

Workflow Automation Trends and Steps to Follow

MAY 2023

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RPA vs. BPM: How are they different?

As midmarket network and security teams struggle with exploding data, distributed environments, manual processes, and delayed analysis due to complexities, automation is becoming the go-to solution for many IT leaders.

But implementing automation into your IT workflows isn't easy, and there are still lingering reservations about giving too much power to robots.

Continue reading to explore key automation trends and implementation strategies affecting midmarket organizations, learn why robots will make work more human, and discover the difference between RPA and BPM.

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STEPHEN BIGELOW, SENIOR TECHNOLOGY EDITOR

Automation is vital for modern IT, as it enables IT teams to accomplish common workflows and repetitive tasks accurately, consistently and quickly. But automation is far from automatic.

The path to implement automation is fraught with mistakes and waste. Most IT admins know automation horror stories: a huge project to address a minor task, detrimental process changes for the sake of automation and the headaches from a poor tool choice. Careful planning and concerted effort are critical to implement automation in a meaningful and maintainable fashion.

There are eight steps to take an IT task from manual to automated:

1. Pick the right automation target.
2. Sequence the steps to the task.
3. Identify problem areas.
4. Build an automation tool set.
5. Set an initial scope.
6. Monitor and measure.
7. Grow the project over time.
8. Maintain the automation implementation.

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1. LOOK FOR AUTOMATION OPPORTUNITIES

Automation is not an all-or-nothing proposition. Not every process or task should -- or even could -- be automated. You don't need to automate everything simultaneously to demonstrate automation's business value.

To start, identify common and frequently performed tasks with minimal complexity. These tasks often benefit most from automation. In general, automation candidates are processes and tasks IT admins perform frequently and ones that consume significant time. Common examples include user password resets and VM instance provisioning.

2. EVALUATE THE AUTOMATION WORKFLOWS

Organizations run into trouble translating human workflows into automation workflows. Automation performs the same steps the same way every time. Different business and IT processes can use radically different approaches to reach the same result. Also, exceptions to the rules pose serious problems for automation.

Evaluate many opportunities for automation, even if you don't intend to implement them all immediately. Consider the current workflows in many tasks across the business and seek common sequences or subprocesses for

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automation. IT can then implement and reuse these sequences in multiple automation projects. The more common sequences or processes there are, the easier and more effective an automation task will be. In many cases, existing human workflows can be altered or divided to benefit from automation.

Microsoft's PowerShell scripts are a good automation example. IT admins typically automate a process by chaining together several small PowerShell scripts. Each separate script represents a discrete task or step in the greater process or workflow, and each script is reusable as needed. This modular approach makes automation versatile, but only when a broad cross section of tasks and processes are understood.

3. CONSIDER EXCEPTIONS AND DIFFICULTY

With automation projects set, focus on implementation. Automation engineers design processes and decide how to handle exceptions, such as variables or options. Exceptions can be difficult and time-consuming to implement; IT leaders might opt to automate the easiest processes and leave exceptions for human intervention.

Here's an example in VM provisioning: IT teams can fully automate VM provisioning steps. But the configuration attributes of the VM -- number of processors, amount of memory and VM image file to deploy -- require manual

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input and pose exceptions. Another example is a business process automation that requires human signoff at the end. Automation engineers need to design for a mix of automated and human-controlled steps, including delays or erroneous input.

4. SELECT AUTOMATION TOOLS OR FRAMEWORKS

Evaluate IT automation products to best suit the projects. There are IT-centric tools or business workflow automation platforms. Some products deploy and get managed in-house, while others are SaaS. Compare features, capabilities, usability and interoperability with other data center or business tools. IT-centric workflow automation tools include products from Cflow, IBM, Microsoft, Nlyte Software and ServiceNow. However, there are dozens more tools and platforms, often with specializations that range from HR to procurement to software development.

Validate the automation tool before committing to it. Narrow the list of available tools to promising candidates, and then test each finalist using demo versions or other trial options.

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5. START SMALL AND BUILD OUT

The best way to adopt automation is to prove its value to the enterprise. Implement it on one or two of the easiest tasks or workflows that will potentially free the most time.

Such fledgling efforts are usually approached as pilot or proof-of-concept projects. Automation owners learn and master the tool or tools for the job while proving its worth to business leaders and teams. Starting small minimizes disruption and culture shock, and enables IT teams to find and handle problems with the tool or its use.

