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# How to avoid the three common execution pitfalls that derail automation programs

Rahil Jogani, Sanjay Kaniyar, Vishal Koul, and Christina Yum

Automation has great potential to create value—but only for businesses that carefully design and execute it.

Encouraged by the much-vaunted potential of automation, organizations around the world are embarking on their own transformation journeys. On paper, the numbers look compelling. The McKinsey Global Institute estimates that about half the activities that workers are paid \$15 trillion in wages to perform in the global economy have the potential to be automated by taking advantage of current technologies (see sidebar, “Key automation technologies”).<sup>1</sup> Looked at another way, at least 30 percent of work activities in about 60 percent of all occupations could, in principle, be automated.

With their eyes on the automation prize, companies have set aspirational targets that run to hundreds of millions of dollars. As they launch their first, second,

and third waves of automation, however, most are finding it harder than they expected to capture the promised impact. In our experience, about half of current programs are delivering value on some fronts, but only a handful are generating the impact at scale that their business cases promised.

Teething troubles are to be expected with an effort as wide-ranging as automation. Applying a largely unfamiliar portfolio of technologies in a fast-moving, complex business is enough to break even the most experienced leaders and teams. In the C-suite, executives are approving major investments that promise generous paybacks in a matter of months; meanwhile, down on the factory floor, project teams are constantly scrambling to extend

# Key automation technologies

**Cognitive agents** are a virtual workforce used to support customers or employees in settings such as service centers.

**Machine learning** identifies patterns in data through supervised and unsupervised learning, using decision algorithms and other means.

**Natural-language processing (NLP)** is a way of creating seamless interactions between humans

and technologies in applications such as data-to-story translation.

**Robotic process automation (RPA)** automates routine tasks such as data extraction and cleaning via existing user interfaces.

**Smart workflow** is an approach to integrating tasks performed by groups of people and machines, such as month-end reporting processes.

timelines and trim back impact estimates. We have seen RPA programs put on hold and CIOs flatly refusing to install new bots—even when vendors have been working on them for months—until solutions have been defined to scale up programs effectively.<sup>2</sup> In case after case, early adopters are left writing off big investments.

Though the reasons for poor results vary, we see three common execution pitfalls that derail automation programs.

## Underestimating the complexity

At one global bank, leaders developed a multimillion-dollar business case for automation. First up in the program was basic RPA. Estimates of the potential value that could be captured in the first year shrank from 80 percent to 50 percent to 30 percent, and finally less than 10 percent once development got under way. The effort quickly lost traction. A platform combining RPA and AI was then proposed and developed for more than a year, but much the same thing happened again.

Treating automation as a technology-led effort can doom a program to failure. Process problems can rarely, if ever, be tackled simply by introducing a new technical solution. Often there are many underlying issues—poor quality of input data, accommodating too many client variations, “off script” procedures that cannot be quickly understood in high-level process demonstrations or requirements documents. The reality is that automation solutions are complex because they tend to affect multiple processes with significant interdependencies across technologies, departments, and strategies. If these issues and elements are neglected, they tend to undermine a company’s automation objectives during implementation. Other more thoughtful approaches—process reengineering, organization redesign, policy reform, technology-infrastructure upgrades or replacements—need to be considered in parallel with automation solutions.

To ensure that automation complements rather than clashes with other strategic priorities, senior leaders, technology experts, application owners, and automation teams need to work together to define a

joint vision for how business processes will function in the future.

Companies that succeed with automation take care to base their vision on reality. They start by understanding their technological maturity, tracking customer and employee touchpoints, mapping information flows, and setting expectations for exception handling, metrics, and reporting.

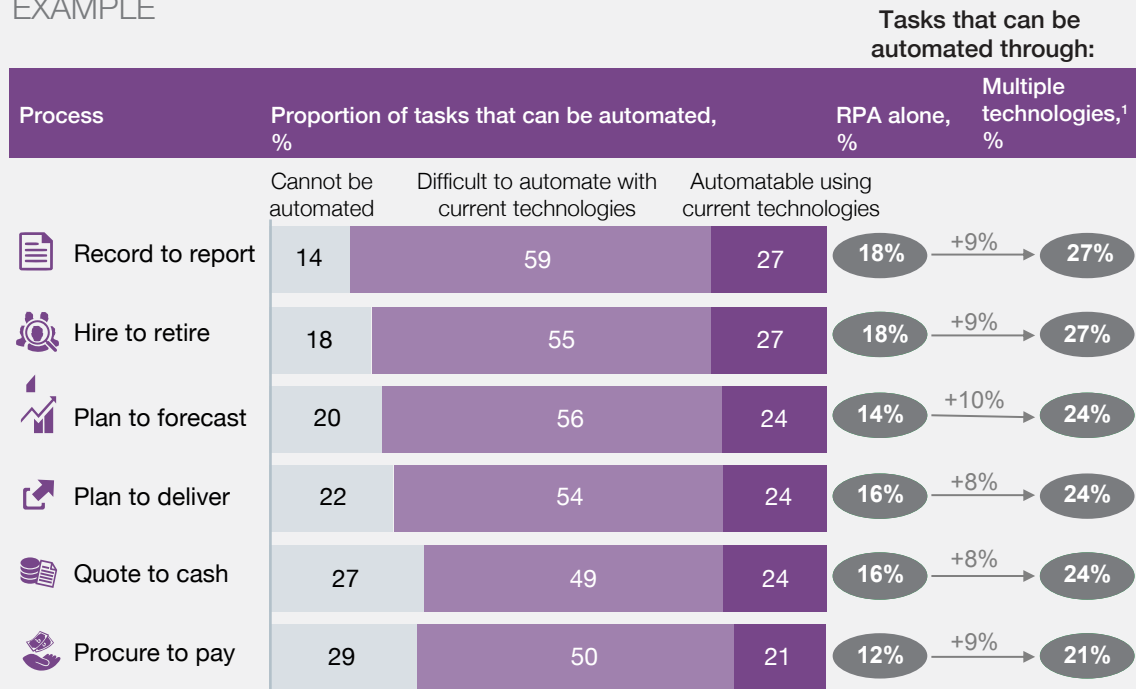
This is generally known as enterprise architecture management. Taking an end-to-end view of processes enables companies to shape and prioritize

