Ditching labor-intensive paper-based processes: Process automation in a Czech insurance company

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Abstract.
(a) Situation faced: The insurance company Generali CEE Holding faced two types of challenges. From an external perspective, the company had to tackle challenges concerning digital transformation, regulatory compliance, and new legislation. From an internal perspective, the company faced a legacy of paper-based process documentation as well as process and workflow inconsistencies.
(b) Action taken: In the digital age, paper-based processes are obsolete and obstruct progress. Based on an Agile project management approach, Generali CEE Holding ditched its labor-intensive paper processes for corporate risk underwriting during a company-wide transformation project, integrated their processes and data into one robust platform, and implemented robotic process automation software to significantly boost productivity and efficiency.
(c) Results achieved: The new platform and robotic process automation software helped Generali CEE Holding make their processes consistent, automate their inter-company workflows, and enhance employee and customer satisfaction. It also ensured compliance with ever-changing laws and regulations in their corporate risk underwriting.
(d) Lessons learned: Simply ditching paper-based processes by digitizing them or deploying a solution for robotic process automation does not guarantee a desired goal. It requires a lot of effort in terms of time and resources. This project demonstrated that a radical change from paper-based processes to robotic automation in a short period of time was possible by starting small and focusing on a smaller sample of processes, making use of an Agile project management approach, and connecting the business and the IT departments in the endeavor.

Keywords: Business process management system, robotic process automation, insurance industry

1 Introduction

The international insurance company Generali provides life and other types of insurance for a range of clients, including individuals, small- and medium-sized companies, as well as corporations. The company aims to manage uncertainty about their customers' futures by protecting them against various risks. Generali offers motor, home, accident, and health insurance as well as commercial and industrial risk solutions in their property and casual insurance segments. With over 14,000 employees, 24 percent market share and eight million insurance contracts, Generali CEE Holding is an important subsidiary and market leader in the Czech Republic. However, Generali CEE Holding faced several challenges concerning digitalization, the insurance market itself, and in their daily working routines concerning process and workflow management that resulted in inefficiency and productivity loss. For example, internal processes had been paper-based, which created the duplication of data and resulted in time- and resource- consuming tasks for their employees.

New regulatory legislation also forced Generali CEE Holding to adapt their internal processes. Generali CEE Holding took advantage of this opportunity to initiate an organization-wide transformation project. The goal of this project was to embark on an organization-wide business transformation to significantly boost productivity and efficiency in the area of corporate risks underwriting. In 2010, Generali CEE Holding teamed up Bizagi, an international software company for business process management (BPM) solutions, to manage this transformation. In this case, the transformation focused on digitizing processes, as well as process- and workflow automation, including robotic process automation. The automated and efficient processes and workflows finally delivered immediate benefits for Generali CEE Holding. Generally, process automation is concerned with the automation of either simple single-process activities or entire complex processes [4]. This paper describes the situation and the challenges Generali CEE Holding faced, actions that were taken to overcome these challenges, what was achieved, and finally, lessons learned.

2 Situation Faced

From an external perspective, Generali CEE Holding not only faced legislative and market challenges but also new the challenges from the digital age. First, a changing regulatory backdrop and new legislation from the Czech and European governments forced Generali CEE Holding to take actions and adapt their processes. For example, they had to meet the requirements of data protection regulation legislations and changes to the International Financial Reporting Standards and Insurance Distribution Directive. Second, digitalization was a powerful force, radically changing the insurance company's landscape. Therefore, Generali CEE Holding needed to act quickly and deliberately to stay competitive and not lose the race against competitors. Insurance companies often go through digital transformation projects to optimize the customer experience and enhance customer loyalty.

From an internal perspective, Generali CEE Holding struggled with process and workflow inconsistencies. First, their processes used paper-based documentation. Such traditional filing systems, often result in a waste of time and resources. Finding the right document, passing the documents back and forth to update process information, creating duplicate entries, and even dealing with lost documentation results in inefficiency and unstructured processes. Second, processes that have already been properly documented digitally, can be managed even more efficiently with the help of (robotic) process automation. Various industries have recognized the enormous potential of business process automation to improve product quality and efficiency [7]. However, Generali CEE Holding employees still needed to switch between different systems (e.g., an internal data management system, policy system, and client overview), to receive the right information.

To overcome these internal and external challenges, Generali CEE Holding initiated a large-scale process project.

