

Familiarity with and Usage of Service-oriented Architectures in German Banks

FIRST RESULTS OF A SURVEY WITH THE LARGEST 1,020 GERMAN BANKS

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Introduction

A current trend in software engineering is the Service-oriented Architecture (SOA) paradigm, which can be used to design and develop complex IT systems (Erl, 2005). The core concept of SOA is the “service”, which can be understood as a self-describing encapsulation of domain-specific functionalities (Krafzig et al., 2004). A purchaser buys a service – with specified characteristics and, if applicable, for a particular price. A server originates the service which is delivered via network to the customer. Business processes of the producer and the applications supporting them can be built based on compositions of distributed and loosely coupled services. “Distributed” means that services may be sourced from independent servers – either within a corporation or from outside vendors.

The implementation of service-oriented concepts is one of the main activities of many IT and business departments throughout enterprises of various industries. Nevertheless, the

impact of SOA on the banking industry in Germany has not yet been examined. Therefore, we conducted a survey with the largest 1,020 banks from which we are presenting first results in this article (as the survey has just recently been closed, the data analysis is still in progress). The group of participants included chief information officers, chief technology officers, chief software architects, and enterprise software architects of banks from all three pillars of the German banking scene (“Drei-Säulen”), i.e., commercial banks, savings banks, and credit unions.

In a burning glass, the results are: Service-oriented Architectures are a well-known and regarded topic in German banks – they excel already a certain impact. However, for almost half of the participants the SOA concept is not interesting. And with respect to crossorganizational collaboration between banks and third parties – either vendors or customers – almost 70% of the participants are not or to a lesser extent familiar with service-oriented concepts.

We present the outcomes from our survey in three different research areas.

Familiarity of participants with service-oriented concepts

We asked the participants to what extent they are familiar with the terms respectively concepts of “service-orientation”, “Service-oriented Architecture” and “service-oriented collaboration”.

As it can be seen in Figure 1, almost 75% of the participants are to some extent familiar with the concept “service-orientation”, about 47% are even quite familiar or familiar with this concept. Examining the results for the concept “Service-oriented Architectures”, the figures are just a little lower, with nearly 69% of the participants being familiar with this concept

to some extent. Nearly 30% are quite familiar or familiar with the concept “Service-oriented Architecture”.

Asked for “service-oriented collaboration”, only 31% were familiar to some extent with this concept. The percentage of participants who are quite familiar or familiar with this concept is less than 12%.

Current state of SOA adaptation in German banks

In the next question, we wanted to know if the participating banks consider an adaptation of a SOA or if they are already planning or performing a SOA implementation.

The results of this question are depicted in Figure 2. On the one hand, one third of the sur-

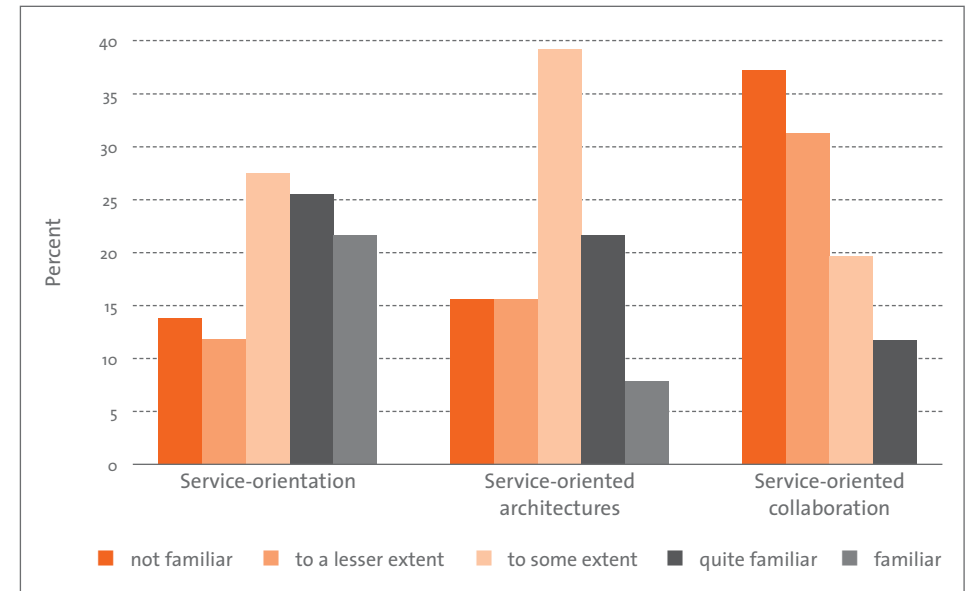


Figure 1: Familiarity of participants with service-oriented concepts

vey's participants stated that the SOA concept is not interesting at all for their companies, but on the other hand, more than 31% of the examined companies are already planning an implementation, the implementation is in progress, or already finished. Further 23% consider the implementation of SOA as interesting.

Importance of a Service-oriented Architecture for cross-organizational collaboration

How do the participants rate the importance of a Service-oriented Architecture for the cross-organizational collaboration between banks and third parties?

