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# Mindful Management Practices in Global Multivendor ISD Outsourcing Projects

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**Abstract.** Research on global multivendor information systems development (ISD) outsourcing projects has uncovered several management challenges, resulting mainly from the complexity of coordinating multiple vendors across geographical locations. However, a gap persists regarding effective management practices in this context. This study employs an exploratory, single-case study design with grounded theory techniques to generate new, empirically grounded theory regarding mindful management practices. In particular, (1) relational knowledge should be viewed as an enabler but not as a standard recipe for interfirm cooperation, (2) cross-organizational trial-and-error learning processes should be leveraged early in the project, (3) intervendedor power relations should be determined on the basis of expertise, and (4) multichannel communication should be structured around the context. These four practices are supported by theoretical insights drawn from organizational mindfulness theory: commitment to resilience, preoccupation with failure, under-specification of structures, and sensitivity to operations. Therefore, the papers main theoretical contribution is the introduction and extension of organizational mindfulness to the domain of global multivendor sourcing, marking an important first step for extending prior theory to the context of interorganizational exchange relationships and networks, with key implications for research and practice.

Key words: Global information systems development, nearshore outsourcing, offshore outsourcing, multivendor sourcing, organizational mindfulness, qualitative methods.

## 1 Introduction

Global information systems development (ISD) outsourcing has become a widely adopted practice, such that different geographical sites simultaneously offer ISD-related services, whether offshore, nearshore, or onshore, following a single, global sourcing model (Mithas and Whitaker 2007; Rottman and Lacity 2004; Willcocks et al. 2007). For companies focusing on diversification in their attempts to achieve cost efficiency and risk minimization, global business demands not only geographically distributed development models but often multiple service providers (Cross 1995). Therefore many firms work to enhance their global sourcing strategies by using multiple service providers, not only at the company level but also for individual projects (Levina and Su 2008). Managers face the constant challenge of governing the interplay between vendors to ensure their individual service deliveries intertwine smoothly and result in a successful overall delivery (Bapna et al. 2010). The increasing complexity of such projects then demands particularly mindful management practices to deal effectively with the associated challenges.

Prior research into global ISD outsourcing has focused predominantly on managing dyadic, global ISD outsourcing relationships (Heeks et al. 2001; Levina and Vaast 2008; Rottman 2006). However, such results do not transfer easily to scenarios with multiple vendors and domain-specific research on multisourcing remains scarce. The few existing studies on global multivendor ISD outsourcing projects uncover management challenges, mainly due to the complexity of coordinating multiple vendors across multiple geographical locations, but cannot describe the effective management of such arrangements (Bapna et al. 2010; Levina and Su 2008).

This study attempts to close this gap. We contribute to information systems (IS) literature by identifying management practices that mindfully support vendor management and coordination in global multivendor ISD outsourcing projects. In the process, we use organizational mindfulness (OM) theory as a meta-theoretical lens for the conceptualization process. Organizational mindfulness is defined as “a combination of ongoing scrutiny of existing expectations, continuous refinement and differentiation of expectations based on newer experiences, willingness and capability to invent new expectations that make sense of unprecedented events, a more nuanced appreciation of context and ways to deal with it, and identification of new dimensions of context that improve foresight and current functioning” (Weick and Sutcliffe 2001, p. 42). In detail, we use and extend this theory to address the overarching research question of how can organizations manage the vendor portfolio mindfully in a global multisourcing ISD project. By making the first step towards an interorganizational mindfulness theory in the network contexts of global multisourcing settings, our study marks an important, incremental extension of OM theory, in addition to its domain-specific contribution.

In the following section, we outline this research method and explain our reasons for conducting a qualitative and exploratory case study. We then briefly describe the research case and provide detailed information about how we employed grounded theory to build, rather

than test, theory. In the subsequent section, we analyze the data and present core categories that emerged from our exploratory, theory-building study. After we discuss the findings in light of existing OM literature, we present our key insights and the implications for research and practice.