3 Action Taken

As part of the transformation strategy, Generali Holding CEE initiated a large-scale project. The overall aim of this project was to deliver structured processes for the underwriting process lifecycle in order to enhance productivity and efficiency. In particular, the focus was on the policy cancellation and the policy binding processes. Based on an Agile project management approach (i.e., Scrum), Generali CEE Holding started to take the required actions. Agile methods originate in the field of software development and found their way into project management (e.g., [3]). Nowadays, this approach enjoys great popularity among practitioners due to its fast-developing nature and user-centeredness. In the Agile method, a self-organizing team works at a high pace that still allows a balance of creativity with productivity. The team always needs to respond flexibly to changes from both the business and the technical sides [6]. Furthermore, employees and customers are actively involved in the development process to provide timely feedback. New technology by itself does not create value right away, it needs people and processes to incorporate the technology, thus making innovation possible and creating value for the company [8].

Generali CEE Holding followed multiple steps to change from paper-based, labor-intense processes to partly robotic automation-driven ones. The following paragraphs describe the four main steps of this journey. First, Generali CEE Holding's IT and business departments came together to form a project team. Other than the software solution provided by Bizagi, the project was handled in house due to unclear user requirements at the beginning and a high demand for fast delivery. The entire project had a timeframe of eight months. A team of three BPM developers and two business analysts worked together in workshops and interviewed users to receive the necessary information about the requirements of the new platform. Consideration of the important

principles of BPM, such as the principle of joint understanding and the principle of involvement, allowed the team to master challenges they encountered [11]. For example, the project team presented the users with the new versions of the prototype every week for five months. Consequently, all the stakeholders were well integrated into the project, and a common understanding of the problem and solution was created. At first, the target group (i.e., employees of the business and the IT departments) disliked the idea of the new platform, and the project team faced great resistance to change. The employees preferred stability and continuity with the existing way of working and feared the new changes. Often, as in this case, communication has been recognized as a relevant dimension for the success of organizational change [9]; the success also depends on top-level management supporting proper communication, training, and workshops [2]. As soon as the users understood that the new platform would simplify their work and allow a more efficient way of working, the users' resistance to the change disappeared.

Second, based on the collected user requirements, Generali CEE Holding introduced a robust BPM platform prototype to facilitate the process and workflow management. Over a period of five months, the project team presented the users with new versions of the system on a weekly basis. Based on the users' feedback, the prototype was developed further and new functions were added. Each week, a new feature of the platform was introduced to keep the users interested. The new platform consisted of four systems: web service integration, a document management system, the BPM engine, and a policy management system. Fig. 1 represents the new BPM platform.

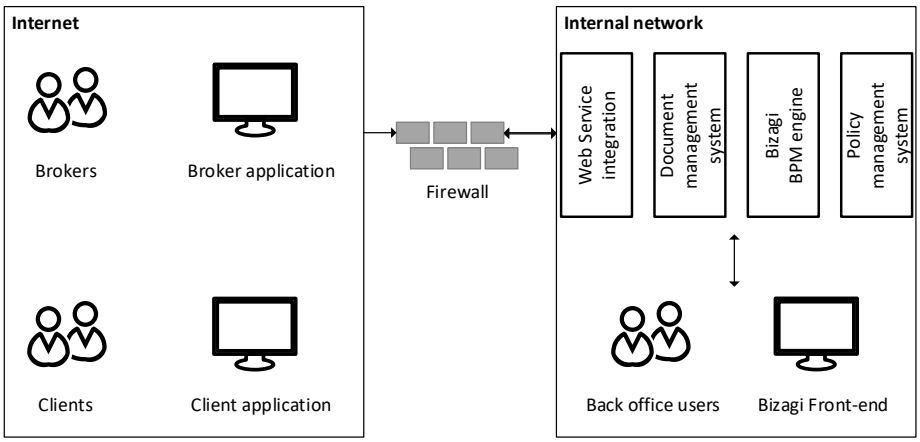

Fig. 1: Solution architecture

This simple architecture allowed Generali CEE Holding's customers and employees to interact smoothly. The web service integration in the form of an Oracle Enterprise Service Bus allowed Generali CEE Holding to communicate with their clients and brokers via the internet. Several application programming interfaces allowed the collected customer information to be distributed to the BPM engine and document

management system. It was then possible to automatically handle customer cases, such as quotations, complaints, and data protection regulation requests, and send these directly to the corresponding back-office departments. The new application allowed the replacement of old-fashioned paper-based documentation with digital process documentation. Additionally, the use of a single platform allowed an easy and fast distribution of process information across departments with defined business rules. All business data could be retrieved directly from the workflow system itself and the corresponding integrated database. Employees did not need to switch between different systems or paper-based documents to get the right information. Furthermore, the graphical representation and real-time monitoring of process elements delivered a high degree of control and visibility of service level agreements.