Currently, cross-organizational collaboration is either realized with a large amount of manual and semi-automatic processing or tight-coupling of systems – resulting in comparatively high costs and in parallel often in highly exceeding

time requirements even for simple implementations. Flexibility based on clearly defined interfaces, loosely-coupled systems, and the application of Service Level Agreements is quite uncommon.

As a result (cp. Figure 3), only less than 6% of the participants think that IT architectures are of no importance for cross-organizational collaboration. Approximately 32% rate the importance of a Service-oriented Architecture for collaboration important to a “lesser extent” or to “some extent”. The remaining 62% rate a Service-oriented Architecture as at least quite important for cross-organizational collaborations.

Conclusion and outlook

Our preliminary results show that service-orientation and SOA are well-known and regarded in the German banking scene. Almost 75%

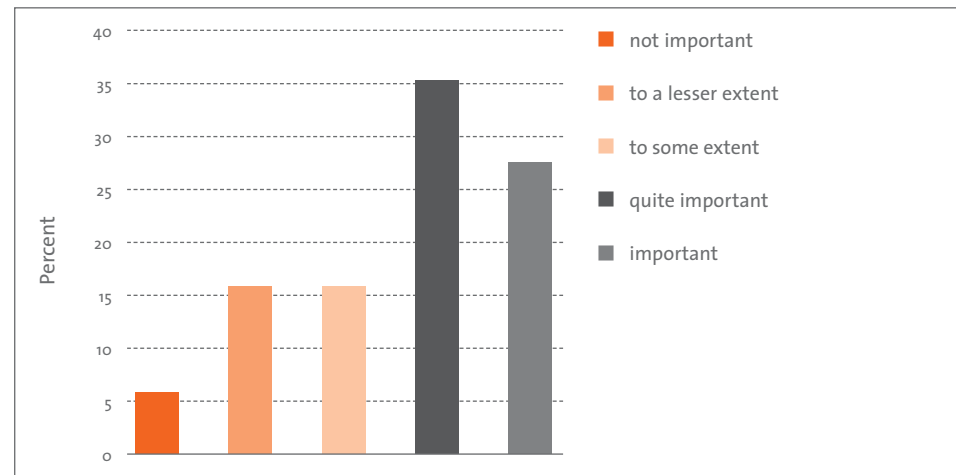


Figure 3: Importance of an IT architecture for cross-organizational collaboration

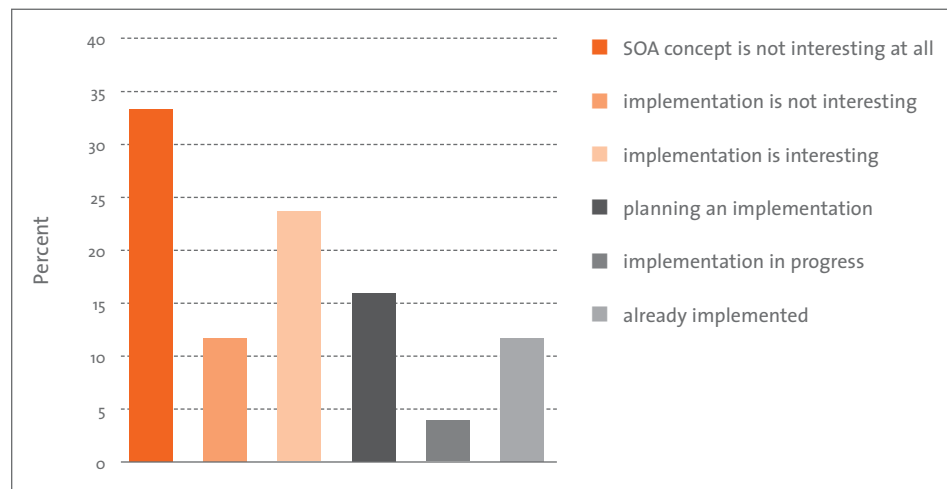


Figure 2: Current state of SOA adaptation in German banks¹ (1no multiple nominations possible)

of the participants are to some extent familiar with the concept of service-orientation, nearly 69% are familiar to some extent with the SOA concept. However, the concept of service-oriented collaboration is only known to 31% of those surveyed. The question regarding the implementation status shows that almost one third of the participating banks plan a SOA implementation, currently perform an implementation, or have already implemented a SOA.

Thus, the results provide an indication that the subject SOA is more than just hype for the German banking industry. Regarding the high percentage of banks currently active in this area, the question if the SOA paradigm has got an impact on the German banking industry should most likely be answered with “yes”.

SOA is crucial in order to support cross-organizational collaboration. Without the adop-

tion of SOA, the competitiveness of banks will be reduced.

References

Channabasavaiah, K.; Holley, K.; Tuggle Jr., E.: Migrating to a Service-oriented architecture Part 1. IBM DeveloperWorks, 2003.

Erl, T. : Service-Oriented Architecture: Concepts, Technology, and Design. Prentice Hall, Upper Saddle River, USA, 2005.

Krafzig, D.; Banke, K.; Slama, D.: Enterprise SOA: Service-Oriented Architecture Best Practices. Prentice Hall, Upper Saddle River, USA, 2004.

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