Proposing the Relationship between IT Business Alignment and the Business Value of Service-Oriented Architectures in Financial Firms

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Abstract. What is the business value of Service-Oriented Architectures (SOA) and how can we achieve it? This paper represents a conceptual piece of research which focuses on the impact of IT Business Alignment (ITBA) on the successful implementation of SOA, in terms of its business value. The contribution of this model is predominant in proposing a threefold effect of ITBA on achieving a successful implementation of SOA through the specific strategic needs defined by a particular firm in a specific industry, i.e., the banking industry. As a result, we show that the business strategy moderates the impact of SOA's general potentials on its actual business value and claim that this relationship is further moderated by ITBA, which must be thoroughly considered by practitioners deciding on introducing SOA in their firm.

Keywords: SOA, Service-Oriented Architecture, Business Value, IT Business Alignment, IT Value, Alignment, ITBA.

1 Introduction

Although many firms have decided or are currently considering migrating towards a Service-Oriented Architecture (SOA), as flexible and adaptive fundamentals of their business applications, there is still no answer to one of the most essential questions associated with this new architecture paradigm: *What is the business value of SOA and how can it be achieved?*

Since introducing SOA is a fundamental architectural change for the firm, evaluating its benefits is both critical and difficult. The typical arguments of increased flexibility, reusability etc. primarily lead to benefits, from a long-term strategic perspective. Therefore, the strategic orientation of the firm is a primary decision factor when evaluating the potential business value of implementing an SOA in a particular firm. This, in turn, leads to the requirement of having reached a high degree of alignment of business and IT strategy (i.e., strategic business IT alignment [1]) in the firm before realizing such a significant architectural change.

Consequently, in this paper we focus on the question: *What is the impact of IT business alignment on the successful implementation of SOA?*

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In this paper, we develop – as the first step of a research project on the business value of SOA – a research model which maps the general potentials, often discussed in the context of SOA, towards the actual strategic business needs of a particular industry and, therefore, examines the role of IT Business Alignment for achieving SOA business value. The objective of the overall research project is to obtain a causal model and to conduct a subsequent empirical study that examines the effect of IT Business Alignment on the successful implementation of SOA in banks and on achieving maximum business benefits from SOA. In this first step, we draw our propositions from previous research in order to conceptualize our research model, which will be the foundation for case studies and a survey-based analysis in subsequent steps.

While it is obvious that the efforts and risks related to introducing SOA have to be overcome with the positive outcomes, the main contribution of our work – and, thus, the differentiator against other quantitative and qualitative works on the SOA business value (like [2-6]) – is the inclusion of a bank's strategic requirements on its IT architecture in order to identify and increase SOA's potential benefits while reducing the related risks and efforts, i.e. the incorporation of ITBA. This approach is consistent with the idea that "the most effective way to cut through the hype surrounding SOA is to consider it in the context of clear and specific cases where generalities are replaced with specific business goals" [7].

Consequently, we focus our conceptualization on a particular industry with unique strategic demands regarding IT. We chose the banking industry for various reasons. First, banks "produce" virtual products, i.e., the IT infrastructure represents the bank's production facility and, consequently, is highly affected by the bank's business strategy. Second, banks are currently facing high levels of competition and, thus, have to flexibly react and adapt both business strategy and IT infrastructure. Third, the banking industry is highly regulated, which leads, e.g., to quite unique requirements in operational risk management and subsequent specific IT demands. Moreover, frequent changes of the regulatory requirements demand a flexible IT infrastructure, again.

The reason why we investigate SOA is that its inherent characteristics, in terms of flexibility are seen to "make SOA-based software far superior to both the customized software supporting proprietary processes and so-called 'off-the-shelf' enterprise software packages" [8]. Therefore, more insights into the relationship of ITBA on the business value of an SOA will help to cope with implementation issues and concerns. Further, strong adoption and implementation trends in the financial industry justify this object of research and promise huge opportunities for empirical research[1].

