DESIGNING A REFERENCE FRAMEWORK OF IT/IS OUTSOURCING STEERING PROCESSES

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Abstract

Problems and challenges with information technology and information systems (IT/IS) outsourcing often do not relate to the strategic level, but to the operational level. Especially organizations with little experience with larger IT/IS outsourcing programs face operational problems with the steering of external outsourcing providers.

In this paper, we propose a reference framework that structures the required processes for an effective steering of IT/IS outsourcing relationships. The research is based on the design science paradigm in information systems research. In a first step, we derive a framework from related literature and knowledge in this particular area. We then use extensive fieldwork to evaluate our framework and to develop it further.

The suggested framework proves to be a viable instrument to support the structured analysis of current processes and the definition of suitable target processes for the steering of IT/IS outsourcing programs. This paper’s primary contribution therefore lies in providing an applicable instrument for practitioners, as well as in extending the existing body of knowledge on IT/IS outsourcing.

Keywords: IT/IS Outsourcing, Steering Processes, Governance, Design Science.
Introduction

The information technology (IT) and information systems (IS) outsourcing (ITISO) concept has emerged since the end of the 1980s and become an established option in strategic IT management for obtaining IT resources and capabilities (Dibbern et al. 2004; Lacity et al. 2009). During the past few years, the ITISO market has grown significantly, with a continuous increase in worldwide spending (Harris et al. 2009). Several studies have investigated and confirmed the benefits arising from ITISO (Koh et al. 2004; Lee et al. 2004; Saunders et al. 1997; Thouin et al. 2009). Recently, however, voices questioning the realization of expected benefits from ITISO have also been heard, most probably triggered by the announcements of companies terminating outsourcing contracts because they have failed to produce the anticipated productivity increases (Qu et al. 2010). Since we observe both success and failure in ITISO endeavors in comparable settings (e.g., outsourcing of an IT infrastructure in similar organizations), we conclude that the problems with and challenges of ITISO in organizations do not necessarily only relate to the general strategy decision whether or not to outsource, but often also to the ITISO operational level.

When we look at practice, we see that many organizations face problems with the operational steering of larger outsourcing programs, particularly after the transfer of services to the outsourcing vendor. Especially those organizations with little experience in collaborating with external service providers often do not have the necessary knowledge and skills required to deal with the changing organizational structures and processes (McFarlan and Nolan 1995). Accordingly, we believe that practitioners need specific “management techniques and procedures that impact the relationship in the desired way” (Dibbern et al. 2004). One important subset of these techniques and procedures is the means to support current processes’ structured analysis and the definition of suitable target processes for steering ITISO endeavors.

The academic literature on ITISO primarily focuses on five major areas (Dibbern et al. 2004), answering the questions of why outsource (e.g., Loh and Venkatraman 1992b), what to outsource (e.g., Grover et al. 1994), which decision process to apply (e.g., Lacity and Hirschheim 1995), how to implement the sourcing decision (e.g., Klepper 1995), and what the outcome of the sourcing decision is (e.g., Aubert et al. 1998). Addressing the question as to how to implement the outsourcing decision, some authors focus on ITISO governance (e.g., Gewald and Helbig 2006; Jong et al. 2010; Leimeister et al. 2008; Lioliou and Willcocks 2009; Miranda and Kavan 2005). However, a deeper understanding is required of “how to manage IT outsourcing relationships to create and sustain strategic value” (Goo and Huang 2008). Specifically, the question regarding how to steer the outsourcing provider has received very little attention. Existing practitioner guides (e.g., DIN 2010; Hefley and Loesche 2006; ITGI 2005) can provide helpful advice, but are often very complex, prescriptive, and sometimes – neither theoretically nor empirically grounded. They are often further limited in that they do not consider contextual differences, which is crucial for ITISO (Gallivan and Oh 1999).

