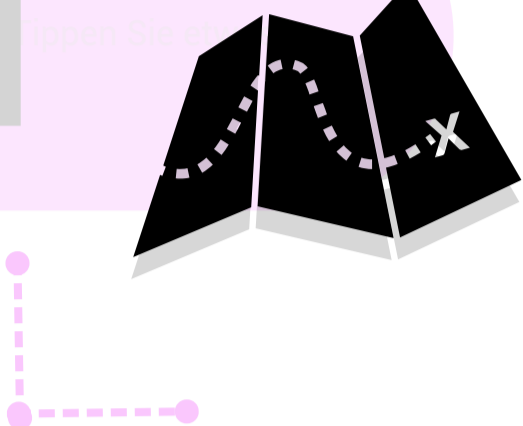


From Data to Knowledge:

6 Steps of Process Mining

1



Planning

A process mining project starts with **selecting the business processes** to be analysed and improved, ideally formed around a **research question**. Research questions can be related to different aspects, e.g. quality, time, resource, cost. This stage also involves **selecting the right people** for the project. The most important roles are business experts and process analysts, between which collaboration is essential.

Extraction

A process mining project needs to have the **scope of data extractions determined**, which considers the *granularity*, the *time period*, the *attributes* of data and the *correlation* between data. Once the extraction scope is determined, **event data** can be created by collecting process related data from the relevant information system.

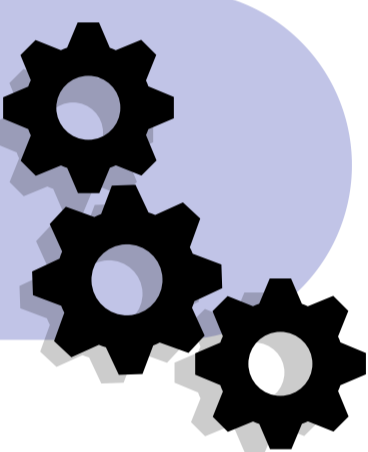


2

Data Processing

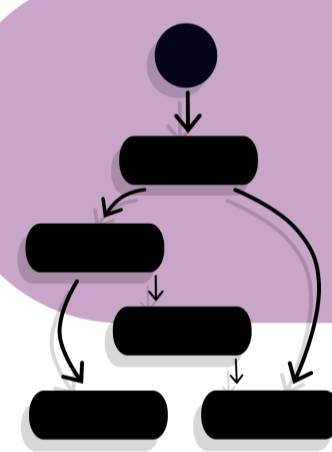
The main objective of this stage is to **create event logs** as different views of the obtained event data and to process event logs in a way that is optimal for the mining and analysis stage. Next to **aggregating events** to reduce the complexity of the structure, it is also important to **enrich the event logs** with various additional attributes: either by data based on the log itself or external data.

3



Mining and Analysis

In this stage, **process mining techniques** are being applied on event logs and aim to **answer research questions** and **gain insight** into processes performance and compliance. Process discovery and conformance checking techniques are being applied to **detect inconsistencies** between a process model and its corresponding execution log. In addition to process mining techniques, process models should be **enhanced with other analysis techniques** (i.e. visual analytics).

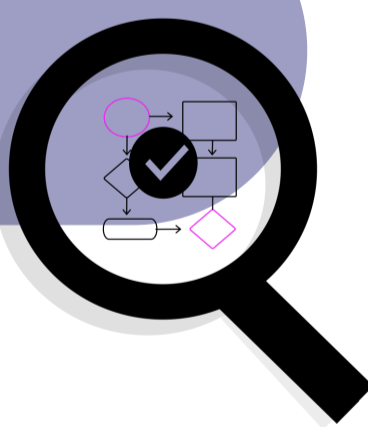


4

Evaluation

By **diagnosing the findings**, it is established if the results were interpreted correctly and interesting results are being distinguished from expected ones. Furthermore, by **comparing the findings** to the original data and system implementations, **the correctness** of the findings is being **validated and verified**.

5



Improvement and Support

Process mining **provides operational support** by detecting problematic running cases, predicting their future or suggesting recommended actions. To use process mining for operational support, it is vital that the **results are of high quality**, and that there is an IT infrastructure in place that links these results to live event data. The results of a process mining project form the **fact-based input of process modification**.



6

