The "dark" side of processes - How the use of RPA and AI is redefining the boundaries of how we will work in the future

An Infosys Consulting Perspective

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The "dark" side of processes

The automation of processes is a further logical step in the course of technological support in everyday working life. From our market´s perspective, insurance companies are already making an increased use of this type of support. The extent to which they do so varies greatly depending on the organisation and their business and IT strategy. The use of automation is becoming increasingly important, especially in times of a shortage of skilled workers and when knowledge carriers are constantly leaving due to generation shifts. This need is compounded by the declining number of newcomers. While there were 13,300 trainees in 2011, ten years later there were only 10,500[1].

Quick wins: Leveraging potential with Robotic Process Automation (RPA) bots

Considering this, the use of RPA bots (autonomous programs that make rule-based decisions) for the automation of "low-skill tasks" is logically an interesting alternative. Thus the following questions should be discussed in advance in order to optimally support the entire organisation and its workflow:

- Will the bots be trained, deployed controlled and integrated centrally or decentrally by the department?
- What skills do already exist in the organisation to develop the bots?
- Will training still be offered in the future or will there be a "handover" to bots?
- What process steps will be automated?
- Is end-to-end execution possible?
- What systems and tasks are particularly suitable for the use of RPA bots?
- In what constellations does the use of bots no longer make sense?

The organisation's goals and expectations should be named and discussed against the background of technology, scope and business processes in order to achieve success in the short and medium term.

Input type	RPA processing possible
Email	✓
Electronic form	✓
Databases	✓
Free text fields	(✓)
Scan	✗
PDF	✗
Handwritten note	✗
Telephone enquiries	(✓)

Figure 1 Exemplary areas of application and limits of RPA bots

Automation is advantageous in the processing of routine procedures. The field of application of the RPA bot focuses on the execution of structured, standardised processes that are carried out regularly. The basis are defined business rules. The set of rules is based on if-then scenarios and can be modelled depending on the area of application. The bot can be used quickly and cost-effectively for support, is available 24x7 and can be reached, e.g. for written advance enquiries.

Examples of applications from the industry are the policy writing of new contracts, the automated recording of claims notifications or the processing of "simple" claims/benefits. Ideally, these are processes with a high administrative effort, which primarily arises from the collection of large amounts of information or simple standard checks. Experience shows that the use of bots reduces the processing time by up to 50%.

Next steps: Expanding the possibilities through artificial intelligence (AI)

Where the RPA bot reaches its limits, the complementary and tailored use of self-learning AI can leverage further potential. While the RPA bot needs structured, consistent patterns and specifications, AI-based "decision-making bots" can independently recognise patterns from a multitude of specifications and process the operation accordingly. They can provide great added value, for example, in fraud detection - anomalies and deviations from patterns can be quickly identified and routed to the clerk for analysis.

Input type	RPA processing possible	Extension through AI
Email	✓	✓
Electronic form	✓	(✓)
Databases	✓	(✓)
Free text fields	(✓)	✓
Scan	✗	✓
PDF	✗	✓
Handwritten note	✗	✓
Telephone enquiries	(✓)	✓

Figure 2 Enhanced capabilities through the use of AI

In addition to image recognition, the evaluation of free text fields and complex conclusions are another feature of AI bots. Regardless of text structure and volume or font type and size, this unstructured, unsorted data is transmitted. They are put into a logical syntax and the next steps are triggered. Automation is particularly useful for processing handwritten documents. Although these tend to become fewer in the course of increasing digitization, the spectrum still ranges from agent applications and customer correspondence to notes in open processes that are documented in analogue form.

Production Readiness: From the Lab to Industrialized Production

A large majority of insurance companies are already using bots and forms of AI. The first experiences with labs, insurtechs and innovation factories show the potential of these technologies. The task now is to create the appropriate framework conditions for the widespread use of bots and AI in day-to-day business. With a suitable "RPA and AI factory model", the development and use of automation in production is accelerated, dependencies on other IT systems are coordinated, and the automation lifecycle is managed.
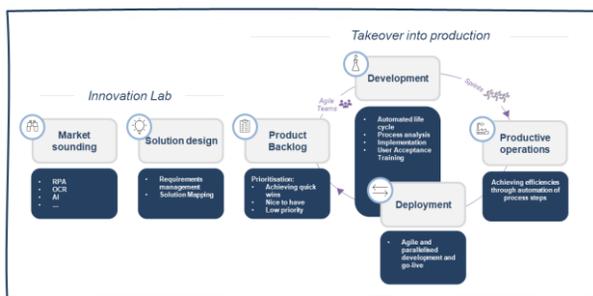

Figure 3 RPA and AI factory model

A practical example shows that a central AI team is established in the organisation that takes over the setup and further development of the bots according to the requirements of the departments. This has the advantage that the requirements are available across departments and synergies can be realised with the use of the bots. The need for subsequent adjustments is thus kept low and operating and maintenance costs are optimised. The prerequisite for this, however, is a basic stock of existing know-how and the commitment of the departments to continuously train and educate the bot as an "advisor".

Efficient and attractive - automation in the departments

Bots and AI are proven to be effective tools for increasing the degree of process automation, freeing this group of scarce specialists to tend to more complex tasks that requires special expertise and human judgement. Meanwhile, the bot "runs through" the set of rules, and processes the assigned operations without restrictions in due time and with proper quality. Customers also benefit from the shorter response times, which in turn increases satisfaction with the service. Proactive rather than reactive customer experience is a competitive factor that should not be underestimated.

The rigid processing of rules is extended by self-learning algorithms by adding AI to bots. Modern AI is largely based on machine learning (ML), which requires enterprise-wide data management. This expands the application range of automation even in complex situations. The implementation costs of AI are significantly reduced with the use of pre-trained ML models, and the corresponding maintenance and adaptation costs tend to decrease over the running time.

For companies that have already invested a lot in testing and possible applications, it is now a matter of transferring these findings into daily business and industrialised operations. For those that are still in the early stages the question is how-to pick-up speed quickly - ideally avoiding the same learning process of the pioneers. External consultants can help their clients to quickly implement their efforts via dedicated labs and experience in this environment, as well as support the internal teams with technical knowledge and implementation expertise.

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[1]Sources: AGV Versicherungen: Eckdaten zur Ausbildung in der Versicherungswirtschaft

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