

Modeling Non-Functional Requirements Using Soft Goals

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INTRODUCTION

NFR: Non-functional Requirement

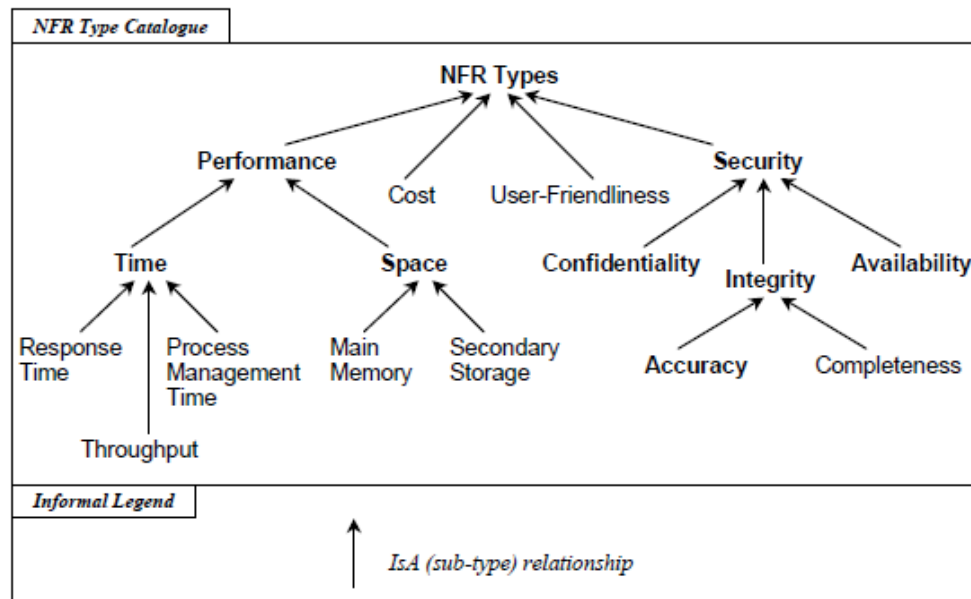
- ▶ The NFR Framework provides a systematic treatment of nonfunctional requirements.
- ▶ NFR are methodically introduced into steps in the design process.

1. Acquiring or accessing knowledge about
2. Identifying particular NFRs for the domain
3. Decomposing NFRs
4. Identifying operationalizations possible design alternatives for meeting
5. NFRs in the target system
6. Dealing with ambiguities tradeoffs and priorities and  interdependencies among NFRs and operationalizations
7. Selecting operationalizations
8. Supporting decisions with design rationale and
9. Evaluating the impact of decisions.

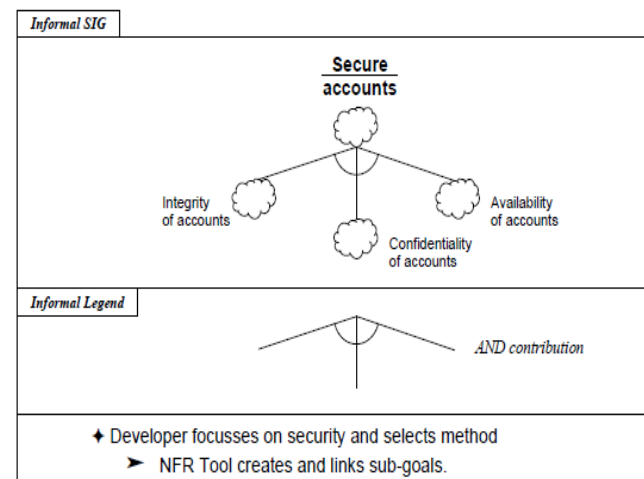
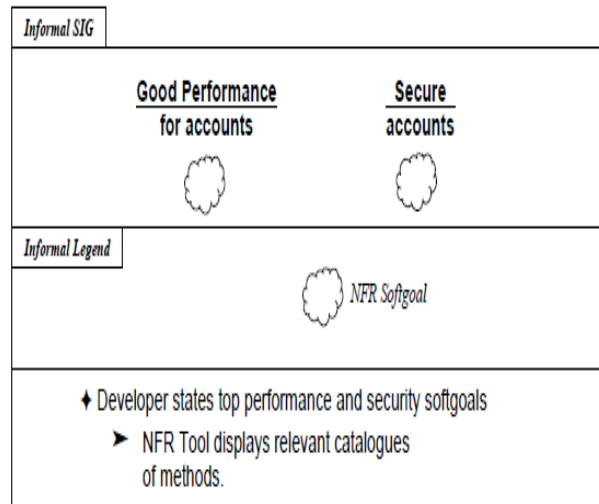
USING THE NFR FRAMEWORK

