

INF5181 – Process Improvement and Agile Methods in Systems
Development

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1 Introduction

<In this section describe the SPI context, method, issues, and goals>

<Length of Section 1 = approx. 1 page>

1.1 Context description

<In this sub-section briefly describe the organisational context in which the SPI initiative takes place>

1.2 Method

<In this sub-section briefly describe the software process improvement method(s) applied in the SPI initiative, e.g., process modelling, measurement, PROFES, GQM, Plan-Do-Check-Act, ... >

1.3 Issues

<In this sub-section describe the issues that shall be addressed/overcome by the SPI initiative>

1.4 Goals

<In this sub-section describe in precise terms, which process-related performance measures (sometimes called: indicators or metrics) shall be improved and by how much; performance measures can relate to activities, artefacts, and roles/people>

2 Baseline process

<In this section describe the elements of the current (baseline) process and how these elements are related>

<Length of Section 2 = approx. 3 pages>

2.1 Elements of the baseline process

<In this sub-section provide the following lists:

- List of artefacts produced/used in the current process
- List of activities performed in the current process
- List of roles involved in activities of the current process
- List of methods/techniques/tools used in activities of the current process

Each element in a list must be briefly described>

2.2 Descriptive model of the baseline process

<In this sub-section present the descriptive model of the current process, either as graph, or as table; if you use a table, describe in each row one activity with name (column 1), input products (column 2), output products (column 3), roles involved (column 4), methods, techniques, tools applied (column 5); if you use a graph, start out with a product flow (consisting of activities and artefacts) and then connect roles and methods/techniques/tools to it.>

2.3 Performance of the baseline process

<In this sub-section present quantitative data for the performance measures (as defined in sub-section 1.4) of the baseline process.>

3 Target process

<In this section describe what parts/elements of the current (baseline) process shall be changed and how the new process looks like; how you present the target depends on the scope of change; if you change/replace the complete process, then you should present a prescriptive process model of the new process, clearly stating what has been changed/replaced as compared to the baseline process; if you change/replace only a sub-process or an activity or a method/technique used in the baseline process, then describe precisely what will be different in the new process with regards to the changed/replaced sub-process, activity or method/technique and how the changed/replaced sub-process, activity, or method/technique fits into the old (baseline) process>

<Length of Section 3 = approx. 3 pages>

4 Implementation of target process

<Describe precisely what steps have to be taken in order to implement the new process; use table with four columns: what – when – who (by whom) – how; each row should then contain the following information:

- What: name of the activity/step to be performed
- When: start and end date of the activity/step to be performed
- Who: who will be responsible, and who will be involved in the activity/step to be performed
- How: how will the activity/step be performed; describe the activity; this may include description of entry/exit conditions, dependency on previous activities/steps, etc.

<Length of Section 4 = approx. 2 pages>

5 Measurement and control

<In this section describe the following:

- How you measure the performance measures defined in sub-section 1.4
- How you decide whether your SPI initiative was successful
- What actions you will take in case of success and failure of the SPI initiative>

<Length of Section 5 = approx. 2 pages>

5.1 Measurement plan

<The measurement plan contains for each measure defined in sub-section 1.4 the following information: name, measurement unit, element of the process to which the measure relates, when the measure will be taken, by whom the measure will be taken, who is responsible for quality control of the measurement, what tools will be used (if any), etc.>

5.2 Action plan

<In this sub-section describe how you will make decisions about the success/failure of the SPI program, and what actions you may take depending on the possible outcomes of this decision>

6 Discussion

<In this section present the underlying rationale of your SPI plan and associated risks>

<Length of Section 6 = approx. 2 pages>

6.1 Underlying rationale of proposed changes

<In this sub-section describe the motivation for the type of changes proposed in the SPI plan, i.e.: Why did you propose exactly these changes? Did you have alternatives of the proposed changes in mind? If so, why did you not go for the alternatives? Etc.>

6.2 Risks of proposed changes

<In this sub-section describe risks related to the proposed changes, i.e.: What may go wrong? Why might it not work? What risk mitigation strategies will be used? Etc.>

7 References

<In this section list the literature referenced in this document; follow an established referencing standard, e.g., IEEE, ACM, Springer>

<Length of Section 7 = approx. 1 page>