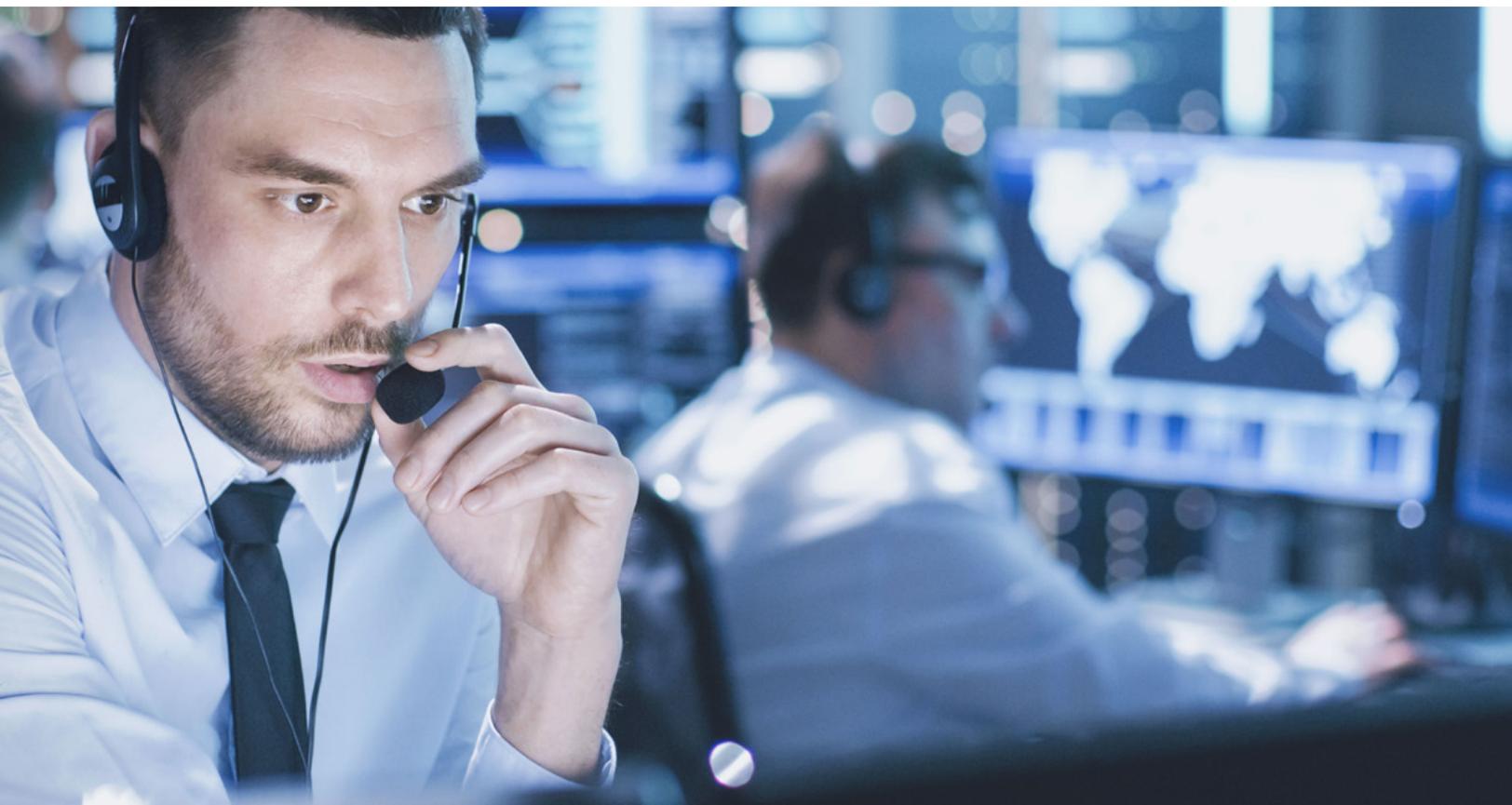


Operations Practice

Operations management, reshaped by robotic automation

Today's automation shows huge promise for saving time, money, and human effort. For operations centers, is it now just a matter of "ready, set, automate"?

by Ian Didion, Pablo Hernandez, Avani Kaushik, and Kobi Masri



Few technologies rival the latest advances in automation in their anticipated ability to enhance organizations' performance, regardless of industry. The potential adoption rate is stunning by any measure: the McKinsey Global Institute estimates that, using demonstrated technologies, more than 81 percent of predictable physical work, 69 percent of data processing, and 64 percent of data-collection activities could feasibly be automated.

