Complexity and Right Sizing Architecture Descriptions

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Facts and Cases of the Value of Architecting

White Paper Resulting from Architecture Forum Meeting

October 10 & 11, 2006 (Eindhoven, The Netherlands)

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Published on June 13 , 2007

1. Introduction

This is an unusual short white paper. Although lack of time of the editors was an issue, the real hurdle was this time the sensitivity of the exchanged information. We will shortly discuss the 2 subjects that were discussed and the underlying problem of sensitivity.

2. Complexity and Right Sizing Architecture Descriptions

A significant tension exists between the need for overview, the need to be up-to-date, and the need for accurate and complete information, as shown in Figure 1. Overview is hampered by an overload of details, hence smaller is better. From maintenance point of view also small size is beneficial. However, to be accurate and complete always more information needs to be captured. On top of that the rationale behind specification and design decisions is worthwhile to capture, since many succeeding decisions have to take the preceeding rationale into account. Again, capturing the rationale always increases the size of the architecture description.

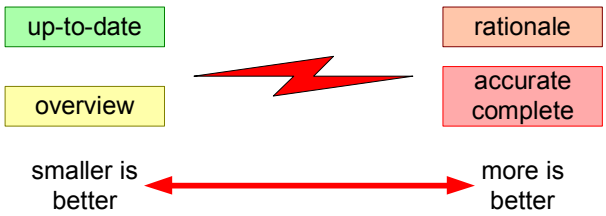

Figure 1. Opposite forces operating on architecture size

3. Facts and Cases of the Value of Architecting

Members of the forum are all convinced of the value of architecting. In the first white paper of October 2005, "The State-of-Practice of Systems Architecting: Where Are We Heading?", the value of architecting is described. Unfortunately, little support exists for our claimed benefits of architecting and architectures. Even worse, disastrous projects where architecture claims have been made without realizing them have damaged some of the architecting credibility. We, architects, run into problems when we need investments (in people, technology, tools et cetera) where the justification is based on our own perceived value. Wouldn't it be wonderful if we could show well-founded support for our claims of architecting value?

To create a starting point for this quest we asked for seed presentations with facts and cases of the value of architecting. The result was highly successful; we got data and fact rich presentations from well established product development organizations. Here we hit the white paper dilemma: Most of the shown material is highly sensitive in competitive and strategic sense.

4. Sensitive case information

Architecting is an activity that is related to most business processes and related to many stakeholders. Research of architecting and discussions of aspects of architecting only make sense when sufficient context information is taken into account. Preferred research methods are therefore case based, with an explicit context.

The dilemma that we face is that if we strip the case from sensitive information, then we obtain an empty set of motherhoods. If we publish the sensitive information then no-one will dare to present sensitive information anymore. One option is to extract and abstract from sufficient cases to capture the underlying know how and insights. We will try to follow this route in next meetings. Another option might be to transfer the insights to an artificial case, but this is difficult, costs a lot of effort, and the end result would still feel artificial for experts in the architecting field.

Although we are not able to publish the case information itself, we are in the position to make an observation. The most valuable case information came from negative examples: cases where insufficient architecting in the past resulted in today's problems. Note that negative examples (we did something wrong) are even more sensitive than positive examples (look how good we are).

5. Conclusion

This meeting was an extremely productive meeting for the participants, due to the very open presentation by several members. The presenters choose a rather vulnerable position, by exposing and analyzing actual problems. We will revisit the subjects, hoping to be able to report more after next meeting.