



Looking Deeper into Robotic Automation

Considerations and case studies for robotic
process and desktop automation

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Introduction – A New Age in Robotics

Visionary companies constantly plan ahead so that they can face the future with confidence. While strategizing to save time and money today, they continually seek to build efficiencies in performance and cost management for the long term.

In the current marketplace, more and more enterprises are undergoing business transformations to digitize their business operations and increasingly automate routine business processes. One method more and more companies are employing to accomplish this is through robotic process automation (RPA) and robotic desktop automation (RDA). Many observers view these to be the next wave of significant innovation that eventually will be a part of most functions and departments in global organizations.

While RPA and RDA represent relatively new innovations in business, this is not a new concept. In fact, robotics has been a fundamental component of business for decades. Robots were introduced to the workforce in 1961 to perform tasks in manufacturing facilities that humans found mundane. Robots could perform routine tasks with consistent speed and precision day in and day out, covering the workload of three full-time employees over the course of 24 hours. These robots were programmed to complete basic, repetitive actions, while work that required decision making, creativity or adaptation still required human involvement. However, the capabilities of robotics, and specifically robotic automation, have expanded significantly and are assuming a more comprehensive role in business operations. Today, in fact, robotics can perform many complex tasks with great precision and accuracy. For example, in medicine, robots are used to perform surgeries that would be more difficult for a human.

IN THE CURRENT MARKETPLACE, MORE AND MORE ENTERPRISES ARE UNDERGOING BUSINESS TRANSFORMATIONS TO DIGITIZE THEIR BUSINESS OPERATIONS AND INCREASINGLY AUTOMATE ROUTINE BUSINESS PROCESSES. ONE METHOD MORE AND MORE COMPANIES ARE EMPLOYING TO ACCOMPLISH THIS IS THROUGH ROBOTIC PROCESS AUTOMATION AND ROBOTIC DESKTOP AUTOMATION.

HOW ROBOTIC AUTOMATION IS EVOLVING

RPA and RDA represent the next generation of robots in the workforce, moving from manufacturing facilities to corporate offices. Each uses automation software for tasks such as processing sales and financial transactions, managing data, communicating between different systems, access management, monitoring and reporting.

RPA is specifically used for back-office tasks, usually in operations, that are repetitive and require no human intervention. Just a few examples that cut across the spectrum of numerous operational functions in organizations include credit decisions, loan underwriting, insurance underwriting, insurance claims adjudication, payment processing, pricing, customer service delivery, accounting data entry, procurement, purchase order creation or issuing online access credentials, among many others.

RDA is used in retail operations, call centers and other back-office activities where each employee leverages his or her own robot to perform specific tasks. Some of these tasks include (1) using a single sign-on to eliminate the time employees spend logging into different systems, (2) providing a consolidated view of instantaneous customer data, (3) performing validations of internal regulations to ensure completeness of inputs and processes, and (4) providing employee productivity and utilization metrics. RDA is intended to minimize the burden of manual tasks on employees so they can focus on using their more specialized skill sets to perform more advanced, complex tasks.

In years past, organizations looking to improve efficiencies in their workforce would outsource certain tasks to regions where labor was a fraction of the cost closer to home. Now, robotic automation provides a more efficient and less expensive alternative to offshoring or outsourcing.

Just a few of the key benefits of robotic automation include the following:

- Robots operate on a 24/7/365 schedule, enabling employees to focus on higher-level strategic tasks and allowing for processes and services to be performed continuously, often providing improved responsiveness to customers.
- Robotic automation involves virtually no human error and requires no time to be spent on training to perform repetitive tasks, resulting in higher quality and reduced risk.
- Simple tasks are completed with minimal expenses for salaries, overtime, benefits, overhead costs, etc., and problems due to spikes in volume and backlogs are usually eliminated.
- The cost of licensing per robot is low compared to the compensation for a full-time equivalent (FTE) staff member.

THE MACROECONOMICS – A CLOSER LOOK AT THE BENEFITS

Digital business transformation is a driving force in how businesses are looking to reshape their organizations. Coupled with factors ranging from low interest rates to ongoing market pressures to maintain competitive advantage, companies have more reasons than ever to rethink how they do business. With its technological advancements, robotic automation is helping companies address these challenges and face the future with confidence by enabling them to achieve operational goals for performance excellence and cost savings.

The accompanying table details a number of factors that are encouraging companies to move forward with robotic automation solutions.

