THE EVOLUTION FROM ROBOTIC PROCESS AUTOMATION TO INTELLIGENT AUTOMATION

Six best practices to delivering value throughout the automation journey
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The opportunity to apply robotic automation to business processes has captured the attention of many organizations as they compete in a digital-first world that requires seamless operations, and greater value from resources.

By adopting robotic process automation (RPA), organizations are automating rule-based processes with software programs that do not require human interaction, and are applying them to systems, such as ERPs, workflow, and databases. When combined with additional digital technologies, RPA evolves into intelligent automation (IA), delivering exponential value by learning and adapting as it automates.

While interest in RPA continues to soar, clarity on what this technology is, how it can be adopted successfully, and where it is going has not kept pace. To clear the ambiguity around RPA and its future, Genpact partnered with Zinnov, a research firm, to produce this practical paper.

Encompassing the insights from over 25 interviews with RPA practitioners and subject matter experts, plus Genpact’s lessons from automating more than 750 sub-processes, this guide offers best practices to organizations at all levels of maturity. Looking beyond the immediate productivity benefits, we also explore how firms are impacting top-line growth as the evolution into intelligent automation progresses into artificial intelligence (AI), and the creation of tomorrow’s truly transformational workplace.
Robotic process automation has evolved significantly over recent years. When applied with systematic planning, RPA substantially improves performance and counters inefficiency across business processes.

Most enterprise processes are manual, deterministic, and repetitive, and more than 70% can be automated using software robots. Processes that have greater complexity and require human judgment can also be automated by 15–20% through strong collaboration between software robots and human workers. Figure 1 shows process complexity and automation opportunities in financial services as an example.

As RPA technology evolves at an accelerated pace, enterprises are becoming more aware of the need to align their technology investments to customers’ needs and business outcomes. For these organizations, value is captured in RPA systems that cut across some of the most complex processes and truly mimic human action. In this setting, process automation requires cognitive abilities, such as natural language processing, speech recognition, computer vision technology, and machine learning, to comprehend the vast amount of structured and unstructured data, learn on the go, and intelligently automate processes.

As the early majority – the first sizable part of a population to embrace innovative technology – adopts the technology and explores new use cases, the convergence of RPA and digital is moving the goal from simply adopting robotic automation for productivity gains to achieving intelligent automation.
Gartner predicts that “by 2020, end-user spending on robotic process automation software will reach $1 billion, growing at a compound annual growth rate (CAGR) of 41% from 2015 through 2020.” The forecast says that “by 2020, RPA tools will have evolved to include more types of functionality, such as AI software, but will experience strong downward pricing pressure.” In addition, “by 2020, 40% of very large global organizations will have adopted an RPA software tool, up from an estimated less than 10% today.”

Some industries, like financial services and retail, have taken the lead with RPA, while manufacturing and healthcare firms have recently increased traction. Over 50% of Genpact’s large enterprise clients have either invested in or are actively considering investing in RPA.

There are a variety of benefits that are driving enterprises towards RPA (see figure 2). Most significant are the potential cost savings: up to 55% for deterministic, rule-based processes. Speed of execution, accuracy, and compliance are key RPA benefits for organizations, in particular for financial services firms. Retail companies looking for capacity on-demand realize that onboarding human resources for a short period of time requires considerable effort and senior leadership bandwidth; for that reason they are gravitating towards using RPA instead. Companies can also free-up human resources from non-value-adding work, and redirect them to tasks that require judgment to gain more productivity per person and greater employee satisfaction as they undertake higher value work.

Organizations that combine RPA with additional digital technologies, such as dynamic workflow, machine learning, and/or natural language processing (NLP), are realizing greater value by achieving intelligent automation. A commercial financial services firm, for example, has applied these technologies to its underwriting process for loans. NLP reads an applicant's financial statements and any information in the public domain. Dynamic workflow ensures the lender reviews the analysis with scoring models for decision-making, while robotics creates a customer profile sheet. Faster decision-making is a productivity benefit, but the bigger value lies in making more accurate customer and pricing decisions.

SIX RPA BEST PRACTICES TO ADOPT

RPA offers tremendous opportunities, but enterprises need a carefully crafted strategy and execution approach to harness them. A combination of deep process expertise, technology prowess, and domain knowledge is also vital. An RPA deployment should build on six established best practices (see figure 3).