6. MONITOR THE RESULTS

Once the IT team implements an automation tool for tasks or workflows, apply metrics or KPIs to objectively measure how automation affects the business.

Every task and workflow has a business value. It might simply be a measure of the cost in workers' hours to perform a task. If automation significantly reduces the time to perform a task, the cost of that task is also significantly reduced. Thus, automation is credited with savings.

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Similarly, automated tasks get done the same way every time, which should reduce mistakes. With fewer errors, automation enhances user satisfaction and reduces time wasted fixing avoidable problems.

Finally, monitoring helps determine bottlenecks within the automated processes. For example, a provisioning task can fail due to insufficient server memory, and succeed when the right resources are available. Monitoring is the only objective means to gauge automation's value and identify problems to remediate.

7. EXPAND THE ROLLOUT

With a small suite of tasks and workflows automated, and automation's value to the business proven, it's time to systematically automate additional tasks, which can be more complex, or simple but less valuable, than those in the first round. Generally, the goal is to focus the automation investment on high-volume, low-risk workflows, sometimes avoiding workflows with exceptions, until automation use within the business matures.

Automation performs repetitive tasks in high volume faster than humans can. If a complex task, such as one with user inputs, alternative selections, approvals or other exceptions, is only performed on rare occasions, there might be insufficient overall benefit to automate it.

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8. FOCUS ON MAINTENANCE

Implementing automation is not a one-time effort. The data sets used to define an automated process -- such as scripts and predefined visual objects -- require regular review and updates to keep pace with changes in workflows and business needs. That is, does every automated process do what the business needs it to? Unfortunately, automation maintenance is often neglected or treated as an afterthought. Plan periodic reviews to revisit and revalidate automated processes -- but don't stop there.

Infrastructure and business changes are two principal drivers for automation maintenance. For example, adding new servers might increase compute resources available for automated provisioning. Similarly, a new law might necessitate changing the steps in an automation process to ensure regulatory compliance. To address these scenarios, automation maintenance can be tied to the organization's change management process.



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GEORGE LYNCH AND JASON PYLE

A few years ago, speculation that we could be replaced by robots at work seemed rife. But it subsided among other pressing concerns and real-world events such as the Covid-19 pandemic.

Now, however, with spiralling inflation leading to unsustainable salary demands, talent shortages that are only getting worse, and increased operational costs for businesses across sectors, the business case for digital labour may be getting stronger.

AUTOMATION INCREASING ITS PENETRATION

Digital labour is still very much on the agenda, *Nash Squared's Digital Leadership Report* reveals. Among the digital leaders that we surveyed from countries around the world, the average expectation is that nearly one in six (16%) of the workforce will be automated in the next five years – a similar percentage to the pre-pandemic results in 2019.

More broadly, almost a third of digital leaders (29%) believe automation will be critical for gaining a competitive advantage over the next 12 months. Although growing at a slower pace than in previous years, the worldwide market for

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robotic process automation (RPA) is expected to experience double-digit growth in 2023, growing 17.5% year on year, according to Gartner research.

Automation has become more widely used by enterprises, with the most common areas being IT (40% of digital leaders report some usage here), finance (31%), customer support (29%) and human resources (28%). This marks quite a progression from just a few years ago when the figures for IT and finance were only 28% and 18% respectively.

MOVING UP THE SPECTRUM

But how far and how deep will it reach? The sweet spot for automation remains repetitive, low-value, high-volume tasks – data entry, for example, or invoice matching and processing. Machines, unlike humans, don't get tired or make mistakes. They can work 24/7 at 100% accuracy if designed and implemented effectively.

However, it's an area that's developing fast. On the spectrum of simple-medium-complex tasks, RPA used to be heavily concentrated at the simple end. But it's moving up the scale and we're now beginning to see it used in more complex scenarios. Artificial intelligence (AI) and machine learning (ML) are being built in too.

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GETTING PAST THE BARRIERS

Although no one knows quite how fast technology will develop, we're a long way from the machines taking over. Nash Squared research underlines that there remain some significant barriers to large-scale automation of tasks and processes. The top blockers cited by digital leaders were cultural resistance (48%), a lack of expertise (46%) and the fact that automation is more complicated than expected (44%).

