draw from diverse skills and expertise.

Most IT leaders in our research give their companies high marks along these dimensions. Over half (56%) rate their people as "very" or even "completely" effective at supporting workflow automation, and over two-thirds say the same for their processes (67%) and technology (71%). However, a closer look at their approaches reveals that this optimism is often unwarranted and that firms must do more to truly optimize workflow automation. To execute workflows today, organizations depend on considerable human and technology resources, as well as highly manual processes (see Figure 3). For many, security review (65%), process checklists (57%), managerial approval (55%), deployment of applications (47%), and technical review (45%) represent manual steps in the digital services delivery process.

Figure 3



Base: 355 global IT leaders from large enterprises involved in application workflow automation at their organizations
Source: A commissioned study conducted by Forrester Consulting on behalf of BMC Software, June 2020

WORKFLOW OBSTACLES RESULT IN DIGITAL SERVICES THAT ARE SLOW, ERROR-PRONE, AND INEFFICIENT

Respondents report several challenges standing in the way of their ability to execute workflows as successfully as they'd like. The most stubborn barriers include: 1) difficulty scaling workflow automation across the enterprise; 2) organizational silos that hinder cross-team visibility and collaboration; and 3) a lack of executive understanding and support (see Figure 4). Too often, these difficulties lead to costly consequences that could otherwise be avoided. Over two-thirds say they frequently contend with an inability to deliver services in time for the business, excessive manual work to create or manage workflows between different applications or environments, and an inability to get ahead of services failures before they occur. Similarly, over half say that "often" or "very often," workflow difficulties cause staff to be diverted away from strategic initiatives, internal customer experiences to fall below expectations, inefficient spending, and security vulnerabilities (see Figure 5).

Figure 4



Base: 355 global IT leaders from large enterprises involved in application workflow automation at their organizations
Source: A commissioned study conducted by Forrester Consulting on behalf of BMC Software, June 2020

Figure 5

"How often do application workflow difficulties lead to the following?"



Base: 355 global IT leaders from large enterprises involved in application workflow automation at their organizations
Source: A commissioned study conducted by Forrester Consulting on behalf of BMC Software, June 2020

The Right Strategy And Solution Can Unlock Workflow Automation's Potential

A minority of organizations have fully automated multiple workflows. However, some are further along on their maturity journeys. These higher-maturity organizations have mostly automated a greater number of critical workflows. By extending workflow automation further, higher maturity organizations are more often reaping “significant” improvement on key metrics, including reductions in costs, errors, and the number of service interruptions (see Figure 6).

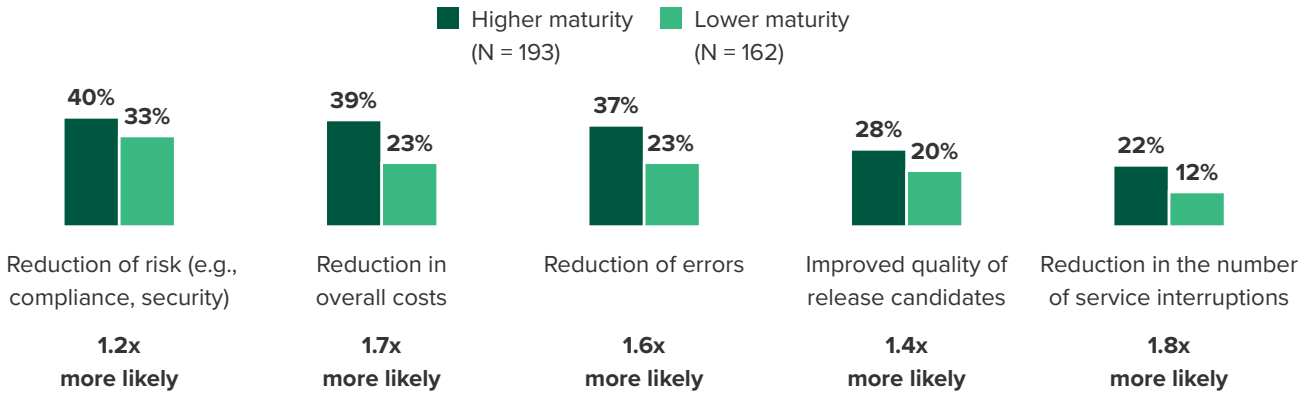
While their results likely represent a fraction of what might be possible by fully automating more workflows, they illustrate that strengthening workflow automation can move the needle on key objectives and drive business value. Those looking to improve their own capabilities can learn from higher-maturity firms that more often embody modern application development and delivery best practices (see Figure 7):