Figure 3: Six RPA best practices
There are three process types that are excellent candidates for RPA implementation:

- **Data-entry procedures in workflow processes**: such as entering data from claims documents into a claims management system, and invoice-processing functions
- **Data extraction from standard databases**: for example, extracting customer information to file tax claims, and data migration activities from one system to another
- **Routine decision-making processes**: such as processing insurance claims, and banking transactions
The time taken to achieve ROI is one of the biggest challenges in RPA adoption. Enterprise processes continue to increase in complexity with greater seasonality, regulatory requirements, geographic variations, or numbers of exceptions, which result in longer development times and more user-acceptance testing. The time to reach break-even could range from six months for standard processes to up to two years for complex ones. The cost savings also range between 10–50% depending on the complexity (see figure 5).

Enterprises should look at robot utilization in a critical way and use RPA platforms that allow robots to shift between processes during lean periods. Businesses managing large virtual workforces can consider creating centralized control to manage bots, monitor performance, and track benefits.

“The ROI we have been able to achieve is much less than projected but it is still fairly good. We had a mismatch in terms of the time we would take to recover the investment because when we hired the vendor we thought it would take 4-6 weeks for the automation to be up and running. However, it took much longer. In our experience, for best results the process to be automated needs to be standardized along with clear demarcation of rule based vs. non-rule based parts.”

General Manager
(Large Global Container Shipping Company)
A governance structure that defines roles and responsibilities for automation activities will help deliver successful RPA initiatives (see figure 6). Key elements include:

- Guidelines and templates for assessing, designing, developing, and deploying robots, and enabling collaboration between business units
- Frameworks for internal change management
- The ability to track performance and productivity metrics to assess impact and highlight areas for improvement

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**RPA vision / roadmap**
- Create a center of excellence early in the journey to accelerate adoption of RPA across the enterprise
- Set deadlines for achieving intelligent automation to leverage the full value of RPA

**Ownership**
- Involve legal, risk, IT, and other teams that are involved in the processes due to be automated
- Include process-specific SMEs for insight on the process nuances

**Enterprise change management**
- Communicate the benefits: RPA helps to eliminate repetitive, non-value-adding tasks so employees can make a greater impact in their roles
- Involve HR to support employee up-skilling, which brings value beyond the benefits from technology. Organizations should prepare employees to work alongside automated processes

**Deployment framework**
- Calibrate production and development environments to ensure smooth RPA deployment
- Ensure IT is aware of RPA-enabled processes, and that it communicates any code changes to the RPA/operations team before they go into production

**Operational risk / data security**
- Create a cross-functional team to clear temporary backlogs in case of bot failure
- Maintain people in critical processes for error-free delivery

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*Figure 6: A guide to governance*
Leading RPA platforms are equipped to handle the most common automation scenarios. Organizations should evaluate tools with pre-built automation libraries that have re-usable components to connect to back-end systems, data-extraction capabilities, and cost and licensing options. As companies mature to automate processes with unstructured data and require cognitive abilities, they integrate RPA with wider technology solutions to achieve additional benefits.

It is also important to work with service providers that can offer end-to-end process support. Further, companies are investing in creating internal centers of excellence that can support critical business functions or processes.

RPA practitioners recommend re-engineering business processes that are inefficient and have critical interdependencies on other processes and applications. Such processes, along with those that are prone to a high degree of exceptions, would otherwise not generate the desired RPA outcomes. Those with few exceptions are good candidates, which is how RPA is increasingly being included as part of broader process and digital transformation initiatives.

A significant number of RPA failures are attributed to the lack of collaboration between business and IT functions. Business leaders often fail to include IT in RPA planning discussions as they assume that RPA systems don’t require extensive IT support.

On the other hand, in the case of IT-intensive projects, IT leaders often undermine the value of a business function’s view point and do not take process nuances into consideration. RPA enablement should be a combined effort between the business and IT with an operating model that defines the roles and responsibilities of each player. While the function needs to own the operational requirements, process design initiatives, and performance monitoring, aspects such as reliability, risk management, technological compatibility, identity and access control, and compliance are for the IT organization to deliver.

Enterprises considering introducing RPA to their organizations should evaluate these six practices to prioritize the processes that can best be performed by software robots, stay invested for the long term, create an effective governance plan, and lead to intelligent automation.
As the benefits of RPA adoption continue to grow, greater numbers of organizations are beginning their own deployments. However, as RPA is still subject to much speculation, businesses need a well-designed strategy to pivot from boardroom conversations to actual success. Directed systematically, RPA adoption is paving the way to achieving the cost and operational efficiencies desired by most organizations.