- ▶ NFR Framework uses non functional requirements such as security accuracy performance and cost to drive the overall design process.
- ▶ Softgoal Interdependency Graphs
- ▶ Cataloguing Design Knowledge

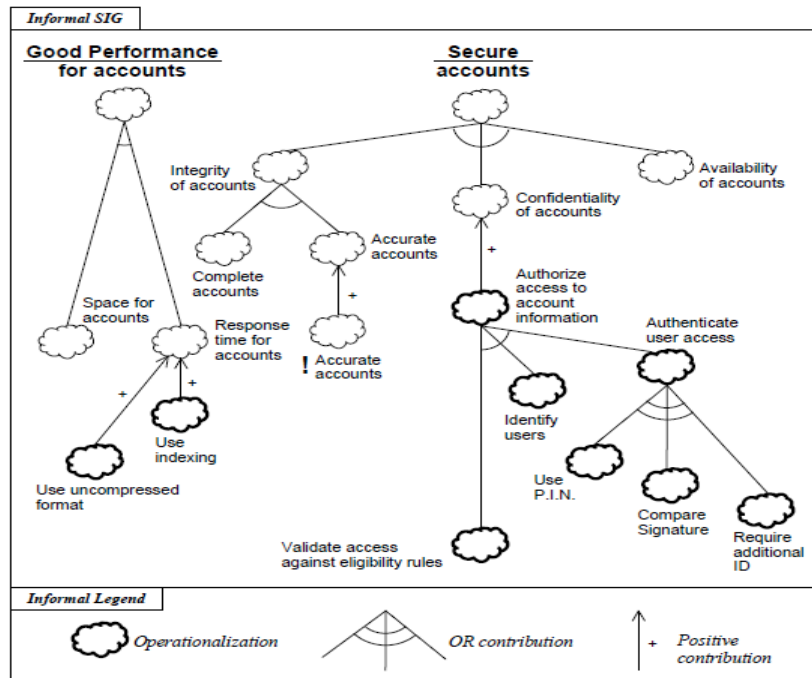
ACQUIRING AND CATALOGUING NFR KNOWLEDGE



IDENTIFYING & DECOMPOSING NFRs