- › **People.** Institutional inertia and a culture that discourages new ways of working can stifle even the best automation plans. Higher-maturity firms are much more likely to have servant leaders who cultivate an environment of iteration and collaboration and remove barriers that keep teams from reaching their maximum productivity.⁴ They're also infusing their teams with high-demand skills (e.g., data science, algorithm development, AI/ML expertise) at a greater rate. By building more well-rounded teams, they can reduce time wasted from role handoffs and hierarchies that slow service delivery.⁵
- › **Process.** Siloed processes are incompatible with successful automation. Higher-maturity firms are more likely to have integrated disparate processes and eliminated “islands of automation” across the organization. Higher-maturity firms also have shared accountability for quality. By more often applying a “you-write-it, you-own-it” mentality — whereby the team that writes the code for a service is also involved in deploying it, monitoring it, and dealing with any production bugs pertaining to it — they can remove the disconnect between writing code, testing, production, and maintenance.⁶
- › **Technology.** High-maturity companies are more likely to experiment with automation across the software development lifecycle (SDLC), helping them promote quality at speed. A wide difference between high- and low-maturity companies exists for the use of continuous integration/continuous delivery (CI/CD) — automated processes for building and testing software and standardizing delivery practices so they're easier to monitor and enforce. They are also more likely to describe their companies as effective at using release automation, which automates the delivery of the complete environment, including infrastructure, middleware, and application. In so doing, they're more likely to remove errors from manual processes by standardizing and automating the movement of applications between environments.

Figure 6

“To what extent have your workflow automation capabilities improved the following metrics?”

(Showing “Significant” improvement among those using each metric to measure the success of their IT operations)

