Robotic Process Automation: Reality Check and Route Forward
by The Hackett Group

Do you have high expectations for RPA?

Early RPA initiatives have produced some tangible successes. Many companies, however, have yet to scale and exploit their RPA use to a level that delivers sustainable process improvement. Whether exploring RPA, launching a pilot or trying to maximize a robust solution already in place, it is vital that finance, HR, IT, procurement and global business services professionals understand what practices are critical to success. With this in mind, Canon Business Process Services is pleased to offer you an important research paper from The Hackett Group. The paper spotlights the current state of RPA adoption, key implementation factors that drive business results and how RPA fits within the smart automation model of the future.
Robotic Process Automation: Reality Check and Route Forward

By Erik Dorr, Vin Kumar and Paul Morrison

Executive Summary
Over the past few years, robotic process automation (RPA) has become a technology of great interest to business functions (e.g., finance, HR, IT, procurement and global business services) seeking to improve performance. While current RPA adoption remains low, expectations are high. For example, Hackett Group research finds that 78% of finance executives anticipate they will use the technology either on a limited basis (i.e., within pockets of the organization, or in specific processes) or extensively within two to three years. Early initiatives have produced some tangible successes, but many organizations have yet to scale their use of RPA to a level that generates major upgrades in performance. This is largely due to a greater-than-expected learning curve with the tool, despite its relative ease of implementation. In the meantime, however, a well-defined set of practices is emerging to speed and simplify deployment.

It has been about five years since analysts began seriously exploring robotic process automation (RPA) and its possible impact on business operations. This new class of automation technology brought with it the enticing potential to use software robots to carry out transactional, rule-based tasks on computer systems (see sidebar on next page, “What is RPA?”). Furthermore, RPA solutions offered the prospect of high returns on a very moderate initial investment. Many vendors claimed RPA could deliver process savings of as much as 60%-80% along with major improvements in quality, productivity and speed. Better yet, RPA could be deployed quickly with only limited IT organization involvement, if at all, for implementation or support.

At first, RPA projects targeted tasks in industry-specific processes, such as processing insurance claims or bank loans, before being embraced more broadly by traditional business services functions. Early adopters used it to automate tasks such as entering data into multiple systems or validating and verifying information such as vendor name, purchase orders, or duplicate invoices in accounts payable processing.

By now, many function leaders have seen evidence of RPA’s potential, but few have taken steps to exploit it as a means of sustainable performance improvement.
The State of RPA Today

Broad-based adoption of RPA is still nascent, but the number of initial success stories, both with large-scale adoptions and smaller, more targeted projects, is encouraging interest. Functional executives expect RPA use to increase significantly in the near term (Fig. 1). While all functional areas studied foresee further use of RPA, finance and global business services (GBS) executives are particularly bullish. In all, 78% of finance executives expect some deployment of the technology, whether limited (i.e., within pockets of the organization, or in specific processes) or broad-based, within two to three years, a sentiment echoed by 85% of GBS organizations.

FIG. 1 RPA adoption by function

Although full adoption is low today, numerous organizations are exploring RPA or have pilot projects underway, nowhere more so than in finance organizations (Fig. 2).

FIG. 2 Percentage of business functions currently exploring or piloting RPA

There are several distinct RPA deployment models and use cases today. Scaled deployments are large, sustained initiatives with robots numbering anywhere from tens to hundreds, where they are a key part of service delivery and have a fundamental impact on the overall business. For example, bots are employed in account-to-report tasks such as balance-sheet reconciliations, consolidation and journal posting, management reporting and master data management.
Unlike scaled deployments, tactical deployments tend to have a medium-term time horizon of two to four years, but no imminent plans for replacing the bots. Beyond generating a financial ROI, the solution brings other benefits as well, such as higher process quality and easier auditability. For example, a healthcare provider implemented seven bots in its revenue-cycle management process to support an aggressive acquisition strategy. In the meantime it is pursuing a longer-term goal to implement a comprehensive revenue-cycle management application.

Finally, disposable deployments are of limited duration and are focused on producing a payback before disposal, usually within six to 12 months. Examples include a data-migration robot supporting a company merger, or a robot that administers staff-training records only temporarily while a new learning and management system is completed, eliminating the need for that task.

Ingredients for Success
RPA is most advantageous when applied to tasks with certain characteristics: they receive digital inputs; they use structured data; and the work to be automated follows unambiguous, logical rules rather than allowing discretion and judgment. Examples of such tasks include:

- Extracting and entering data.
- Processing and updating forms.
- Merging, consolidating and archiving.
- Tracking, monitoring and archiving.
- Formatting and reporting.
- Downloading, updating and uploading files.
- Conducting periodic analysis, performing calculations and preparing analytics reports.

