



BISM7216 Assignment 1
Process Modelling (Individual Assignment)
300 marks (30% of course grade)

Due dates

Milestone 1: Thursday 18th August at 2pm

Milestone 2: Thursday 25th August at 2pm

Milestone 3: Thursday 1st September at 2pm

Final submission: Friday 9th September, 2022 at 2pm

Submission type:

- Milestones: **Excel** documents (as specified) for Milestones 1 & 2; **Word** document for Milestone 3.
- Final submission: full **BPMN process model** in 3 formats: a Signavio archive (SGX), a PDF, and as a .bpmn file. **Any and all subprocesses** must be included in all above files. NB: If elements of the overall process are missing because of missing subprocesses, marks will be lost.
- All filenames must start with the **Student Number_Last Name** format (with descriptions following your last name e.g. 1234356_Surname_LandAccessProcess).

Submission method: via Blackboard Assignment 1 submission tool. Please double-check your submission!

<https://powcoder.com>

Background & your task

As the world increasingly acknowledges the need to move to low / net-zero carbon emissions sources of energy, the need to build new energy infrastructure brings new challenges. Currently favoured technologies include renewable energy to supplant fossil-fuelled electricity in the grid. Sites for renewable energy generation are chosen by nature: sites where the wind blows most consistently and ideally at peak energy consumption hours are chosen for wind farms, as are predictably sunny locations for utility-scale solar PV farms. These generation sites are then sometimes supplemented by grid-scale batteries which store excess energy and stabilise the grid as demand varies, to which they are connected by electricity transmission lines that stretch across the landscape.

Lizzie Nairb, the CEO of a Lizzie Nairb Projects (LNP), the company that is building a wind farm in a remote location, notes that, in some ways, this challenge bears a close resemblance to work she had done in a previous life, when she worked for an onshore gas company. All this infrastructure will be sited on somebody's land, and often in remote locations; they also need to connect their production to the consumers (and the grid). As such, she dug out some old notes she had made on how she approached negotiations with landholders in the past, and updated them with her thoughts on how this could work for LNP's wind farm. She now wants to build a clear process model of the steps involved so that she can use them as the basis for a discussion with her team on recruiting teams and setting consistent standards and process across all the upcoming infrastructure planning and negotiations with landholders.

To this end, Lizzie calls upon you, the Business Analyst. She has asked you to her office to review her old notes. Over a 2-hour introductory meeting, she provided you with those notes, and together you identified some amendments, resulting in a process walkthrough that she now wants presented as a visual (aka BPMN) model to facilitate the discussion with her team where she hopes to improve it.

The next step for you is to confirm your understanding of some aspects of that process (see the requirements of *Milestones 1, 2 and 3* below), and submit them to the boss. This will allow “Lizzie” (aka your tutors) to provide valuable feedback to you over the coming weeks, so that you can provide her with the best possible BPMN process model using Signavio (see *Final submission*) for her discussion with her team before settling on LNP’s final approach.

Please document any assumptions you have made within the (final) BPMN model using the BPMN “text annotation” construct.

Land access process

The land access process starts when the Project manager, responsible for delivering LNP’s next wind farm, completes his Project Approvals Form (PAF). The PAF includes key details about the proposed infrastructure and its location, and the Project Manager sends this via the Project Management And Land Access System (PMALAS) to the Land Access Coordinator (LAC). The LAC reviews it for completeness, and if it is missing key information, returns it to the Project Manager for completion before progressing to the next step. If complete, the LAC undertakes a (property) title search to confirm ownership of the land where the infrastructure is proposed. The LAC then updates the ownership field in PMALAS, uploads the title search document, and PMALAS updates the PAF with this information. PMALAS then notifies the Land Access Negotiator (LANs), the Survey Team, and G4 of Land & Environment of the proposed PAF. At the same time as sending to the LANs, PMALAS also notifies the Land Access Legal Adviser (LALA) of the title search document, who then drafts a key legal document, the Consent to Enter (CtoE) permit. Meantime, the LANs identify an individual LAN to conduct this negotiation, and once the LALA completes the CtoE, she submits it to the PMALAS, which notifies the assigned LAN that the CtoE is available.