automation initiatives. This clear view also allows the business to better pinpoint which of the various automation technologies are most appropriate and how they can be combined to create more value. For instance, an organization by introducing a basic RPA program could address 12–18 percent of general and administrative tasks by itself, but the addition of smart workflows, NLP, cognitive agents, and other technologies helped increase the scope for automation to 21–27 percent (Exhibit 1). Combinations of technologies can also deliver other benefits, such as shorter cycle times and better quality.

#### EXHIBIT 1

**Over a third of tasks are currently automatable for all processes, while over three quarters of tasks may become automatable as technologies mature.**

#### EXAMPLE



<sup>1</sup>Including smart workflows, machine learning, natural-language processing, OCR, and chatbots

When one enterprise decided to overhaul its customer-care operations, for example, it began by scrutinizing the journeys customers took to complete a given task. After creating a comprehensive view of the various processes and dependencies, it was able to set targets and select solutions with clear business outcomes in view. These included automating basic front-line processing using chat and voice-enabled cognitive agents; offering online self-service for 30 to 60 percent of customer transactions; seamlessly integrating customer journeys with back-end transactions and servicing; improving response times; integrating social, messaging, digital, and voice-driven channels to develop omnichannel customer inputs; and having a clear view of strategic customer-relationship management (CRM) tools, systems, and interfaces to lay the foundation for automation.

Armed with this process-centered vision, automation teams had a clear framework within which to plan and execute their initiatives. Because they had a clear grasp of their scope, accountabilities, and expected impact on the business from the outset, they were able to minimize duplication of effort, tackle dependencies between systems and processes more easily, and better manage change both for the customers using the new features, services, and channels and for the teams introducing and supporting them.

### Automating inefficient and complex processes

A professional-services firm was automating its shared service centers as part of a cost-reduction strategy. Its first priority was to automate the processes offering the greatest scope for efficiency savings, so it began by targeting a team of 20 who all handled transactions manually. With a potential saving of 60 percent of their workforce costs, development began. However, further analysis revealed that the team served hundreds

of customers, each with its own requirements for the creation and submission of transactions. Not only that, but the team worked with more than five different input systems, each with its own slew of transaction formats.

As a result, some of the process steps that leaders assumed would be automatable proved not to be. The solution that eventually emerged was hypercomplex: it had hundreds of variations, required manual intervention at multiple points, and was a nightmare to maintain. Before long, development was abandoned, and the program was replaced by a traditional integration project run by IT.

With so much value at stake in automation, leaders are often tempted to get straight into technical development. That approach leads businesses to try to automate inefficient or obsolete processes. If processes (and the organizations supporting them) are not reconfigured before automation, savings often prove elusive.

The enterprises that do best at automation take the time to consider how they could redesign their processes, their organization, and their underlying technologies to pave the way for automation. Thoughtful redesign can reduce development times, simplify maintenance activities, create cleaner handoffs between people and machines, and improve metrics and reporting.

To uncover redesign opportunities, companies that do this well use four key techniques (Exhibit 2):

- **Design thinking:** taking a people-centered and journey-based view to process optimization that accounts for human empathy as well as analytical criteria
- **Process clean-sheeting:** designing an optimal process from scratch rather than making incremental changes to an existing process

## EXHIBIT 2

To maximize value capture, leading businesses draw on a range of automation technologies and application techniques.

| Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | + | Techniques                                                                                                                                                                                                                                                                                                                                                                                                                           | = | Optimal value                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-------------------------------------------------------------------------------------|
|  Robotic process automation<br> Smart workflows<br> Optical character recognition (OCR)<br> Machine learning<br> Natural-language technologies<br> Cognitive agents |   |  Design thinking<br> Process clean-sheeting<br> Role-level assessment<br> Minimum viable product |   |  |

- **Role-level assessment:** analyzing type and hierarchy of roles within the organization or function when evaluating the potential for automation
- **Minimum viable product:** developing a new process that addresses the most basic criteria via agile sprints and rollout in releases every three to four months to test and adapt in the marketplace.