[1] Schulte et al. did a survey in 2006 asking Germany's 1020 largest banks about their plans to implement SOA [9]. Their results show that "more than 31% of the examined companies are planning an implementation, the implementation is in progress or already finished. Further 23% deem an SOA implementation as interesting" [9].

2 Service-Oriented Architectures and Related Research

"Service-oriented architectures (SOA) is an emerging approach that addresses the requirements of loosely coupled, standards-based, and protocol-independent distributed computing." [10]. Within an SOA, the business functionality, which was formerly present in applications, is now used through the invocation of different components. In order to integrate these components, an enterprise service bus (ESB) is used to facilitate the communication among them. Therefore, "SOA is based on six assumptions: applications are loosely coupled; interface transactions are stateless; interface follows the RPC (remote procedure call) model; interface is message-based; messages use XML data [encoding]; and interfaces may support both synchronous and asynchronous transactions" [11]. In connection with SOA, web services are often used protect the investment in legacy systems of an organization, as the use of relatively simple interfaces and the incorporation of standards, such as SOAP and XML, to deliver standard messaging formats increases the cost-effective reuse of information assets [10].

From a business point of view, SOA promises that "well-executed SOA implementations will bridge the gap between enterprise architecture and business strategy, as companies achieve a closer alignment of IT and the business and, in parallel, implement the robust reuse of existing technology and application code with unprecedented agility and cost effectiveness" [12]. Thus, the SOA paradigm creates a view of IT from a business process perspective, which is contrary to other architectures. Here, alignment is seen as an outcome rather than as a success factor of introducing SOA. This multi-faceted and mutual relationship between ITBA and SOA represents the main motivation for our research.

Various authors emphasize that "services" within an SOA encapsulate *business* functionalities (e.g. [7, 11]) and that "technical services" are just complementary but do not constitute an SOA. Therefore, services are used to create composite applications which support particular business processes. To allow a flexible combination of different services, the services are explicitly defined by their interfaces, which are independent of their concrete implementation. The loosely coupled services are invoked through their communication protocols, which promote location transparency and interoperability. Services are self-characterizing and encapsulate reusable tasks in order to support a fast and cost-saving composition to underpin new or changed business processes [13-15].

SOA had become evident some years ago in academic research. However, most of this research deals with the technical issues, which offers possibilities for business-oriented questions about the business value of SOA [4, 16, 17]. The sparse business-oriented literature mainly dealing with very specific potentials of SOA, such as, exposing information sources as services [18], transitioning large-scale distributed healthcare enterprises to SOA [19], examining the potential of SOA as extensible organizational architecture [16] or during mergers and acquisitions [20], investigating the ability of SOA for organizational integration [21], examining the impact of SOA on supply chains [2-4, 22], assessing the potentials of Web Services as a particular implementation technology [23, 24], or presenting best practices how to introduce SOA [25].

In contrast to these focused research scopes, Müller et al. present "a model that describes the sources of the economic potential of" [17] SOA. Comparing our model with this research model, we do not simply extend by including the efforts and risks associated with SOA, but also show how banks are able to transform SOA's characteristics into economic potentials through ITBA.

3 Model Development

The objective of this paper is to conceptualize a model which qualitatively determines the relationship between SOA and ITBA, i.e. how can ITBA improve the effectiveness (i.e., achieving a business value) and efficiency of an SOA implementation and how does – vice versa – the successful implementation of SOA affect ITBA?

The business value of SOA can be determined along two dimensions: (1) improved business agility, and (2) cost reduction [5]. The first dimension results, for example, from an increased flexibility to adapt to changes in the competitive environment, easier integration of external functionality, better support of a firm by IT [20], or an increased information quality in terms of more accurate or complete real-time information. The second dimension arises from reduced development and maintenance cost due to reusability of functionality, increased scalability of the architecture, as well as easier integration of internal and external systems.

