

## Automatic Invoice Checking

Automotive

Finance

ETL

### Replacing a manual invoice checking process and reducing human error

Accounting is extremely important for recording the financial transactions in each business. And without correct accounting, it's not possible to display the financial health of the business to stakeholders. Accounting provides vital information regarding cost and earnings, profit and loss, liabilities and assets for decision making, and planning and controlling processes within each business. Optimization of accounting process saves time, ensures quality, and reduces human error.

Over 300 emails per month are received from partners with invoices in PDF format and invoice attachments as Excel or CSV files. Because there is no automated process to check these invoices, all attachments are manually checked on a random basis. KNIME Analytics Platform is used to replace this existing manual invoice checking process. An automated solution provides a transparent overview of the invoice processing.

### Four steps in KNIME Analytics Platform

Using KNIME Analytics Platform a connection to the SQL Server on one side (ground truth) and imported flat files (invoice attachments) on the other side is established. Flat files are checked against the database table. The following steps are taken in order to implement it:

- 1) Transform the flat file format in order to extract dates in a proper format (using the Time Field Extractor node)
- 2) Filter the database data by respective month and partner (using the Rule-Based Row Filter node)
- 3) Match the data from both sources in order to find the same data (using the Joiner, Rule Engine and Group By nodes)
- 4) Calculate any missing data (using the Math Formula and Group By nodes)

One of the challenges is that many partners deliver different flat file formats (different schemas). To overcome this challenge, an individual invoice-checking procedure for each partner (of the 18 largest partners) is implemented in a separate metanode that contains all the steps described above.

### Results

Upon project completion, a report is delivered that displays all relevant data (including matching result, month, plus additional information) per partner and provides a clear overview of the invoicing data from the selected partner. Specific benefits include:

- Reduced costs due to automated invoice processing (automated report containing information about all largest partners received within 1-2 hours)
- Improved quality of the invoice checking process
- Early detection of inconsistencies between database and invoices

### KNIME Software

KNIME Analytics Platform makes it possible to create a workflow, which provides a transparent overview of the invoice processing. It's possible to complete all the steps within a single environment - including connecting to the Microsoft SQL Server. The ability to create metanodes in the visual workbench make it easy to duplicate processes over multiple partners/groups.

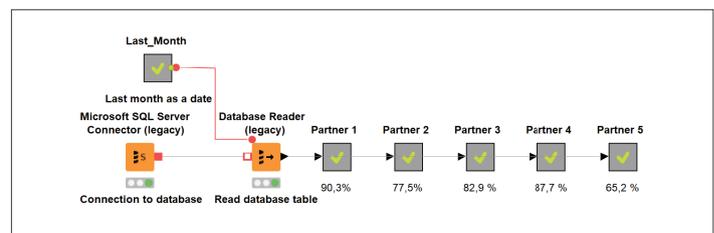


Fig. 1: High-level KNIME workflow