Spending time considering redesign opportunities may initially slow down time to market, but it will also take some of the risk out of implementation and help ensure that operational results are sustainable and easy to maintain. In many cases, work on redesign, restructuring, and optimization opportunities can be pursued in parallel to capture quick wins provided that a company's underlying technologies are mature.

A North American bank identified automation opportunities in its record-to-report process. Instead of automating the existing process, it performed a clean-sheet redesign that re-envisioned how the whole process would operate using RPA, AI, and natural-language generation, complemented with manual tasks where needed. The new design eliminated a one approval cycle, removed unnecessary handoffs between five teams and reduced processing time from 12-15 days to 6-8 days. The new design automated 70 percent of process steps and reduced risk of error through automated quality control checks and complete audit trail.

### Under-investing in change management

A large financial-services organization set RPA bots onto labor-intensive back-office operations for certain regions. In parallel, it was exploring other technologies (machine learning, chatbots, natural-language tools) and traditional technology

enhancements. The teams absorbing the changes found that although their best people were spending hours with project teams providing requirements, they were unable to get answers on how the different technologies would work together and had no idea how to train staff to operate in the new way. Months of frustration later, there was still no impact in sight. Worse, the RPA bots were not performing and were disrupting established working routines. One by one, project teams were withdrawn and the team resumed manual processing as before.

Unless companies understand the impact of automation on their employees and plan for it, automation programs can be highly disruptive, sow confusion in the ranks, and foster resistance. To prevent this kind of disruption, the most successful companies:

- **Design for the operator, agent, or customer experience.** Automation program decisions must always be made with end users in mind. If incorporating automation into a process is unnecessarily disruptive to the operator's experience—if it involves too many new steps, say, or requires accessing additional systems or files or unnecessary wait time—it will trigger significant resistance. Any newly designed process should take advantage of familiar ways of working as much as possible.
- **Think realistically about technical and executional maturity.** Piloting technologies early and rapidly will build organizational awareness and demonstrate value. However, savvy leaders also consider how quickly the business and the automation team can absorb change. They are selective in focusing their energies where they can build a deep capability. Start with basic, lower-cost automation technologies such as RPA, optical character recognition, and workflow to ensure they're not taking on too much at once.
- **Adopt agile implementation.** Automation programs are most effectively run in iterative sprints. Building components rapidly allows for early user input and quick identification of any technical constraints that could jeopardize delivery. Data-driven prioritization, in which agile teams use data on the volume of exceptions to inform what types of enhancements to implement, helps teams course-correct and improve performance as implementation progresses.
- **Set clear and considered expectations.** With complex processes, getting from the current to the target state involves many stages. The best organizations set expectations at the outset that clearly describe the operator experience at each stage through live, hands-on demos. Business and project teams actively discuss trade-offs between time and functionality. Taking some additional time can deliver real benefits, such as more effective and sustainable solutions, reduced production incidents, and positive sentiment. But it may require holding back a project team that is hungry to see savings.
- **Engage with their employees, then engage some more.** Automation poses more challenges to the workforce because of the need to upgrade skills and shift the culture to support continual adjustments to the way people do their work. The best companies move away from a project-focused mind-set, partner with the business to plan changes, and treat automation releases and upgrades as a routine part of daily operations. We have found that providing employees with hands-on experience and live demos early, clearly explaining constraints, and discussing design decisions in partnership with development teams are crucial for the workforce to adopt new automation programs. We have also seen successful companies invest in structured

capability-building programs, innovation labs, and rotational programs to foster interest and broaden awareness.

A professional-services organization introducing an automation program began by specifying which types of transactions would be tackled in the first release and which would not, and checked with affected employees that the plan made sense and would have a positive impact. Before the first release, the automation team worked with the business on a series of sprints to clarify how the team would work in conjunction with the automation, how training would be done, and what the timeline would be. When the automated process went live, the team knew exactly what to do and how to work with it and

immediately started gathering ideas for the next release. Teams acknowledged the success of the effort, were happy with the changes in their roles, and—as estimated—30 percent of capacity was strategically redeployed.



Automation technologies give leaders an exciting new toolbox for increasing efficiency, reducing cost, and improving quality. But unlocking all this potential isn't just a technical exercise. Leaders must give careful consideration to the full array of issues, from redesigning processes to aligning work teams, if they want automation to deliver the full potential value. ♦

**Rahil Jogani** is a partner in McKinsey's Chicago office, **Sanjay Kaniyar** is a partner in the Boston office, **Vishal Koul** is a specialist in the Stamford office, and **Christina Yum** is an expert in the New York office.

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