How Businesses Drive Digital Transformation with Automation

Savvy business and IT leaders are putting automation technology to work to increase success and speed the results of digital transformation initiatives across the business.
Table of Contents

P3. Automation in the Era of Digital Transformation
P3. Automation Adoption Accelerates
P6. Why Automation Now?
P7. Where Automation Works
P9. Automation Challenges Remain
P11. Automation Investments on the Horizon
P15. Survey Details and Demographics
Automation in the Era of Digital Transformation

Rapid changes in the healthcare landscape means organizations need to gain the competitive advantage by turning the potential of technology first innovations into operational advantages. From the development and discovery of new drug and treatment breakthroughs that enable solutions beyond therapeutics to the way patient information is handled, stored, and analyzed. It takes a holistic approach to data and process management to achieve outcomes demanded by the market. Through the use of Digital Business Automation, Operational Management, Policy & Compliance Management, and Mainframe Modernization healthcare organizations need BMC to develop the healthcare technologies of tomorrow.

60%

Nearly 60 percent of IT respondents surveyed report that their companies use automation to complete between 25 percent and 75 percent of tasks today. *Based on 125 respondents.

Digital transformation efforts are driving more IT executives to weigh the pros and cons of leveraging automation technologies to complete tedious tasks, reduce human error, and speed problem resolution.

The potential benefits of using automation are compelling IT leaders to put the technologies to work accelerating application development, analyzing volumes of data, and managing cloud resources across hybrid environments, according to recent survey data.

The BMC-commissioned survey, conducted in the fall of 2019 by PureB2B, garnered 125 responses from IT managers, directors, and executives across varied industries.

And the results are clear: automation has evolved from a nice-to-have tool to a must-have technology in the era of sophisticated software, increased customer demand, accelerated development times, and digital business transformation.
Automation Adoption Accelerates

IT leaders are embracing automation across domains to varying degrees. The majority are easing into it, but there are IT leaders reporting broader adoption of automation.

When asked to what degree the company uses automation technology to complete tasks in the IT organization today, 10 percent said they are leveraging automation to complete more than 75 percent of tasks. More than one-fifth (22 percent) of IT leaders reported using automation to complete between 50 and 75 percent of tasks within the IT organization. And 36 percent of IT execs stated that between 25 and 50 percent of tasks in the IT organization are completed with the help of automation. (See Figure 1.)

Still, nearly one-third of those IT leaders surveyed are tapping automation to complete just 25 percent or less of tasks within the IT organization. (See Figure 1.)

Among respondents, there is an opportunity to expand automation, and many of those surveyed are working toward that. A little more than 23 percent said they are just getting started with automation adoption, about 13 percent are more than one-third along with their implementations, and nearly 9 percent reported that they were past the halfway point. (See Figure 2.)
Nearly 5 percent of those polled for this report said they are nearing completion, and roughly 1 percent report their automation projects as completed. More interesting, perhaps, are the close to 50 percent of survey respondents who recognized that adopting automation really has “no end date; it is a continual improvement project.” (See Figure 2.)

As for the departments driving this level of automation, the majority of respondents reported the investment in and commitment to expanding automation is shared across teams. While some 28 percent pointed to the IT department as the catalyst for the uptake in automation projects, nearly 57 percent indicated that multiple departments collaborate on the larger automation strategy. (See Figure 3.)

**Figure 3**

*What department within your organization is most interested in seeing automation technology used across more projects?*

- Multiple departments collaborating on a strategy: 57%
- IT organization: 28%
- C-level executives: 6%
- Marketing/sales: 4%
- Human resources: 4%
- Finance: 2%

48% of respondents recognize that automation is a continual improvement project with no set end date. *Based on 125 respondents.*
The push across departments to adopt automation is the result of shared strategies—as well as shared challenges in addressing business needs with the current technology.

For instance, the majority of IT leaders (54 percent) surveyed reported operational inefficiencies as the primary driver for automation adoption. The need to streamline operations and improve performance with tools such as workflow orchestration will continue to push IT leaders toward expanded automation strategies. (See Figure 4.)

Automation adoption is also increasing due to interest in best practices that optimize application development. For more than one-third of respondents (36 percent), adopting best practices such as DevOps and Agile also required an automation strategy. In fact, infusing the application development lifecycle with workflow orchestration enables developers to set and follow best practices for workflow creation through builds, testing, QA, and deployment.

### Why Automation Now?

Nearly 54 percent of IT leaders pointed to operational inefficiencies as the catalyst for adopting automation technology.

*Based on 125 respondents.

