

# ETPN 2021 Project

## *Técnico+ Course Planning and Management*

The world is constantly changing and, these days, this change is faster and faster, especially in the technical and technological areas, where engineers and researchers every day create and update ideas. Instituto Superior Técnico has the duty and mission to share and spread knowledge, having created Técnico+ (<https://tecnicomais.pt/>), the first advanced and professional postgraduate training school in the areas of Technology, Engineering, Science and Architecture in Portugal.

### **Task**

Your assignment is to model and analyse the “as is” business process model for a Técnico+ Course Planning and to redesign a “to be” process. A table that captures the phases and tasks of the “as is” process can be found in the Excel File “Tecnico Plus Course Planning Phases.xlsx” that is available in Fenix. When the details of the process detailed in the Excel file are not detailed enough, you must make your own assumptions and write them down in your report.

Your work starts with understanding 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 analyse the “as is” process model quantitatively and qualitatively leading to an “issue register”. You do not need to apply all analysis techniques introduced in the lectures, but rather you should select those techniques that are applicable given the data provided in the case study. For the quantitative analysis, whenever it gets too complex to perform by your calculations, you can run a process simulation and support your analysis with that data.

Tecnico+ executive committee identified several issues with the current process:

1. 20% of the courses got insufficient candidates; Based on a preliminary analysis of a survey on this issue 40% answered there is no market interest; 20% did not know the course; 35% knew about the course but forgot the deadlines to apply; 5% needed financial support.
2. Despite existing interest, public companies fail to meet the deadlines for applying employees due to specific public procurement procedures which take additional time and require that Tecnico+ issues proposals or submit proposals through public procurement platforms which is not covered by the current process;
3. A recent survey noticed that testimonies are very relevant to improve attraction to the courses, however it is difficult to get relevant testimonies. The executive director realized that creating a reward programme where credits are given to individuals that provide a testimony to use in future application to courses could help in getting more testimonies;
4. Companies have much interest that their employees learn from the academia, however courses can only be proposed by Tecnico Professors and sometimes the companies’ needs are not fully aligned with Tecnico+ course offering.

Based on the above identified issues, you will then design a “to-be” process. You will explain the proposed changes, and how and to what extent these changes help to address the issues identified before. Also, report what other possible changes you considered, why could they also be potentially relevant, and why did you discard them. This will lead to a “to-be” process model.

### **What to Submit?**

You should submit a deliverable as a PDF report with the following sections:

1. The “As is” process model. If the size of the diagrams allows so, please copy the process model(s) into your report. But if some diagrams are too large, submit them as separate PDF file(s). Please also include the Camunda source file with the submission.

2. The “As is” process model analysis: This section should include the issue register as a bare minimum (try to conceive and use a handy table for this purpose), but may include also why-why diagrams, a Pareto chart, a waste table, or value-added analysis table. To perform the flow analysis and simulation you will be required to make assumptions, given the provided data. You must present all assumptions in a clear way, and make sure they are also used in the analysis of the to-be process.

3. The Process Redesign: This section should include: (i) the proposed process changes and justification for each proposed change; (ii) a discussion of the expected benefits of the proposed changes; (iii) alternative changes that, according to the subject of the course, could be considered as potentially relevant but you discarded, explaining the reasons for all that; and (iv) the “to be” process model in BPMN (can be submitted in separate files).

Each team must deliver a video presentation of their report on the specified date after delivering the report. The presentation should explain the outcomes of the analysis and redesign and must have a maximum of 4 minutes. Each student must then analyze two other projects (video and report) and answer a survey which address will be shared through Fenix. This survey will also include some question to allow the student to give feedback on the performance of their group.

Indicative grading: Each of the three points above is worth 6 points, which will be each accessed according to the quality of their presentation in the report. The video presentation is worth another 2 points.

## ***Important dates***

- Delivery date – 04/02/2022 through Fenix
- Video presentation delivery date – 09/02/2022 through Fenix