The third step in the journey was the optimization and simplification of the processes. All the user forms were kept manageable to avoid complex adjustments at a later stage (e.g., changes in the production parametrizations or in product behavior). Additionally, Generali CEE Holding minimized process activities and collected further business rules to facilitate decision making.

Fourth, in addition to process optimization and new software, advanced technology in the form of robotic process automation (RPA) was introduced. RPA is defined as a "software-based solution to automate rule-based business processes that involve routine tasks, structured data, and deterministic outcomes" [1 p. 65]. Such RPA software sits on top of the existing BPM systems [12]. Fig. 2 shows an overview of positioning RPA to highlight the corresponding relevance of this technology [10].

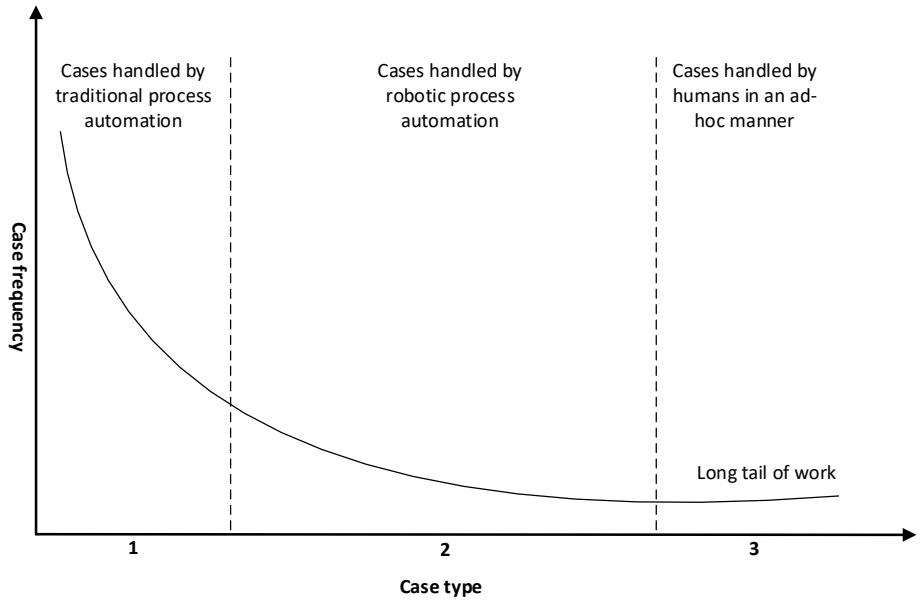

Fig. 2: "Positioning RPA" adapted from [10]

The "long tail of work" is split into three different case types: 1) cases that show a high degree of frequency and a common structure that can easily be automated, 2) cases that show a medium degree of frequency but do not justify process automation, and 3) cases with a low degree of frequency and need to be handled in an ad hoc manner. RPA can support the second type of case, as robotic agents imitate human workers. According to Fung [5], the second case type is characterized by the following five criteria and are therefore particularly suitable for RPA: 1) low cognitive requirements, which are tasks that do not require subjective knowledge or the creativity of workers; 2) high volume, which are tasks that are performed on a frequent basis; 3) access to multiple systems, which are tasks that require access to various applications; 4) limited exception handling, which are tasks with a high degree of standardization; and 5) human error, which are tasks that are likely to fail due to human mistakes. According to these criteria, Generali CEE Holding started to use RPA for all their policy cancellation processes. All other processes connected to policy binding were still done manually and in an ad hoc manner. The testing from the current pilot phase already shows promising benefits for extending RPA into other process areas at Generali CEE Holding.

4 Results Achieved

The transformation project was strategically relevant to the company and resulted in a great success. The introduction of the workflow system delivered immediate benefits for the company.

Process documentation. Changing the documentation style from paper-based to digital allowed Generali CEE Holding to improve process documentation *efficiency*, to eliminate duplicate data entries, and to improve accuracy and better use of existing resources. As a result, process *control* was increased and *responsibilities* were clear. For example, the time to prepare quotes and offers for customers was reduced by 40 percent.

