

University of Tartu – Institute of Computer Science

MTAT.03.231 – Business Process Management *Project – Vehicle Inspection and Emissions-Testing Process*

Teams: 3 or 4 members.

Worth: 25 points

Task

Your assignment is to model and analyze the “as is” business process model for a Vehicle Inspection Process and to design and automate a “to be” process. A description of the “as is” process and issues identified in this process can be found in the case study “Frumherji Ltd. Reykjavik: Vehicle Inspection and Emissions-Testing Process” that was given to you separately. In some places, the case study description is not detailed enough. In these cases, you can make your own assumptions.

The first step in your assignment is to understand the “as is” process. To this end, you will model the process in BPMN, starting from a value chain and drilling down to sub-processes where appropriate. This process model should cover the “normal course of action” (happy path), as well as foreseeable errors or exceptions and how these are handled.

Next, you will analyze the “as is” process quantitatively and qualitatively leading to an “issue register”. You do not need to apply all the analysis techniques introduced in the lectures, but rather you should select those techniques that are applicable given the data provided in the case study.

Based on the identified issues, you will then design a “to-be” process. You will explain the proposed changes, how and to what extent these changes help to address the issues identified before, and which other possible changes you considered and why did you discard them. For each change, you will analyse what could be its possible benefits (where possible, you should quantify the benefits in terms of performance measures). You should also discuss any potential drawbacks or costs associated to your proposed change. These changes will lead to a “to-be” process model

To give an initial idea of how the to-be process could be automated by means of a new information system, you will implement the to-be process model in Bizagi. The process implementation should produce forms allowing actors in the process to enter relevant data. The form in the last page of the case study could be used as a basis. But given that it is in Icelandic and not readable, you may take inspiration from alternative emissions testing forms available online, e.g. <http://tinyurl.com/jqwtnk8> - But you don't need to make such a complex form. A much simpler one is fine for presentation purposes. For example, a sample of about 20% of the fields of the above form would be sufficient to give an idea of how the form would look like. The purpose of your Bizagi project is to “sketch” how the system supporting the to-be process would look like.

Presentation

You do not need to submit this project via the course web site. Instead, the assessment of your project will be done during a 25-minutes face-to-face presentation with the lecturers in which you will present your solution.

The presentations will take place on Tuesday 26 May, 9:00-14:00. A week before this date, we will set up a Doodle poll so that you can select your exact time-slot. The poll will allow you to select a 25-minutes time-slot.

Your presentation should cover the following points:

1. The “as is” process model: show us the value chain, and then zoom in into each of the subprocesses in the value chain. Please present your as-is process model directly in Signavio (no need to copy the diagrams into a slide deck).
2. Analysis: You should present your issue register as a bare minimum, but you are highly encouraged to also include one or multiple why-why diagrams, a waste table and/or value-added analysis table (your choice). Flow analysis or simulation of this case study might be possible but would require making a lot of assumptions given the provided data. (Hint: queuing analysis might be useful). You may use slides to present your analysis.
3. Redesign: You should present: (i) your proposed process changes and justification for each proposed change; (ii) the expected benefits of the proposed changes and their potential drawbacks; (iii) alternative changes that were considered and discarded and reason for discarding them. You do not need to present the conceptual “to be” process model in BPMN, but you will present an executable to-be process model in the next point. You should use slides to present your analysis.
4. Automation: You should present an executable process model in Bizagi. You should start by showing to us the to-be process model, then the data model, the actions/decision rules, and the assignment of tasks to roles/performers. We may also ask you to run the process and show us at least one scenario step-by-step.

Each team should be prepared to present their solution in 15-20 minutes + 5 minutes for questions.

There is no need for all team members to connect to their presentation session (although it’s great if everyone connects).

Grading: The “as is” model is worth 7 points. The other three points above are worth 6 points each. The lecturers will tell you your grade at the end of your two 10-minutes presentations.