To address the problem of practice and to fill the above-mentioned research gap, our research focuses on the development of a comprehensive but parsimonious reference process framework for the effective steering of ITISO relationships, following the design science research paradigm. Accordingly, this paper reports on our efforts to theoretically ground, develop, apply, and evaluate such a framework. At the core of this will be a reference framework we have synthesized from an analysis of the available literature, as well as from empirical observation and evaluation. This paper’s primary contribution thus lies in providing an applicable instrument for practitioners, as well as in extending the existing body of knowledge on ITISO. Our paper is organized as follows. Section 2 describes the theoretical foundations of ITISO and its steering. In Section 3, we explain our methodological approach to designing our framework of ITISO steering processes. In Section 4, we elaborate on the different steps for the framework’s design, application, and evaluation. In Section 5, we present the framework and explain its elements. Finally, Section 6 summarizes the study’s results and outlines the research implications, limitations, and contributions.
2 Background

2.1 IT/IS outsourcing

In many organizations, IT departments’ role has changed significantly during the past few years. While these departments previously had a primarily internal delivery function within companies, they now increasingly serve as service centers targeted at reaching market price level and seeking to contribute to company success. Thereby, the importance of sourcing services from suppliers and delivering to internal and/or external customers has increased (Riempp et al. 2008). This development becomes evident through the increase in ITISO, which generally refers to “the handing over to a third party management of IT/IS assets, resources, and/or activities for required results” (Willcocks and Lacity 1998). The concept can be further specified as the delegation of all or any part of the technical resources, the human resources, and the management responsibilities associated with providing IT services to an external provider through a contractual arrangement (Clark Jr. et al. 1995).

When Kodak outsourced its information systems function to IBM, DEC, and Business Land in 1989, it was the first large, well-known organization to turn over its IT to a third party provider (Applegate and Montealegre 1991). This outsourcing deal marked the beginning of the ongoing trend towards ITISO. Since then, both small and large companies have found it suitable, even fashionable, to transfer their IT/IS assets, leases, and staff to outsourcing vendors (Dibbern et al. 2004). Loh and Venkatraman (1992b) even use the term “Kodak effect” to signify the importance of this critical event in driving the ITISO diffusion pattern. During the past two decades, ITISO has evolved to become an established strategic option for IT management. Its growth has spawned an industry of IT services providers with worldwide revenues of several billion dollars (Harris et al. 2009).

The benefits organizations seek to attain with ITISO can be categorized into strategic, economic, and technological benefits (Grover et al. 1996). Strategic benefits refer to a firm’s ability to refocus on strategic, core capability, and knowledge areas (Willcocks et al. 2004). Economic benefits indicate the utilization of the service provider’s expertise and economies of scale with regard to human and technological resources (Loh and Venkatraman 1992a; Loh and Venkatraman 1992b). Finally, technological benefits refer to access to leading-edge IT, and the avoidance of technological obsolescence due to dynamic IT changes (Loh and Venkatraman 1992a). These benefits stand in contrast to an increase in transactional costs, a decrease in flexibility, as well as the service provider and the outsourcing organization’s conflicting objectives (Grover et al. 1996). An overview of previous academic literature on ITISO is provided by the comprehensive literature reviews of Dibbern et al. (2004) and, more recently, Lacity et al. (2009).

2.2 Steering of IT/IS outsourcing

Existing research on ITISO focusing on the outsourcing decision’s implementation seeks answers to the questions: How can the impact of ITISO counter-effects be reduced? And how can its strategic, economic, and technological benefits be harvested? This outsourcing research area basically covers three coherent parts: 1) vendor selection techniques, 2) relationship characteristics (formal and psychological contracts), and 3) the steering of ITISO (Dibbern et al. 2004).

These three areas are highly intertwined. The vendor selection techniques depend on the desired relationship characteristics, while the formal contract defines the foundations of the steering processes. Vice versa, the continuous steering during the duration of the outsourcing leads to changes in both the formal and the psychological contracts. Research on relationship characteristics and their influence on outsourcing success (e.g., Aubert et al. 1998; Grover et al. 1996; Lee and Kim 1999; Useem and Harder 2000) clearly shows that certain relationship characteristics (e.g., the completeness of the formal contract, perception of the service quality, trust, and flexibility) correlate positively with outsourcing success. Hence, beneath the strategic decision regarding what to outsource, the
operational challenge is the day-to-day steering of these relationship characteristics that can make or break the outsourcing (Lacity and Willcocks 2003).