**What prompted the decision to adopt automation technology?**

- **Operational inefficiencies**: 54%
- **Best practice (DevOps, Agile) adoption**: 36%
- **Increasing customer demand**: 23%
- **Evolving competitive landscape**: 22%
- **Understaffed IT department**: 18%
- **Lack of specific skill sets**: 14%
- **Emerging technology implementation**: 14%
Customer demand and competitive pressures are also pushing IT leaders to adopt more advanced automation technologies: some 23 percent of respondents pointed to increasing demand; and another 22 percent of IT respondents said an evolving competitive landscape is a primary factor in their automation technology strategy. For 14 percent of IT leaders surveyed, the plan to implement other emerging technologies is requiring more automation tools. (See Figure 4.)

Automation is also being pulled into IT organizations to address the workload for existing IT teams. Nearly one-fifth of IT leaders said they will leverage automation to augment understaffed IT departments, and some 14 percent of those surveyed said they are applying automation to their tasks due to a lack of specific skill sets. (See Figure 4.)

Where Automation Works

Despite the premise that IT would resist adopting automation technologies due to a fear of losing work—or more likely, jobs—for human personnel, the results of this survey show the opposite is true.

Some 68 percent of IT leaders polled said that automation benefits the human IT workforce because it will create better jobs for IT pros. Nearly 25 percent of respondents said automation will neither threaten nor benefit the IT workforce, because it will reduce tedious work so IT pros can focus on higher-level projects. Slightly more than 7 percent of those surveyed indicated that they see automation technologies as a threat that will eliminate jobs for IT professionals. (See Figure 5.)
The reality is that automation tools such as workflow orchestration can bolster an IT team’s performance by reducing manual efforts, processing volumes of data, and lessening the impact of human error on the performance of the technology environment and the applications it supports.

Some 35 percent of IT leaders in this survey expect to see automation used to offset tasks related to application development. (See Figure 6.)

For instance, workflow orchestration can help ensure customer-facing applications perform as expected. Such applications include a dynamic mobile front end communicating with a back end that requires transaction processing. The process involves multiple automated steps that must be executed for the transfer to complete. A workflow orchestration platform can integrate with the various processes involved and provide governance, verifying that the transaction completed successfully—or not.

Figure 6

<table>
<thead>
<tr>
<th>In what IT domains do you see automation technology most employed to offset tasks for human operators?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application development: 35%</td>
</tr>
<tr>
<td>IT service management: 18%</td>
</tr>
<tr>
<td>IT operations management: 18%</td>
</tr>
<tr>
<td>Business process management: 14%</td>
</tr>
<tr>
<td>Security: 9%</td>
</tr>
<tr>
<td>Cloud operations management: 6%</td>
</tr>
</tbody>
</table>

While less than 10 percent of IT executives in this survey pointed to security as a potential area for automation, security tasks can also benefit greatly from it. (See Figure 6.) There is no room for error when configuring security systems; automation can ensure configurations are accurate and reduce the chance of human error. Also, workflow orchestration tools can more quickly spot any anomalies that could be indicative of a security incident.

More than 26 percent of respondents think security projects will benefit from automation.

*Based on 125 respondents.*
IT leaders also see automation as a means to better manage various tasks and processes across their organizations. Nearly 20 percent of respondents pointed to both IT service management (ITSM) and IT operations management (ITOM) as areas that could benefit from automation. For nearly 14 percent, business process management is a target for automation, and for nearly 6 percent of IT leaders, automation could help them better manage cloud operations. (See Figure 6.)

Automation Challenges Remain

IT executives recognize the need for a broader use of automation technology, yet they also perceive shortcomings with the automation technologies available today.

More than one-third of survey respondents worry that automation cannot anticipate change because it lacks flexibility. The reality is today’s automation tools can be easily configured and adjusted to address changing conditions. And nearly 30 percent of respondents said they perceive that, “automation is only as smart as the IT operator,” which could also be construed as a benefit. Automation technology, such as workflow orchestration, incorporates the intelligence of experienced IT professionals and solves problems more quickly than a human operator could. (See Figure 7.)

Figure 7  What do you consider the shortcomings of automation technology today?

- Automation cannot anticipate change/lack of flexibility. 34%
- Automation is only as smart as the IT operator. 29%
- Automation could be costly to deploy/require too much configuration and integration. 21%
- Automation is limited to the actions it can take. 17%
Of the IT leaders polled, 20 percent worry about the potential cost of automation, as well as the configuration and integration requirements. However, the reality is that workflow orchestration technologies integrate with existing and legacy systems with little upfront configuration.

And 17 percent of respondents said automation is limited to the actions it can take, which points back to the power the human operators allow automation to have. (See Figure 7.)

While there are perceived shortcomings to the technology, IT leaders have other hurdles to clear to get the most out of an expanded automation implementation. For 46 percent of respondents, the biggest hurdle to automation adoption is budget constraints. More than 30 percent pointed to cultural resistance as a challenge to greater automation, and 26 percent said technology integration challenges represent a barrier to automation success. (See Figure 8.)