## 2 Research method

We have adopted a qualitative research approach and conducted an in-depth single case study with a focus on theory building as opposed to theory testing (Stebbins 2001; Yin 2003). That is, we were not involved in the project itself but have accompanied it conducting an exploratory research approach informed by grounded theory method (GTM). In particular for the data collection and analysis, we adopted the procedures suggested by GTM, including constant comparisons and theoretical sampling (Glaser 1978; Glaser 1998). This appears most suitable, as GTM was especially founded to help researchers understand complex social processes (Suddaby 2006). Thus, we regard it as particular appropriate for revealing new insights from the complex context of coordinating multiple vendors across multiple geographical locations. Furthermore, we still lack detailed knowledge about the appropriate management of global ISD outsourcing relationships in multiple vendor constellations (King and Torkzadeh 2008).

Beyond that, using guidelines for conducting GTM in IS research (Urquhart et al. 2010), we also applied OM theory as our guiding meta-theoretical lens to enhance our conceptualization and abstraction of the case analysis. Our Glaserian GTM approach thus is enhanced by established methodological guidelines for conducting exploratory research in IS and enables us to develop a theoretical middle range theory (Merton 1968) contribution. For further clarification, Table 1 illustrates the steps of the overall research process. Details are described in the subsequent sections.

### 2.1 Case description

Our unit of analysis is a global software development outsourcing project, undertaken by a large international financial services institute with strong operations in Germany, which we refer to as BANK. The focal project aimed to reengineer BANK's online banking system, because its existing technology required a high degree of costly expertise and its maintenance was set to expire soon. Therefore, BANK had to migrate its system to a new technology, which would support reusability by a modular architecture and ensure a broad supplier base, unlike the previous system that had been developed and maintained by a single, long-time service provider. For this new system, BANK decided to pursue a multivendor sourcing strategy to reduce the risks of dependence; therefore, in addition to its existing long-term service provider, it included three other service providers in the project. All four vendors were selected on a best-fit basis and contracted directly with BANK, as summarized in Table 2.

<i>No</i>	<i>Step in the research process</i>	<i>Main Dimensions</i>
1	Identification of research case	Definition of central requirements with regards to the phenomenon of interest Selection of suitable case in cooperation with industry partner
2	Data Collection	Identification of interviewees Conduction of interviews Collection of secondary data
3	Creation of interview notes	Creation of clean copies Complementing of interview notes with details that were in our minds Adding of further comments (e.g., emotions)
4	Data analysis and interpretation	Open coding Grouping of codes into categories and identification of major conceptual themes Application of OMT for further refinement and abstraction of concepts

Table 1: Overview on research process

<i>Organization</i>	<i>Area of responsibility</i>	<i>Locations involved</i>
ARCHITECT	Definition of architectural framework Implementation controlling	2 locations in Germany
IMPLEMENT	Functional design Technical design Implementation	4 locations in Spain 1 location in Brazil
SCREEN	End-user front-end design	1 location in Germany
TEST	Software test	1 location in India (test factory)

Table 2: Multivendor portfolio

ARCHITECT was a German boutique consulting firm, focusing on IT transformation. For the reengineering project, ARCHITECT designed the architectural framework of the new online banking system and ensured that the implementation activities undertaken by IMPLEMENT were compliant with the principles of the defined framework. IMPLEMENT was a leading international IT service provider for the financial services sector, providing IT solutions and services in three business areas (services, resourcing, and software) and had been one of BANK's preferred service providers for many years (i.e., it operated and maintained the old

online banking system). During the reengineering project, IMPLEMENT had three main responsibilities: (1) create functional design documents based on its experience with the old system, (2) create technical design documents in close cooperation with ARCHITECT, and (3) implement the new online banking system (using ARCHITECT's framework). IMPLEMENT therefore chose a global delivery model, involving four locations in Spain and a captive center in Brazil. The third vendor which we call SCREEN was an Internet agency based in Germany. It was responsible for the front-end screen design. Finally, as a large IT service provider with international operations, TEST was responsible for the software testing, which it conducted in a newly established test factory in India. Thus the project featured both sourcing from neighboring countries (nearshore outsourcing) as well as from distant countries (offshore outsourcing).

BANK's online system attracts more than 1 million users per day, so it represents a critical business system with high importance and visibility, for both BANK's management and its customers. Against this background, a successful project course was critical. The project started in October 2008 and finished in December 2009, in time, on budget, and with acceptable quality.