Over the past decade, research on implementing the ITISO decision has focused on whether the combination of contractual and relational characteristics contribute to outsourcing success and, if so, how (e.g., Goo et al. 2009; Lioliou and Willcocks 2009; Poppo and Zenger 2002; Sabherwal 1999). Conversely, the matter of “management structure that needs to be in place to be able to operationalize, develop and maintain the relationship” (Kern and Willcocks 2000) remains under-researched. Although several authors touch on ITISO steering structures and processes (e.g., Aubert et al. 1999; Beulen and Ribbers 2002; Gewald and Helbig 2006; Goo et al. 2009; Lioliou and Willcocks 2009; Miranda and Kavan 2005; Weimer 2009), there is no comprehensive framework that consolidates the outsourcing steering mechanisms into one integrated model.

3 Research Method

Our research is based on the design science paradigm in IS research (March and Smith 1995; March and Storey 2008; Nunamaker et al. 1990; Walls et al. 1992). Generally, design science research is a problem-solving (Hevner et al. 2004) and prescription-driven paradigm (van Aken 2004) that seeks to create new things (design artifacts) which serve human purposes (March and Smith 1995) and provide solutions for management problems (Gregor and Jones 2007). In this particular case, we followed the design approach proposed by Hevner et al. (2004) and Hevner (2007) to develop our framework.

Adapting Hevner’s three-cycle view of design science research (Hevner 2007), as depicted in Figure 1, we began our research by conducting a rigor cycle. In this research phase, we reviewed scientific and application-oriented literature (Vom Brocke et al. 2009; Webster and Watson 2002) on existing approaches to ITISO governing and steering, and explicated our own background knowledge (Gehlert et al. 2009). The results provided a theoretical foundation for our design artifact in terms of justificatory knowledge (Gregor and Jones 2007). We present the theoretical foundation in Section 4.1.

The outcomes we received from the rigor cycle served as a basis for the initial design cycle. In this research phase, we constructed a first version of the ITISO steering processes framework, based on existing knowledge. During this phase, we internally evaluated the intermediate results against the requirements until a satisfactory design was achieved.

We then conducted two relevance cycles to evaluate our framework. In the first iteration, we discussed our framework with subject matter experts in the ITISO field. The second iteration was a field study in which we used a questionnaire based on our framework and conducted interviews to analyze existing ITISO steering processes in a corporate environment. The approaches we took to evaluate our framework are described in Section 4.2. The final result of our research is the evaluated framework presented in Section 5.
4 Development of the Framework

4.1 Justificatory knowledge

The first step in the process of developing our framework was reviewing the literature on existing approaches to ITISO governing and steering. In order to identify relevant literature on this specific topic, we started our literature search by reviewing comprehensive review articles on ITISO (Dibbern et al. 2004; Lacity et al. 2009) and continued with a backward and forward search as proposed by Webster and Watson (2002). Besides the available academic literature, we also considered so-called additional knowledge. According to Hevner (2007), additional knowledge comprises “experiences and expertise that define the state-of-the-art in the application domain of the research.” Thus, we also included application-oriented literature in our review. Furthermore, the authors' expertise in that particular field of research has been implicitly incorporated into the initial framework design.

When reviewing the academic and practitioner literature, as well as consolidating the various different terms, a set of four mechanisms that impact ITISO characteristics emerged:

Quinn (1999) recognizes contract management as one of the “crucial management controls” that companies which outsource successfully need to implement; other authors in this field confirmed this mechanism (Beulen and Ribbers 2002; Currie and Willcocks 1998; Kern and Willcocks 2000). Furthermore, practitioner frameworks (Gewald and Helbig 2006; ITGI 2005) further elaborate on contract management’s tasks, with special emphasis on storing and communicating contractual agreements, as well as on managing contractual changes.

The risks associated with ITISO have been the subject of academic interest since the outset of outsourcing research (Aubert et al. 1999; Earl 1996). While several reoccurring risks and mitigation strategies have been identified, steering processes that are important levers to mitigate outsourcing risks have not been the subject of existing literature (Gewald and Helbig 2006). Accordingly, the need to implement risk management processes as part of an applied outsourcing steering framework has often been neglected. Drawing on our experience, project risk management processes (e.g., Chapman and Ward 1996) provide a sound foundation for the definition of ITISO-specific risk management processes.