These three categories describe much of the work handled in operations centers, which we define as organizations that manage equipment and services remotely, or that manage human forces in the field (field forces). Examples include telecom and electrical utility network-operations centers (NOCs), IT operations centers, remote resolution centers, contact and call centers, and dispatch centers.

Indeed, the early stages of automation have already begun. Our colleagues' late-2018 automation survey found that three-quarters of respondents had either embarked on an automation journey, or would do so in the coming year (exhibit). And in our recent studies supporting the introduction of automation technology to operations centers, we've witnessed first-hand the extent to which automation can transform the technological paradigm of front-office operations management.

The automation journey

Robotic process automation (RPA) has been a particular focus of attention, having been widely adopted in organizational support functions—initially in shared-service centers (SSCs) that had taken much of the responsibility for many companies' HR, finance, procurement, and IT functions. These environments were ripe for the introduction of RPA because many processes were standardized; RPA could therefore be applied to reduce costs (which had been rising) and improve accuracy.

RPA technologies have significantly improved in recent years, providing the high levels of quality and stability required for sensitive, customer-related processes in operations centers. Following the successful implementation in SSCs, organizations started expanding the application of RPA to

operations centers in hopes of radically accelerating the automation of operational processes, while also cutting costs.

What RPA offers operations centers

In most industries, operations centers have used traditional forms of automation for many years. But these came with serious limitations. For example, custom software managed interfaces with multiple backend systems, but these implementations took several years to complete, and were expensive and quite rigid.

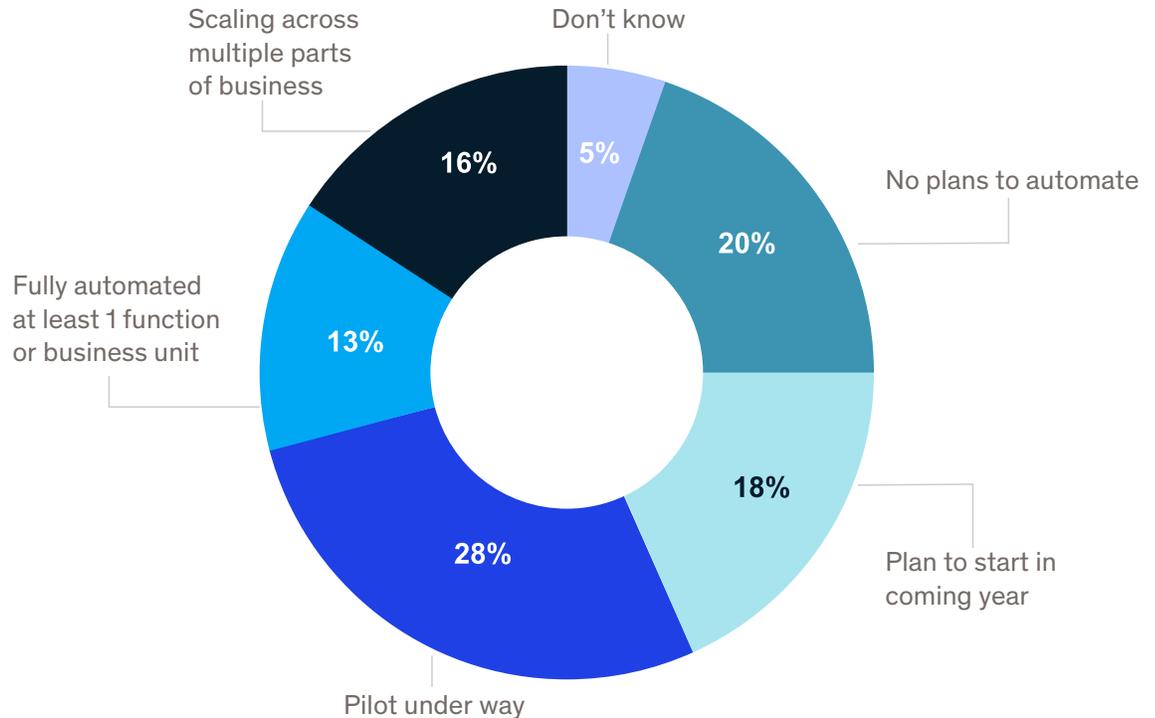
By contrast, new automation techniques, such as RPA and cognitive technologies, are having transformative impact. By automating manual and repetitive tasks, successful operations centers are reducing costs by 30 to 60 percent while increasing delivery quality.