## 2.2 Data collection

We started our interviews in July and August 2009, and then continued with a second round of interviews in November and early December 2009. The interview partners represented different organizational levels, three of the four vendor companies, and various profiles and roles of people comprising different skills and knowledge levels. In the process, we covered organizational perspectives such as "vendor versus client", hierarchical perspectives such as "upper versus lower management", and professional perspectives such as "business analysts versus software developers". The different numbers of interviews with individual organizations resulted from the different team sizes of the involved parties. For example, ARCHITECT's onshore project team included 5 experienced experts, whereas IMPLEMENT's team comprised more than 50 people with various competences and practice levels, working in a distributed setting with both near- and offshore locations. We unfortunately did not attain an opportunity to interview any representatives from TEST, despite repeated inquiries. Table 3 details the distribution of interviewees.

We continued our data collection until further interviews did not contribute any additional insights (Glaser and Strauss 1967), such that the overall number of interviews reflected a theoretical saturation criterion. The interviews lasted between 1 and 2 hours, with an average duration of 1.5 hours. Except for one telephone interview with a respondent located in Brazil, we conducted all interviews face-to-face: 15 interviews in Germany and 9 in Spain. In total, we conducted 25 interviews with 22 respondents for our primary data collection, resulting in more than 38 hours of interviews and 130 pages of notes

BANK's corporate policy prevented us from recording any interviews (with either BANK's or the vendors' employees). We therefore organized our research team so that we nevertheless could conduct rigor research by compiling a rich data set. We conducted interviews having two researchers at the location to ensure that our notes are as complete as possible. Thereby, one researcher conducted the interview while the other researcher concentrated on taking extensive notes and asking complementary questions. After each interview session, we jointly went through the notes, wrote a clean copy and complemented them with details that were in

our minds but have not been written down yet. In addition, we added comments regarding the atmosphere during the interview and emotions of our interview partners. With this proceeding, we are in line with recommendations of Eisenhardt and Bourgeois (1988) and Walsham and Sahay (1999) who made important contributions without tape-recording their interviews but using extensive notes-taking.

<i>Organization</i>	<i>Organizational level/role in the project</i>	<i>Number of people interviewed</i>	<i>Number of interviews conducted</i>
BANK (Client)	Top management	2	2
	Project & sub-project management	5	6
	Project team	2	2
ARCHITECT (Vendor)	Top management	1	1
	Project & sub-project management	1	1
	Project team	0	0
IMPLEMENT (Vendor)	Top management	3	4
	Project & sub-project management	5	6
	Project team	1	1
SCREEN (Vendor)	Top management	1	1
	Project & sub-project management	1	1
	Project team	0	0
Total		22	25

Table 3: Distribution of interviews across organizations

The interviews were conducted in German or English, depending on the national background of each interviewee. Accordingly, the notes were in the language of the interview, as were the clean copies of the interviews that provided the input for the data analysis process. We coded and analyzed the data in each native language. Only after we selected supportive citations to include did we translate all the quotes into English.

The interviews were conversational in nature, conducted using an interview guideline with semi-structured interview questions. To illustrate the general structure of the interview, we provide the initial interview guideline in the Appendix, though we also refined the interview questions multiple times during the course of data collection and analysis when our theoretical sampling indicated additional information was needed to confirm emerging themes or substantiate initial findings. We used the write up of our field notes after each interview session to identify appropriate interviewees and questions for forthcoming interviews (i.e., theoretical sampling).

In addition, we gained access to documents generated during the course of the project, such as project tracking sheets, project presentations, status reports, and lessons learned documents. We used these secondary data to supplement our primary data and for data triangulation purposes.

## 2.3 Data analysis

In a first step, we coded the interview transcripts by identifying, naming, and categorizing phenomena related to our research question (open coding), using ATLAS.ti software. We first compared the interviews with each other, as well as with the available secondary data (constant comparison). After we discovered these main conceptual themes from the interview data, distinguished by their high frequency (principle of emergence), we again compared all interview data with the conceptual themes (i.e., constant comparisons of primary data) to find additional quotes or parallel statements made by other interviewees. Thus we substantiated our findings and managed to identify the core idea of each management practice from our data set.