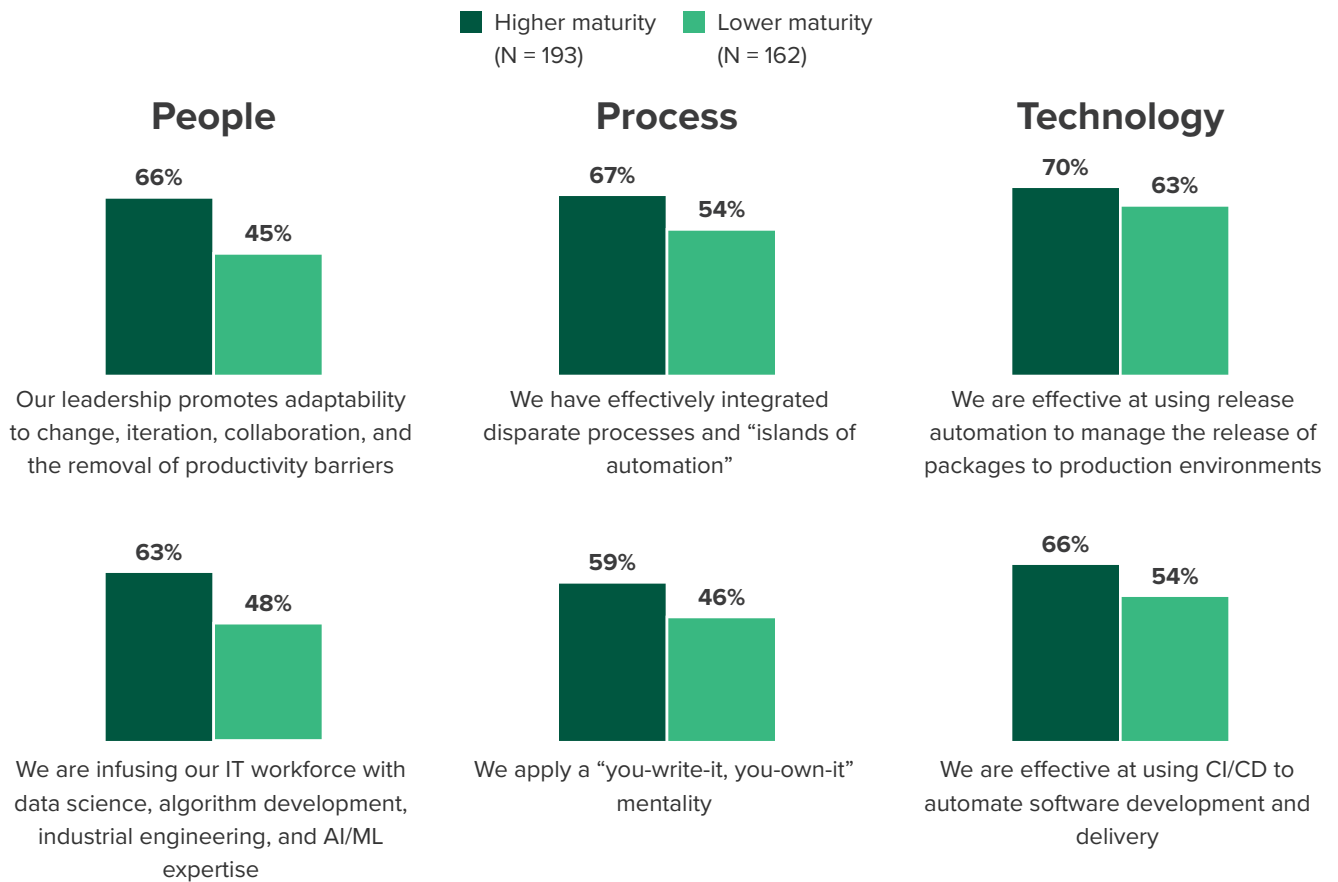


Base: Variable; global IT leaders from large enterprises involved in application workflow automation at their organizations

Source: A commissioned study conducted by Forrester Consulting on behalf of BMC Software, June 2020

Figure 7

“How well do the following statements describe your IT organization?” (Showing “Mostly” or “Completely”)



Base: 355 global IT leaders from large enterprises involved in application workflow automation at their organizations

Source: A commissioned study conducted by Forrester Consulting on behalf of BMC Software, June 2020

A COMPREHENSIVE WORKFLOW AUTOMATION SOLUTION CAN EASE WORKFLOW EXECUTION

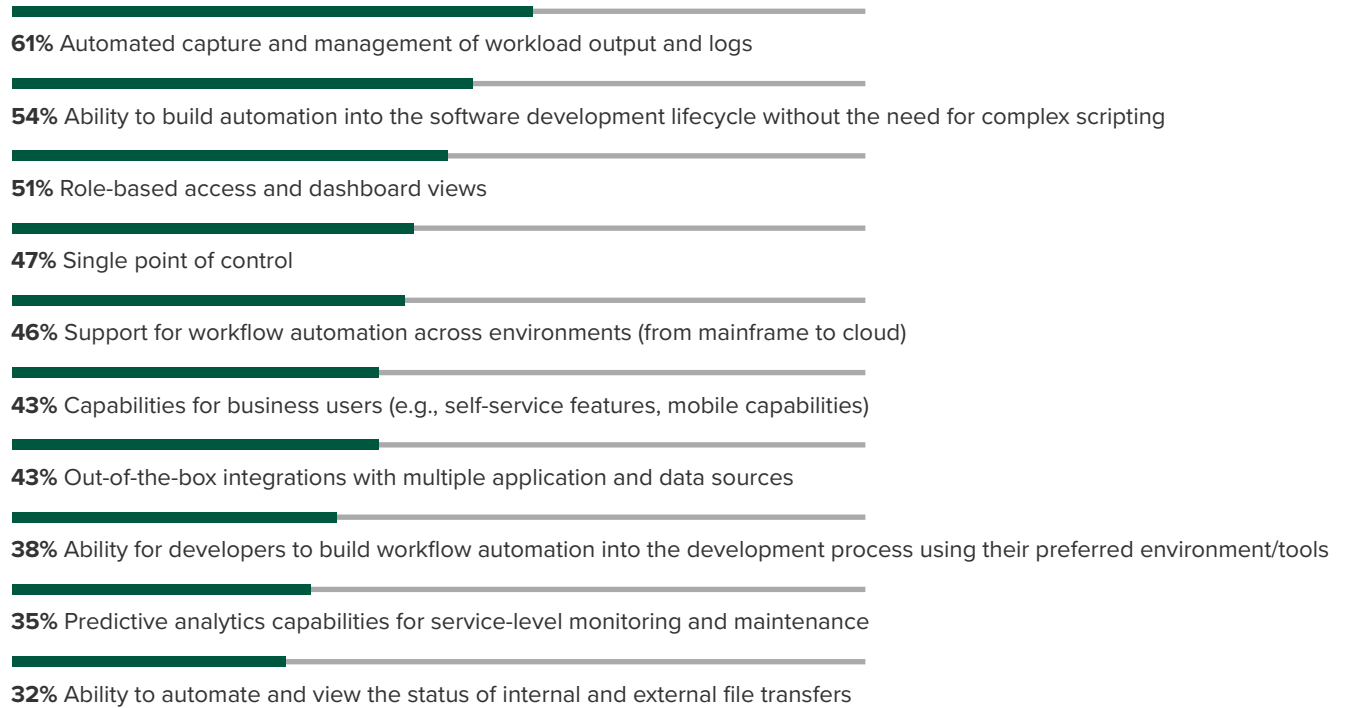
Users need access to a range of solution features to execute workflows with the consistency and speed today's digital services demand (see Figure 8). Some of the most sought-after capabilities include:

