



UNIVERSITY OF TARTU

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Business Process Mining

*Practice 6:
Process Performance Mining*

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Exercise: Variant analysis (logical driver)

Consider the **SEPSIS** log:

<https://www.dropbox.com/s/s8rqx4gtptm6h2h/Sepsis%20Cases%20-%20Event%20Log.csv.zip?dl=1>

This is a log related to 1050 patients treated for sepsis in a Dutch hospital.

Generate two variants of this log, one where the patient age is up to 30 years (SEPSIS_young), the other where the age is 65 or above (SEPSIS_old). Based on these two variants, answer the following questions using a process mining tool:

1. What is the cycle time of each variant?
2. Describe the differences in terms of frequency and order in which activities are executed between the two variants. Can these explain the cycle time difference?
3. Describe the differences in the bottlenecks (highest transition waiting times) in each of the two variants and how do these bottlenecks differ?

Exercise: Defects and Rework

Consider the **Purchasing** log:

<https://fluxicon.com/academic/material/files/PurchasingExample.csv.zip>

1. There are several types of “defects” in this process that lead to rework. These defects take the form of amendments or disputes. How often these defects happen (defect rate) and to what extent these amendments and disputes are contributing to the cycle time of the process?
2. Related to the above: What’s the on-time delivery rate at 21 days? To what extent the amendments and disputes are contributing to untimely delivery (i.e. to violations of the 21-days completion target)