RPA is also suitable for automating so-called “swivel-chair interfaces,” i.e., labor-intensive clerical tasks that involve capture and reentry of data in multiple business applications such as email, spreadsheets, ERPs or CRM systems, or internal and external web applications and portals.

Early adopters have achieved more than operational cost benefits. Because robots operate with 100% consistency, these organizations are reducing incidences of errors and inconsistent application of rules that are common in tasks performed by people. And because RPA allows organizations to operate around the clock, productivity and cycle time have improved. Additionally, companies adopting RPA have been able to:

- Refocus staff on higher-value work.
- Strengthen auditability for tasks subject to rigid compliance regulation.
- Use enhanced task-execution data to analyze and improve processes.

Moreover, RPA is beginning to change the value proposition of outsourcing as well as GBS operations by changing the labor/technology mix. The technology has allowed some companies to move the location of service delivery, bringing it closer to customers.
Growing Pains
Despite the relative ease of initial implementation, RPA’s expansion and impact have experienced growing pains. For early adopters, the biggest challenges have been finding the right deployment opportunities, hiring or training staff to design and develop the robots, expanding small projects into large-scale programs, and finally, managing and governing bots throughout their lifecycle.

In many cases, the problems are traceable to decentralized or opportunistic efforts to identify and pursue RPA use cases, especially cross-functional ones. While trial and error can be helpful for understanding how the technology works in a pilot or proof of concept, beyond that point a more methodical investigation is needed (as discussed in the next section of this report). Otherwise, it is difficult to create repeatable capabilities that are essential in order to scale programs.

A key aspect of opportunity identification is understanding the right level of automation for a specific set of tasks. This requires experience that businesses and bot programmers simply do not have at the outset. Good design and development require the same discipline and creativity demanded by other automation projects, but in a highly compressed time frame. Lack of experience combined with a compressed implementation schedule may yield initial bot designs that are unnecessarily complicated. This may make the bot difficult to manage and maintain over time and limit its reusability elsewhere in the organization.

Many companies also struggle with talent-related challenges – and not just developing and acquiring RPA skills, or motivating employees who fear they will lose their jobs. To maximize the benefits of RPA, businesses must also redesign roles and redeploy/reskill talent in conjunction with implementation. Most are finding this to be much more complex and time-consuming than designing, developing and implementing a bot.

Early adopters have also found the time and cost of implementing bots is higher than expected. For businesses that lack mature RPA programming skills, as most do, initial deployment cycles require extra work to make sure they are getting it right before going live. Decentralized adoption just exacerbates this issue; without some level of centralized control and knowledge-sharing, each department or function is effectively investing in its own learning curve. In addition, some are finding they should have undertaken optimization initiatives or addressed data-quality issues before introducing RPA into their operations.

Finally, many users underestimate the time and resources required to support and maintain bots after deployment to keep them running as intended. For example, a common use of RPA is to automate manual tasks that “touch” two or more disparate systems. In this scenario, bots must be updated when changes to those systems occur. Close collaboration with the IT function is necessary, even if the bots are owned and managed by the business.

Overall, the returns of early adopters, while tangible, have to date been more modest than initially anticipated. This is partly due to the implementation learning curve but also to overly optimistic or ill-defined expectations. Further, many fail to think through their automation objectives thoroughly before introducing RPA into their operations. As discussed later in this report, when building the business case for using RPA, it is critical to consider the total cost of ownership (TCO) and not simply the cost of a bot license. In short, RPA is proving to be not quite the easy win predicted by vendors and expected by businesses.
Approaching RPA Today Based on Lessons Learned
Business functions that have successfully deployed RPA beyond the pilot or trial stages share a number of characteristics. First, they are disciplined about identifying and assessing suitable RPA opportunities. Next, they plan the introduction and expansion of RPA based on a lifecycle perspective. Finally, they support their programs by building an RPA team or center of excellence (COE).

1. Selecting suitable opportunities for RPA
An effective approach for identifying suitable tasks is to deconstruct a back-office process. In the example illustrated (Fig. 3), order-to-cash, purchase-to-pay and account-to-report processes are broken into several subprocesses. Specific activities within each subprocess will be analyzed and categorized as a strong, good, moderate or poor candidate for RPA. (For this effort it is helpful to keep in mind the characteristics of good candidates for RPA identified on page 3.) In the case of account-to-report, the example analysis finds that three subprocesses are strong candidates for using RPA because, at a high level, they involve extracting and entering data. This makes cash application, overall, a strong potential target for RPA.

