

# TDT4175 Information Systems Case 2

Martin Hegnum Johannessen

September 17, 2024

# Chapter 1

## Modelling Case 2

The BPMN model represents the mortgage application process. It outlines the interaction between the Client, Broker, BestLoans, Notary, and Financial Department. The model captures all the steps from the submission of the mortgage application to the final disbursement of funds. The model can be seen in Figure ??.

The mortgage application process begins with the Client creating and submitting an application. This is done either through a Broker or an online portal. The application submission triggers the start of the process, and the broker then reviews the application. The broker determines whether the mortgage amount falls within their authority. This decision is represented by a decision gateway (XOR), where the broker either handles the application directly or forwards it to BestLoans.

If the broker can handle the application within their mandate, they proceed with an eligibility check. If applicable, they notify the client of approval or rejection. If the broker is unable to manage the application due to the number of clients or the mortgage amount, the application is forwarded to BestLoans. In these cases a reduced interest rate is offered to the client.

Upon receiving the application, BestLoans takes over. They process the application, which involves reviewing the client's financial details and conducting credit checks. A decision gateway determines if the loan amount exceeds 90% of the total cost of the property. If it does, BestLoans must initiate a mortgage insurance contract by coordinating with their internal insurance division (this step is included within the BestLoans lane). If the loan amount is below 90%, the insurance requirement is bypassed, and the process moves forward.

Once all necessary checks are completed, BestLoans makes an application decision and notifies the client of the outcome. The notification is sent

through a message event. At this point, the Client must make a decision: either to accept or reject the mortgage offer.

If the client accepts the offer, BestLoans drafts the mortgage deed and sends it to a Notary for signing. The Notary is responsible for formalizing the deed, and the process allows for two options: the deed can be signed either in person or electronically. Once the deed is signed, the Notary returns the signed document to BestLoans.

After receiving the signed deed, BestLoans submits a disbursement request to the Financial Department. The Financial Department processes the disbursement request and informs the Client that the funds have been successfully disbursed.

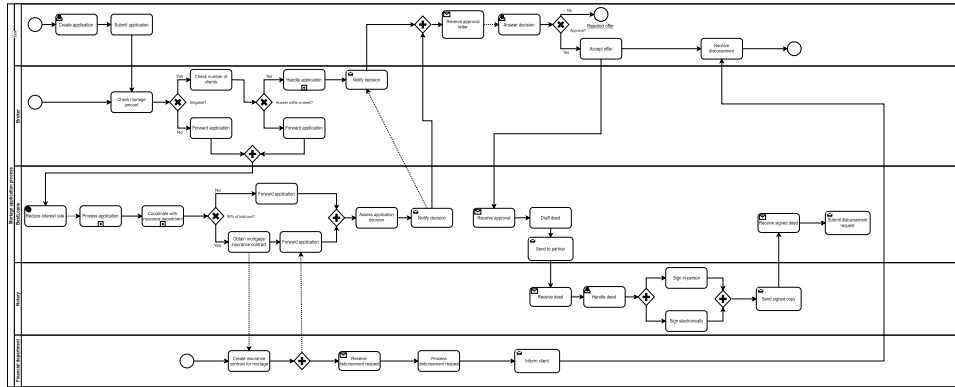


Figure 1.1: BPMN Diagram