All of these factors can be expected to ease over time. Cultural resistance may be the longest-lived, but nevertheless we're all getting more used to the concept of automated processes, digital assistants and the general power (and convenience) of technology.

Done well, automation will allow people to take on roles that are insight-based and add more value. For every role taken away, a new (human) one will be added somewhere else. And there are certain attributes that machine intelligence will never match humans for: creativity, emotional intelligence, empathy, intuition, innovation. These are things you can't code.

The line between what technology can do and what people can do is constantly shifting. As technology becomes increasingly sophisticated, humans need to rise up the value chain. What really differentiates organisations is people and ideas, and increasingly human jobs are being expected to focus on creativity and

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innovation. The key for successful organisations is to have the right balance between humans and computers. Robotics may make the work humans do much more human.

KEY CONSIDERATION FOR DIGITAL LEADERS

Where does this leave CIOs and business process owners when considering automation?

First, don't be scared of automation – and don't ignore it either. There is almost certainly going to be an element of “natural selection” here – the organisations that embrace and leverage it within their business could be the leaders of the future, whereas those that don't will struggle to compete.

Second, focus on automation as a way of increasing efficiency and speed – but keep looking to human talent for new ideas, strategic vision and leadership qualities. Smart technology should be about making people's lives easier, freeing them up for judgement-based tasks, and giving them the data and information they need for smart decision-making.

Third, things won't stand still. As leaders, make sure you are investing in your people and supporting them through upskilling, training and continuous development. Encourage individuals also to take responsibility for themselves,

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through study, reading and learning of their own. Businesses and individuals alike need to future-proof themselves.

RPA DECISION MAP

More immediately, while many businesses are a way along the automation journey, some are still at first base. Our advice here is:

- In conjunction with business process owners, identify the high-volume, repetitive processes in the business that may be candidates for automation.
- Catalogue these in a central repository.
- Assess whether these processes could be solved using anything other than automation – for example, by integrating them into an adjacent process or area.
- If not, look for an RPA/automation tool suited to your business – there is a multitude of options available in the market.
- Carry out a careful cost analysis to ensure the investment will be worthwhile.
- Choose a partner you can rely on and trust.

FINDING THE LINE

Automation is one tool within a complex matrix of technology and people. The key is to find where the line sits between them and being clear about where

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people – whether permanent staff, contractors or outsourced talent – can add most value, and where that’s best left to the power of smart technology.

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GEORGE LAWTON, CONTRIBUTOR

Robotic process automation and business process management are complementary partners in driving digital transformation initiatives. RPA has received a lot more publicity in recent years, but BPM is an essential discipline and a key enabler in scaling RPA projects.

RPA differs from BPM in several ways, but most significantly, RPA automates a specific set of tasks while BPM determines what tasks to automate and the steps needed to eliminate and consolidate those tasks.

WHAT IS RPA?

RPA programmable software, or bots, automates manual, repetitive, rules-based tasks by mimicking the way humans click and type through typical business applications, freeing up employees to work on more value-critical tasks. RPA can also automate access to legacy systems that lack a modern API.

Early RPA implementations were somewhat brittle and inflexible, which limited the number of bots deployed in many businesses. Consequently, Gartner coined the term hyperautomation as a way of characterizing a collection of technologies for automating bots at scale. Hyperautomation combines various technologies to

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create more automated workflows in such applications as process mining, machine learning and low-code/no-code development environments.

WHAT IS BPM?

BPM is a business discipline that helps companies better understand and improve how they operate so they can streamline workflows, boost overall productivity, eliminate waste, lower costs, and increase agility, scalability and process efficiency. It builds on the early scientific management approach by Frederick Winslow Taylor, with more modern techniques for improving quality and efficiency pioneered by Peter Drucker and the total quality management and Six Sigma methods for process improvement.

BPM has traditionally required process experts to manually craft process diagrams by watching and interviewing business users. These diagrams were often captured as a business process modeling notation using visual diagramming tools like Microsoft Visio. The resulting files were static and required additional work to implement. But that approach has started to change with better tools to automatically capture processes, highlight opportunities for improvement and implement new workflows.

