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Robotic Process Automation in Insurance

An ACORD/Capgemini Perspective

People matter, results count.

A New Era in Insurance

Insurers have been accustomed to the current market realities of relatively low premium growth, rising loss costs and ever increasing customer expectations. Over the years, carriers have focused on adapting the business to address the challenges posed by these conditions. Senior management, business unit and IT leaders have directed investments primarily towards performance improvement initiatives including cost take-out.

However, the industry is now facing an inflection point where current market conditions, the growth of emerging technologies, and the rise of a digitally-empowered consumer is driving an outcomes-focused operations and technology (O&T) agenda. The result is a new insurance technology "era", where CIOs and COOs are increasingly working together to attract, retain and develop customers while maintaining their focus on administering and transforming the current business and IT infrastructure.

The cornerstone of this new "era" is digitization, which not only involves the conversion of paper and hard-copy information into digital formats, but also includes the deployment of capabilities which support digital processes including social media, big data and analytics, internet, and mobile technologies. The end result for insurers is a digital business model which will support improved decision making, enhanced customer relationships and expanded automation / reduced human touch points across the value chain.

Unfortunately, not all insurers have the culture or capacity to embrace this change and the fundamentally different operational models that are now appearing on the horizon. A recent ACORD study of digitization in the insurance industry, suggests that only about 40% of carriers have truly digitized the value chain while more than 10% are not leveraging digital technologies within their current business processes.[1] While the reasons insurers struggle with digitization vary, there are a number of common barriers including:

- Accumulated legacy systems characterized by outdated technologies and a complex infrastructure of siloed applications and supporting data, systems and architecture
- Complex business models, particularly in the area of underwriting and claims, where multiple variations of similar processes, modified to support unique lines of business, co-exist across the value chain
- Lack of vision, C-suite support, and talent to implement and manage a digitized process environment
- Impact of organizational silos including multiple, complex balance sheets and a lack of transparency and collaboration across the enterprise
- Marketplace disruption including emerging competitors and shifting compliance and governance requirements

In order to address these issues, O&T professionals and business leaders among insurers, agents, brokers and reinsurers are increasingly turning to Robotic Process Automation or RPA, the use of software combined with artificial intelligence and cognitive computing to mimic the activities of humans conducting highly repetitive tasks. Current spending on RPA technologies among banking, financial services and insurance firms (BFSI) is estimated between $50 million and $100 million and is forecasted to grow between 30% and 60% annually, potentially surpassing $1 billion in the next five years.[2] This is being driven by the need for strategic flexibility, operational adaptability, and process efficiency.

[1]ACORD Insurance Digital Maturity Study, 2016

[2]ACORD Research, 2017. Analysis of RPA spending estimates and forecasts in the BFSI segment.

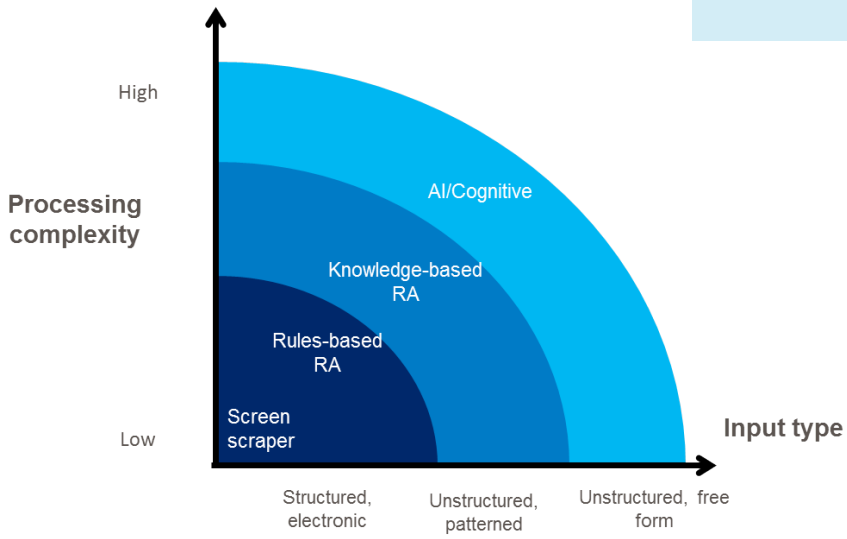
Unlocking the Potential of Robotic Process Automation (RPA)