The LAN then makes initial postal contact with the landholder proposing three dates for a face-to-face appointment to discuss the proposed infrastructure. Once the LAN gets a response including the confirmed date from the landholder, he will diarise that meeting, ensure that he has a folder of all relevant information ready for the landholder, book a pool vehicle for travel to the property and complete a journey management form. On the appointed day, the LAN will meet the landholder at the property to introduce LNP and the project. If the LAN doesn’t get a response to the original letter within 10 business days, he will call the landholder to arrange a time. Sometimes the LAN gets the landholder’s voicemail, and leaves a voice message asking for a return call, though on most occasions, he gets to speak to the landholder. Invariably the landholder will confirm the date after this reminder at the latest, after which the above steps of meeting preparation are followed.

During that first meeting, the LAN presents the CtoE formally to the landholder, and explains what the proposed activity would entail (light impact, survey crew). If the landholder agrees, she will first negotiate land access rules that set out clear expectations about behaviour on the land (e.g. leaving gates open/closed/as they were found, as well as any weed washdown requirements), then signs the CtoE, and returns both documents to the LAN. Once the meeting is finished, and the LAN returns to his vehicle, he scans the CtoE and land access rules, and uploads them both to PMALAS. On some occasions, the landholder will be unsure of her legal rights and obligations, and while happy to negotiate the land access rules, will not sign the CtoE at that first meeting, choosing to obtain legal advice first. In those instances, the landholder’s lawyer will then contact the LALA to resolve any legal queries, and once those are resolved, the Landholder will sign the CtoE electronically and email it to a special email address which PMALAS processes. Irrespective which route the negotiation took to get to this point, PMALAS automatically allocates it to the correct PAF, and then notifies the Project Manager that the signed documents are ready for execution. Once the PAF is formally approved by the Project Manager, PMALAS notifies LNP’s Survey Team that this land is now available to add to their survey schedule.

The Survey Team will review the details in the PAF, and identify three potential dates for the survey, which they enter into PMALAS. PMALAS now automatically sends a copy of the executed CtoE and land access rules, as well as a standard email, asking the landholder to confirm which of the three proposed dates would suit, or to nominate another. Because the unexpected can happen, at any time after confirming the survey date and before the survey happens, the landholder may need to change the date, and does that by contacting the LAN to advise of the change. If that happens, the LAN will cancel the scheduled survey in PMALAS, and record a new survey date from a list of availability dates for the survey crew. After the survey is undertaken, the Survey Team uploads its reports and data to PMALAS, which automatically updates the approved PAF, and notifies the GIS team that maps are needed. The GIS Team will then create sign-off maps using the coordinates and infrastructure information provided in the PAF, and upload these to PMALAS. PMALAS then notifies the LAN, who reviews the maps, and once approved PMALAS adds them to the PAF. If there are errors, the LAN will reject the sign-off maps in PMALAS, explaining why, and the GIS team then creates a new sign-off map which follows the same review and approval process.

Now that confirmed infrastructure locations have been confirmed, the LAN and landholder can negotiate the long-term access agreement. The LAN requests the LALA draft a legal agreement to cover construction and long-term operational access to the land with the landholder (the land access agreement). The LALA provides this typically within a day by uploading it to PMALAS, which then notifies the LAN. The LAN now contacts the landholder via telephone to arrange a time to present the land access agreement to the landholder. Once presented and discussed, if the landholder wishes to obtain legal and valuation advice, the landholder's lawyer will then contact LNP's LALA to resolve any legal queries, and the valuer will assess the economic impact on the landholder, providing a report to both the landholder's lawyer and LNP's LALA. Once legal and valuation negotiations are resolved, the LALA issues the final draft of the land access agreement to the LAN and to the landholder's lawyer, which the LAN will bring to the landholder for signature. When the landholder signs, the LAN scans and uploads the signed agreement and the signed sign-off maps to PMALAS, which adds them to the PAF, and then notifies the GM Land & Environment. The GM executes the contract electronically on behalf of LNP, and PMALAS then notifies the Project Manager and LAN, and issues a copy via email to the landholder. The LAN also sends the paper version of the signed contract via express post to the LAC, who gives it to the GM Land & Environment to wet sign, after which the LAC files the original in a fireproof safe, and now, with land access secured, the process ends.