IDENTIFYING POSSIBLE OPERATIONALIZATIONS



Recording design rationale & Selection by developers

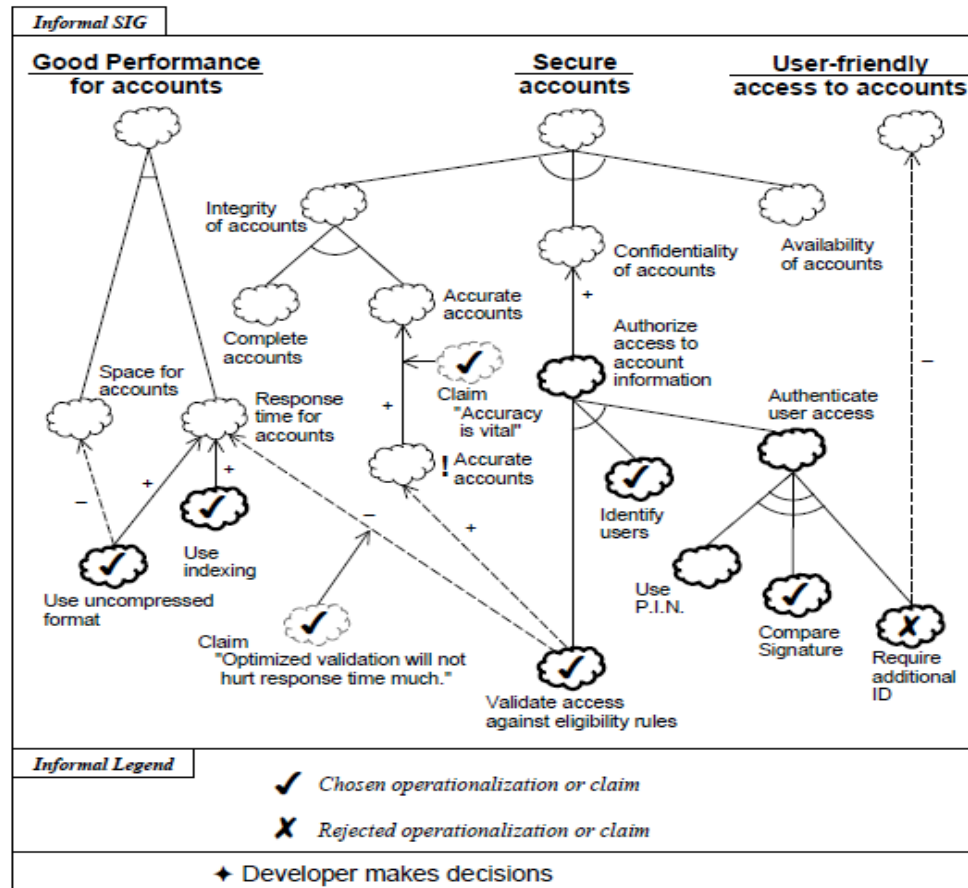


Figure 2.12. Selecting among alternatives.

Evaluating the impact of Decisions

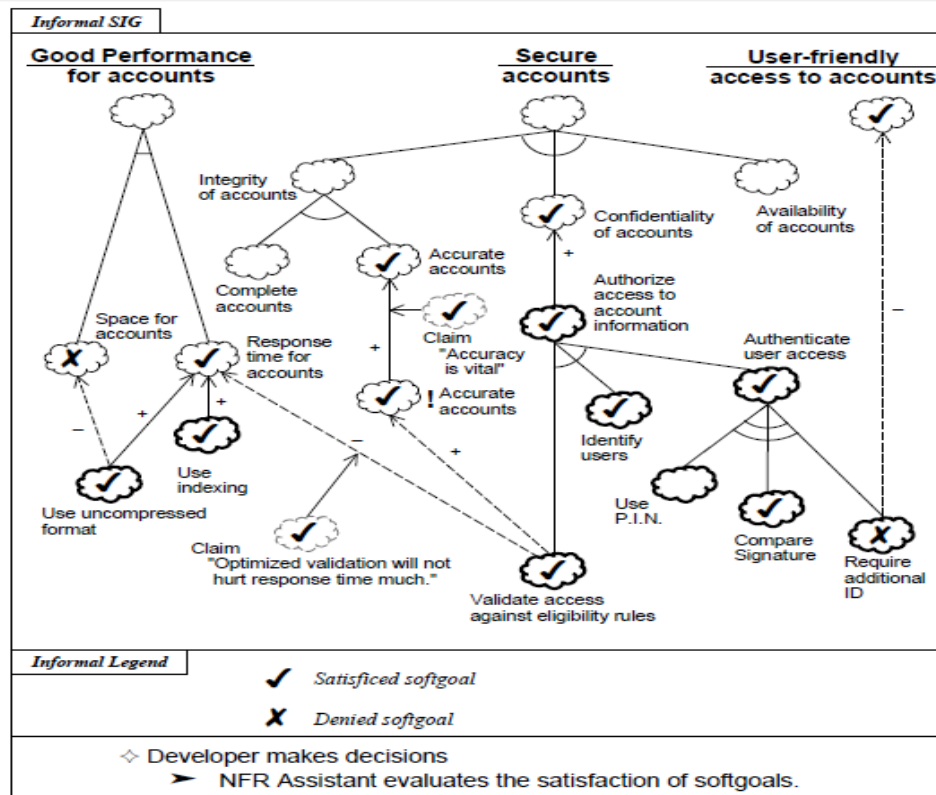


Figure 2.13. Evaluating the impact of decisions.

