

TDT4175 Information Systems Case 1

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Chapter 1

Modelling Case 1

The BPMN model represents the radiology examination process at Hospital X. It illustrates the interactions between the Physician, Radiology Department, and Patient using lanes, tasks, message flows, and gateways. The model can be seen in Figure 1.1.

The process begins in the Physician lane, where the physician logs into the EHR system and submits a digital order form requesting a radiological procedure. This is represented as a task. Once submitted, a message flow sends the form to the Radiology Department, initiating the next steps in the process.

In the Radiology Department lane, the submitted order form is received and reviewed by the radiologist, indicated by another task. A decision gateway (XOR) then determines whether to accept or reject the request. If accepted, the process moves to scheduling the examination and triggers another message flow that sends a notification to the physician. The physician, in turn, informs the patient, shown by a message event in the Physician lane. This interaction is followed by the Notify Patient task, ensuring the patient is aware of their scheduled appointment.

In the Patient lane, the patient receives the scheduled appointment and is expected to arrive for the examination. A decision gateway (XOR) checks if the patient arrives within 15 minutes of the scheduled time. If they do not, the appointment is canceled with a cancel event, and the process ends. If the patient arrives on time, the process flows to the Conduct Examination task in the Radiology Department lane.

Following the examination, the results are stored in the Picture Archiving and Communication System (PACS). Next, the Radiologist Creates Report task is depicted. Then, the Transcribe Report task follows, and the radiologist reviews and signs the report, shown as the Review and Sign Report

task.

After the report is signed, it is sent to the requesting physician via the EHR system. The Receive Report task in the physician lane signifies that the physician has received the final report. The process ends with an end event in the Physician lane once the report is delivered.

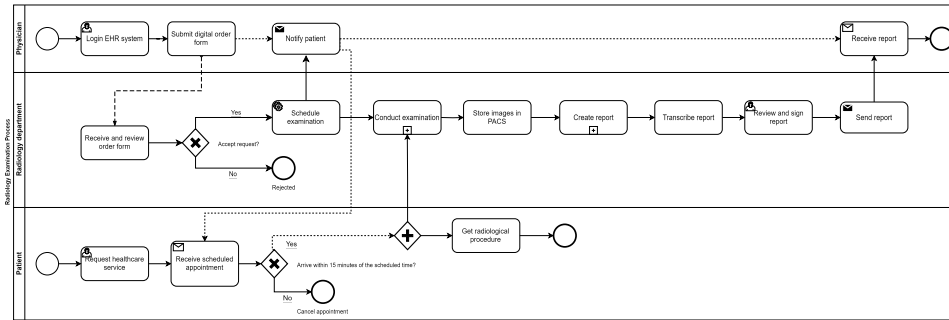


Figure 1.1: BPMN Diagram