SOA-Technology: Managing architectures on different levels saves SOA-concept

In January the Burton-group analyst Anne Thomas Manes caused quite a commotion due to a short blog post titled “SOA is dead”[1]. Many follow-ups were published based on that announcement and even some scientific work was motivated[2]. This can be a great opportunity for SQS, because the main reasons for failed SOA projects can be remedied in the context of an effective Quality Management.

Based on standard definitions Architecture is “the fundamental organization of a system, embodied in its components, their relationships to each other and the environment, and the principles governing its design and evolution.“[3] It is important to note that one system can have several architectures built-in, as long as there are many different principles applied for the decomposition. A system can have for example a hardware-architecture, a network-architecture, a software-architecture, a security-architecture etc. Anne Thomas Manes is right in that working with architectures is not only a technical challenge but should be seen in a more holistic context. In that sense, a SOA approach that only considers technology will fail.

Additionally there are more and more architecture guidelines that have to be fulfilled by projects. For example there exists the NATO Architecture Framework, creating a set of different architecture views and demanding for a specific cooperation between them. In Germany there also exist the “Standards und Architekturen für E-Government-Anwendungen” (SAGA), giving a minimal set of requirements that has to be fulfilled within e-government applications.

Based on the experience of many large architecture oriented projects SQS now is able to present a Quality Assurance Framework for Architectures (QAFA) that classifies the different QA activities for risk-management of SOA-projects. This framework consists of three levels of QA activities:

- Syntactic Architecture QA: On this level it is checked if architectures have been made explicit, if they can be understood (e.g. if a standard method like UML is applied), if they can be modified, if they can be exchanged between different parties, etc. An old MS-Paint based picture with some nice bubbles and relations between them is a show-stopper on this QAFA-level.

- Semantic Architecture QA: On this level it is checked if the architecture made explicit can be matched with the real system. Additionally it is checked if this specific architecture does fulfil those business requirements that are affected by it. A visionary or outdated architecture, that has only a very limited match with the existing system and therefore should not be used for any real-life use case is a show-stopper on this QAFA-level.

- Strategic Architecture QS: On this level it is checked if the different architectures are synchronised together. A high-performance hardware architecture is without any value if you have a slow-performance software architecture. The same is valid for a technical SOA without a corresponding service oriented organisational architecture.

SQS has bundled these activities together to be able to offer a holistic SOA-QM-system. In doing so, SQS delivers a framework to the customer that helps ensure that all risks around a SOA are covered and that the SOA-concept generates real benefit for the organisation.

---

1 http://apsblog.burtongroup.com/2009/01/soa-is-dead-long-live-services.html

2 Harald Gläser: „Ist SOA gescheitert?“, in Objektspektrum, Online-Ausgabe SOA 2009

3 IEEE 1471 – Recommended Practice for Architectural Description of Software-Intensive Systems