Types of Catalogues

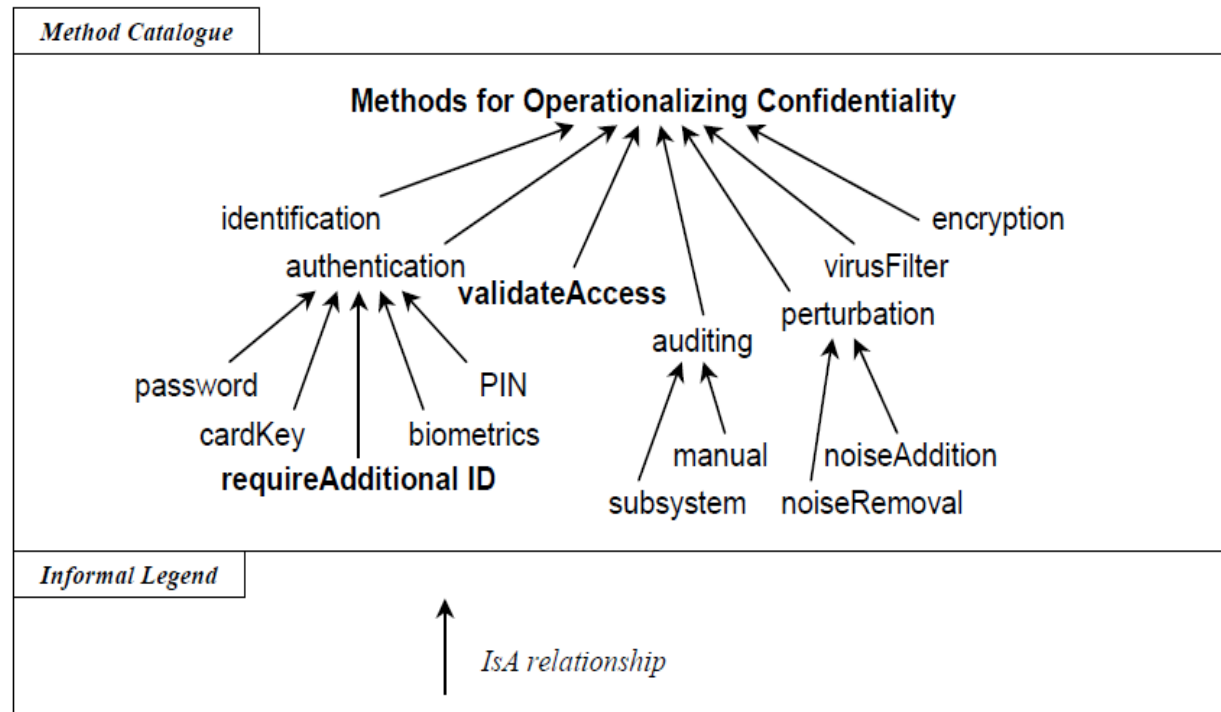