RPA is a software application that combines user interface recognition technologies with workflow execution tools. RPA software is programmed to follow predetermined actions within specified applications that replicate and therefore replace the human interaction required to complete the required activities within a business process. These activities including moving or populating data between locations, performing calculations, initiating actions and activating downstream activities. RPA systems can be either attended, where an automation assists users and then returns control or unattended, where an automation selects input from a queue and processes it end-to-end without human intervention. Regardless of the level of human interaction, RPA solutions typically consist of five key elements:

- Non-intrusive business system integration
- Data aggregation which pulls information from multiple back-end systems
- Business rule execution based on defined logic and self-learning
- Work item and exception queuing
- Activity monitoring

RPA applications have evolved from the early days of "screen scraping", where applications collected data from one application to be shared with another. Today, most RPA systems are rules-based, which enable them to work well with complex processes governed by a specific set of repetitive rules, such as completing an invoice. Finding success with these systems, some insurers have begun to implement more sophisticated, knowledge-based RPA solutions. These systems are able to handle a wider variety of tasks and can operate outside a limited set of rules. A typical example of knowledge-based automation would be in the customer service function, searching for information across systems and answering customer emails. As artificial intelligence and cognitive computing advance, RPA solutions will eventually evolve into more value-adding initiatives.

What is particularly revolutionary about RPA software is that it does not necessarily require companies to make changes to their strategic processes or existing back office technologies. Even if companies are separated geographically or have various technological systems implemented, RPA is able to connect systems. Therefore, RPA may function as a low cost, low risk solution for process optimization with near-term payback.

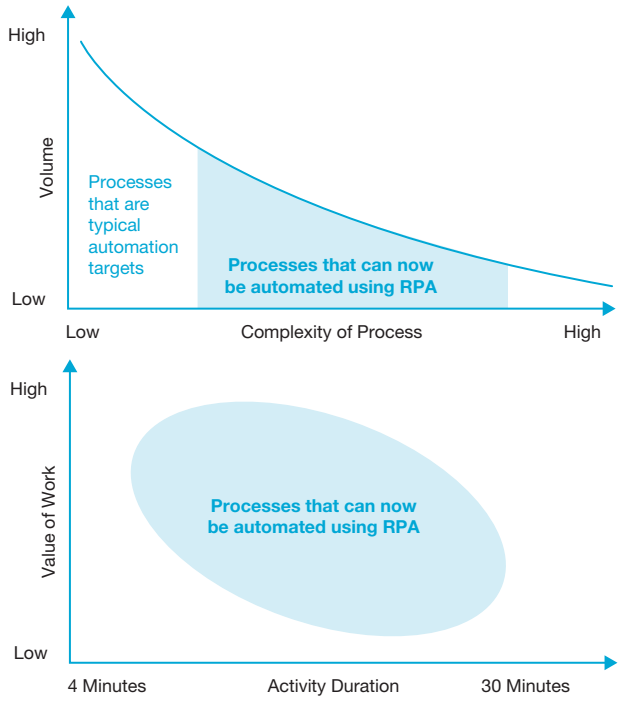


Opportunities for Insurance

Despite the value potential RPA solutions can bring to the business, not all processes are candidates for automation. Advances in artificial intelligence and cognitive computing are providing new opportunities to extend automation to processes requiring a high degree of decision making or involving a wide potential for exceptions. However, today's RPA solutions are typically best suited for processes with the following characteristics:

- Require access to multiple systems
- Prone to human error
- Comprise unambiguous rules
- Require limited human intervention
- Require limited exception handling
- Manages high volumes of transactions
- Highly repetitive or subject to significant peaks in workload

Characteristics of Processes Which Can be Automataed Using RPA



Across the insurance value chain – including sales, underwriting, policy issuance, policy servicing and claims processing – there a number of manual and repetitive tasks that would benefit from automation. These include menial sub-processes where RPA could be applied to allow human employees to focus on the more complex, value-added activities. Within the underwriting function, for example, the collection of policyholder records, prior-year claims documents, and other underwriting data can be easily handled by RPA applications, improving the underwriter's productivity and freeing up additional capacity to handle more cases. This will not only lower costs, but also provide revenue growth opportunities by increasing the capacity to write more business.