We see three fundamental differences between RPA and traditional automation technologies:

1. **Accelerated implementation.** Like traditional automation techniques, RPA achieves high impact by both lowering costs and increasing the quality of manual tasks—but it does so much faster. Many of the improvements that may have required months, or even years, to achieve can be replicated with RPA technologies in a matter of weeks. This rapid timeline results from RPA's low barriers to entry and out-of-the-box controls. For example, a telco wholesaler used automation to reduce cycle times in one of its back-end processes by 99 percent. This automation solution took two developers just four days to implement.
2. **Low barriers to entry.** Traditional automation technologies require multiple technology stakeholders, developer teams, user-experience designers, and system instructors. In contrast, RPA can be overlaid on an existing IT infrastructure. It is developed by mirroring the user's inputs, while customization requires only a minimal programming background. Consequently, training RPA developers typically takes just two to four weeks, compared with more than

Exhibit

Three-quarters of organizations say they are automating now or will be soon.



SOURCE: "The automation imperative," McKinsey & Company Operations, September 2018, McKinsey.com

a year for software engineers. An industrial-services company needed only about a month to train more than 20 remote-center engineers on RPA, combining a one-week training course with three weeks of teaming the trainees with experienced RPA developers.

3. **Enhanced control.** RPA applications come with out-of-the-box monitoring, reporting, and system controls in place. Standard RPA controls include scheduling customization, queue creation, email notifications, and response-triggered actions. The same level of controls and monitoring for software automation must often be developed from scratch.

What's best to automate?

Although RPA's value proposition is attractive relative to traditional technologies, companies must stay focused on feasibility. Within operations centers,

there are a few common activities where we have seen RPA add significant value.

Network monitoring. By correlating network events, RPA can generate alarms for multiple standardized (pre-defined) issues.

Remote troubleshooting and resolution. RPA can support issue tracking, data gathering, ticket analysis, and remote reset. Intelligent incident-management systems can detect similar issues and resolve them—such as at a telco that uses RPA to improve its responses to network-equipment failures. The RPA bot executes steps according to a codified troubleshooting guide, leaving human agents to resolve only those issues not yet fully documented.

Automated dispatching. Companies can use automation to dispatch jobs from operations centers

to field agents, to handle exceptions in workforce allocation by load-balancing, and to optimize transportation routes for dispatched jobs. These steps help reduce time-to-resolution and increase the amount of time spent on judgment-based work.

Self-help facilities. For routine level-one and level-two requests, RPA can automate ticket logging, routing, and replies, which form the basis of self-help tools for customers. By minimizing the need for in-person call-center support, these solutions improve not only incident tracking, but also customer experience. Automatic analysis of customer call logs enabled one telco provider to reduce call-center agents' handle times by 10 percent for an entire family of service issues.

It's all about impact

Successful RPA-led transformations have focused on capturing value by starting small, exploring select use cases, and scaling up over time. This methodical approach has yielded a wide range of performance improvements at operations centers.

- By automating performance-indicator monitoring and increasing remote-problem resolution, a large managed-services provider reduced its NOC and field-force costs by 20 to 30 percent.
- One large telco provider has automated 80 percent of its resource scheduling, resulting in a 10 percentage-point reduction in escalations and a 15 percent reduction in cycle time and field costs, while another telco used automation to reduce NOC operational costs by 55 percent.
- Automation helped a technical call center reduce its costs by more than 40 percent, while increasing quality of service.