Although GTM provides valuable techniques for exploratory research that does not mean ignoring prior research conducted in the field (Suddaby 2006). Thus, toward the end of the analysis process, we started to compare our findings with extant literature and our meta-theoretical OM lens. In so doing, we conceptualized the emerging conceptual themes from our data (selective coding). In the course of this comparison, we elaborated on the identified themes by further developing our descriptive categories into more meaningful notions at a higher level of abstraction. Thereby, we participated in intensive discussions throughout to ensure that we did not force any existing theory onto our data (Glaser 1992). Table 4 provides illustrative examples of the process described above.

<i>Initial Codes (selection)</i>	<i>Main conceptual themes</i>	<i>Resulting Category</i>	<i>Literature used for comparison</i>
Formal communication Spontaneous communication Task-driven communication Workshops Directed communication	E-mail communication Face-to-face communication Tool-based communication	Allowing for context- driven multichannel communication	Literature on communication behavior in global sourcing projects (Gupta and Raval 1999; Imsland and Sahay 2005; Kotlarsky and Oshri 2005)

Table 4: Data analysis process example

The adoption of OM theory as meta-theoretical lens was suggested by initially emerging open codes such as “mindset” and “flexibility”. Consider an example referring to the developed management practice of training a cooperation to learn from any mismatches as an illustration

how OM as meta-theoretical lens supported us in the abstraction and conceptualization process. First, we coded this practice as “allowing for a designated initialization period”. After comparing our findings with the cognitive processes described in OM theory, we noticed that the ability of an organization to leverage experiences, in particular to be able to generalize and learn from failures, is reflected by the OM-process “preoccupation with failure” (Weick et al. 1999). Based on this linkage we finally conceptualized our finding as “consciously leveraging cross-organizational trial and error”.

### **3 Research analysis and findings**

In this case study, the four practices that emerged from our data were conceptualized by us as mindful management practices in global multivendor ISD outsourcing projects. We explain how these findings emerged from our analysis, briefly describe the nature of each practice, and make its emergence from our data transparent by supporting our arguments with illustrative empirical quotes and rich narratives from the case study. Finally, we relate our results to extant literature and discuss our findings from a theoretical perspective.

#### **3.1 Practice 1: Viewing relational knowledge as an enabler, not as a standard recipe**

BANK was quite aware that its existing client–vendor relationships and the resulting relational knowledge were valuable for project work. Thus, when setting up the vendor portfolio for the migration project, it relied heavily on its existing business relationships—such as including its long-term service provider IMPLEMENT in the project. At the same time, BANK realized that the project entailed methodological and technological challenges that could not be met by relying solely on its existing business relationships. Rather, BANK had to ensure that its vendor portfolio would be set up in such a way that the profiles of the selected vendors complemented one another in terms of their expertise and ensured they could meet the project’s technological requirements. That is, BANK considered the general benefit of its existing business relationships and concurrently reflected on the specific requirements of the project; we conceptualize this practice as viewing relational knowledge as an enabler but not as a standard recipe. Relational knowledge in this sense refers to knowledge about the BANK employees’ behavior and social work practices that resulted from prior joint collaborations.

The involved vendors had been selected according to their prior history with BANK, ensuring an existing client–vendor relationship before the project started. In the course of prior projects, these vendors had gathered valuable knowledge about BANK’s general work practices and thus could direct their work practices to meet the client’s requirements. This ability was particularly valid for IMPLEMENT, which had been one of BANK’s preferred service providers for years. As a senior manager of BANK commented:

The long business relationship with IMPLEMENT was one of the major reasons for project success.... It's a people topic. Each party knows how the other party is working ... this kind of knowledge cannot be documented in process descriptions.

This perception of the significant value of a joint business history also appeared on the vendor side, as reflected in IMPLEMENT's project manager's explanation of the importance of relational knowledge:

As we already have operated and maintained the old system for many years ... we have adapted our policies, methods, and infrastructure that way that it is pretty easy for us to work with BANK. We also have a lot of social experience with the customer himself. We can estimate the customer's expectations and behaviors very well, this helps.