The development of our research model is grouped into four subsections in order to increase the level of complexity with each additional step. The first starts with the efforts and risks associated with the introduction of SOA. After presenting these negative aspects, we continue to enhance the model with SOA's *general* potential to contribute to the business value. The third subsection draws on the foundation of the second subsection discussing the reasons for the *specific* requirements which banks have for their IT architecture. The last section combines the derived requirements of bank's business strategy on their IT architecture (subsection three) with the general potential of SOA (subsection two). Finally, the last section proposes the influence of ITBA on all three before-mentioned sub models in order to further improve the success of the implementation of SOA.

3.1 Efforts and Risks Associated with SOA

Our literature review reveals a couple of issues which an organization has to overcome in order to implement SOA successfully and to achieve the maximum business value of SOA. Therefore, this subsection starts with the downsides of SOA and groups the identified factors into three main categories of efforts and risks: organizational efforts, governance, and technology risks. As the literature demonstrates, we can expect that these aspects have a negative impact on the successful implementation of SOA and the resulting business value of SOA ("SOA success", in short). This is, for example, the case if organizations do not perform necessary organizational changes, develop a sufficient governance, or evaluate the specific technology risks for their own company in advance.

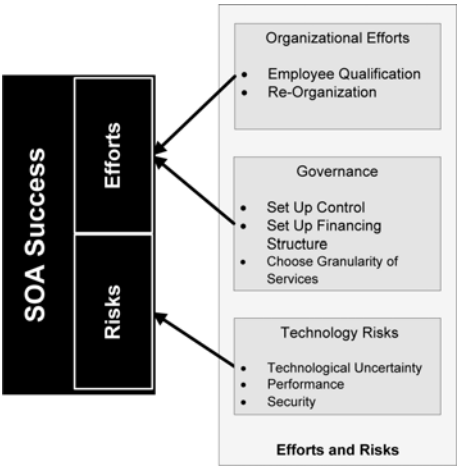

Fig. 1. Efforts and risks and their impact on SOA success

Organizational Efforts. Efforts arising from organizational change can be ascribed to two main aspects: employee qualification and re-organization.

SOA combines new aspects, such as service choreography and service repositories, with existing principles, e. g. encapsulation or modularization, which have to be altogether understood by the system architects requiring additional *qualifications,* such as "the mapping of process tasks to compositions of software-based services" [26]. These qualifications are not classified as risks, as they only represent efforts, which can be overcome with further training and education [23]. Moreover, an adjustment of the organization is necessary to achieve an effective usage of the IT infrastructure [27]. As *re-organization* depends on the employees, it can take a long time until SOA's principles are internalized by the employees and established within the company [28]. One problem, which is associated with this organizational change, is the cultural change an organization has to facilitate in order to establish a new organizational structure [25, 29]. One the one hand, as SOA enables the business units to define processes "IT mangers are worried about losing their influence and position" [25]. However, on the other hand, service orientation may also add new responsibilities to the IT: instead of maintaining applications the IT now has to integrate different service interfaces to satisfy the business needs [23]. Therefore, an organization needs intermediates, who have business knowledge as well as IT skills, in order to coordinate service development. IT can only serve as a promoter for competitive advantage, if this organizational prerequisite has been realized [30]. For example, "the organizational model must be transformed to create differentiated and flexible team-based services" [31]. Consequently, the "new model optimizes cross-business unit operations to deliver objectives, eliminates costly duplication, and flattens management chains. The resulting structure is flexible, agile, and well-orchestrated" [31].

Governance. Establishing an SOA governance is a key factor of successfully implementing SOA [5, 7, 12], but leads to significant *control* efforts (Who is allowed to develop new services?) [12]. Furthermore, the governance requires the specification and periodic adaptation of a *financing and budgeting structure* (Who pays for the infrastructure (implementing and running the SOA itself)? Who pays for developing and setting up a service? Who pays for running the service?) [25, 31].