Process automation. Generali CEE Holding automated and fully operationalized 38 processes within two months. RPA resulted in *cost reduction* based on increased productivity and reduced average processing time. In particular, Generali CEE Holding was able to enhance cost savings up to 50 percent with the new solution. Additionally, the use of RPA increased productivity with 24/7 potential and at the same guaranteed the quality of work as the failure potential of human error was excluded. Process decisions were now made based on clear and predefined logical rules instead of subjective knowledge or the experience of workers. This led to quality improvement and error reduction, as the robots run with only up to 1% error by default. Besides the benefits of cost reduction, even *employee satisfaction* increased as monotonous activities (e.g., copy-paste activities) were eliminated from their daily tasks, and they could focus on more value-adding tasks that required creativity and decision-making

skills. Furthermore, the new platform ensured greater *visibility and auditability* of transactions leading to better control of the overall underwriting process lifecycle. Generali CEE Holding could now follow new regulatory requirements in a fast manner and compliance was increased. Generali CEE Holding was now able to respond more flexibly and faster with its customers and regulators. Based on a faster handling of customer queries, for example, in the contact center concerning complaint management, the *customers* benefited as well. The introduction of RPA enabled Generali CEE Holding to enhance *business agility* and make use of *scalability* effects. Besides responding to changing regulations, seasonal demand could be solved by deploying virtual resources (i.e., robots) at a fraction of the cost and in a short period. As RPA had minimal impact on the existing IT landscape of Generali CEE Holding, the use of such software did not necessarily require Generali CEE Holding to make major changes in IT and allowed them to stay agile.

5 Lessons Learned

Based on the journey that was experienced from paper-based, labor-intensive processes to their automated replacements, the Generali CEE Holding project revealed several lessons learned.

Integrate data and processes. An integrated data model provides a proper foundation for process success as information and data can be shared across different departments and stakeholders at any time but with fewer resources. Furthermore, it allows an enhanced capacity for proper decision-making or forecasting based on accurate data. It takes a lot of effort to *consolidate data* and *processes*, but it paid off with great benefits for the company in this case. For example, it now allowed them to reduce data complexity, collaborate with internal and external stakeholders more easily, and quickly make and deploy changes to the entire production environment without much effort while taking care to keep the processes and data right.

Start small. Generali CEE Holding started to define and automate their processes and workflows with a few working processes in one specific area. Learning from a small sample allows later simplification and adaption due to market or legislation changes in a fast and easy manner. In particular, starting with a prototype with very few functions and adding *new features every week* keeps the users interested in future features and the final solution. Additionally, Generali CEE Holding started with one *pilot project* (i.e., the back office in the Czech Republic). The number of back offices in Europe that have started to implement RPA and learn from the experiences of this pilot project is steadily rising. At the time of this writing, the new platform includes 51 processes and has been delivered in four countries and five languages.

Work agile and involve users. Generali CEE Holding followed an Agile method approach (i.e., Scrum) to account for user requirements and the final solution rather than the traditional waterfall approach. First, a good and motivated *project team* should

be built that drives the change project. It is inevitable to bring the IT and business departments together and build a workforce of both departments to ensure a good overview and solid foundation for the project (e.g., for mapping of business processes and providing information about process execution frequency). Second, user involvement is of utmost importance. Based on regular workshops, interviews, and briefings, it was possible to capture *user feedback* and *requirements* for the final solution. Workshops can ensure that business and technology users are on the same page. It is also recommended to connect the BPM experts with the RPA experts, so all involved project participants are always informed about every decision or update. Third, created *prototypes* should be delivered quickly to gain stakeholder commitment and investments for the project. The faster a new version of a prototype exists, the better.

Master change. An implementation of a new platform is only successful if future users accept and work with the new platform. Therefore, some easy rules should be followed and resistance to change should be directly taken care of. First, the new platform should be made *relevant*. The top-management should support the new platform and communicate its importance to all levels of the company. Second, negative views from skeptical employees should be *listened* to and should be taken seriously. With training or workshops, their voices can be heard. The entire project team should always take time to receive feedback in regular user requirements and feedback meetings. Third, make the new platform *desirable*. If employees understand that the new platform is easy to use, valuable, and facilitates their working habits, it is more likely to get adopted. Fourth, the project team should *stay flexible*. They should have a project plan (e.g., timeline, tasks, responsibilities) in mind, but should be comfortable with change and project plan adjustments.

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