What are the imperatives for success?

For robotic automation to achieve its full potential across a business, organizations must proceed with care. The leaders' success stories all rested on a few critical factors, each requiring

substantial attention.

Re-skill your organization

New skills will be essential to ensure smooth execution of the automated processes and create sustainable impact. Among the most critical are the identification, quantification, prioritization, and mapping of new processes that should be automated. Next, solution design, programming, and execution will all involve significant new capabilities, as will the monitoring and management of automation once it is in place.

Rethink business-IT collaboration

When robotic-automation projects run into problems, a crucial reason is often misalignment between IT and business leaders—who will need a deeper level of cooperation than has historically been typical. Because business users understand the processes and are responsible for operations performance, they must identify which processes to automate, and should participate closely in RPA development. For its part, IT must contribute its advanced technical knowledge and experience in running production-level quality systems, and ensure end-to-end performance of the bots. Close collaboration is also required whenever there is a change in the application, so that bots can be updated appropriately.

Support the transformation with a CoE

A center of excellence (CoE) is vital both as a source of expertise and to define priorities. This central team, with responsibilities cutting across operations and other functions, leads the organization's transformation, identifies opportunities for automation, and helps scale up current automation programs. The CoE's areas of expertise should include attended bots (for call centers), chat bots, advanced analytics, and cognitive agents.

The role of the CoE evolves over time. In the short term (usually the first six months), the CoE's diverse support responsibilities will include identifying the potential for automation; prioritizing opportunities; managing early proof-of-concept testing; codification of learnings; recruitment of CoE team members; training of business people; and oversight of existing transformations.

In the long term, the CoE's primary role evolves. Activities include managing the entire transformation from end to end (including prioritization of initiatives and funding), providing technical support for more complex issues, and establishing best practices. The CoE also supports initiatives of varying sizes across the company, seeds subject-matter experts and advocates where needed, and provides thorough coaching to team members. Additionally, the center can give light support to business-led initiatives.

In most situations, we have found it better not to have a separate CoE for operations, but instead to have a single automation CoE for the whole company. Such a CoE will not only be responsible for RPA, but will also serve as an interface with other parts of the organization involved in technologies such as advanced analytics, chat bots, and virtual agents.

The CoE's support should be guided by four main principles:

- *Establish an agile way of working* through cross-team collaboration and knowledge sharing. Agile automation follows the “scrum” method as its basic framework. Typically, each use case is addressed in “sprint” cycles lasting two to three weeks. A cycle starts with mapping user stories. It moves on to process analysis and developing a process map at the task level. The final step is technical design and development.
- *Drive standardization* by ensuring a consistent automation approach and reusability of components across different sprint teams.
- *Coordinate with IT* for automation delivery and execution.
- *Continuously introduce emerging technologies* beyond RPA. Because the technology landscape for automation is continuously evolving, organizations must

master complementary technologies to apply automation successfully. Beyond RPA, several additional automation technologies are already showing promise. For example, by combining RPA, cognitive agents, and artificial intelligence for image processing, a multinational recently reduced the cost base for one of its operations centers by more than half.

Focus on creating impact

For a successful transformation, a company needs a comprehensive, end-to-end view of the automation opportunity. It should prioritize automation activities by business value, ease of implementation, and risk. Usually, prioritization is more effective when done within functional “domains” comprising 50 to 200 people rather than on a process-by-process basis—so, for example, for the HR domain as a whole rather than just for the employee-onboarding process. Typically, domains with high business value and high ease of implementation can be quick wins for automation.

In addition, leaders must think through how they will redesign the organization to take advantage of the capacity increases that usually result from successful automation. Moving people promptly to higher-value work helps multiply automation's impact—but the higher-value work must be identified and available for the people to do. That often means restructuring the organization at the same time that the automation solution is being designed and implemented, so that judgment-heavy tasks flow through to the right teams once the automation is in place.

It is time for companies to transform their operations centers using RPA and other automation technologies. Such a transformation needn't take long—and can generate tremendous value if done correctly.

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