Monitoring the outsourced IT services’ performance is one of the core competencies of an outsourcing organization (DIN 2010; Kern and Willcocks 2000; Miranda and Kavan 2005). The main challenge is to identify the relevant performance indicators that actually depict the outsourcing endeavor’s strategic, economic, and technological objectives (McFarlan and Nolan 1995). An important part of performance management, and one that the academic literature often neglects, is capacity management, which includes the monitoring of the actual numbers of services provided (e.g., the number of desktops) (ITGI 2005).

The fourth steering mechanism to emerge from academic literature can be grouped under the umbrella term communications management, which comprises the execution of appropriate meeting structures (Gewald and Helbig 2006), managing the information platforms (Beulen and Ribbers 2002), and resolving nascent conflicts (Goles and Chin 2005; McFarlan and Nolan 1995).

While the demand management steering mechanism is seldom discussed in academic outsourcing research, it is a vital part of the application-oriented literature (DIN 2010; Gewald and Helbig 2006; Hefley and Loesche 2006). Demand management comprises the maintenance of the ITISO service catalogue (DIN 2010) and the realization of demands that are not specified in the outsourcing contract (Hodel et al. 2004). Drawing on our experience, this mechanism is a crucial gatekeeper between the organization “asking for golden taps” and the outsourcing vendor “happy to deliver expensive services.”

The second outsourcing steering mechanism, which is mainly found in the practitioner literature, can be labeled service improvement (DIN 2010). Since complex ventures like ITISO are unlikely to be
optimally configured from the outset, and the outsourcing contexts usually change over time, it is critical to steadily improve the outsourced services. Related activities can, for instance, comprise benchmarking studies during the contract duration to gear prices towards the market level.

While practitioner frameworks (DIN 2010; Hefley and Loesche 2006; ITGI 2005) mostly propose contextual-independent approaches, different empirical studies (e.g., Kern and Willcocks 2000; Weimer 2009) have shown that the mechanisms to improve outsourcing relationships depend on several contextual factors, including spatial proximity, the completeness of the contract, and the outsourced service’s standardization (McFarlan and Nolan 1995). Clearly, this should be taken into account when developing a framework for ITISO steering.

4.2 Evaluation approach to the framework

After designing an initial version of the process framework, the next stage of our research project comprised the framework evaluation and refinement. In line with the research methodology outlined above (see Section 3), we used two relevance cycles to further improve the framework (as displayed in Table 1). The following paragraphs outline the two cycles in further detail.

<table>
<thead>
<tr>
<th>Relevance cycles</th>
<th>Cycle 1</th>
<th>Cycle 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methodological approach</td>
<td>Expert discussions</td>
<td>Field study (action research)</td>
</tr>
<tr>
<td>Input</td>
<td>Experts from a management consulting company</td>
<td>IT management of a pharmaceutical company and its major business units</td>
</tr>
<tr>
<td>Dimensions of evaluation</td>
<td>Acceptance by subject matter experts, Completeness, Comprehensibility, Operationalizability</td>
<td>Acceptance by mid-level management, Applicability to practice, Comprehensibility, Completeness</td>
</tr>
</tbody>
</table>

**Table 1. Evaluation approach**

**Cycle 1 – Expert Discussions:** In the first cycle, we assessed the initial version of our process framework (illustration, process descriptions, design principles, and contextual factors) by conducting guided interviews with three subject matter experts from a management consulting company. The interviewees were chosen for their long experience with ITSO. The interviews sought to evaluate the framework for acceptance, comprehensibility, completeness, and operationalizability (Benbasat and Zmud 1999). Each of the three expert interviews lasted approximately one hour.

The interviewees’ overall evaluation was mainly positive, as the following statement indicates:

“The framework is comprehensible and, due to its clear descriptions, applicable to practice. I find the ‘continuous improvement’ mechanism, which is missing in most other models, very beneficial. The most important contextual factor, from my perspective, is the overall IT strategy.”

The benefit of considering contextual factors was further highlighted by another interviewee:

“Although I like simple models, I am glad to see that you have added contextual factors. Especially the soft factors like trust and just ‘knowing each other from the past’ may change meeting structures, escalation procedures, and the intensity of the ’hard processes.’”