- › **Automated capture and management of workload output and logs.** Often, firms are unable to predict service failures before they occur. To minimize disruptions, users need information contained in output and logs generated by jobs. However, this information can be difficult to retrieve efficiently. By automating the capture and management of output and logs, interested stakeholders can more easily diagnose, repair, and learn from service failures.
- › **Ability to weave automation into the SDLC without complex scripting.** The need to support a wide variety of applications across environments often requires that developers write custom scripts to maintain them all, making it difficult to deliver services to customers quickly. Decision makers see value in solutions that allow them to build automation into the SDLC early, without the need for complex scripting.
- › **Role-based access and dashboard views.** IT organizations under pressure to deliver faster are prioritizing self-service capabilities in the coming year. However, widely implemented automation tools have great power that needs to be wielded appropriately to prevent accidental misconfiguration.⁷ By having role-based access and views, organizations can right-size control to the automation tool while also promoting greater collaboration between IT and business users.
- › **Single point of control.** Considering most organizations are juggling multiple tools to handle the range of workflows that exist, the desire to have centralized control is not surprising. Twenty-six percent of decision makers report using a different technology for each workflow type, and 44% use the automation (if any) that came with a package for any domain-specific workflow type. Meanwhile, 7% don't have any formal tool to manage workflows and are instead relying on homegrown methods or tools. Access to a single workflow automation system that can manage all types of workflows is sorely needed but eludes most — just 23% report having one.

Thankfully, the technology to achieve highly automated workflows across environments managed through a single point of control does exist. Respondents agree that access to a comprehensive solution, one inclusive of these and other features, would lead to several benefits including: greater visibility and control, improved experiences for external customers, and greater ease in maintaining compliance (see Figure 9).

Figure 8

“When evaluating application workflow automation solutions, which of the following capabilities would you consider important for them to have?” (Select all that apply)



Base: 355 global IT leaders from large enterprises involved in application workflow automation at their organizations
Source: A commissioned study conducted by Forrester Consulting on behalf of BMC Software, June 2020

Figure 9

“What benefits do you expect from having a single workflow automation solution with all these capabilities?” (Select all that apply; showing top benefits)



Base: 355 global IT leaders from large enterprises involved in application workflow automation at their organizations
Source: A commissioned study conducted by Forrester Consulting on behalf of BMC Software, June 2020

Key Recommendations

Leaders often trick themselves into believing they have everything under control; after all, they've been investing in automation technology platforms, honing process plans, and working to ensure standards are kept. With 81% indicating that automation is critical to improving their ability to respond to business and market changes, you might think that systems of automation are in place to fulfill this priority, yet a look under the covers reveals wide gaps in automation execution. Leaders tell us that they need eight people, on average, to orchestrate application workflows — and where there is automation, it's often managed by an array of disjointed tools.