In order to prevent a decline in governance, the right level of *granularity of services* has to be determined. If services are designed to be too fine-grained, management complexity will increase and inter-service communication can lead to network bottlenecks and to a shortage of parser capacities. By contrast, if services are too coarse-grained, the flexibility of service reusability will be reduced [16]. In addition, Bieberstein et al. point out that for "efficient SOA deployments, it is critical to streamline SOA-related project controls to the bare essentials and promote service reuse" [31] making the level of granularity – as an enabler of service reuse – a key IT governance topic. Additionally, Fricko reports the importance of a governing body with new guidelines, in order "to reinforce the importance of reusable artifacts and ensure widespread participation"[25].

Technology Risks. The technology risks consist of three major aspects: technological uncertainty, performance, and security.

SOA's most often used implementation vehicles are web service standards, such as SOAP and WSDL [18, 32]. Although web services are widely used, the W3C still classifies them as immature [33], which leads to *uncertainty* about the future technical advancement of web services within organizations and possible lack of competence of the employees [16]. Therefore, "the immaturity of some Web service related standards […] is a key concern" [23] for many organizations according to the case studies from Ciganek et al..

Due to the use of web services, in contrast to a method call, additional tasks must be performed: network communication, creation and parsing of XML documents, and packaging of the XML documents into a transport protocol. These additional tasks influence the *performance* of the entire IT infrastructure negatively [34].

Setting up the necessary level of *security* can also be a challenging task [23, 24]. For example, mature security standards, as well as vertical industry payload standards, are lacking [23, 24].

3.2 Contribution of SOA's General Potentials to Business Value

For the assessment of SOA's contribution to the business value we draw on Yoon et al. [5], who have performed a multiple case study in order to discover the benefits of SOA. These benefits contribute to the main aspects of improved business agility and cost reduction.

According to Yoon and Carter [5], the improved business agility consists of: easier integration of systems, better alignment of IT and business, and a quicker response to market change or customer demand (shorter time-to-market), whereas cost reduction consists of lower application development efforts, reuse of existing functions (applications), and lower maintenance costs.

However, what are SOA's potentials which will lead to these business benefits? Adopting and adapting own previous work [35], we propose that the SOA characteristics lead to two basic general potentials: (1) increased support and enhanced management of business processes and (2) opportunities on the technical layer.

Business Process Support. Business processes can be supported more effectively and efficiently due to concepts such as modularization, reuse of functionality, reduced complexity of interfaces, and SOA's integration potential.

Modularization. As one of the basic principles of service orientation, the encapsulation of business functionality in services, modularization is a key potential of SOA. Breaking down business processes into smaller parts, i.e. services, enables higher business agility in the case that business processes have to be changed [36]. Furthermore, due to the increased ability of selective outsourcing, the costs of production can be reduced.

Reuse of Functionality. Due to the reuse of functionality, which is encapsulated in services, a functionality has to be implemented only once but can be used in different business processes [16]. As a result, new applications can be developed in shorter time at lower costs. If considering the high rate of new products in banks, which nevertheless are very interrelated, within their segments (e.g. credit products or investment products), there are huge opportunities for re-using particular functionalities in order to deliver/perform an end-customer product/service.

Moreover, the maintenance costs of the entire system landscape can be reduced, because redundant functions are implemented and thus maintained only once. Additionally, through the use of web services it is possible to implement functionality by a single service, which "could be adapted and modified without compromising the functionality and the stability of already developed/deployed 'consumers' components" [16]. Altogether, the reuse of functionality can lead to an improved business agility and cost reduction.

Reduced Complexity of Interfaces. Compared with an architecture in which all application systems are connected to each other, SOA reduces the number of interfaces as each service has only an interface to the ESB [37]. Due to the reduction in interface complexity, it is possible to maintain and test the existing interfaces more intensely at lower costs. Moreover, changes in business processes can be supported quickly as each service encapsulates a specific part of a business process.