Due to their long-lasting cooperation with BANK, the vendors' work mode was strongly influenced by BANK's requirements and social work practices, such that the vendor's own work mode was less salient for this project. IMPLEMENT also had the opportunity to acquire considerable client-specific business knowledge, based on its preexisting relationship. As the project began, there was no significant need to transfer functional or process knowledge from BANK to IMPLEMENT; it already had been built over the years through prior projects. Thus according to a senior manager from BANK,

There was no need to transfer functional knowledge.... This was very valuable as often the learning phases are even longer than the real projects.

As a reinforcing factor, the project attracted considerable top-level management attention, because of the online banking system's great importance and high visibility to BANK's end customers. As one of BANK's vendor managers outlined, continuous information exchange took place at the managerial level:

We frequently meet with the senior management of the vendors to discuss the project's progress on a high level, but also to share more general information on how the respective business develops. Therewith, we want to increase our knowledge about each other and to understand the current status and future developments.

That is, relational knowledge not only was being created and maintained on a working level but also was frequently fostered and reinforced at the senior management level, to ensure the commitment to the relationship between the client and the vendor. According to the involved vendors, this commitment enabled them to cooperate proactively, as a project manager from IMPLEMENT described:

We know that the other vendors have also been working for BANK before.... But we have a different focus and we do not lose a big part through this setting, even one vendor would be easier to manage. Our relationship with BANK is established, so we do not compete but work on the joint objective.

Because BANK did not trust IMPLEMENT's ability to migrate the online banking system to the new technology on its own, it complemented its vendor portfolio with ARCHITECT,

which had expertise in the focal technology. As a consequence, ARCHITECT took responsibility for designing the architectural framework of the new online banking system and needed to ensure that IMPLEMENT's implementation activities complied with it. BANK's project manager thus commented:

In fact, IMPLEMENT and ARCHITECTURE did not directly embrace the cooperation, but we have made it very clear from the beginning on. The main reason for this constellation was that we did not trust IMPLEMENT to deliver the quality we expected for the project.

Although it attached great importance to its existing business relationships and relational knowledge, BANK acted on its doubts regarding IMPLEMENT's capabilities to enhance its vendor portfolio.

In summary, the existing client–vendor relationships accelerated the project's start, because no client-specific knowledge transfer was needed. Furthermore, the relational knowledge supported a smooth start, in terms of easing cooperation among the vendors in their mindsets and work modes. BANK used existing relational knowledge as an enabler, but it did not use it as the sole recipe, in the sense that BANK also took the project's specific requirements into consideration.

## **3.2 Practice 2: Consciously leveraging cross-organizational trial and error**

Although all the vendors had been involved in prior projects with BANK, they had not interacted with one another in a multivendor setting before. In such projects, the responsibility for service delivery is distributed, so their cooperation must be set up in such a way that the individual service delivery parts resulting from the different areas of responsibility intertwine smoothly and ensure successful service delivery. In this context, it emerged from our data that at the start of the project, the parties set aside a dedicated period to enable the vendors to practice their cooperation and learn and generalize from any shortcomings or mismatches that emerged. We conceptualized this effort as consciously leveraging cross-organizational trial and error, which was designed to mitigate the risk of long-term cooperative failure by allowing for short-term errors.

Specifically, instead of starting directly into the project, BANK explicitly planned for a separate trial phase at the beginning, which it called the ramp-up phase. During this initialization of multiparty cooperation, the vendors practiced their cooperation and related or adjusted their mutual expectations and needs. A member of BANK's project team summarized this essential phase as follows:

In the course of this phase, we practiced and evaluated based on selected business transactions how the overall service delivery has been setup and how the performance was with regards to process and outcome quality.

As a consequence, the parties clarified functional, process, and technological issues and disclosed some performance deficits. They therefore could introduce appropriate countermeasures very early in the process, as illustrated by BANK's project manager:

At the beginning, it turned out that IMPLEMENT was not able to produce the technical design documents with sufficient quality. It was a lot of coaching to enable them to reach the quality requirements without help from ARCHITECT, so we started into an important process with several workshops to leverage the outcome quality.

This early identification was not only important and reasonable from BANK's viewpoint but also benefitted the vendors, which asserted that the ramp-up phase significantly contributed to alleviating problems in the further course of the project. A statement by a member of the Spanish project team lead underlined this view:

From my point of view, the ramp-up phase at the beginning of the project was very important and reasonable. As we had to deliver very early [in the ramp-up phase] we also had to deal with problems very early as well.