***** END OF PROCESS WALKTHROUGH *****

Guidance on your objectives

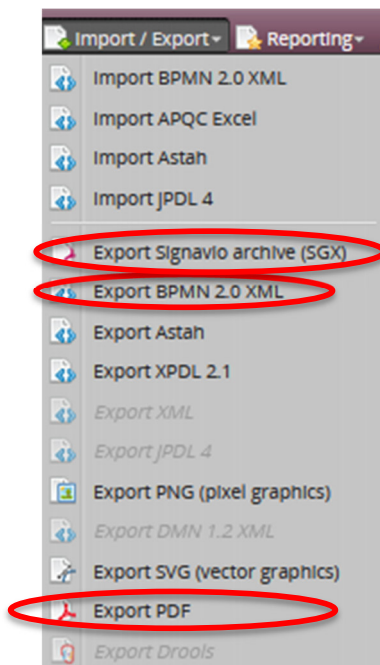
The overall marking rubric is outlined on the final page. Marks are allocated not just for correct modelling of the scenario, but also for the **pragmatic** quality of the model (i.e. use of modelling guidelines, aesthetics, general ease of interpretation and maintenance for the model's audience).

As such, please ensure your models are **easy to read when printed at A3 size** (consider your audience). You will need to choose the appropriate level of detail (abstraction), and also avoid leaving excessive blank spaces in your model, which would result in your model being longer or wider than otherwise necessary. (Signavio's "create or remove free space" tool can help you tidy the model; don't forget to tidy the messages too once you've optimised the space!)

Your final submission will not be considered complete unless all three files are submitted by the deadline. All filenames must start with the **StudentNumber_LastName** format (with descriptions added after that). *Please read the requirements overleaf, and carefully comply with them!*

Student task: your deliverables

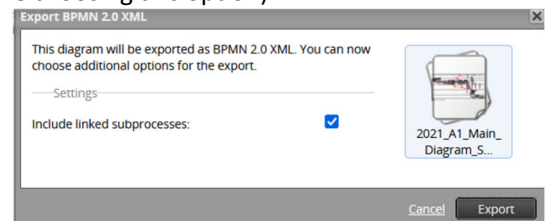
1. **Milestone 1** (total 25 marks):
 - a. please submit – using only the **table in Microsoft Excel that will be provided for Milestone 1 (M1)** – your understanding of all the **actors** / organisational artefacts in this process (i.e. lanes and pools (both black and white box modelled pools)).
 NB: if there are multiple entities within the same pool (i.e. lanes), please group them together in the table so that the structure is clear.
NB: You do not need to submit a BPMN model or even a swimlane diagram.
 - b. please submit one (any one) activity that each actor undertakes in the column next to the actor name
 - c. please submit (in the same Microsoft Excel document used above) one **positive outcome**, and one **negative outcome** of this process.
 - d. PDFs or other file formats are not permitted; CSV, XLS or XLSX format is required.
2. **Milestone 2** (total 30 marks):
 - a. please submit a list of the event(s) i.e. trigger(s), and activities in this process using the format that will be provided in the Excel spreadsheet for Milestone 2 (M2)
 - b. please remember that the customer requires you to use the same language (i.e. the same verbs and nouns) as they do in their process walkthrough. If you don't use the customer's language, they will not understand what you're referring to and give you zero mark
 - c. PDFs or other file formats are not permitted; CSV, XLS or XLSX format is required.
3. **Milestone 3** (total 35 marks):
 - a. please submit this time using a Microsoft Word document – two **complex and advanced BPMN constructs** that are necessary to achieve high semantic and pragmatic quality in this process. Please also explain, in less than 200 words for each, why you have chosen those constructs as necessary to best model this process. You may use a fragment of a BPMN model to help explain.
 NB: you do **not** need to submit a full or complete BPMN model for this milestone.
4. **Final submission** | BPMN model (210 marks): a **full BPMN As-is model** of the process described above.
 1. Please insert your name on the Signavio model page, below the last pool i.e. on the model itself (in addition to the filename). Please use the **StudentNumber_LastName** format, and you can use the Text Annotation tool under Artefacts in the Signavio Shapes menu to do this. Your student number and surname must be visible on all files.
 2. Please make sure that your final Blackboard submission includes THREE files, as shown in the image:
 - The Signavio archive (SGX) file (select all files in your Signavio process explorer window before choosing this option).
 - The .bpmn file from Signavio that contains your model (select only the main process, then Export BPMN 2.0 XML, and in the options, please ensure it includes any linked subprocesses. NB: Signavio only exports **local** subprocesses in this way, not Global subprocesses, so be mindful of that when you model and export)
 - The .pdf image file of ALL your process (including sub-processes, by selecting all files in your Signavio process explorer window before choosing this option).