WITH ITS TECHNOLOGICAL ADVANCEMENTS, ROBOTIC AUTOMATION IS HELPING COMPANIES FACE THE FUTURE WITH CONFIDENCE BY ENABLING THEM TO ACHIEVE OPERATIONAL GOALS FOR PERFORMANCE EXCELLENCE AND COST SAVINGS.

Factor	Explanation
Reduce cost and improve profitability	Organizations face constant demands to improve financial performance, thus managing costs is an ongoing priority. Manual, wasteful processes can be eliminated by moving to robotic automation. Margins will improve because robotic automation is less than half the cost of using an outsourcing provider.
Shift FTE resources to activities with higher revenue-generating potential	The level of integration of robotic automation is flexible, as a robot can work alongside a human or can take over a process end-to-end. Employees can use the time saved from robotic automation toward product and service innovation, such as developing tailored products for customers.
Support processes that have been outsourced to shared service centers	Robots can interact with systems and applications in the same way that individuals at a shared service center would. Therefore, they can reduce the reliance on the shared service center or, in some instances, eliminate the need for it completely. Robots can also aid in any drawbacks created from time zone restrictions that many shared service centers encounter.
Improve service delivery for internal customers	Robots can execute thousands of tasks for employees that would otherwise consume thousands of staff hours. Finance teams, for example, can execute processes more frequently and efficiently by relegating repetitive manual tasks to robots.

These factors are not new, but the way in which companies are seeking improvements in these areas is. Historically, offshoring tasks and entire roles to lower-cost regions has been a preferred method of cost reduction. Now, organizations are realizing that the cost savings achieved by robotic automation can greatly exceed those of an outsourcing/offshoring solution.

Another key benefit of robotic automation is its ability to use other application software without significant integration/coding. A few examples:

Financial operations: This greatly benefits the finance and accounting functions since robotics software can interact seamlessly with preexisting systems, does not require significant IT support and is much more intuitive than running a SQL program. Therefore, it is relatively easy for a person with a finance/accounting background to learn how to use robotics software and make updates when necessary.

Banking: Robotics can interact with third-party credit reporting, underwriting rules depositories, new business applications and other data sources to analyze and perform a credit decision quickly, accurately and at a fraction of the cost of human credit decision making.

Insurance: Robots can perform the tasks associated with both insurance underwriting and claims adjudication by evaluating incoming requests, and interacting with third-party vendors, data sources and business rules to perform new business underwriting or claims adjudication efficiently and accurately.

The level of integration of robotic automation is flexible, as a robot can work alongside a human or can assume control over an entire process. Robotic automation is best used in routine, repetitive, highly transactional tasks that do not require human judgment. Companies will achieve the greatest cost savings if they apply robotic automation to tasks that are high volume and time-consuming for a human.

Robotic automation is a worthwhile solution for many organizations. However, astute leaders recognize there are struggles to prioritize processes ideal for automation. As a result, enterprises should strongly consider a prioritization methodology that can assist them in deciding which processes take precedence. The outcome of this approach will provide back-office leadership with the clarity it seeks and create a baseline road map for implementation.

Many industries, including but not limited to financial services, consumer products and retail, are more competitive than ever, with higher performance expectations related to quality, time to market, cost and innovation. Robotic automation can help companies achieve many of those expectations by seamlessly integrating across the organization, improving productivity while new standardized processes permit more precise monitoring and reporting, thus greater control. Employees can focus on customer needs and product innovation from the reduction in the volume of mundane, manual tasks associated with inefficient systems and processes.

Specifically, robotic automation can help in call centers, retail sites, back offices, operations centers and any other locations with processes that have tasks that require the use of business rules, formulas, data and analysis. Examples of such tasks performed by robots include onboarding of new customers, reconciliation, report formatting, configuration of upsell rules, opening of new accounts, creating customer profiles, claims adjudication, claims processing, credit cards, fraud and treasury operations.

Another area in which robotic automation can provide significant efficiency savings is tax consolidation. A process consisting of executing thousands of manual calculations, followed by review checkpoints via email, can be streamlined by moving the calculations to RPA and using RPA's workflow capability to eliminate the need for email.

HOW TO PRIORITIZE OPPORTUNITY AREAS – A CASE STUDY

The best way to begin a robotic automation program is to map an entire end-to-end process. Then, from a critical viewpoint, identify potential opportunities to streamline. Organizations can determine the potential efficiency savings that robotic automation can enable as well as identify which processes are good candidates for automation.

For example, a large international company in the financial services industry implemented a fit-for-purpose methodology, estimating efficiency savings by annual hours if robotics were to be implemented. The approach and outcomes were then tested with finance leads. This approach, which can be customized for any enterprise, is an essential first step in moving to a robotic automation framework.