Integration Potential. SOA offers the possibility of programming a service-oriented facade around existing (e.g. legacy) systems in order to make them compatible with the new service-oriented paradigm [16]. This feature allows a firm to support its existing business processes with their existing systems while moving towards SOA. Due to the possibility of integrating systems with service-oriented facades, SOA offers higher protection of invested capital [38], which in turn reduces costs, if information systems of different firms have to work together in order to support a (partly) outsourced business process.

New functions can be more easily integrated with less complex interfaces, promoting easier changes in business processes. Furthermore, new technologies can be adopted

faster, offering enhanced flexibility in order to support the business processes with that technology, which is most appropriate, e.g. in terms of a shorter time-to-market.

Technological Opportunities. SOA offers technological opportunities such as virtualization and grid computing as well as platform independence.

Virtualization and Grid Computing. Despite the fact that practitioners and major software vendors, such as IBM or Microsoft, promote the natural fit between these two topics and SOA [39-41], the academic literature has not investigated this area. Nevertheless, we expect that SOA can leverage the benefits of virtualization and grid computing, due to easier rerouting of services in order to reduce capacity costs. For example, business processes such as securities processing do not cause a balanced workload over time, since there are usually ups and downs in market activity, which could result in performance bottlenecks. Due to the increased scalability resulting from virtualization, the opportunity of rerouting services within an SOA, these bottlenecks can be overcome while reducing fixed costs [41]. Moreover virtualization helps to enhance governance as "service and policy configuration and management are done centrally for each application server, enterprise service bus, or orchestration engine" [39].

Platform Independence. Through the common use of web service standards, one of SOA's features is its independence in programming languages and technical platforms which enables compatibility with other existing technologies [10, 37, 38]. This allows it to offer the possibility of choosing the technology which is best suited in terms of quality and cost for a given problem.

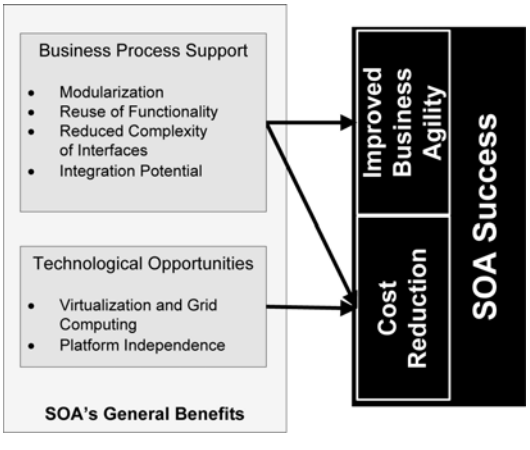

Fig. 2. SOA's contribution to business value

3.3 Deriving Business' Demands on the IT Architecture

General benefits delivered by a new architectural paradigm do not necessarily result in a concrete business value for every firm, e. g., not every technological potential, such as grid computing, will be relevant and beneficial for many parts of the retail banking business.

As the IT infrastructure should support the bank's business strategy, the actual needs fulfilled by the IT infrastructure have to be derived from the latter. For banks, this is even more important since, in contrast to physical goods, financial services are purely virtual. Their design, distribution, and clearing rely completely on information systems. Therefore, the IT infrastructure represents the bank's "production facility" and, consequently, has to adapt significantly to changes in the bank's strategy [42].

Generally, a firm's business strategy is highly affected by its competitive environment and the resulting market opportunities. In many countries, such as the US, Germany, etc., the banking industry shows strong dynamics and high competitive pressure, resulting from globalization and an increasing disintermediation, as more and more direct sellers enter the market [43, 44]. The resulting increase in necessary customer orientation leads both to high flexibility requirements and cost pressures, which, in turn, claim a higher degree of automation, modularization, and outsourcing. Furthermore, the pressure forces banks to engage in mergers and acquisitions which, in turn, lead to unique requirements regarding the IT infrastructures.