It is important to note that Fig. 3 is illustrative, covering three high-level process examples. The areas of analysis will vary based on company circumstances and can include back-office processes in any function, such as the recruit-to-retire process in human resources. Moreover, this represents just the highest level of filtering. Fig. 3’s color coding is the result of multiple rounds of analysis and elimination designed to find and prioritize specific tasks for automation.

Once potential opportunities have been identified, potential returns can be quantified to help with prioritization. This can be a complex exercise, involving much more than calculating license costs and financial value of human labor eliminated (see sidebar, “Sizing the RPA opportunity”). Nevertheless, it is essential for building a credible and achievable business case.

Sizing the RPA opportunity
Building a business case for RPA involves developing a set of key assumptions and parameters, as well as understanding any drivers or inhibitors, such as process stability or complexity. In building the economic model, it is also important to calculate TCO, which involves much more than just the license fee of a bot. Examples of one-time costs include:

- Server space
- Project time (strategy, design, build, test, run, scale)
- Business change management and training
- Restructuring of people and roles
- Licenses (which vary by RPA platform, but a number of leading vendors price in the range of $5,000-8,000 [€6,000-10,000] per license)
- Hosting
- Monitoring and maintenance

In addition, there will be ongoing costs, such as support and maintenance, IT and process change management, and exception handling.

At least initially, most RPA business cases focus on cost savings, but keep in mind that introducing RPA can produce a range of outcomes, such as the ability to reallocate talent to higher-value work, as well as improvements to process speed, quality and accuracy. These are all factors that should be part of the business case, where relevant.

The amount of cost savings possible depends on the scope and opportunity of deployment, the amount of human labor removed from the equation, and also the cost base of these resources. It is relevant to note that RPA business cases are often strongest in expensive, onshore locations that rely on skilled, high-cost resources.
Managing the RPA lifecycle

Introducing RPA into an organization requires both rigor in the early stages of adoption and a continuous focus on expansion and optimization. This lifecycle approach involves a sequence of stages:

- **Discover**: Learn about RPA through initial discussions within the business function and opportunity assessments, as well as through a pilot or proof of concept.
- **Mobilize**: Build an RPA strategy, business case and operating model, including deeper exploration of deployment opportunities.
- **Scale**: Implement an initial wave and then expand it, enabling the broader organizational changes that accompany wider-scale deployment of RPA. Build a COE for tasks requiring unique skills or those that are scarce within the organization and can be leveraged the company.
- **Run**: Create the capabilities for hosting, running, supporting and optimizing RPA.
- **Evolve**: Extend the strategy from the individual function to the entire enterprise and provide oversight for continuous expansion and performance impact.

Approaching RPA from a lifecycle perspective will help build a solid foundation for effective deployment of the technology, including governance, change management, security, IT alignment, operational excellence and benchmarking, and continuous process improvement.

### 2. Lifecycle-based planning

A well-planned roadmap (see sidebar, “Managing the RPA lifecycle”) is essential to attaining the expected payback from RPA, first when it is introduced and later when it is scaled up. A roadmap ensures that, among other things, sufficient rigor is applied to areas that have proved challenging for others. Examples are:

- Selecting the best tool for a specific use case.
- Building realistic expectations within the organization about expected ROI.
- Managing the politics of associated changes (e.g., in roles).
- Establishing sufficient resources to facilitate scaling, for example through training or a COE.
- Establishing governance for management of the bots throughout their lifecycle.

### 3. Building an RPA team or COE

As a business function gains more experience with and begins to extend its use of RPA, it needs a team of resources to support process owners who are introducing RPA into their own operations. The purpose is to leverage an existing body of knowledge and experience and thus avoid some of the issues that limited early adopters from realizing the full potential of RPA. In particular, it facilitates better assessment of opportunities, creation of repeatable automation capabilities, and coordination of multiple RPA projects across the enterprise.

An RPA COE can take different forms depending on circumstances, but should always be made up of a multidisciplinary team with leadership and political skills, business analysis and design skills, and technical development skills. Participants should also come from the IT function and relevant business function and process leads. Even though RPA deployment is usually business-led, support from the IT function is vital to enabling and scaling RPA by providing guidance, requirements and resources for infrastructure, connectivity and operations management.

