Business Process Mining for Every Enterprise

> *Process mining empowers enterprises to extract knowledge of their business processes. With a group of experts in process management and mining, the Center of Process Intelligence (CPI) supports companies in various industries to identify the improvement potentials in processes and to develop transformation strategy.*

Challenges and Objectives

With the rapidly growing popularity of process mining, the company identified the opportunities this technology can bring. However, **the company does not yet have capabilities** with this relatively new technology in the industry.

Aiming to build expertise in process mining to boost their business and ensure their competitiveness, CPI helped the company have a deeper understanding of the technology by applying process mining to identify the automation opportunities for their Accounts Payable Process.

The CPI Solution

CPI provided an end-to-end solution, i.e., from transforming the data into a format that can be used by process mining techniquesd to the development a strategic roadmap for the company.

The analysis process starts with transforming the records of executions of processing invoices in SAP system into an event log, i.e., the input for all the process mining techniques.

The quality of the operation, i.e., conformance, is evaluated with a focus on payments of invoices. CPI provides general statistics of the process compliance as well as concrete examples of deviations for reference. Together with the company's domain experts, we investigate and diagnose the root causes of non-compliance.

The priority and benefits of automation were quantified by comparing the efficiency with best-practice cases. Based on the results, CPI developed a transformation roadmap for data-driven process optimization and management.

To equip the company with the capabilities to perform process mining, CPI documents the analysis with emphasis on each phase's process and objectives.

The CPI Solution

We found that no major pathway was followed in the process, i.e., only **three to four process instances follow the same execution**. Meanwhile, **nearly half of the invoices are reversed in SAP**. This indicates that further training of the employees should be performed, or the process must be redesigned in order to reduce the possibility of mistakenly executed actions.

In terms of performance, due to batched executions, significant delays occur for invoice archiving, i.e., after invoices are paid. The invoices that caused the delay are prioritized for automation. Meanwhile, there are **more resources used than required**. Therefore, adjustment of the distribution of resources was recommended.

- An estimated one-fourth of the payments are paid multiple times or paid without invoices.

- Nearly ten thousand distinct process executions are detected, and 3-4 cases follow the same execution

- Most of the invoices are paid within 30 days; however, due to batched executions, the overall delay of the cases' closure is unnecessary long.

About the Center of Process Intelligence

We are a team of scientists and experts from business process management and mining. Our founders also founded the PM4Py project, i.e., the largest opensource process mining library in the programming language python. Our Scientific Advisory Board consists of Prof. Dr. Wil M.P. van der Aalst; founder of the field of Process Mining and Prof. Dr. Maximilian Röglinger; world-wide leading scientist in business process digitization.

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