A review of the insurance business models highlights several key areas where RPA could have a meaningful impact. These include not only core insurance processes, but non-core, back office functions such as finance and accounting, procurement and HR.

Implementation Considerations

Before launching an RPA project, a number of considerations must be taken into account to ensure that the full benefits of RPA are realized.

First, experience shows that RPA delivers the greatest level of efficiency when applied to processes that have already been optimized and where any non-value activities have been removed. Simply jumping straight into robotics exposes the organization to the risk of magnifying what already is a bad process. Eliminate, Optimize, Automate, and Robotics (EOAR), is one approach that can be used to prepare a process for the implementation of RPA.

The first stage of this approach involves eliminating any unnecessary steps while optimizing the remaining actions in the process. The improved process is now ready for the application of RPA, first through the deployment of rules-based, process automation, which leverages Application Performance Management tools for unified monitoring and self-correction. It is estimated that between 25%-40% of manual process steps can be automated in this phase. The use of analytics and cognitive computing provides significant opportunities to generate benefits through additional RPA implementations. The application of statistical analysis, prescriptive modeling or workforce and workload monitoring can be used to automate an additional 10%-15% of processes within the business model. The execution of judgment based processes, such as exception handling, is possible with the use of artificial intelligence and has the potential to increase automation by another 20%-25%.

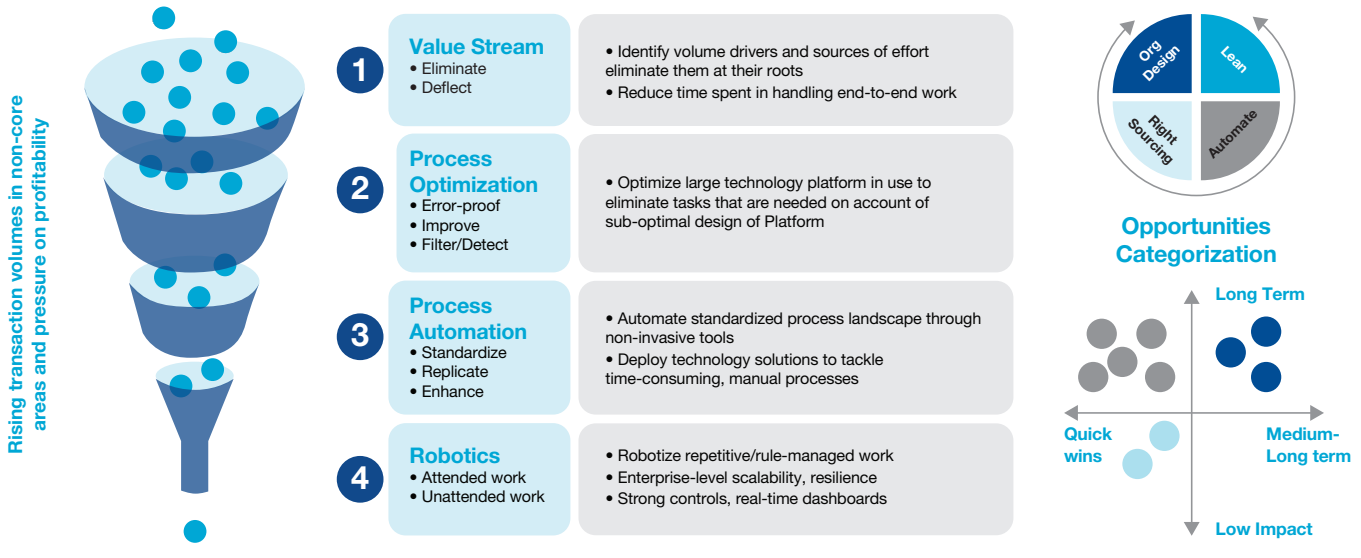
Second, in addition to the RPA software and process improvement activities, a number of supporting components are required to successfully implement and manage RPA-enabled processes.

- RPA will be running critical client processes and will require close monitoring and preventative maintenance. **RPA coordinators** will need to stay in close contact with the application owners and process owners to anticipate any needed changes to the automation based on product introductions or application changes.

- RPA involves transaction handovers between both humans and automated processes as well as between one or more automated processes without any human interaction. As a result, **workflow tools**, which monitors & tracks transactions and ensures nothing falls through the cracks, will be required.