A workflow orchestration tool can integrate with other job scheduling platforms and automation tools while providing centralized control over all processes.

Other hurdles indicated by IT leaders include poor data quality (21 percent) and lack of skills (18 percent). Some 12 percent of respondents said legal or compliance concerns are a hurdle to adopting automation technologies, and more than 11 percent pointed to getting executive buy-in as an adoption challenge. (See Figure 8.)

While tools exist for each environment, businesses need a centralized, holistic view of the entire operation to ensure proper governance and security, and to be able to prove compliance. Workflow orchestration technology can do just that.

**Figure 8**  **What are the biggest hurdles to adopting automation in today’s IT organizations?**

- **Budget constraints**: 46%
- **Cultural resistance**: 31%
- **Technology integration challenges**: 26%
- **Poor data quality**: 21%
- **Lack of skills**: 18%
- **Legal or compliance concerns**: 12%
- **Executive C-suite buy-in**: 11%

52 percent of survey respondents intend to invest in workflow orchestration technology in the next 6 months.

*Based on 125 respondents.*
Today’s digital transformation realities across businesses are driving automation adoption for more IT organizations than ever. And the options on the horizon are promising.

Automation is expected to benefit digital transformation projects across IT domains. More than one-quarter (26 percent) of IT leaders intend to apply more automation technology to security projects. Another quarter said automation will power data analytics projects. More than 20 percent intend to put automation to work improving their cloud computing initiatives. (See Figure 9.)

A workflow orchestration tool that integrates with cloud providers brings cloud services under control just like premises-based applications and data.

Other investment considerations include agile application development for nearly 14 percent of IT leaders in this survey. Workflow orchestration technology enables developers to build applications, catch issues in the early stages of development, and manage or mitigate interdependencies in familiar environments with familiar tools. It also supports better collaboration with IT to give their businesses a competitive advantage.

Other applications of automation technologies include the Internet of Things (IoT) for 8 percent of respondents. And about 5 percent are looking to leverage automation for bigger artificial intelligence (AI) and machine learning (ML) adoption plans (See Figure 9.)

![Figure 9](image-url)

**What digital transformation/technology adoption projects do you expect to do in 2020 that would benefit from automation?**

- Security: 26%
- Data/analytics: 25%
- Cloud computing: 22%
- Agile application development: 14%
- Internet of Things: 8%
- Artificial intelligence/machine learning: 5%
IT organizations intend to devote budget dollars to everything from workflow orchestration (50 percent) to AI and ML (21 percent) this year.

Another 14 percent pointed to event-driven management as a critical automation technology investment, while 10 percent said they will invest in robotic process automation, and just 3 percent plan to adopt decision algorithms. (See Figure 10.)

Automation technologies will continue to increase in demand across IT organizations. As application development cycles accelerate to meet growing customer demand and keep pace with competitive markets, IT professionals will need to leverage all the tools in their automation arsenal to reduce error and improve performance. And as hardware and software infrastructure become more sophisticated, and legacy systems integrate with hybrid cloud resources, automation technologies will provide the speed and intelligence to keep operations running optimally while also freeing IT professionals to tackle strategic business projects.

Advanced IT automation is the new reality for today’s digital businesses. Workflow orchestration technology can help you deliver on your business modernization initiatives with increased speed without sacrificing governance, control, and security. It gives you the freedom to embrace DevOps and cloud services at scale, and ultimately further your corporate goals.
For more information about how BMC can deliver on your workflow orchestration and automation needs, visit: bmc.com/controlm.

This Digital Transformation and Automation survey of 125 IT leaders was conducted between October and November 2019 on behalf of BMC by PureB2B and its PureSurvey intent-based survey engine, a customized survey program designed to connect directly with optimal decision makers to help clients uncover valuable insights and drive better business decisions.
## Survey Details and Demographics

### Company Size

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<th>Size</th>
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<tr>
<td>500-999</td>
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<tr>
<td>10,000-49,999</td>
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<tr>
<td>50K-100K</td>
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<tr>
<td>&gt;100K</td>
<td>4%</td>
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### Job Level

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<td>C-level</td>
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<td>VP level</td>
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### Industry

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<td>Education</td>
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<td>Software, Internet, and technology</td>
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<tr>
<td>Manufacturing</td>
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<tr>
<td>Others</td>
<td>31%</td>
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</tbody>
</table>
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From core to cloud to edge, BMC delivers the software and services that enable over 10,000 global customers, including 84% of the Forbes Global 100, to thrive in their ongoing evolution to an Autonomous Digital Enterprise.

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