

# Identifying Value-Based Criteria for Requirements

## Triage and Selection Decision-Making

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### 1 Introduction

In software intensive products such as cars, industrial robots or telecom systems, software has traditionally been associated with cost, and there has been no real perception of its value in relation to the entire product offering. However, as software is becoming a larger part of the main competitive advantage, driving innovation and product differentiation while hardware is becoming more standardized, the valuation of software is becoming critical. A consequence of this is that software intensive products in general, but the software parts in particular, are increasing in size and complexity, and the cost associated with the development of the software part is also increasing. Decisions taken regarding the software will impact the entire product's life cycle and value. Thus, it is important to take into consideration value aspects impacting both short-term and long-term success of the product and company.

#### 1.1 Objectives

The objective of the study is to identify which value aspects are considered when taking requirements triage and selection decisions. To fulfill this objective, value aspects considered currently need to be elicited from the industry participants and value aspects that should be considered (ideally) need to be elicited. In addition we want to elicit how the value aspects are and should be evaluated/assessed/measured.

**RQ1:** Which value aspects are considered when taking requirements triage and selection decision?

**RQ2:** How the value aspects are evaluated/assessed/measured?

**RQ3:** Which value aspects should be considered when taking requirements triage and selection decision?

**RQ4:** How the value aspects should be evaluated/assessed/measured?

### 3 Method

We propose to use exploratory case study method. We propose to interview all the roles involved in the decision-making (minimum two persons per role) per product. The participants would first be asked to name and briefly describe value aspects they consider today. Information about how these value aspects are evaluated/assessed/measured would

also be elicited. In the second step, participants will be presented with an exhaustive list of value aspects to elicit value aspects that should be considered and how these should be evaluated/assessed/measured.

### **3.1 Wanted from Industry**

- **Context:** Market-driven software product development companies, medium to large-scale companies
- **No. of products:** 2-4
- **Roles:** People involved (directly or indirectly) in requirements triage and selection decision-making. For example, product managers, requirements managers, system managers, marketing units
- **No. of personnel:** 2-4 people in one role/per product as it is essential for triangulation
- **Artifacts:** access to artifacts used in/for requirements triage and selection decision making for example, requirements specification documentation, roadmaps, product strategies (if used for requirements triage and selection)