Nevertheless, we also used the three interviewees’ suggestions for improvement to further refine the framework. These modifications included rewordings, extensions, as well as further specifications and, thus, addressed the above-mentioned four dimensions of evaluation. The subject matter experts’ feedback finally resulted in a revised version of the process framework, which we wanted to test in an organizational scenario as a next step.

**Cycle 2 – Field Study:** In the second cycle, we sought to evaluate our design artifact in a practical application scenario. We therefore followed an action research approach (Cole et al. 2005; Järvinen 2007) to apply the reference framework to a large German pharmaceutical company and its major international business units. Again, the objective was to evaluate the framework for comprehensibility...
and completeness. Furthermore, we wanted to analyze how the framework can be applied in practice and its acceptance by mid-level management.

Within the field study, the reference framework was used as the baseline for a gap analysis of the existing ITISO steering processes in the organization. The reference framework was therefore translated into a questionnaire which was distributed to the management of the corporate service management unit and the six major business units. The questionnaire was used to assess the existing processes’ maturity and importance, the urgency of their improvement needs, as well as their responsibility within the organization (corporate IT department, business unit's IT department, or federal responsibility). After receiving the completed questionnaire, the results were discussed with the responsible managers to clarify misunderstandings and to receive a final assessment. On the basis of the seven assessments, the gap analysis was conducted and the proposed ITISO steering processes were defined. The final results were discussed with the corporate and business units’ IT directors and service managers in a workshop format. After the suggestions had been implemented, several improvements in the relationship between the organization and the outsourcing provider were observed. Among others, these comprised improved communications management (clear issue and escalation processes) and the greater clarity that a revised version of the service catalogue offered regarding the service quality.

This second cycle further demonstrated the comprehensibility and completeness of the reference framework. Furthermore, we observed that the framework could be applied in a practical environment and that a large enterprise’s mid-level management would accept it. As our experiences within this evaluation step were very satisfying, as we modified the frameworks only slightly in terms of rewording the process descriptions during the field study.

5 Synthesis of the Framework

We built an initial ITISO steering processes framework on the basis of existing knowledge and our experience. The framework was subsequently refined after two evaluation steps. In its current form, the framework consists of six mechanisms that help IT managers effectively design and steer ITISO relationships (see Figure 2).

![Reference framework of IT/IS outsourcing steering processes](image)

Figure 2. Reference framework of IT/IS outsourcing steering processes

To the best of our knowledge, these six mechanisms cover the relevant processes of an effective ITISO steering. In the following sections, we describe our design principles for these mechanisms, as well as the contextual factors that should be considered for successful implementation. A table listing the processes and process descriptions can be found in the paper’s Appendix.
**Demand Management:** In the context of ITISO, an outsourcing provider usually accepts the various demands of the business departments and is able to implement appropriate solutions with its large resource pool – as long as the requester pays for the delivered service. At this point, demand management comes into play, which assures that only those requirements are realized that are a) necessary and b) compliant with the organization’s IT governance standards. In this way, demand management supports both the IT strategy implementation and the IT cost control.

Owing to the flexibility and change rate of IT services, demand management with an IT service provider is much more challenging than the transmission of requirements in the context of product-based vendor management. To implement demand management for IT services transferred outside the organization, we propose the following design principles:

- Standardized requirements should be handled in direct communication between the service provider and the users that the service catalogues support.
- Individual requirements should be aligned with IT strategy and other requirements in close cooperation with the business departments involved.
- Decisions should be taken swiftly and made transparent to the different stakeholders involved to avoid local bypass services.

**Contract Management:** Contract management seeks to make the complexity of large ITISO contracts controllable to allow negotiated services to be claimed. It therefore has to consider that contractual weaknesses are practically unavoidable due to most contracts’ complexity. Seeking to eliminate such weaknesses by further specifying the services, as well as the mechanisms for charging and collaboration is often counterproductive, since complexity increases further, inconsistencies occur, and the business units’ review teams lose track of the contract. From our perspective, a more promising approach is the flexibilization of the contract, which leaves the service provider minimal room for opportunistic behavior. Thus, to implement contract management, we propose:

- Organizations should invest in the transparent editing and communication of the contract’s content.
- ITISO contracts should be adjusted regularly to changing conditions.
- Contract management should be undertaken in close connection to performance and risk management.
- The contract manager should be someone who is very knowledgeable and experienced in contract law, who is assertive, and has strong communication skills.