In addition, the financial services industry faces a strict and dynamic regulatory environment (e. g. Basel II), which has to be met by the IT infrastructure. Changes in reporting structures, but also the requirements of precisely determining operational risks of singular components within the banks' IT infrastructure, raise the need for a transparent and flexible IT architecture.

As a consequence, typical business strategies in the banking industry – which can be derived from generic types of strategy, such as cost leadership vs. differentiation [45] or prospector vs. analyzer vs. defender [46] – are increased customer orientation (in terms of increased service quality and product customization) [47], industrialization (in terms of increasing automation and modularization of services) [48], outsourcing and shared services [49], enhanced risk policy [50], and mergers and acquisitions [51].

From these strategy groups, we can derive six major requirements regarding the IT infrastructure: (1) since banks manage sensitive data and, therefore, are subject to high regulations, they have comparatively high security requirements for being immune, amongst others, against confidentiality leakages and service delivery interruptions. (2) Banks usually run large legacy systems which cannot be easily substituted. Consequently, an IT infrastructure will always have to ensure their proper integration. (3) Moreover, since banks are increasingly engaged in outsourcing of business activities, such as payments and securities processing, loans management etc. [52], the tight integration of the sourcing providers' systems is necessary in order to reach straight-through processing. This also requires the IT infrastructure to support modular and granular business functions which can be selectively outsourced. (4) On the other side, bundling of processing volumes ("cooperative sourcing"), including those from external firms (i.e. insourcing) is increasingly demanded by banks' business strategies [53, 54]. (5) Customer orientation leads to two primary requirements. First, since banking products are "produced to order", competition leads to high real-time requirements. Even a credit application should ideally be responded to immediately. (6) Furthermore, although banking products are quite homogenous, banks try to diversify their product portfolios and issue new products very frequently. For example, large banks offer more than one thousand new products per year, which all have to be implemented by the underlying information systems. Thus, the IT infrastructure is

required to enable fast support of new products and business processes in order to decrease time-to-market.

Figure 3 shows the resulting relationships between business strategy and the derived strategic IT need.

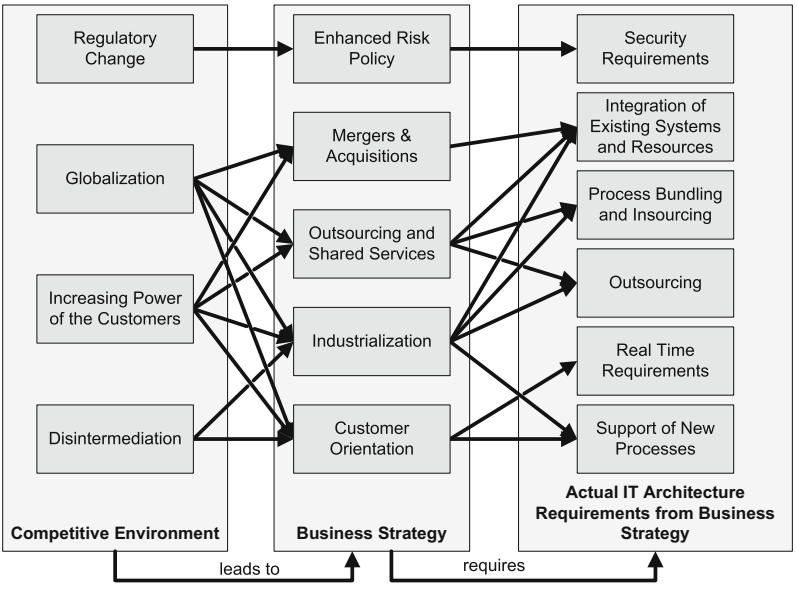

Fig. 3. The competitive environment influences the requirements on the IT architecture