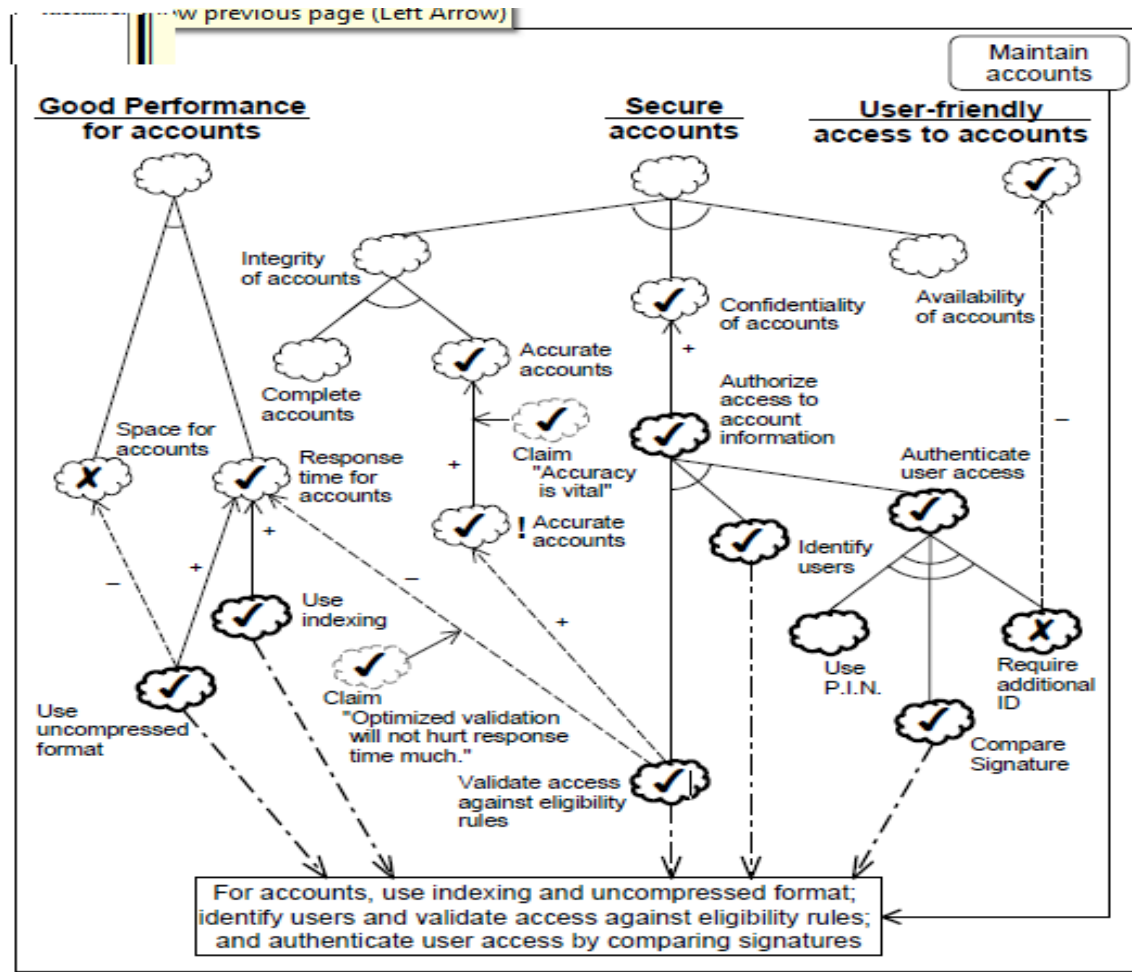


