

# *Business Process Management (BPM)*

## **Lab 2**

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# Exercise 1.6

❖ Consider the following process at a pharmacy:

- Customers drop off their prescriptions either in the drive-through counter or in the front counter of the pharmacy. Customers can request that their prescription be filled immediately. In this case, they have to wait between 15 min and 1 h depending on the current workload.
- However, most customers are not willing to wait that long, so they opt to nominate a pickup time at a later point during the day. Generally, customers drop their prescriptions in the morning before going to work (or at lunchtime) and they come back to pick up the drugs after work, typically between 5 p.m. and 6 p.m. When a prescription is dropped off, a technician asks the customer for the pick-up time and puts the prescription in a box labeled with the hour preceding the pick-up time.

# Exercise 1.6(cont')

- For example, if the customer asks to have the prescription be ready at 5 p.m., the technician will drop it in the box with the label 4 p.m.(there is one box for each hour of the day).
- Every hour, one of the pharmacy technicians picks up the prescriptions due to be filled in the current hour. The technician then enters the details of each prescription (e.g., doctor details, patient details and medication details) into the pharmacy system. As soon as the details of a prescription are entered, the pharmacy system performs an automated check called ***Drug Utilization Review (DUR)***. This check is meant to determine if the prescription contains any drugs that may be incompatible with other drugs that had been dispensed to the same customer in the past, or drugs that may be inappropriate for the customer taking into account the customer data maintained in the system (e.g., age).

# Exercise 1.6(cont')

- Any alarms raised during the automated DUR are reviewed by a pharmacist who performs a more thorough check. In some cases, the pharmacist even has to call the doctor who issued the prescription in order to confirm it. After the DUR, the system performs an **insurance check** in order to determine whether the customer's insurance policy will pay for part or for the whole cost of the drugs.
- In most cases, the output of this check is that the insurance company will only pay for a certain percentage of the costs, while the customer has to pay for the remaining part (also called the co-payment). The rules for determining how much the insurance company will pay and how much the customer has to pay are very complicated. Every insurance company has different rules. In some cases, the insurance policy does not cover one or several drugs in a prescription, but the drug in question can be replaced by another drug that is covered by the insurance policy.

# Exercise 1.6(cont')

- When such cases are detected, the pharmacist generally calls the doctor and potentially also the patient to determine if it is possible to perform the drug replacement.
- Once the prescription passes the insurance check, it is assigned to a technician who collects the drugs from the shelves and puts them in a bag with the prescription stapled to it. After the technician has filled a given prescription, the bag is passed to the pharmacist who double-checks that the prescription has been filled correctly. After this quality check, the pharmacist seals the bag and puts it in the pick-up area. When a customer arrives to pick up a prescription, a technician retrieves the prescription and asks the customer for payment in case the drugs in the prescription are not fully covered by the customer's insurance.

# Exercise 1.6(cont')

- With respect to the above process, consider the following questions:
  - What type of process is the above one: order-to-cash, procure-to-pay, application-to- approval, or issue-to-resolution?
  - Who are the actors in this process?
  - Who are the customers?
  - What are the tasks of this process?
  - What value does the process deliver to its customers?
  - What are the possible outcomes of this process?
  - Taking the perspective of the customer, what performance measures can be attached to this process?

# Exercise 1.6(cont')

- What potential issues do you foresee this process might have?  
What information would you need to collect in order to analyze these issues?
- What possible changes do you think could be made to this process in order to address the above issues?

# Exercise 1.7

- ❖ Consider the following process at a company of 800 employees in the early 1990s.
  - Almost any employee at the company can initiate a purchase request by filling in a form. The purchase request includes information about the goods to be purchased, the quantity, the desired delivery date, and the approximate cost. The employee can nominate a specific vendor.
  - Employees often request quotes from vendors in order to get the required information. Completing the entire form can take a few days as the employee often does not have the required data. The quote is attached to the purchase request. This completed request is signed by two supervisors. One supervisor has to provide a financial approval, while the other supervisor has to approve the necessity of the purchase and its conformance with the company's policy (e.g., if purchasing a software tool, is it compatible with the company's standard IT operating environment?).



# Exercise 1.7(cont')

- Collecting the signatures from the two supervisors takes on average 5 days. If it is urgent, the employee can hand-deliver the form, otherwise it is circulated via internal mail. A rejected purchase request is returned to the employee. Sometimes, the employee makes minor modifications and resubmits the purchase request. Once a purchase request is approved, it is returned to the initiator of the request. The employee forwards the form to the purchasing department. Employees often make a copy of the form for their own record, in case the form gets lost. The purchasing department checks the completeness of the purchase request and returns it to the employee if it is incomplete.

# Exercise 1.7(cont')

- The purchasing department then enters the approved request into the company's enterprise system. If the employee has not nominated any vendors, a clerk at the Purchasing Department selects one based on the quotes attached to the purchase requisition, or based on the list of vendors (also called *master vendor list*) available in the company's enterprise system.
- Sometimes, the quote attached to the request has expired in the meantime. In this case, an updated quote is requested from the corresponding vendor. Other times, the vendor who submitted the quote is not recorded in the company's enterprise system.

# Exercise 1.7(cont')

- In this case, the purchasing department should give preference to other vendors who are registered in the enterprise system. If no such vendors are available or if the registered vendors offer higher prices than the one in the submitted quote, the purchasing department can add the new vendor into the enterprise system.
- When a vendor is selected, the enterprise system automatically generates a purchase order. The purchase order is sent to the vendor by fax. A copy of the purchase order is sent to the accounts payable office. This office, part of the financial department, uses an accounting system that is not integrated with the enterprise system, where purchase orders are stored.

# Exercise 1.7(cont')

- The goods are always delivered to the goods receipt department. When goods are received, a clerk at this department selects the corresponding purchase order in the enterprise system.
- The clerk checks the quantity and quality, and generates a document called **goods receipt form** from the purchase order stored in the enterprise system. The goods are forwarded to the employee who initiated the purchase requisition. A print-out of the **goods receipt form** is sent to the accounts payable office. If there are any issues with the goods, they are returned to the vendor and a note is sent to the purchasing department and to the accounts payable office for archival.

# Exercise 1.7(cont')

- The vendor eventually sends the invoice directly to the accounts payable office. A clerk at this office compares the purchase order, the goods receipt and the invoice. This latter task is called **three-way matching**. Three-way matching is time-consuming because the clerk needs to carefully investigate each discrepancy. The payment process takes so long that the company often misses the deadline for invoice payment and has to pay a penalty.
- At the end, the clerk triggers the bank transfer and sends a payment notice to the vendor. Some vendors explicitly indicate in their invoice the bank account number to which the transfer should be made. It happens that the bank account number and name indicated in the invoice differ from the one recorded in the vendor database. Sometimes payments bounce back, in which case the vendor is contacted by phone, email or postal mail.

# Exercise 1.7(cont')

- If new bank details are given, the transfer is attempted again. If the issue is still not resolved, the accounts payable office has to contact again the vendor in order to trace the cause of the bounced payment.

# Exercise 1.7(cont')

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# Exercise 1.7(cont')

- What potential issues do you foresee this process might have? What information would you need to collect in order to analyze these issues?
- What possible changes do you think could be made to this process in order to address the above issues?