3.4 IT Business Alignment (ITBA)

In order to be able to implement an IT infrastructure which effectively and efficiently supports the business, the bank has to establish a sufficient degree of alignment between the IT and the business on all levels: strategy, people, projects, and structure [55]. During the last two decades, the research community has developed and refined a multi-dimensional concept of IT business alignment in order to consider all aspects of alignment relevant for firm success. Henderson and Venkatraman distinguish between the alignment of the strategic and the structural level of the firm. Both business and IT strategies but also business and IT structures (in terms of processes, skills, routines etc.), have to be aligned in order to generate value from IS. Reich and Benbasat [56] further distinguish between an intellectual and social dimension, the first covering the congruence of IT and business strategies and plans, while the second focuses on a shared mindset and mutual understanding of business and IT managers. Combining the social dimension and Henderson and Venkatraman's alignment on the structural level, subsequent works develop a concept of operational alignment targeting the project and operations level [57, 58]. These authors further distinguish between a cognitive dimension (mutual trust and respect between business and IT people) [59], high communication intensity and quality, and high shared knowledge [60].

Based on the previous section, we will now develop propositions on how this multi-dimensional concept of alignment is interrelated with SOA implementation success and the resulting business value (i.e. SOA success), in order to derive a nomological model which will be used in later empirical work.

We expect four different relationships between ITBA and SOA success, which are illustrated in figure 4.

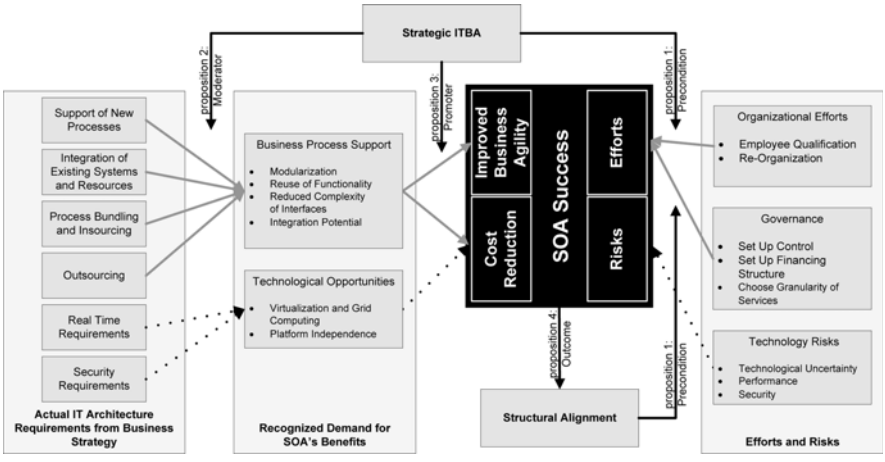

Fig. 4. Moderating impact of strategic ITBA on SOA success. (ITBA influences solid grey arrows, while dotted arrows are assumed to remain unaffected by ITBA.)

IT Business Alignment as Precondition. As explained earlier, implementing an SOA comes along with major risks and efforts (such as organizational re-structuring, setting up an SOA governance, determining optimal service granularity, etc.). It is quite obvious that the implementation goals can only be efficiently and effectively achieved in the case of strong collaboration between business and IT [61] since major parts of the firm (across business and IT) are affected and since major planning problems will be probable if the business gets not involved at a very early stage. This is a typical reason for the failure of large IT projects, in general. Consequently, planning and implementing SOA in a firm requires high alignment on the strategic level and the structural level [55], and from an intellectual as well as from an social perspective [56]. For example, a close relationship between business and IT will also result in higher commitment toward performing the necessary re-organization of the business. In addition, shared knowledge and collaboration between IT and business experts is expected to significantly improve the effectiveness of determining appropriate service granularity [25]. Therefore, ITBA enables efficient SOA implementation, i.e. helps minimizing avoidable efforts and implementation risks.

Proposition 1: All (strategic and structural) dimensions of IT Business Alignment represent a necessary precondition for successfully managing the implementation of SOA and thus reduce the resulting efforts.