To be most effective, an RPA COE must have visible executive sponsorship, well-defined placement in the organization, and governance processes that specify responsibility for and authority over the organization’s deployment of RPA. In addition, there are several requirements that are critical to establishing an effective COE or talent hub, and these are no different for RPA COEs. They include:

- A strategy and vision for the COE.
- Defined scope of activities, structure and model for interacting with the business.
- Key processes, activities, roles and responsibilities.
- Service level agreements, key performance indicators and a performance tracking model.
- A staffing model that addresses capability and competency development, as well as rewards and recognition.

### What Comes Next? The Evolution of RPA and Smart Automation

As RPA technology matures and starts to offer more functionality, and as organizations develop related skills, knowledge and experience, adoption will rise. However, even at this early stage, The Hackett Group’s research shows that many organizations are beginning to approach RPA as part of a broader enterprise digital strategy. A critical element of this strategy is the transformation of operations based on the principles of smart automation — faster, incremental, business-driven — using a combination of emerging technologies that includes RPA (see sidebar, “Smart automation defined”).
The Hackett Group defines smart automation as “the optimization of the execution of transactional, knowledge-based and decisioning work through deployment of robotic process automation (RPA), intelligent data capture and cognitive automation technologies.”

To help structure thinking in this emerging area, The Hackett Group has mapped the human capabilities addressed by each of the three main areas of smart automation (below). Over time this list of capabilities will grow as new tools enter the smart automation market.

**Hackett digital worker model: Human capabilities addressed by the three types of smart automation**

<table>
<thead>
<tr>
<th>INTELLIGENT DATA CAPTURE AND ENGAGEMENT TECHNOLOGIES</th>
<th>RPA TECHNOLOGIES</th>
<th>COGNITIVE TECHNOLOGIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding images</td>
<td>Data entry</td>
<td>Analyzing data</td>
</tr>
<tr>
<td>Understanding handwriting</td>
<td>Moving files</td>
<td>Pattern recognition</td>
</tr>
<tr>
<td>Understanding typewritten content</td>
<td>Updating files</td>
<td>Predictive analysis</td>
</tr>
<tr>
<td>Understanding spoken voice</td>
<td>External data downloading</td>
<td>Probabilistic inference</td>
</tr>
<tr>
<td>Written expression</td>
<td>Monitoring for events</td>
<td>Building a logical model (ontology)</td>
</tr>
<tr>
<td>Oral expression</td>
<td>Checking and comparing data</td>
<td>Deductive reasoning</td>
</tr>
<tr>
<td></td>
<td>Collating and coding data</td>
<td>Self-learning and inductive reasoning</td>
</tr>
<tr>
<td></td>
<td>Memorization</td>
<td>Making decisions and recommendations</td>
</tr>
<tr>
<td></td>
<td>Numeracy, basic calculations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Formatting data and reports</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Orchestration</td>
<td></td>
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</tbody>
</table>

Source: The Hackett Group
Smart automation requires a solid foundation of enterprise automation, workflow, RPA and cognitive technologies. While most organizations have mature capabilities for automating common transactional processes and standard workflows, generally speaking the business functions remain in the very early stages of adopting cognitive or artificial intelligence technology (Fig. 4); almost all that currently use these capabilities do so on a limited basis. According to our research, adoption rates will grow significantly within two to three years. Many organizations are now piloting cognitive computing and artificial intelligence projects, including 47% of GBS organizations and 38% of finance organizations (Fig. 5).

**Looking Ahead**

While scaling up and expanding adoption of RPA has been more challenging than expected, this technology is still poised to play a key role in digital transformation. However, RPA will be just one of a number of tools used to automate and integrate transactional, decisioning and knowledge work.

To plot a path ahead and achieve step-change performance improvement, business functions must begin thinking more broadly and longer term, developing a vision and roadmap for smart automation that includes both strategic and tactical roles for RPA. At the same time, a reality check is warranted. A certain amount of trial and error is necessary to learn the capabilities and limitations of these tools, but companies that expect they will be in broad use in the next few years – as our research suggests many do – must exercise discipline when analyzing opportunities and developing business cases as part of a robust process for managing the RPA lifecycle.
The Hackett Group (NASDAQ: HCKT) is an intellectual property-based strategic consultancy and leading enterprise benchmarking and best practices implementation firm to global companies, offering digital transformation and enterprise application approaches including robotic process automation and cloud computing. Services include business transformation, enterprise performance management, working capital management and global business services. The Hackett Group also provides dedicated expertise in business strategy, operations, finance, human capital management, strategic sourcing, procurement and information technology, including its award-winning Oracle EPM and SAP practices.

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