Avoid Spaghetti Decision-Making With RPA

Robotic process automation (RPA) may conjure up futuristic visions of mechanical robots ruling the world, but it is, in fact, nothing of the kind. RPA is a set of software "bots" that run on physical or virtual machines and automate routine and repetitive business tasks at accelerated speed and efficiency. RPA allows you to define instructions or tasks for theses software "bots" to perform. The big advantage of RPA is that it performs routine, time-consuming tasks that used to require human interaction. The main purpose of RPA is to increase efficiency.

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Here's how Clint Boulton, senior writer at CIO Magazine explains it: "RPA is an application of technology, governed by business logic and structured inputs, aimed at automating business processes. Using RPA tools, a company can configure software, or a 'robot,' to capture and interpret applications for processing a transaction, manipulating data, triggering responses and communicating with other digital systems. RPA scenarios range from something as simple as generating an automatic response to an email to deploying thousands of bots, each programmed to automate jobs in an ERP system."[1]

The power of RPA is multiplied when it's used in conjunction with Decision Model Notation (DMN), an easily readable standard for describing and modeling repeatable decisions, and a Business Rules Management System (BRMS) to automate decision-making across an organization's business processes. When used together, these tools can have a significant, positive impact on business outcomes.

Common Applications of RPA

RPA generally works best when processes are policy-based, repeated regularly, have a predefined trigger, defined inputs and outputs, and sufficient volume. Below are example use cases for RPA:

▸ **Finance:** RPA is commonly used for processing receivables and payables. In this area of finance, the benefits of RPA can be reaped almost immediately. When RPA code is written in a way that standardizes processes, inefficiencies are eliminated and the need for manual processes are reduced. Human capital can then be leveraged for more strategic, higher-value tasks. Gartner predicts that 73% of corporate controllers will implement some form of RPA in their finance departments by 2020, up from 19% in 2018.

▸ **eCommerce:** In online shopping, RPA can be used for processing merchandise returns. RPA can perform the necessary repetitive steps: sending confirmation messages acknowledging the return, updating inventory, making payment adjustments for the customer, and updating internal billing systems. The ability to update multiple systems and send multiple acknowledgements is one of the key values in many eCommerce RPA implementations.

Risks of RPA

It bears mentioning that, when used alone, RPA is not a silver bullet. Automating a typical business process won't deliver straight-through processing, personalization, or true digital business. To maximize the value of process automation, you must also automate the decision-making that a process relies on. In the eCommerce example above, for instance, the decision-making is around whether a credit or cash refund will be issued. Since RPA focuses primarily on task automation and not on decision-making, it should not be on its own.

Specifically, RPA typically supports only simple if/else or switch/case constructs to model decisions. The problem with this approach is that any decision-making rapidly becomes overly complex. The research paper entitled "Towards Decision Management for Robotic Process Automation" from the Hasso Platner Institute in Germany suggests that even very simple logic rapidly over-complicates the RPA process and results in "spaghetti processes." This often causes organizations to abandon the use of RPA on decision-heavy processes because logic validation takes excessive time and effort. Even if the project goes forward, maintenance costs skyrocket and the process becomes unmanageable, thanks to an intricate maze of business logic.

The Role of Decisions in Process

When processes become difficult to change, organizations lack agility. Even with RPA-driven automation of the process, an inability to change the embedded logic will mean the organization won't be able to react quickly or effectively to new opportunities, dynamic business conditions, new regulations, or new challenges. By making decisions explicit and managing them in concert with processes through a Decision Management approach, organizations can streamline their business and maximize the value of the automation capabilities delivered by RPA.

Here are the primary ways in which Decision Management contributes to business process improvement while keeping intact and further enhancing the value of RPA:

▸ **Simpler, more agile processes:** When processes handle multiple scenarios, managing the decision-making using only gateways and the simple logic supported by RPA becomes extremely complex. Decision Management replaces a nest of gateways and simple logic constructs with a single, explicit decision task. It clarifies the behavior of the process, makes it easier to see if the process or the decision must change, and allows for changes in the decision-making approach to be independent from process change.

▸ **Safe business agility:** Decision Management ensures that the decision-making is accessible to business users so they can change it and so that it can be shared among multiple processes. Decision Management ensures that decision-making components are flexible and easy to change safely. By separating them from the RPA process, the business owners can change them independently and without breaking the links between RPA bots.

▸ **Improved alignment between business and IT professionals:** Alignment of these two groups of stakeholders is difficult in most complex environments. RPA does provide a certain level of value because it connects the disparate and disconnected systems (IT assets) involved in many business processes and automates the tasks involved. However, the decision-making tied to a process is a business asset that requires consensus from both IT and business teams. This is something that RPA alone cannot deliver. It is only by separating the decision-making logic and managing it in a business-centric way that enables business and IT professionals to be on the same page.

Integrate RPA with DMN and a BRMS

▸ **Identify the decisions in the process before applying RPA:** It's critical to identify the business decisions that matter before getting started with RPA. Identifying the decisions allows RPA to be applied to automate the rest of the process, without risking that critical business decision-making will get obscured or lost in the process.

▸ **Model the decisions:** Decision models built with the DMN standard act as a blueprint for managing the complexity of real-world decisions The structure of the decision and the underlying decision logic can be managed using graphical models and decision tables. DMN encapsulates what would otherwise be messy branched and nested logic into a single new decision activity that can be included in the process. Organizations can leverage existing policies, regulations, best practices, and domain expertise to improve the decision model. They can even use process mining tools and analytics to identify thresholds and segmentation currently in use in the process.

▸ **Automate them in a BRMS:** By structuring the business logic in the BRMS according to the modeled decision, a simple, business-centric, and clear decision service can be developed. Business processes that are kept separate from decision-making in this way are organized more clearly and packaged more compactly.

▸ **Use RPA to pull together the non-decision-making components of the process:**
- Assemble the data needed for each decision task based on the requirements of the decision model. The decision model ensures that only the data that is required to make the decision is included. RPA can pull this data from a wide range of possible legacy systems, emails, spreadsheets, or application programming interfaces (APIs).
- Act on the decisions made, updating all the necessary systems and sending all the necessary acknowledgements, depending on the decision made. This too can be complex in a typical business environment where selecting the right thing to do (the decision) is often just the beginning.

▸ **Integrate RPA bots and deployed decision services:** By integrating these elements, organizations can streamline and simplify processes, making them easier to maintain and manage.

Conclusion

RPA can be a great boon to businesses looking to streamline day-to-day operations. When combined with DMN decision models and a BRMS, RPA can be a powerful tool for automating processes that rely on business decision-making.

Source:

[1] https://www.cio.com/article/3236451/what-is-rpa-robotic-process-automation-explained.html

Learn more about combining advanced technologies such as RPA, artificial intelligence (AI), and machine learning (ML) with DMN and BRMS systems. Automate, streamline, and optimize your business with our unique and innovative DecisionsFirst™ approach.

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