

## Individual BPMN Modelling Exercise

Below will you find **two (2)** process descriptions (modelling cases). You have to model the two processes in two separate BPMN models.

### Modelling Case 1

The radiology department in hospital X functions as a service provider for both clinical departments and the outpatient clinic. Physicians can request radiological procedures, such as X-ray examinations, MRI's, PET scans and so on. When requesting a procedure they must fill out an order form on paper, specifying the kind of examination requested and the so-called indication. The indication consists of a short summary of the patient's health problem, including symptoms and results of diagnostics tests (if available). Often it also contains a hypothesis about what causes the health problem, for example a bone fracture or the existence of a tumour in some part of the body. The form is sent to the radiology department. There the indication is checked by a radiologist in order to avoid unnecessary (often expensive and time consuming) procedures. The request can be accepted or rejected. If a request is accepted, the requested examination is scheduled. The date and time of the examination is communicated to the requesting physician by means of a letter. He or she has to inform the patient. If the patient is not showing up for the examination within 15 minutes after it was scheduled, it is cancelled. If the patient shows up, the examination is performed and documented. The latter is done by storing the images taken in the so called Picture Archiving and Communication System (PACS), that is used at the radiology department. After the examination is finished, the radiologist writes a report which includes an analysis of the images and a conclusion. The report is dictated on a voice recorder. The sound file is used by a secretary to type the report. After the text is checked and signed by the radiologist, it is sent to the requesting physician.

## **Modelling Case 2**

The mortgage application process starts with the receipt of a mortgage application from a client. When an application is sent in by the client to the broker, the broker may either deal with the application themselves, if the amount of the mortgage loan is within the mandate the broker has been given by BestLoans. Otherwise forward the application to BestLoans. If the broker deals with the application themselves, this results in either a rejection or an approval letter being sent back to the client. If the broker sends an approval letter, then it forwards the details of this application to BestLoans so that from there on the client can interact directly with BestLoans for the sake of getting the loan. In this case, BestLoans registers the application and sends an acknowledgment to the client. The broker can only handle a given number of clients at a time. If the broker is not able to reply within one week, the client must contact BestLoans directly. In this case, a reduction on the interest rate is given should the application be approved. If BestLoans deals with the application directly, its mortgage department checks the credit of the client with the Bureau of Credit Registration. Moreover, if the loan amount is more than 90 % of the total cost of the house being purchased by the client, the mortgage department must request a mortgage insurance offer from the insurance department. After these interactions BestLoans either sends an approval letter or a rejection to the broker, which the broker then forwards to the client (this interaction may also happen directly between the mortgage department and the client if no broker is involved). After an approval letter has been submitted to the client, the client may either accept or reject the offer by notifying this directly to the mortgage department. If the mortgage department receives an acceptance notification, it writes a deed and sends it to an external notary for signature. The notary sends a copy of the signed deed to the mortgage department. Next, the insurance department starts an insurance contract for the mortgage. Finally, the mortgage department submits a disbursement request to the financial department. When this request has been handled, the financial department notifies the client directly.