IT Business Alignment as Moderator. Strategic ITBA represents an important moderator during the SOA evaluation process, which determines whether and how SOA will have the potential to deliver a business value to the particular bank. Strategic alignment is expected to strongly moderate the process of recognizing the demand for SOA's benefits resulting from an organization's business strategy. For example, in case of high alignment on the strategic level, where the SOA potential is evaluated and implementation decisions are made, the bank can more effectively decide whether and where the general SOA benefits, such as reusability, modularization, and integration potential, would deliver to the firm's specific situation and demands defined by the business strategy. In case of good strategic alignment, SOA's potential will be mapped to the bank's strategy regarding the support of new processes, integration of new systems due to mergers and acquisitions, process bundling, or regarding in- and outsourcing, leading to an effective SOA decision by the business and IT executives [62].

Proposition 2: Strategic IT Business Alignment helps to determine the actual potential for SOA business value in a specific bank.

ITBA as Promoter for Business Value. After deciding to implement SOA in an organization, strategic ITBA will also promote the successful implementation leading to business value from IT. Even if strategic ITBA has helped to identify that SOA is a desirable solution for the particular bank, we suppose that ITBA is also helpful in the implementation phase, as certain aspects, such as shared knowledge between IT and business, will significantly improve the effectiveness of the implemented SOA. As a result, ITBA helps to transform the identified potential benefits into actual business value, because the specific SOA realization of a bank is better aligned with the needs and requirements of the specific business.

Proposition 3: IT Business Alignment promotes the implementation success of SOA in order to achieve maximum IT business value.

IT Business Alignment as Outcome. We hypothesize that the relationship between ITBA and a successful implementation of SOA does not end after the SOA has been established. We believe that a well-developed SOA will positively affect the alignment on the structural level, facilitating collaboration between business and IT on the project and operations level [22, 60, 63]. For example, the development of a new service or the implementation of a new banking product requires an inter-departmental point of view which makes new project management techniques and new – more close – forms of collaboration between business and IT necessary [27]. Yoon and Carter [5] found evidence, in five case studies, that SOA leads to better alignment of IT and business, being explicitly mentioned as a realized benefit. Since both sides now talk about "services", the mutual understanding between business and IT will increase and lead to more effective communication during projects. However, the case studies of Henningsson et al. show inconsistent results: "even though the respondents agreed to that SOA in some cases lead to better communication between business and IS departments the majority of them described the current situation as lacking from such communication" [20]. This counter-argument is also supported by

the results we found in one of our own case studies: most of the interviewed IT managers argued, after an SOA was introduced, that "business people do not think in services" but rather in whole business processes or products.

Proposition 4: Implementing and using a service-oriented architecture will increase the IT Business Alignment on the structural level.

4 Conclusion and Outlook

Our findings propose a multi-faceted relationship between ITBA and achieving business value from an SOA. As this paper only develops a conceptual model, we are going to empirically evaluate the work presented here in a subsequent step. If our propositions can be supported by empirical work, the findings will sensitize practitioners for the critical importance of IT Business Alignment on both the strategic and the structural level for SOA implementation plans and projects. If there is no strategic alignment, SOA's potential benefits might be either overseen (proposition 2) or overestimated, or, if SOA is recognized as a solution, a lack of strategic alignment may result in a suboptimal implementation which does not utilize the full potential business agility and cost reductions (proposition 3), as well as faces higher efforts as necessary (proposition 1). But, if a successful SOA implementation can be realized, alignment on the structural level will in turn improve (proposition 4).

Based on this conceptual model, we will conduct case studies to find evidence for our propositions and to develop a stronger understanding of the differential impact of the different dimensions and levels of alignment on SOA success. In a next step, we will derive a measurement model consisting of indicators for the different constructs in order to formally describe the relations between potential benefits and strategic needs mapped to an SOA context. Finally, we will validate the relevance of the different moderating effects by a quantitative study with the financial services industry to quantitatively validate our model.

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