1. Please insert your name on the Signavio model page, below the last pool i.e. on the model itself (in addition to the filename). Please use the **StudentNumber_LastName** format, and you can use the Text Annotation tool under Artefacts in the Signavio Shapes menu to do this. Your student number and surname must be visible on all files.

2. Please make sure that your final Blackboard submission includes THREE files, as shown in the image:

- The Signavio archive (SGX) file (select all files in your Signavio process explorer window before choosing this option).
- The .bpmn file from Signavio that contains your model (select only the main process, then Export BPMN 2.0 XML, and in the options, please ensure it includes any linked subprocesses. NB: Signavio only exports **local** subprocesses in this way, not Global subprocesses, so be mindful of that when you model and export)
- The .pdf image file of ALL your process (including sub-processes, by selecting all files in your Signavio process explorer window before choosing this option).



Marking Guide/Rubric

Feedback after Milestones 1, 2 and 3 will be provided in your tutorials.
Marks will be issued only **once**, after all four components have been submitted.

All stages of the assignment will be marked based on the following marking rubric & allocation of marks.

Criteria	High Level Competency 80% - 100%	Adequate Competency 50% - 79%	Developing Competency 0% - 49%
Lanes/Pools 30 marks	All internal/external process participants have been correctly modelled.	Some internal/external process participants are missing or are incorrectly modelled.	Most internal/external process participants are missing or are incorrectly identified.
Activities 40 marks	All activities, including appropriate sub-processes have been correctly labelled and modelled.	Some activities or appropriate sub-processes are missing or are incorrectly identified.	Most activities or appropriate sub-processes are missing or are incorrectly identified/modelled.
Decision Gateways 65 marks	All gateways have been correctly modelled, using appropriate gateway types.	Some gateways are missing or are of incorrect type.	Most gateways are missing or are incorrectly identified/modelled.
Sequence flows 35 marks	All sequence flows have been correctly modelled.	Some sequence flows are missing or are incorrectly identified.	Most sequence flows are missing or are incorrectly identified/modelled.
Events 65 marks	All events have been correctly modelled, using the correct event types.	Some events are missing or are of incorrect type.	Most events are missing or are incorrectly identified/modelled.
Message Flows 25 marks	All message flows have been identified and are correctly modelled.	Some message flows are missing or are incorrectly identified/modelled.	Most message flows are missing or are incorrectly identified/modelled.
Pragmatic Quality 40 marks	Consistent use of modelling guidelines, well structured, easy to read model.	Some inconsistencies exist in applying modelling guidelines, and/or issues with model user friendliness.	Little or no evidence of application of modelling guidelines, significant issues with model user friendliness.