Figure 2.15. A catalogue of operationalization methods for achieving confidentiality.

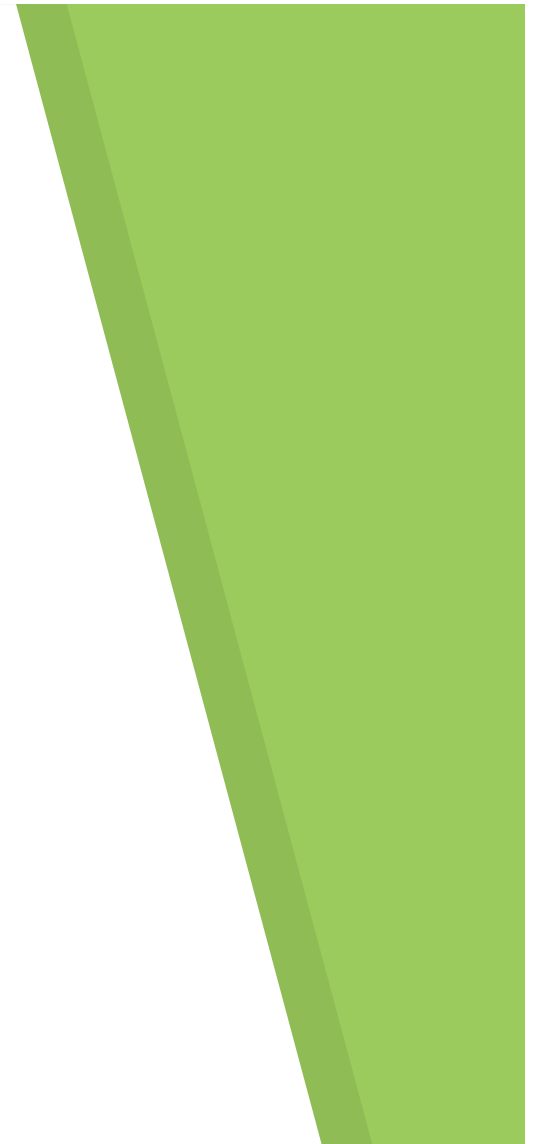
Relating Functional Requirements to Decisions and NFRs



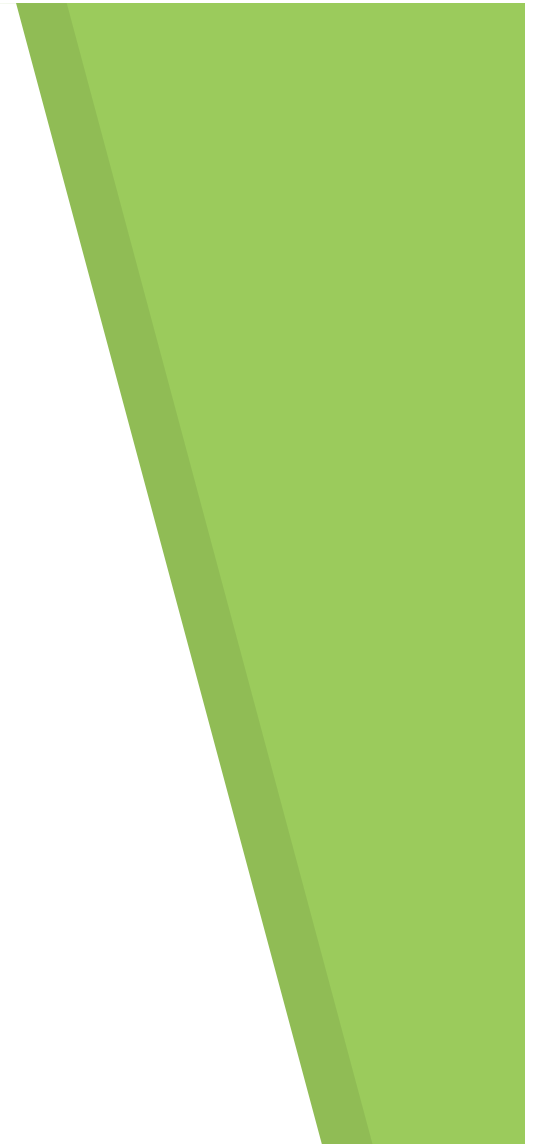
CONCLUSION

The goal-oriented approach we have taken is meant to be intuitive following and supporting the developers reasoning.

