

Process & Service Design Project



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1. Project Description

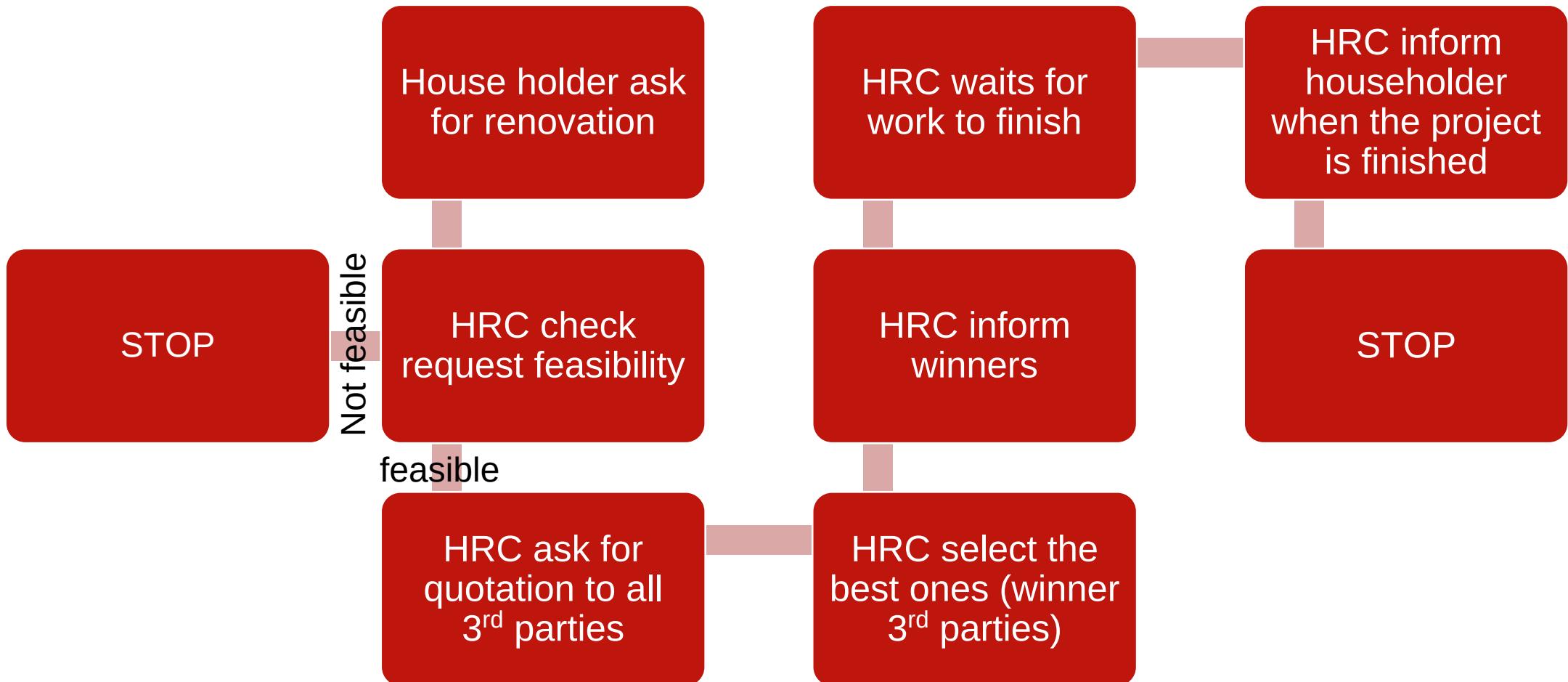


House Renovation Company (HRC)



- This project is an e-service for a house renovation company(HRC) that can handle renovation requests and communicate with other 3rd parties easier.
- User sends a renovation request to HRC and it will then check its feasibility. If feasible, based on the request, HRC will contact any of the 3rd parties(**plumbers, electricians or constructors**) required for the project.
- The process will:
 - Begin as soon as a house holder sends a new renovation request is sent to the HRC.
 - Finish if the request is not feasible or the renovation is completed.