To overcome this automation reality gap, leaders need to recognize that the problem is staring at them in the mirror: 33% of respondents tell us that they struggle to get executive attention when it comes to understanding the critical nature of workflow automation. In addition, 35% say that organizational silos hinder cross-team visibility and collaboration. How can IT leaders hope to have end-to-end workflow automation when they can't even connect on common objectives? The result of this disfunction is that many can't scale their automation across the enterprise. A digital business needs technology that adapts and scales quickly, reliably, and economically.⁸ To do better, firms must:



Stop using quantity of automation systems as a proxy for quality. To mark progress, many leaders simply count the number of automation systems or tabulate their automation investments, but few are looking at the results and outcomes of those investments. As the data suggests, many leaders believe they have ample systems of automation, but a deeper look reveals many have large automation system gaps that depend on multiple human and technology resources to be filled.



Start using outcomes to measure automation capability. Respondents tell us that serving customers, reacting to changing markets, and improving IT efficiency are important priorities, and that's why it's critical to not only evaluate what you have, but also how well it's working. What is the impact of your systems of automation? How well is it helping you serve and retain customers? Are your systems of automation helping your business be more adaptable to changing market conditions? Use these questions to guide your evaluation process toward key indicators of effective automation.



Create OKRs to quantify desired results. Forrester's research on OKRs (objectives and key results) shows they can be an effective tool for setting high-level objectives that not only have a desired qualitative outcome (such as improved customer satisfaction) but also quantitative targets that teams can use to measure progress.⁹ This tactic elevates your evaluation of a capability from "we have three systems of automation to manage customer success" to "we have improved customer success by 20% and are targeting 35%."