The future of RPA and intelligent automation will be shaped by the following key forces:

**Process-centricity as priority**
A process-centric view is essential as multiple digital technologies start appearing in (and confusing) organizations. This will become even more important as RPA is deployed as part of broader business process management and digital transformation initiatives, and success is measured top-down. For RPA to mature into intelligent automation, it is important for organizations to re-imagine processes using design-thinking principles to create winning customer experiences, and end-to-end solutions, while managing compliance and governance.

**Integration of RPA and digital technologies**
The combination of RPA and digital technologies is transforming deterministic and rule-based RPA into truly intelligent automation. Enterprises are expecting to gain greater value from IA with its promise to process vast amounts of data, learn on the go, and automate complex business workflows. Intelligent automation will evolve to leverage artificial intelligence more over time, achieving the next era in automation, with more significant benefits.

A global financial services firm, for instance, uses artificial intelligence to deliver personalized advice to its high-net-worth clients. The solution scans through relevant data sets and crawls various publicly available information sources and unstructured data to build a profile of the individual. It identifies behavioral patterns using an AI engine to show potential matches with different types of wealth management products. The relevant recommendations are shown on the client’s mobile phone, tablet, and other devices.

**RPA, enterprise software and APIs**
Over time, RPA capabilities are likely to become more closely integrated in other enterprise software products. Industry acquisitions in the RPA space are set to continue, while broader enterprise software companies will integrate RPA into their offerings and build a software library of RPA use cases to enhance the customer experience. APIs will play a big role in enabling the exchange of information across technologies. This tighter integration will lead to less custom development work, and even higher levels of productivity.

It’s fair to say that the path to successful RPA adoption can be challenging given the multitude of decisions and choices that enterprises need to make along the way. These range from where to apply and prioritize RPA with well-defined outcomes, to how to adopt RPA: the tools, partners and governance. And while enterprises grapple with these choices, rapidly evolving digital technologies are pushing the boundaries of what is possible even further.

The benefits, however, make RPA a key opportunity for enterprises to invest in today. The reality is that RPA should be addressed as part of a bigger digital transformation initiative. CEOs and leadership teams must build an integrated RPA vision, commit to its success, and develop measurable goals across the organization. Corporate leadership teams need to amend their roadmaps based on pilot projects and continuously refine their RPA vision with clear rewards for executives and employees to make RPA a priority.

Service providers that bring in the unique combination of deep domain knowledge, technology prowess, process handling (including exceptions), and adherence to SLAs are indispensable for achieving ROI at scale. A service provider’s ability to leverage design thinking to reimagine processes is also a critical factor in guiding enterprises through this maze. Successful RPA deployment will depend on the provider’s automation experience, prowess in high-velocity engineering, and Lean implementations to enable continuous iterations and improvements.

RPA is coming of age and becoming a mainstream investment focus across industries. As such, organizations are bringing robotics and advanced digital technologies together, balancing human and robot workforces, and automating intelligently. Pulling all of this together through intelligent automation—and beyond with artificial intelligence—requires strategic planning, and the ability to break boundaries, convince stakeholders, and occasionally fail. These temporary failures lead to greater learning for an enterprise’s overall digital transformation journey.

In today’s hyper-competitive world, the only choice enterprises do not have is to not make a move at all.
Genpact has led the deployment of robotic process automation in over 750 sub-processes for more than 140 client functions — including finance and accounting, supply chain management, insurance underwriting, and healthcare policy administration. We have developed unrivaled experience and skills in bringing intelligent automation to organizations worldwide.

Based on our Lean Digital™ approach, which combines design-thinking practices, process and domain knowledge, and digital technologies and analytics, we deliver transformational impact and expected business outcomes. Our capabilities include digital consulting, mature RPA assessment methodologies, end-to-end governance, agile development, and deployment accelerators.

We have generated savings of over $200 million, with an average of 44% reduction in processing time. In addition, our intelligent automation initiatives have improved customer experiences, resulting in higher revenues, greater competitiveness, and increased market share.

In recognition of our credentials, analyst firm HfS Research positioned Genpact in the Winner’s Circle of its 2016 Blueprint Report on Intelligent Automation, which highlights our holistic approach to intelligent automation.