First, this company underwent a qualitative evaluation of its processes to determine whether they are viable candidates for robotic automation. The criteria areas in the accompanying chart can be used to rate and rank various business processes, as this company did.

ROBOTIC AUTOMATION CAN HELP IN CALL CENTERS, RETAIL SITES, BACK OFFICES, OPERATIONS CENTERS AND ANY OTHER LOCATIONS WITH PROCESSES THAT HAVE REPETITIVE TASKS.

Structured Approach to Prioritize Automation Opportunities

Logical to Automate

Overall general assessment as to whether the process can be automated. Do the process descriptions or activities contain logical elements that can be programmed into a software solution?

- Potential candidates include performing calculations, conducting variance analysis, reconciling data and systems, and reporting.
- Less-than-ideal candidates include any activities that require applying professional judgement, writing or communicating.

Maturity of Process

Has the process been executed in a repeatable fashion over multiple periods? Is there strong organizational knowledge with key subject-matter experts and management regarding the process execution and outcomes? Are there existing process documentation and control descriptions that summarize the activity and outcomes?

- Potential candidates include processes that are repeatable, sustainable and have been executed for consecutive periods, and for which there is ample institutional knowledge.
- Less-than-ideal candidates include new processes with limited execution (<1-2 periods) and those with limited institutional knowledge.

Availability of Data

Are data elements that support the process available in existing IT systems with no or little manual intervention? Data coordination is limited to one or two IT systems.

- Potential candidates include data available in source systems with little manipulation (e.g., ERP, BI and accounting solutions).
- Less-than-ideal candidates include data that must be pulled from multiple systems and requires input from subject-matter experts, along with data accessibility. Can data elements that support the business process be acquired and consumed with little or no manual manipulation and intervention?

Business Value

Examine the hours consumed on an annual basis to determine how much of a resource can be transitioned to higher-value activities by automating the process.

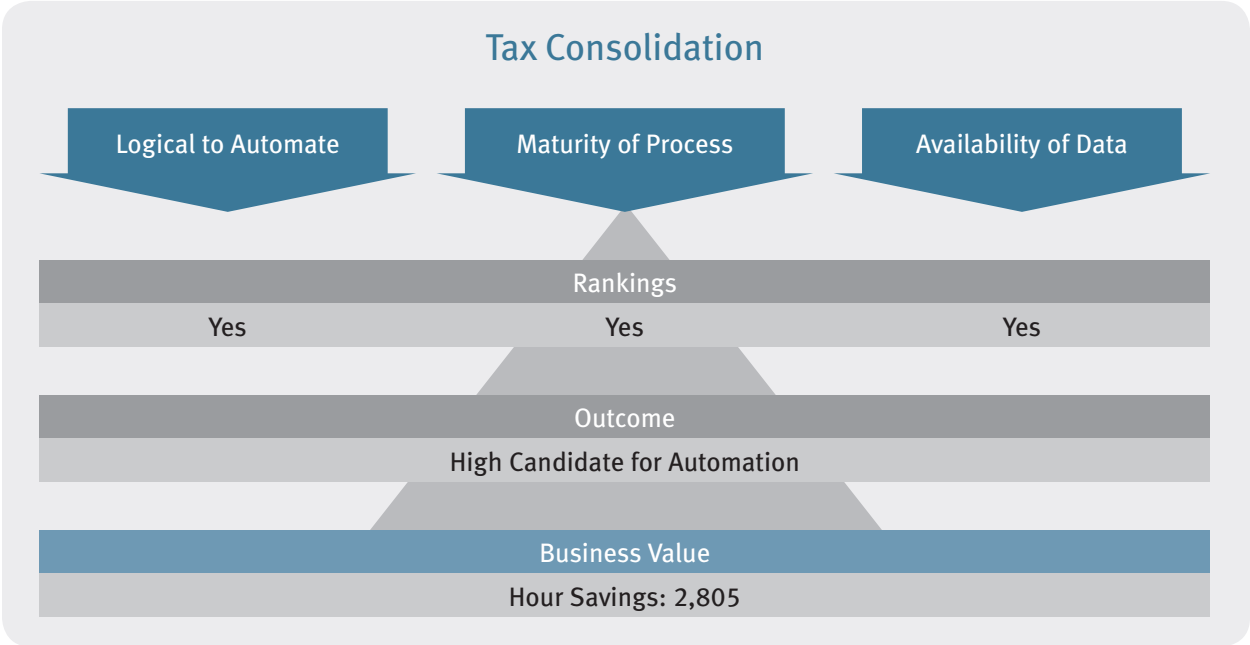
- Potential candidates include business processes that generate the highest amount of resource savings to the organization.
- Less-than-ideal candidates include business processes that generate the least amount of resource savings to the organization.