Finally, the ramp-up phase concluded with a workshop for discussing the lessons learned and determining further proceedings. These relevant insights regarding project content and vendor interplay were generated very early in the project and could be implemented effectively, with considerable benefits for the project overall.

In summary, the ramp-up phase initialized cooperation among BANK and the involved vendors. By practicing and reinforcing the allocation of tasks and the required patterns of interactions over a fixed period, BANK ensured that the involved parties first understood and accepted their own roles and responsibilities, as well as those of the other parties. Then they could implement this understanding in their daily business activities and interactions. Furthermore, the scheduled period for trial and error at the beginning of the project seemed to pay off later, when the need for active management of the cooperation among the vendor companies decreased.

### **3.3 Practice 3: Expertise-driven reorganization of intervender power relations**

The next practice that emerged from our analysis relates to cooperation within the vendor portfolio. In the project, BANK contracted directly with all vendors, placing them at the same hierarchical level. Yet one vendor (ARCHITECT) officially acted as BANK's extended arm, with responsibility for controlling the work of another (IMPLEMENT), as well as supporting it with coaching and transferring client-specific technological knowledge to it. With this setup, BANK aimed to utilize ARCHITECT's specialized technological knowledge and signaled that it valued expertise and experience over contractually established organizational structures. We conceptualize this deferral of the hierarchical structure as an expertise-driven reorganization of intervender power relations.

BANK's overall sourcing strategy mandated direct contracts with all vendors, as explained by the project manager, who emphasized the driving role of his organization:

Instead of employing one of the vendors as main contractor, we have kept hold of the overall project management responsibility comprising the typical associated tasks such as project planning, status reporting, and progress control, i.e., we pull the strings.

Despite this flat vendor organization though, ARCHITECT served as an extended arm for BANK by managing IMPLEMENT. This extended function encompassed several aspects. First, ARCHITECT provided the framework that constituted the software's architecture for IMPLEMENT's activities and thus received a mandate to control whether these implementation activities were compliant with the principles of the framework. Second, ARCHITECT was bound, by contract, to transfer relevant technological knowledge to IMPLEMENT. The senior project manager of ARCHITECT realized:

In the project we had a very special role: on the one hand we act as vendor, on the other hand we control and support another vendor. This hybrid role influenced the relationship to the other vendors.

With its great need for alignment and discussion, this structure led to intensified cooperation between the focal vendors. The positive effect on their interplay particularly took the form of a willingness to account for the client's requirements and expectations, as well as to respond to the particular needs and features of other members of the vendor portfolio to ensure smooth collaboration.

This willingness became particularly apparent in the context of the vendor-to-vendor knowledge transfer. The project-specific allocation of tasks demanded that a significant amount of knowledge be transferred from a small team of experienced experts (ARCHITECT) to a large, geographically distributed implementation team with varying competence and practice levels (IMPLEMENT). In the course of this knowledge transfer process, ARCHITECT realized that its usual knowledge transfer approach, which had worked well previously, was inapplicable, as a project manager explained:

After a while, we realized that the knowledge transfer was too theoretical and the practical elements have been missing. Many things that have been written down on paper make no sense until one begins doing it.

The main reason for the obstacles was IMPLEMENT's global service delivery concept, which involved several near- and offshore destinations. Not all developers could participate personally in the knowledge transfer, so the knowledge needed to be multiplied internally across several locations and countries. Although this issue represented an internal organization challenge, ARCHITECT proactively changed its learning-by-telling approach and adopted a more practitioner-oriented, learning-by-doing method. This shift significantly increased IMPLEMENT's learning curve and thereby facilitated the multiplication of knowledge. As ARCHITECT's project leader observed:

We have conducted frequent workshops, in the course of which we concentrated on misunderstandings and errors. We have discussed a lot with the developers, trying to establish a joint discussion towards a shared learning. This means a lot more examples;

the party the knowledge is transferred to needs to be involved intensively and especially as early as possible.