- RPA provides granular data on each and every transaction. **Data management** is required to generate and leverage operational intelligence and insights. Unlike traditional sampling techniques, this data is 100% auditable, quality compliant and provides an operational picture unavailable through traditional approaches.

- Once RPA reaches industrial scale (50 or more robots) the need for a continuous focus on driving value using **smart scheduling** of robots becomes critical. This can be achieved through attendant automation, autonomous automation based on triggers or using one robot for multiple processes.



*EOAR: Eliminate, Optimize, Automate, Robotize

Benefits

As with traditional automation solutions, one of the most obvious benefits of RPA involves the reduction in labor cost associated with manual processing. When compared to their human counterparts, RPA can cost as little as one-fifth of an on-shore full-time employee (FTE) and one-third that of an off-shore FTE. RPA applications also have the potential to reduce error rates by 20% and free employees from tedious tasks, enabling them to focus on more value-added initiatives.

Overall, the benefits achievable through RPA fall into one of three categories. From a productivity perspective, RPA applications can run 24 hours a day, 7 days a week, vastly reducing the need for downtime. Since RPA consists of software, human training is replaced by programming which can be conducted across tens, hundreds or thousands of RPA applications at the same time. Insurance firms have reported productivity gains of up to 50% within those processes where RPA has been implemented.

Operational efficiency, particularly in the area of service delivery, is another key benefit. Reductions in cycle-times of nearly 80% are not uncommon among those processes where RPA has been implemented. In addition, RPA ensures a level of accuracy, security and continuity that is higher than that when humans handle the same processes. This is particularly important in the insurance industry where customers are increasingly demanding consistent and transparent levels of service. An additional, and somewhat overlooked, benefit to RPA involves regulatory compliance. When properly coded and applied to the appropriate process, RPA applications can ensure 100% compliance with stated regulations.

Finally, RPA has demonstrated significant cost optimization savings over both on-shore and offshore delivery options. The lower costs achieved through the reduction in FTEs and other “run the business” expenses, often translates into RPA investment recovery periods of as little as six to nine months.

Case Study

Leading Global Insurer

Business Process: Policy Renewal Process

Activities

- General Liability and Financial Lines
- Non-Standardized process between three different locations worldwide
- Process involved more than 25 applications and numerous documents, forms and emails
- Part of the process involved an offshore Business Services provider

Benefits

- Reduction of FTEs by approximately 50%
- 30 to 40% increase in efficiency
- Elimination of overtime, including peak cycles
- Increased customer satisfaction due to faster response times
- Increase in quality and accuracy output

Source: Capgemini

Case Study

Global Insurance Brokerage Firm

Business Process: Robotics Center of Excellence

Activities

- Identify business processes for automation
- Establish and demonstrate RPA capabilities within the context of the business
- Illustrate expected benefits and obtain business user acceptance on automated results

Benefits

- 50% reduction in FTEs
- Reduced cycle time of targeted processes by 75%
- Reductions in error rates
- Ease of scalability to extend RPA
- Reduced operational cost

Source: Capgemini

Critical Success Factors

The success of RPA depends on many factors including identifying and prioritizing the most appropriate processes to automate and deciding on the extent to which RPA will be leveraged across the organization. In reviewing multiple RPA projects across the insurance industry, there are a core set of best practices that underpin the most successful implementations.

- The application of Lean Process Optimization before any application of Robotic Process Automation
- Business ownership of the solution is essential. Business criticality and component-based architecture should be used to drive prioritization of RPA candidate processes.
- Implementation of a Center of Excellence (CoE) including guidelines for assessment, design, development, and deployment of robots
- Creation of a central RPA command center to proactively monitor progress, benefit realization, capacity, and interdependencies
- Establishment of a dedicated, regional RPA project execution and maintenance team coordinated through the command center
- Formation of a shared asset library across geographies and functional areas
- Alignment of RPA deployment architectures across geographies and business units

RPA has the potential to deliver significant benefits including increased productivity, operational efficiency and cost optimization. However, it is critical that insurance organizations consider the investment in these technologies in the context of a broader digital transformation strategy. Automation, either through RPA or conventional approaches, should not be viewed as a panacea to inefficient processes, misaligned capabilities or a lack of vision for the organization. With proper focus, Robotic Process Automation can serve as a critical component of an outcomes-focused operations and technology (O&T) agenda.

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