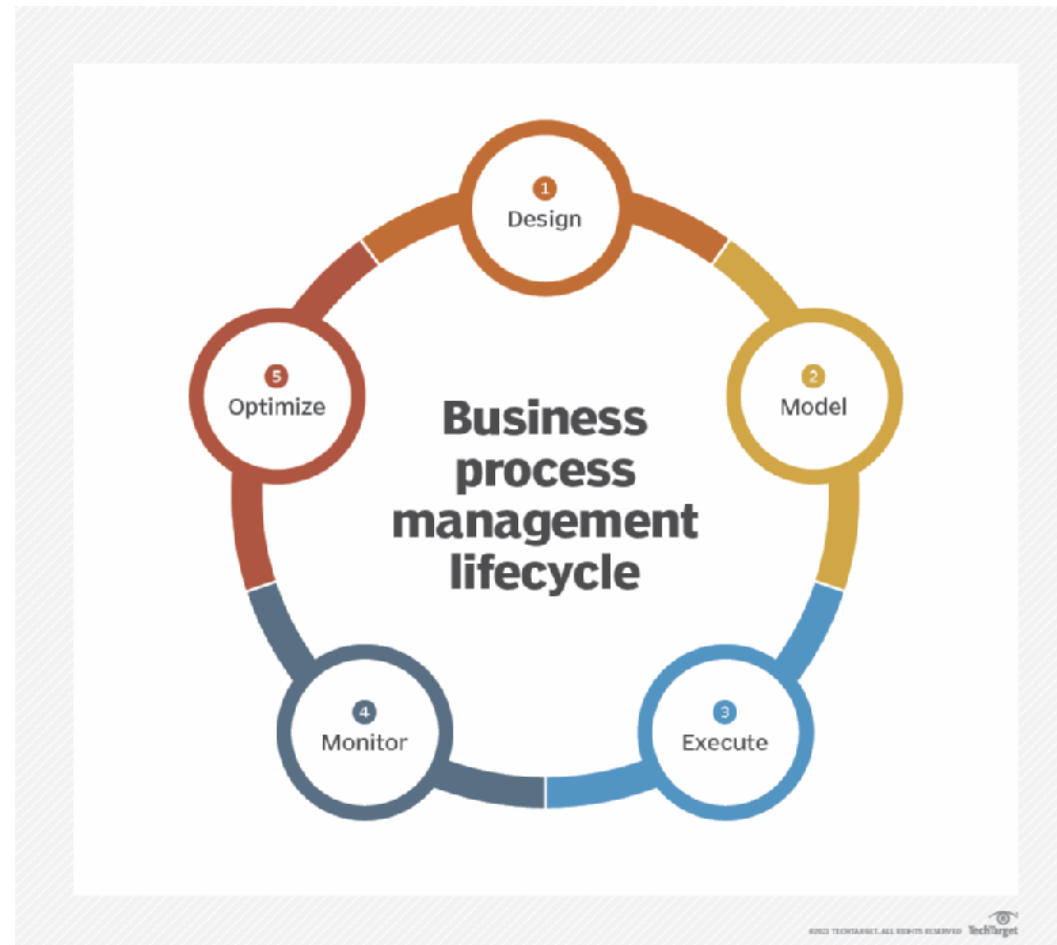
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BPM is as much a cultural as it is technical discipline. To improve processes, employees must be willing to accept change and eliminate unnecessary tasks, while adding new tasks.



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RPA AND BPM: HOW TO USE EACH CONCEPT SEPARATELY -- AND TOGETHER

Tactical vs. strategical deployments. Most RPA initiatives start with a BPM process to capture an overview of business operations. "Some kind of BPM is a prerequisite to any RPA deployment, as one can't successfully automate what one doesn't understand," reasoned Jeffrey Brown, senior director of digital automation at global management consultancy SSA & Company.

RPA is usually deployed tactically as a Band-Aid to a problem until an appropriate platform is implemented or a longer-term technology roadmap pays off. Process mapping can be very targeted to avoid, for example, mapping an entire accounting function if the goal is to automate the ingestion of invoices. A complete business process map, Brown said, is an excellent tool for discovering and prioritizing RPA opportunities.

Automation vs. monitoring and analytics. RPA and BPM work in complementary fashion when deploying and monitoring automated processes. "RPA refers to the automation aspect of BPM, such as data formatting and the pushing and pulling of information from multiple systems," explained Isaac Gould, research manager at Nucleus Research. BPM encompasses the workflow design, monitoring and analytics of RPA tasks and processes.

