CAMUNDA

Harnessing speed and efficiency gains with Camunda-orchestrated intelligent document processing

Key Benefits
• 95% accuracy rate in determining intent, document type, and identifying organizational criteria from intelligent document processing
• Increased developer efficiency and speed
• Enhanced business employee experience

Camunda Product
Camunda Platform

See how Provinzial orchestrates intelligent document processing (IDP) technology with Camunda to maximize developer efficiency, strengthen IT and business user relationships, improve business employees' effectiveness, and create better customer experiences.

Introduction

When you think of the term "paperwork" in terms of insurance claim processing, the next word you think of is rarely "efficient." Paperwork is often seen as an administrative hurdle slowing down the process for business users, developer teams, and ultimately for customers as well, but is critically important for regulatory reasons to protect consumers, carriers, and financial markets.

That's why Provinzial is using intelligent document processing (IDP) technology to better collect, process, and direct information contained in documents, and orchestrating that information into business processes using Camunda to maximize developer efficiency, while also strengthening IT and business user relationships, improving business employees' effectiveness, and ultimately create better customer experiences.

The Problem/The Challenge

Software developer Marcus Hunger and the rest of the document input management function within Provinzial's application development team was facing a challenge. Their mission was to find a way to better connect their document intake and information extraction work to the existing workflow management system that powered many of the company's day-to-day operations.

Its historic document intake system was a "black box" style service, but was large and difficult to change. In fact, if any process owner or business user requested a change to the architecture of the business process, including how converted documents were handled in the process, they needed to wait for one of four quarterly update cycles to push those changes into production. This was frustrating for business users and negatively impacted developer efficiency, as they had to collect all necessary information to make the requested change and then wait for the next release cycle to actually push into production. Ultimately, this process affected the customer's overall satisfaction with Provinzial, as submitting documents to support their requested product or service wasn't a seamless experience.

The Solution

Hunger and his team wanted to have an option to react "just in time" to process owner requests and make changes as inputs were coming in from converted documents, and they wanted to share a system that gave business users transparency into the process to directly improve it with their subject matter expertise. That's why the team began experimenting with BPMN-based process orchestration to make collaboration between developers and business users clearer and more efficient.

"We pick the right tool in our toolbelt to solve the problem," Hunger explained. "BPMN makes it easy to pick the

right tool in the belt."

Additionally, the team began using the DMN standard to implement business rules into their processes to increase developer efficiency and to solve for the long cycle times. DMN allowed for business users and experts to interact more often and more directly with their processes, collaborating with developers as opposed to requesting work from them.

To support this strategy, Provinzial chose Camunda to orchestrate these business processes to empower both developers and business users to create better, more seamless customer experiences. Using Camunda's heatmaps feature helped business users quickly identify areas within their processes that needed improvement and swap out rules to guide those changes, instead of having to wait for the next release cycle to make a manual change. With the help of Camunda's process visibility and analysis features, the team can easily monitor the sheer number of processes that Provinzial is orchestrating.

Evolving the solution: Incorporating IDP and AI

While BPMN and DMN-enabled process orchestration was a fantastic foundation, Provinzial quickly found that to scale their process orchestration to deliver optimal strategic value, that they would need to incorporate even more cutting-edge technology solutions into their existing workflows, particularly to create better end-to-end process visibility and to concentrate business users' time on executing critical decision-making work within processes as opposed to spending time and energy on lower-value tasks, like document intake and review.

That's why Hunger and his team turned to orchestrating intelligent document processing (IDP) within these processes. With IDP, Provinzial can intake documents and determine their document type and content based on specific wording as defined by the team, and more common documents are automatically processed and directed into their place in the workflow. To preserve business continuity, Provinzial also extracts and validates documents through DMN as well to provide a safety mechanism for AI.

There are three document mediums that can be handled by the IDP capabilities; emails or digital files, paper or other physical documents, and audio files, which are transcribed and then fed to the model the same way the digital or physical files would be. At intake, the system looks for specific words or values to classify the document type and contents. Commonly seen documents, like invoices, are handled almost entirely with automation. For a small set of documents that are new or rarer and the likelihood of the intelligent processing precision being low, are handled with specific DMN rule sets. Business users are able to use Camunda's orchestration layer to see the end-to-end process and can report back on the performance to improve the AI model and the DMN rule sets for continuous process improvement – both at the technical level and within the customer journey powered by the process in question.

Choosing Camunda

According to Hunger, choosing Camunda to orchestrate this AI functionality was an easy choice.

It was also an easy choice to go with AI and IDP as opposed to other existing tech solutions, such as homegrown or third-party RPA tools, to solve this challenge.

"RPA is a temporary solution," Hunger clarified. "It forces you to be reactive, to make UI changes every time."

RPA was also not a developer-friendly solution; it simply did not offer the scaling capabilities Provinzial needed for the sheer amount of processes and documents needed to support those processes.

The Results

Provinzial's ability to orchestrate AI and IDP capabilities directly into their business processes has made life easier for developers, business users, and the customers who rely on them for their insurance needs.

The firm currently has 12 separate business processes using intelligent document handling, and processing 720k documents per month, representing a staggering 3.5m document pages per month.

Developer speed and efficiency has increased, as they are able to partner more easily with business users to make changes as needed to processes, which are in turn more transparent and easily tracked. It also has increased collaboration between developers and the business users, who were eager to have their expertise positively represented in their processes.

With an increased automation rate, business users are able to make rule changes more easily into the processes.

Perhaps even more valuable is how their time is also freed up from the low value, time-consuming work of document intake and manual processing. The real efficiency boost comes from the recognition tools that provide a 95% accuracy rate in determining intent, document type, and identifying organizational criteria such as insurance and claim numbers. This automation significantly reduces the manual effort required for document searches, resulting in substantial time savings for our specialists. Instead, they now receive the information they need when they need it to make decisions and can now focus on more high-value work.

All of this translates into improved customer experiences. Hunger describes it in this way:
“We know their experience is more seamless; it just happens for them. They don’t even have to think about whether their information is going to the right place.”

What’s Next?

Hunger and his team are already thinking about how to scale both their DMN work and the AI /IDP capabilities available across Provinzial. They are evaluating more subprocesses, as well as considering adding more processes for new business departments to increase automation rate. They are also looking at ways to more efficiently connect follow-up processes to further increase visibility and performance in these large, complex workflows.

Their newest process is to simplify one massive DMN table into subprocesses in order to separate different insurance product lines into individual subprocesses for better transparency along product lines. This DMN currently represents 2,000 rules defined by business users; Hunger’s team is looking forward to updating those rules with the help of a solution designer, and to use those new rules to make the AI model even better.

Overall, Hunger wants to use the success of this AI orchestration to show more departments within Provinzial how to work with the application development team to maximize the value of AI in support of their roles.

“AI can feel scary [to business users], but it is an opportunity to connect with IT and ensure your subject knowledge is reflected in the business process you need to use.” Hunger explains. “We want to make you more effective, and at the end of the day, tie everything back to the customer’s experience.”