Processes can be ranked high, medium or low based on their ability to meet the above criteria. It is important to note that in the example cited above, the company also considered the location in which the current processes are performed, as operations in high-cost regions would generate more significant savings if moved to a robotic automation framework. (See the following section for an example of these criteria being applied to a process.) The company then assessed candidates for automation and prioritized them based on estimated time savings.

The next step is to determine whether the process identified has any upstream or downstream dependencies.

WHEN AND WHERE TO EMPLOY ROBOTIC AUTOMATION

Below is an example of how one company applied a project methodology to decide whether to employ robotic automation processes, and then implemented it.



By moving a portion of the company’s finance consolidation process to robotic automation, the company was able to save time, money and resources while significantly reducing the risk of errors.

Individuals in finance and accounting roles often spend significant time on repetitive, low-value tasks. A company can gain a competitive advantage through successfully attracting and retaining top talent. One way to accomplish this is through alternative staffing models that provide more flexibility for employees, such as part-time arrangements and flexible workweeks. Robotic automation can help make part-time arrangements more feasible by taking on some of the responsibilities of a current, more manual and repetitive role. For employees who are not looking for part-time arrangements, they can use the extra time saved toward product and service innovation, such as developing tailored products for customers.

KEY SUCCESS FACTORS

Successful robotic automation is not immune to challenges that can emerge during implementation. The following table lists potential issues and possible approaches to ameliorate them.

Issue	Key to Success
Failure to have executive ownership to drive cross-functional implementation	The company identifies an executive in the organization to secure financial support to implement robotic automation, as well as the right cross-functional resources, whose involvement is required to enforce change.
Failure to have an established program management team to drive implementation	The company establishes a dedicated, cross-functional team whose tasks are to examine processes for automation, develop requirements and report progress; the team is accountable to the executive sponsor.
Failure to apply finance controls as processes are automated	The company ensures finance controls are in place in the newly automated processes. Management develops and approves process maps before migration to the automated system. Functional areas and individuals are made accountable for maintaining controls.
Failure to have a sustaining team to manage potential system breakdowns	At least one full-time employee is dedicated to monitoring and supporting use of the robotic automation software and handling system breakdowns and general inquiries from users. The employee also performs regular audits to ensure that the software is running as planned.
Failure to develop a plan that addresses redeployment of impacted resources	The company develops a comprehensive change-management plan and a new organizational structure (as necessary) to adjust for the efficiency savings that robotic automation generates. In addition, it updates process maps and operating procedures to articulate employees' new roles.
Failure to implement a plan that addresses broad impact of robotic automation program to all cross-functional groups	A communication strategy, as part of the overall change management plan, is put in place to make sure users are tied to the overall goal of robotic automation to achieve consistent buy-in and user adoption for what robotic automation will deliver.
Failure in user-acceptance testing (UAT)	Robotic automation software is tested thoroughly before it goes live. (The software will be run 24/7, so if there is an issue, it will be multiplied as the program is continuously running.)

WHO OWNS THE PROCESS IN A ROBOTIC ENVIRONMENT?

Once a methodology is incorporated and risks are mitigated, questions pertaining to process ownership and amendments arise. Companies ask, “Who will own the process once robotic automation has been put into place?” “What is the cadence for amending the automation logic?” Below are two key takeaways companies consider when automating processes using robotics.

- 1. Process Ownership:** The business function that owns the process activity and outcome is the sole owner of, and the entity responsible for, the process and its outcomes. The business function maintains the responsibility for establishing the cadence for when and how the logic needs to be updated, including instituting checks/controls to ensure that it is running accurately.
- 2. Process Support:** The IT function that may have a relationship with the software provider, or may be responsible for the hardware that supports the software, is a key partner in the automation process.

CLOSING THOUGHTS

As companies strive to remain relevant and on the leading edge, they need to evolve continuously. Preserving one’s fitness in the market and maintaining a competitive advantage require innovation, but also depend on efficiency. Robotic automation is an increasingly significant strategy for achieving these goals.

Robotic process automation and robotic desktop automation will continue to take hold as proven practices as companies develop methods to employ greater precision and efficiency in a variety of processes to help them grow. RPA and RDA spur this growth by enabling companies to employ automation for routine tasks, which in turn frees up talent to add value by taking on more qualitative and strategic-level initiatives.

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