**Communications Management:** Communications management refers to the systematic planning, implementing, monitoring, and revision of the communication channels within the organization, as well as between the organization and the outsourcing contractor. While the other five ITISO steering mechanisms are primarily fact-based, communications management seeks to build trusting relationships. A trusting relationship between an organization and outsourcer often results in a significant reduction in transaction costs. For the practical implementation of communications management, we propose the following design principles:

- Communications management should be strongly anchored in the retained organization and be undertaken by assertive employees in order to avoid overemphasizing the implemented control mechanisms.
- A trustful relationship should not be mistaken for some kind of “fraternization” in which insufficiencies are hidden and, thus, potentials for improvement are not realized.
- In challenging cost situations, savings should not be made on resources for communications management, since trustful relationships support the solving of conflicts regarding claims against a business partner.

**Risk Management:** In the context of ITISO, four specific types of risks can be distinguished: strategic, operational, legal, and contractual risks. Risk management relates to the identification, mitigation, communication, and controlling of those kinds of risk. To implement risk management in the ITISO context, we propose that:

- Risk management should be realized as an integral part of ITISO steering, rather than just another facet of corporate risk management.
Risk management should have a control function for the other ITISO steering mechanisms and should control these mechanisms’ risks.

Performance Management: Performance management ensures that ITISO goals are being tracked effectively and efficiently. In our view, two types of problems related to performance management usually occur. First, contractually defined service levels often focus on simple technical indicators with which the outsourcing goals are hard to track. Second, performance is often primarily measured using financial indicators. However, financial indicators do not sufficiently report on the achievements from a functional perspective (e.g., improved process support). For the implementation of performance management, we suggest the following design principles:

- The service provider’s financial objectives inherently contradict those of the outsourcing organization. This awareness must be accepted and considered.
- Controlling instruments, such as the Balanced Scorecard (Kaplan and Norton 1996), should include the organization’s objectives, while also leaving room for the service provider to optimize the IT service processes and, thus, to reach its objectives.
- Capacity controls (the number of services actually provided) should be included in the controlling mechanisms. The measuring of the actually consumed services throughout the organization forms the basis of further key processes (e.g., invoice checking).

Service Improvement: In the ITISO context, service improvement refers to the continuous identification, analysis, and addressing of improvement potentials in the service provided. To implement service management, we propose that:

- Techniques for service improvement should be made comparable. Thus, the communication of results and anchoring in management-by-objectives lead to competition and to service improvement within the organization gaining in significance.
- Owing to the variety of analysis and comparison options available today, there is the risk of over-engineering the action tracking process. Complex software support should be treated with caution, as achieving pragmatic solutions is considered crucial.

Contextual Factors: The specific implementation of the six mechanisms depends on several context factors that should be taken into account. Although an individual customization is relatively cost-intensive and time-consuming, simply adopting off-the-shelf process descriptions usually leads to ineffective solutions. In our view, the most important contextual factors to be considered are the overall IT strategy (the ITISO endeavor’s goals), the contract (type of service, mode of billing, and quality of the contract), the legal requirements, the outsourced technology (maintainability, speed of change, and degree of standardization), processes (criticality, speed of change, and degree of standardization), and relationship factors (trust, spatial proximity, and number of vendors).

6 Discussion and Conclusion

In this paper, we proposed a comprehensive and integrative reference process framework for the effective steering of ITISO relationships. We used existing literature and additional knowledge as a basis for the initial design. The design was refined by means of two iterative evaluation and design cycles. The framework evaluation showed that our predefined evaluation criteria have been met and that the framework is considered valuable for the organization in which the field study took place.

Since the work presented in this paper is work in progress, the results we present are limited in that the empirical work on which we base our analysis is not yet very broad. In cycle 1 of our evaluation approach, only three subject matter experts were chosen to discuss the initial framework. Furthermore, cycle 2 is only a single case. Thus, the collected empirical data may not provide sufficient evidence of the proposed framework’s applicability in practice. Moreover, the chosen action research approach has some inherent limitations (Baskerville 1999). Accordingly, future research might extend this study by adding additional relevance (and the resulting design) cycles. Therefore, we will apply the reference framework to further application scenarios. We will also improve additional relevance cycles by using
a more systematic success analysis, including questionnaires and/or semi-structured interviews subsequent to the practical application.

