

# Business Process Management

## SS 2021

### Exercise 1

Formalities for submitting your solution:

- Please submit your solution in OLAT
- The solution is due on **05.05.21 at 23:59 (UTC+2)**
- Please provide one single PDF file per group
- Please include all screenshots into your PDF file
- Please include the names of all group members into your solution
- You can reach up to 10 points in this exercise sheet

Tools needed for this exercise:

In this exercise, you are asked to provide EPC and BPMN diagrams. To create your diagrams, you are required to use the Signavio process editor. Signavio has provided an academic workspace, which is free of charge. Therefore, the online tool must only be used in the scope of this lecture, i.e., not for commercial projects.

To register, please use the following link and sign up with your university email address:  
<https://academic.signavio.com/p/register?link=563d1c8d72404514b73bd96ba20ddada>

If you already registered for Signavio in a previous course, you can keep using that login data.

## Task 1 (3 points)

Consider the following example of a business process for assessing a customer complaint. If a complaint is issued by a customer, a customer service employee has to determine to which department the complaint should be forwarded. This is conducted as follows:

- If a customer complaint is issued, the customer service employee verifies if the complaint information (such as original invoice, description of the failure report, serial number etc.) sent by the customer is complete
- If the information is incomplete, the customer service employee requests the missing information
- If the customer does not reply, the complaint is declined by the customer service employee
- In the other cases, the customer service employee forwards the complaint
- The customer service employee enters the complaint case into a company CRM system (in both cases, i.e., independent of the complaint being forwarded or declined)

Please model this process as an **EPC** diagram in Signavio. You can include a screenshot of your diagram in your solution. Please model “entering the complaint case into the company CRM system” as an IT-system and NOT as a function.

## Task 2 (4 points)

Consider the following example of a business process for the approval of car insurance costs. If a customer of an insurance company files a claim that seems unreasonable, the insurance company may reserve the right to have the insurance claim inspected by a third party (expert) company. The insurance company can request the inspection of a third party as follows:

- If the insurance company receives a claim, an employee decides whether the claim seems reasonable
- If the claim seems admissible, the money is transferred to the customer's bank account – The customer is informed via email, that his claim will shortly be reimbursed
- If the claim seems suspicious, the insurance employee must contact a third-party company in order to verify the claim
- The third-party company, which specializes in automobile inspections, inspects the claim – this inspection process works as follows
  - The company receives a report with all the relevant information
  - The company checks the value of the car parts in their company database
  - The company calculates the actual costs of the repair, corresponding to the car part costs found in the database
  - The company can then compare the actual costs with the value in the insurance claim:
    - If the actual costs are lower than or equal to the value in the insurance claim, everything is fine, and the insurance claim can be approved
    - If the value in the insurance claim is up to 500€ higher than the actual costs, the insurance claim is to be rejected
    - If the value in the insurance claim is more than 500€ higher than the actual costs, it is assumed that the insurance customer wanted to commit insurance fraud
- After the inspection process, the insurance company is informed about the outcome by the third company party
- If the claim can be approved, the money is transferred to the customer's bank account - The customer is informed via email, that his claim will shortly be reimbursed
- If the claim is to be rejected, the insurance customer is informed per letter
- If it is to be assumed that the claim was an insurance fraud, the insurance employee can decide whether to forward the case to the fraud department or not
- If the insurance employee decides to forward the case to the fraud department, he generates a report and forwards it to the fraud department of the insurance company

Please model this process as a **BPMN** diagram in Signavio. You can include a screenshot of your diagram in your solution. Model the customer, the insurance company (with the sub-departments) and the third-party inspection company using pools/lanes. Model the inspection process as a sub-process.

### Task 3 (3 points)

Consider the following example of a business process for the reimbursement of employee expenses. For example, an employee could get reimbursed for company travel costs such as a train ticket or hotel costs. In order to get reimbursed, an employee should proceed as follows:

- The employee should determine the amount to be reimbursed and file an expense report
- If there is no expense cost account yet for the employee, an account has to be created
- Costs under 100€ are automatically approved
- Costs over 100€ must be approved by the department manager (DM)
- \*If the DM takes longer than a week to approve the cost, the DM will be reminded via e-mail. In this case, the employee keeps waiting for the DM to approve.
- \*If the DM takes over a month to approve the cost, the case is forward to the human resources department and the process is ended at this point.
- If the department manager does not approve the reimbursement, the employee must be informed via email
- The reimbursement is otherwise directly transferred to the account of the employee

Please model this process as a **BPMN** diagram in Signavio. You can include a screenshot of your diagram in your solution. Model the parts marked with \* appropriately with timer events!