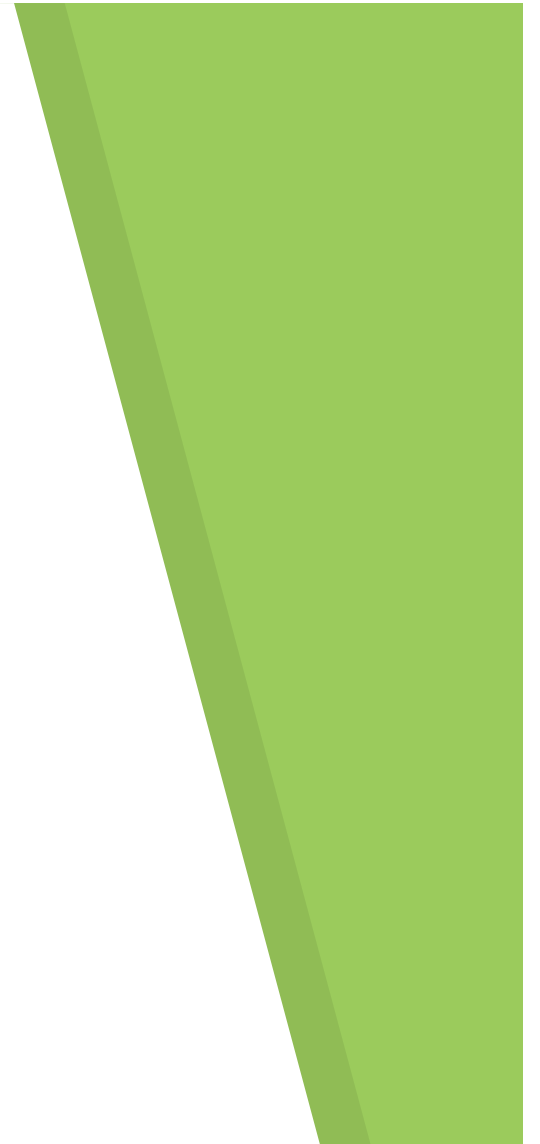
The aim is to offer flexible support for a developers reasoning and to allow it to be recorded. The purpose is not to automate development Instead development is intended to be highly interactive where the human developer is in control



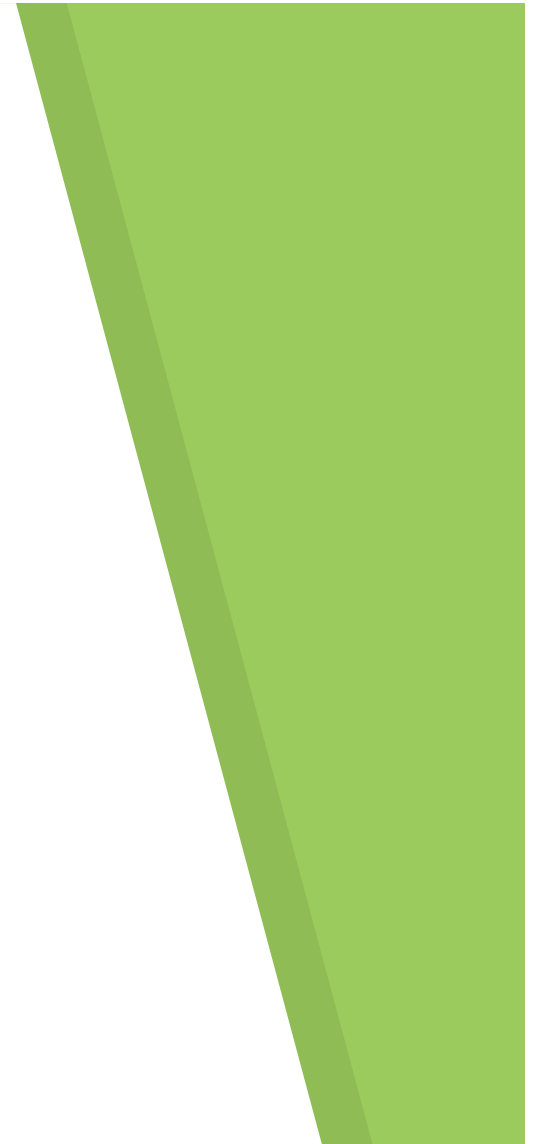
When do you think the refinement process should end ?



**What tools do you know for
sketching Softgoal
Interdependency Graphs ?**



**What is the negative contribution
in SIG and why is it required?**



THANK YOU!