Keeping the limitations of the study in mind, our results contribute to both theory and practice. From a practical point of view, the developed reference framework offers guidance to organizations regarding implementing ITISO steering processes to improve their relationship with their service provider. By filling the research gap described in this paper’s introduction, our contribution to theory extends the existing body of knowledge in the ITISO area.

References


## Appendix

<table>
<thead>
<tr>
<th>Mechanism / Process</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Demand Management</td>
<td>Continuous process of identifying, analyzing, prioritizing, and implementing quantitative changes (e.g., additional server) and qualitative changes (e.g., new type of server, new service, non-standard-services)</td>
</tr>
<tr>
<td>1.1 Service Catalogue Maintenance</td>
<td>Continuous development of the catalogue of standard services (SSR)</td>
</tr>
<tr>
<td>1.2 Order Process for SSR</td>
<td>Coordination of the decentralized process for ordering standard services (SSR)</td>
</tr>
<tr>
<td>1.3 Process for NSSR</td>
<td>Coordination of process for ordering non-standard services (NSSR), identification of technical change needs to optimize business processes, realizations of IT governance through quick and transparent requirements prioritization, coordination between business and contractor, as well as technical controlling of change-request implementation</td>
</tr>
<tr>
<td>2 Contract Management</td>
<td>Contractual tracking and management processes to ensure that the obligations are being carried out by both the service recipient and the contractor</td>
</tr>
<tr>
<td>2.1 Communication &amp; Archiving</td>
<td>Reduction of information complexity through target-group oriented visualization of the contract content and intelligent archiving mechanisms</td>
</tr>
<tr>
<td>2.2 Contractual Change Monitoring</td>
<td>Monitoring and communication of automatic contract changes (e.g., automatic price increase due to low usage)</td>
</tr>
<tr>
<td>2.3 Contractual Change Requests</td>
<td>Identification, decision, and realization of contractual changes</td>
</tr>
<tr>
<td>2.4 Claim Management</td>
<td>Identification and verification of potential claims, decision how to proceed, and enforcing claims</td>
</tr>
<tr>
<td>3 Communications Management</td>
<td>Systematic planning, implementing, monitoring, and revision of the communication channels within the organization as well as between the organization and the contractor</td>
</tr>
<tr>
<td>3.1 Committee Execution</td>
<td>Staffing and organization of contractually defined committees as well as the further development of committee structures</td>
</tr>
<tr>
<td>3.2 Escalation Management</td>
<td>Coordination of communication processes and structures for escalation (e.g., urgency decision board)</td>
</tr>
<tr>
<td>3.3 Training</td>
<td>Realization of training programs to prepare employees for new steering tasks and collaboration with other cultures and languages</td>
</tr>
<tr>
<td>4 Risk Management</td>
<td>Identification, mitigation, communication, and controlling of risks on the basis of IT/IS outsourcing risk categories; starts with the identification and ends with including the weighted financial impact into the business case calculation</td>
</tr>
<tr>
<td>5 Performance Management</td>
<td>Ensures that the outsourcing goals are being tracked in an effective and efficient manner</td>
</tr>
<tr>
<td>5.1 Service Level Transparency</td>
<td>Clarification of contractually agreed service levels</td>
</tr>
<tr>
<td>5.2 Controlling of Service Levels</td>
<td>Monitoring of service level agreements and communication of target achievements</td>
</tr>
<tr>
<td>5.3 Invoice Verification</td>
<td>Controlling of invoices received from the contractor</td>
</tr>
<tr>
<td>6 Service Improvement</td>
<td>Continuous identification, analysis, and addressing of improvement potentials with respect to the services provided by the contractor</td>
</tr>
<tr>
<td>6.1 Issue Tracking</td>
<td>Identification and analysis of issues as well as controlling the issue solving process</td>
</tr>
<tr>
<td>6.2 Improvements Realization</td>
<td>Coordination of service improvement activities</td>
</tr>
</tbody>
</table>