Marketers, for example, might need to complete a monthly report of how their campaign affects sales. BPM software will assign and notify the individuals

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responsible for starting the project. An RPA tool will then be triggered to move sales data from a CRM or ERP system to a report builder. As each iterative step is completed, BPM software will automatically send progress reports to project participants for approval and add a layer of analytics to track how long each step takes to complete and which tasks require the most rework.

Faster vs. better processes. RPA makes any process faster, including a bad one, while BPM can improve an existing process. "Deploying robots to automate tasks in an inefficient process just makes a faster inefficient process," said Miguel Valdes Faura, CEO and co-founder of open source BPM and low-code development platform provider Bonitasoft. "Approaching business process automation by looking at the whole process end-to-end through BPM implementation results in a better process, where RPA can have its own important role to play."

Despite the recent popularity of RPA, BPM is still the foundation of automated business processes. BPM manages end-to-end process, structures and business data, and coordinates how people and systems work together, Faura explained. Using visibility and process data, BPM also provides strategic insights for process improvements and innovations.

RPA can connect BPM processes with the same technologies deployed with other platforms and systems. BPM processes can delegate tasks to RPA robots at the right time and in the proper context.

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RPA's definitive role in BPM

ISAAC GOULD
Research manager,
Nucleus Research

"RPA refers to the automation aspect of BPM, such as data formatting and the pushing and pulling of information from multiple systems."

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Senior director of digital automation,
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"Although RPA most likely will be an integral part of BPM, RPA is not necessarily the only area of emphasis within BPM for organizations."

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Implementation vs. understanding. RPA excels at the implementation of process automation, while BPM increases understanding of how those processes work by defining, centralizing and managing process workstreams. "BPM is about understanding how work is completed in your organization and how it's connected to higher-level business objectives," said Dan Shimmerman, CEO of business process design at management platform provider Blueprint Software Systems.

Knowing the sequence of steps in the process, how much they cost, how often they're run, how often they produce errors and the number of variances can

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help optimize workstreams. In some cases, Shimmerman added, process optimization and retraining might be necessary, while in cases where the process is rules-based, highly repeatable and prone to costly manual errors, RPA deployment might be appropriate.

RPA automates simple, mechanical, rules-based tasks, but enterprises also need to automate decision-based tasks by using intelligent process automation (IPA). BPM can play a role in hyperautomation initiatives that span RPA and IPA by providing information on what processes need to be automated and where in the process AI and machine learning can be applied.

Technology waste vs. bureaucratic waste. RPA and BPM smooth business operations and eliminate different kinds of waste. RPA eliminates waste in technology systems that use bots to complete software tasks faster and more efficiently, while BPM eliminates waste in a company's bureaucracy and the human hierarchies that operate a business.

"BPM is a mindset, or a set of practices, not a specific tool, program or application," noted Saahil Panikar, principal consultant at business transformation advisory Project & Team. BPM implementation signals a significant change in business architecture, the full impact of which may not be realized for some time. BPM tools help keep stakeholders updated about their business processes during the transition.

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BPM tends to involve whole teams or departments to organize and collaborate on business processes companywide, while RPA can be the responsibility of an individual development team or implemented on an as-needed basis to perform individual tasks and processes identified by BPM as promising candidates for RPA.

BPM: From starting gun to finish line

PRIYA IRIGAYARAPU
Vice president of the center of data excellence, AArete

"RPA can only contribute to a small portion of an overall BPM framework, whereas BPM targets and addresses an end-to-end process management framework for organizations."

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Task vs. architecture orientation. RPA automates very specific repetitive tasks, while BPM encompasses an organization's end-to-end architecture and process management. "Although RPA most likely will be an integral part of BPM, RPA is not necessarily the only area of emphasis within BPM for organizations," said

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Priya Iragavarapu, vice president of the center of data excellence at global management consultancy AArete.

BPM plays a role in the strategy, planning, technology and execution of business processes. RPA typically enters in the last two phases -- technology and execution. BPM's most critical steps, Iragavarapu said, are appraising the current state of a company's business processes and documenting how the smaller segments of the process fit into the end-to-end framework. Process mapping can produce additional insights into the process flow.

While RPA requires simple decisions to automate specific repetitive tasks, machine learning and predictive analytics can be infused into BPM to enable processes requiring more complex decisions. "RPA can only contribute to a small portion of an overall BPM framework," Iragavarapu explained, "whereas BPM targets and addresses an end-to-end process management framework for organizations."