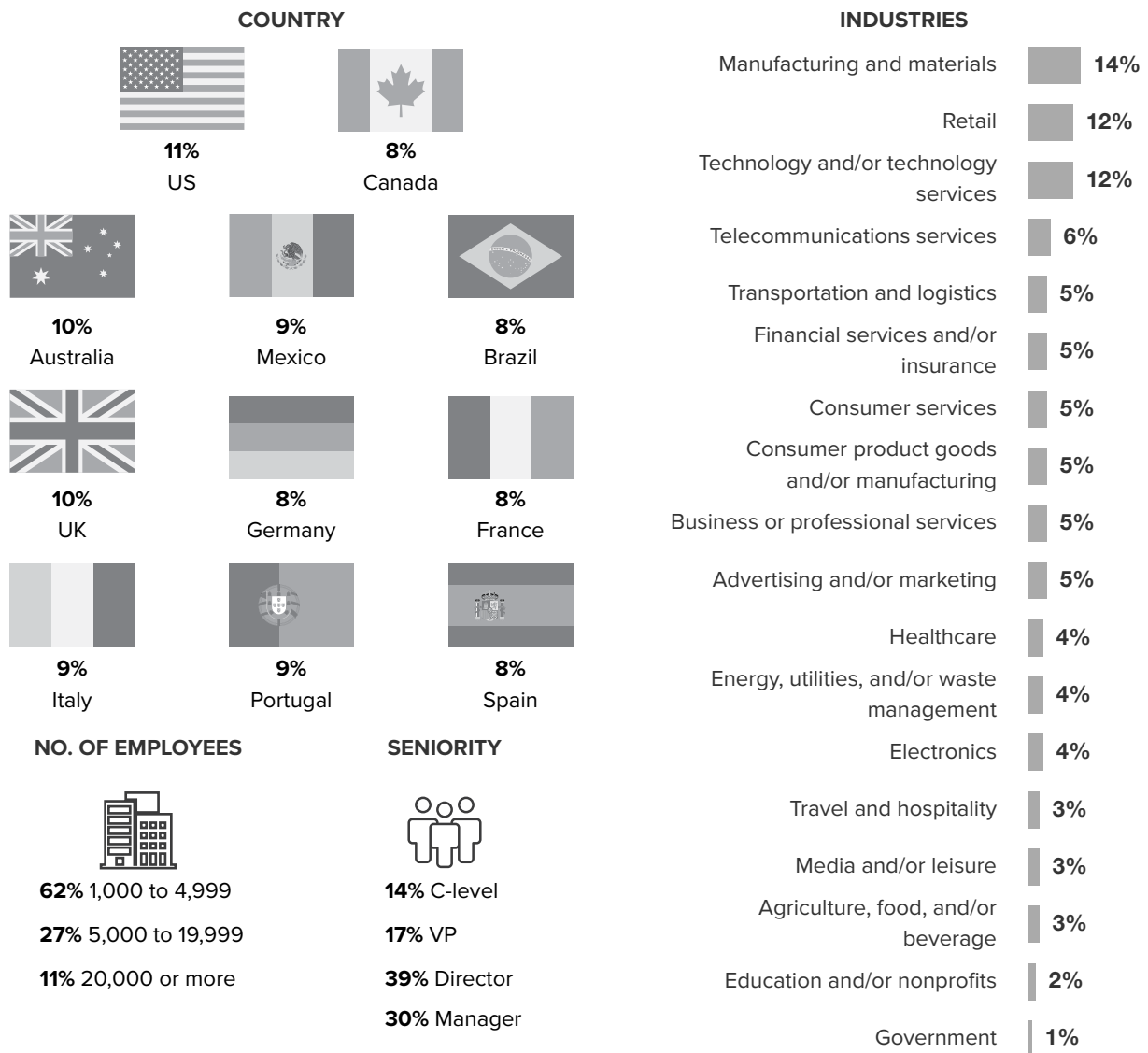


Select automation technologies that drive results. Respondents tell us that a comprehensive workflow automation solution, which can be executed through a single point of control, will afford them benefits that help them deliver on their promises to their customers and their business, including greater operational visibility and control and higher-quality customer experiences.

Appendix A: Methodology

In this study, Forrester conducted an online survey of 355 IT leaders involved in application workflow automation at large organizations across a range of industries. Respondents come from the US, Canada, Australia, Mexico, Brazil, the UK, Germany, France, Italy, Portugal, and Spain and represent IT operations, engineering, and DevOps roles. The study sought to evaluate the current state of application workflow automation at large companies and the value decision makers see in having a comprehensive workflow automation solution that can help scale workflow automation across the enterprise. Questions provided to the participants asked about their current workflow automation approaches, challenges standing in the way of successful workflow automation execution, and the people, process, and technology considerations they believe can make a positive impact on their efforts. Respondents were offered a small incentive as a thank you for time spent on the survey. The study fielding began in May 2020 and was completed in June 2020.

Appendix B: Demographics/Data



Base: 355 global IT leaders from large enterprises involved in application workflow automation at their organizations
 Note: Percentages may not total 100 because of rounding.
 Source: A commissioned study conducted by Forrester Consulting on behalf of BMC Software, June 2020

Appendix C: Supplemental Material

RELATED FORRESTER RESEARCH

“Master The SDLC For Modern Application Delivery,” Forrester Research, Inc., December 5, 2019.

“Digital Transformation Requires Development Transformation,” Forrester Research, Inc., December 13, 2019.

“Automation Drives The I&O Revolution,” Forrester Research, Inc., November 19, 2019.

Appendix D: Endnotes

¹ Source: “Digital Transformation Requires Development Transformation,” Forrester Research, Inc., December 13, 2019.

² Source: “Gauge Your Infrastructure Automation Maturity,” Forrester Research, Inc. August 16, 2019.

³ Source: “Digital Transformation Requires Development Transformation,” Forrester Research, Inc., December 13, 2019.

⁴ Source: “Master The SDLC For Modern Application Delivery,” Forrester Research, Inc., December 5, 2019.

⁵ Source: “Digital Transformation Requires Development Transformation,” Forrester Research, Inc., December 13, 2019.

⁶ Source: “Master The SDLC For Modern Application Delivery,” Forrester Research, Inc., December 5, 2019.

⁷ Source: “Automation Drives The I&O Revolution,” Forrester Research, Inc., November 19, 2019.

⁸ Ibid.

⁹ Source: “Use Objectives And Key Results To Build A Better Strategic Product Portfolio,” Forrester Research, Inc., August 23, 2019.