Process



2. Mock-up



Mock-up

- In this phase, a very general mock-up of the services is implemented using C#.
 - 1) Open-API description of the services are described in a yaml file.
 - 2) Mock-up of the defined service is implemented.
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- In this phase, an individual yaml file is written for each 3rd parties, explaining their restful APIs, considering the fact that the communication between each of the 3rd parties and the HRC is as follows:
 - 1) Plumber offers a synchronous API to HRC.
 - 2) Electrician offers an asynchronous API to the HRC, in turn the HRC also offers an asynchronous API to this company.
 - 3) Constructor offers an asynchronous API to the HRC.

Open-API Specification

Plumber.yaml

- RequestForQuotation [\[post\]](#):

Receives a new request for quotation from a HRC company and responds with a Quotation

- Project [\[post\]](#):

Request to start a project

- Project [\[get\]](#):

Gets completion status of the project by Id

Open-API Specification

Constructor.yaml

- RequestForQuotation [\[post\]](#):
Receives a new request for quotation from a HRC company and responds whether the request was submitted or not
- RequestForQuotation [\[put\]](#):
Receives a request for editing the quotation request with specific id from a HRC company and responds whether the request was submitted or not
- RequestForQuotation [\[delete\]](#):
Receives a request for deleting the quotation request with specific id from a HRC company and responds whether the quotation was deleted or exception happened.
- RequestForQuotation [\[get\]](#):
Receives a request for offering the quotation of the request for quotation with specific id from a HRC company and responds with the Quotation.
- Project [\[post\]](#):
Request to start the project
- Project [\[get\]](#):
Gets completion status of a project by Id

