



Departamento de Eletrônica e Sistemas



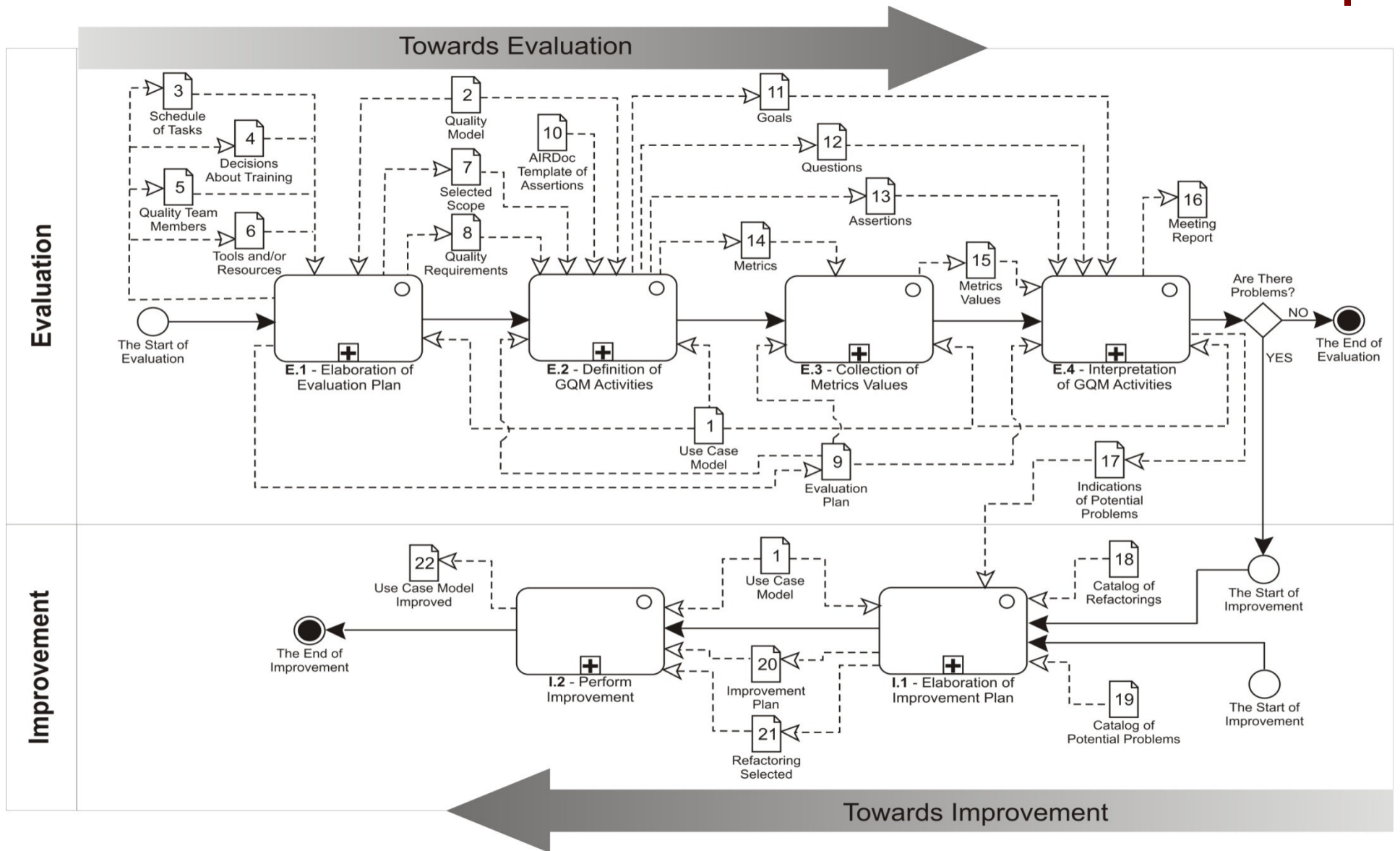
Towards the Improvement of Use Case Models: The AIRDoc Process

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1 Introduction

- AIRDoc is an acronym for “Approach to Improve Requirements Documents”
- AIRDoc is an approach to improve the quality of Use Case Models.
- The AIRDoc proposes a process that supports not only the evaluation but also the improvement of requirements documents specified via Use Cases.
 - To evaluate Use Case Models by elaborating goals, defining questions and assertions that will be addressed by metrics;
 - As well as to improve the quality of Use Case Models by means of refactorings. AIRDoc relies on a catalog of well-known requirements problems and their possible solutions.
- The AIRDoc process is based on Goal Question Metrics GQM and complies with the IEEE Standard for a Software Quality Methodology

2 THE AIRDOC PROCESS



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- (1) Evaluation that consists of four Activities, which are composed by steps or other activities (sub-process):
 - (E.1) Elaboration of Evaluation Plan.
 - (E.2) Definition of GQM Activities.
 - (E.3) Collection of the Metrics Values.
 - (E.4) Interpretation of GQM Activities.
- (2) Improvement that consists of two Activities:
 - (I.1) Elaboration of Improvement Plan.
 - (I.2) Perform Improvement.
- The use of the process with the evaluation performed is based on a large real requirements document provided by SERPRO.

3 Ongoing and Future Work

- **Systematic qualitative evaluation of the AIRDoc process. Several on-going case studies are also under way.**
- **The evaluation stage may take a considerable amount of time of the quality assurance team, which may compromise the adoption of AIRDoc.**
- **The AIRDoc process is modeled with BPMN, and the refactorings are described using the algorithm format. This helps to define it more precisely, which may enable the development of some tool support, which in turn can help accelerate this stage of the process.**

5 Publications



- **Quality Improvement for Use Case Model.
In: SBES 2009**

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6 Research



- **Dissertações**

- **Extender Airdoc métricas em i***