Assignment 2. Process Improvement, APIM and GQM+

*Department of Software Engineering*

The software process improvement section of this course intends to give you understanding of the common issues and problems related to process improvement. This is done by writing a report focusing on experiences from software engineering practices as well as information picked up from the course literature for this course.

One important ingredient is the personal experience and logical reasoning and to show understanding for the complexity of process improvement. Further it is important to analyse the proposed solutions to the problems of process improvement to understand its intended effect and also show understanding of the workings of that solution.

The basic information for this assignment is Jacobs book (Accelerating Process Improvement Using Agile Techniques) and the GQM+Strategies Approach (Basili et al.), but it is recommended to complement with other sources.

The report shall address the following questions clearly:

1. Describe shortly your experience of software engineering development projects.
2. Identify at least three examples from your experience (from your professional working life or from doing student assignments) that should have been subject for improvement. The improvement can be small – or big (include at least one “big” example). Analyse possible hindrances to process improvement initiatives related to your examples. Describe the examples and the possible hindrances (or if the hindrances really have happened). Motivate your statements.
3. Select two of your examples – preferably examples with different characteristics. Describe, in quite some detail, how you would use Jacobs’s recommendations, and the different elements/activities of APIM to perform these improvements. **Focus on the activities with the highest relevance for your examples**. Pinpoint explicitly how Jacobs’s recommendations can be used for overcoming the hindrances. Discuss and motivate.
4. Select one of your examples in 3 above. Analyse and describe how you can use the GQM+Strategies grid elements in your example. **Focus on the elements that are relevant for your example**. Compare the APIM model and the GQM+Strategies process – pinpoint similarities and differences. Describe and motivate how the models/approaches contribute to your example.
5. Select a suitable number of tools described in part IV (four) of the Jacobs book and connect them to the examples you selected in 3 above. Describe how you could have used them in your examples. Discuss and motivate.

The assignment shall be done individually. Grading will be done according to the ECTS scale.

Estimated size: 6 pages in IEEE template.