Open-API Specification

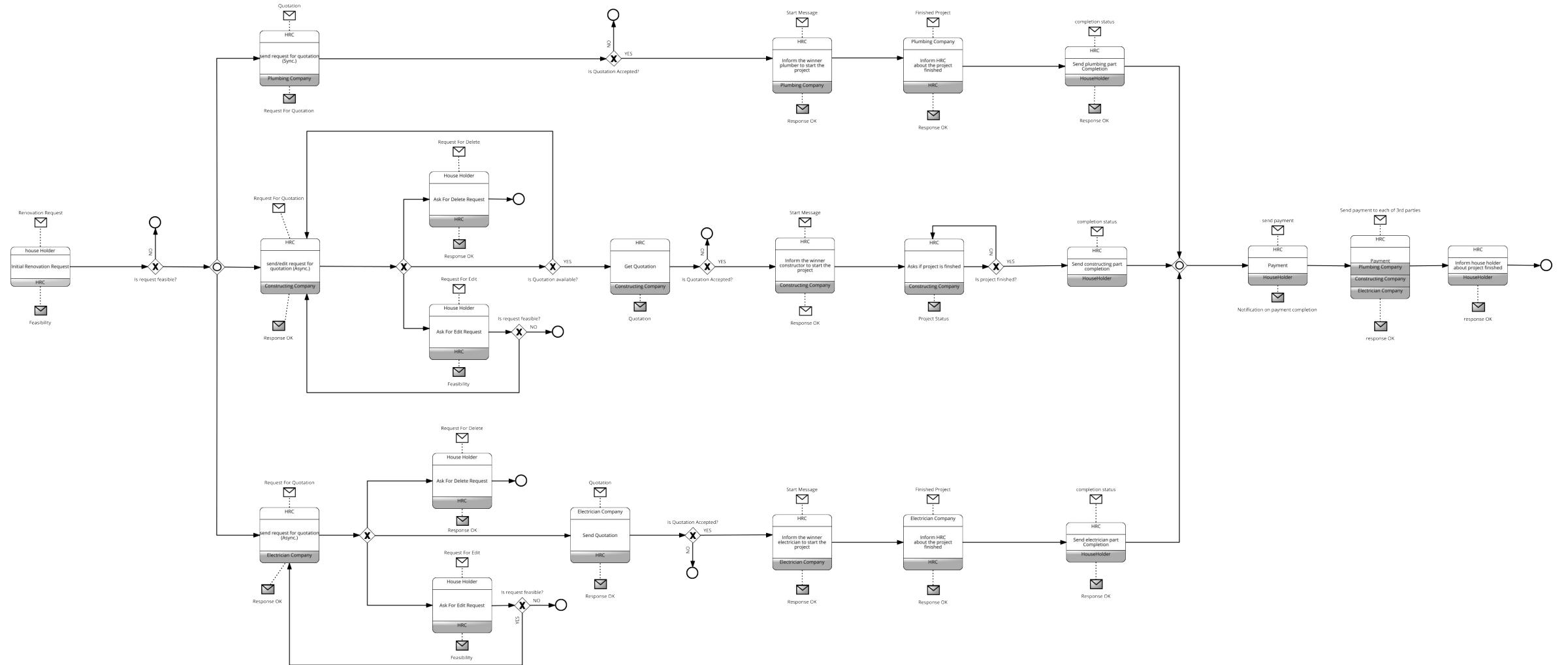
Electrician.yaml

- RequestForQuotation [\[post\]](#):
Receives a new request for quotation from a HRC company and responds whether the request was submitted or not
- RequestForQuotation [\[put\]](#):
Receives a request for editing the quotation request with specific id from a HRC company and responds whether the request was submitted or not
- RequestForQuotation [\[delete\]](#):
Receives a request for deleting the quotation request with specific id from a HRC company and responds whether the quotation was deleted or exception happened.
- Project [\[post\]](#):
Request to start a project

3. Models



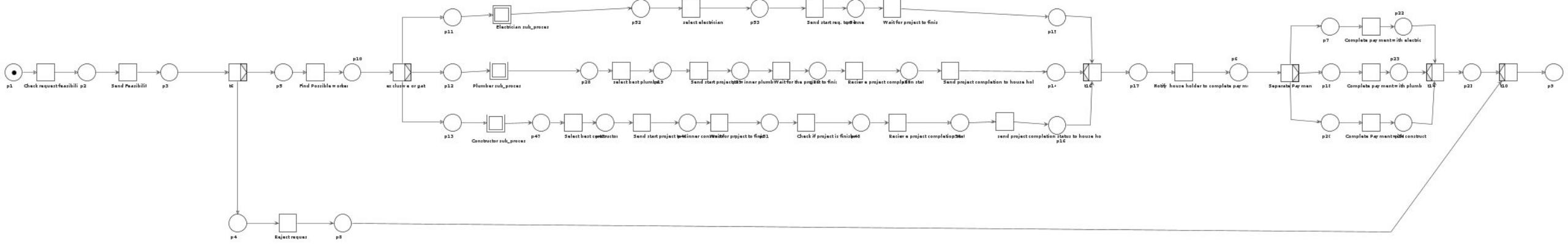
Choreography Model



BPMN Model

Executable Model

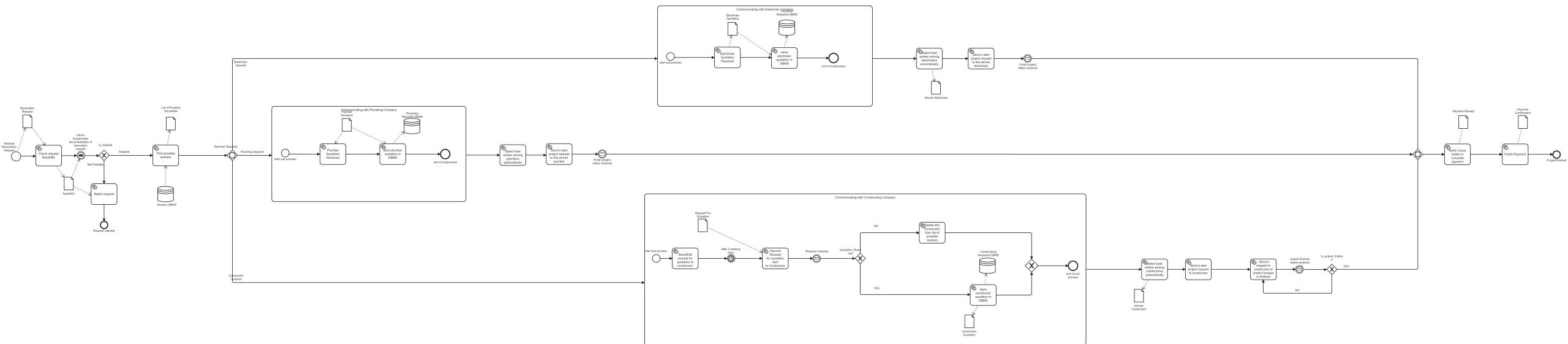
Petrinet



4. Running on Camunda



Modified Executable Model



Thank you for your attention