The positive effect of the extended arm principle moved beyond adapted behavior to include mindsets as well. When the project started, IMPLEMENT seemed to have a different self-concept than the other vendors, based on its very intense prior cooperation with BANK. It was accustomed to great autonomy in its implementation activities, together with sparse control by the client. In this project though, the multivendor constellation meant that some tasks (e.g., architectural framework, software test) previously performed by IMPLEMENT were taken on by other vendors. Furthermore, its design and implementation activities were being controlled not by its client but by another vendor (ARCHITECT). Thus, in the course of this project, IMPLEMENT's employees needed to change their attitudes in terms of content (i.e., learning the new software architecture) and their roles and responsibilities. The project manager illustrated this mindset change as follows:

For sure, we would prefer to also have the responsibility for the framework, as it is part of our portfolio. But the client has decided differently..., so now we are jointly responsible for this project. As a consequence, we have to prioritize the project goals higher than our goals as a service delivery company to create a win-win situation. Even this is not easy, as you do not have a guarantee that you get back what you invest.

In summary, though service delivery responsibility was allocated to multiple vendors, coordination and control efforts by the client declined. The extended constellation intensified cooperation between the involved vendors and forced them to cope with any obstacles by adopting different work processes, setups, and styles, without active involvement by the client. Finally, this scenario helped overcome disparities within the vendor portfolio. At the beginning of the project, BANK strongly encouraged cooperation to reinforce their roles and responsibilities and foster a stable working mode, but its efforts gradually decreased, replaced by self-organizing mechanisms among the vendor companies.

### **3.4 Practice 4: Allowing for context-driven multichannel communication**

Finally, our data revealed that the project team used different communication tactics with respect to task characteristics and the actual project situation. The project management did not actively control the use of certain communication media but rather supported evolving communication behavior based on current project needs. We conceptualized this practice as allowing for context-driven multichannel communication.

Our interviewees frequently mentioned communication as one of their biggest challenges. The project's global reach induced language problems and geographical distance and time zone differences. Thus BANK's overall project manager stated:

For me, communication in the sense of language is one of the biggest challenges here in the project.... Especially for conference calls it is important to have the results set out

in writing to make sure that one does not talk on cross-purposes.... The geographical distance is an exacerbating factor, as the phone is a bad communication medium when one does not talk in his mother tongue.

The project team managed to overcome these challenges by using multiple channels, depending on the actual project needs or task characteristics. At the very beginning of the project, BANK strongly encouraged communication among the involved parties to reinforce their roles and responsibilities and foster stable work modes, but again, self-determined communication behaviors emerged, in accordance with daily operations, as a vendor project manager described:

At the beginning [BANK] arranged formal meetings, managed by BANK, but later there was more and more direct interaction over several channels between the vendor companies.... BANK was not the driver of communication, but was always informed to sustain transparency.

In the day-to-day project work, e-mail communication evolved as the predominant communication medium, for three reasons. First, it fit BANK's existing communication culture. Second, in multiple vendor constellations, such communication offers a decisive advantage, because several parties can be addressed simultaneously without any information loss. Third, global ISD outsourcing projects tend to be characterized by the use of distributed teams, with geographic and time-zone gaps and language differences. E-mail communication therefore facilitated the spread of information and helped address language barriers, because team members challenged by their minimal comprehension of spoken language could read the written documents at their own pace to understand the key decisions and context. A functional analyst of BANK explained:

I try to bypass language problems by using 'plan B.' That is, whenever I have the feeling to not understand well or not to be understood well I prefer writing e-mails.

With its widespread use, the efficient and effective application of e-mail was of great importance. In coaching sessions, BANK worked to improve the quality of e-mail communication; for example, a sub-project leader explained:

At the beginning of the project people had written very, very long e-mails and still the topic of the e-mail was not clear. Sometimes we had mails with more than two pages of length.... This caused a lot of misunderstandings. We had to train the teams how to communicate effectively using e-mail. So we emphasized keeping the e-mails short and using elements for structuring such as bullet points, and what is meant. This led to a more efficient way of communication.

E-mail communication remained primary for day-to-day project work, but other channels reflected other task characteristics and actual project needs. Thus a project team member from BANK explained why different tasks might require different ways of communication:

I only had a few misunderstandings with my Spanish colleagues. I express my request as clearly as possible in an e-mail and so I get along very well. In case it gets more complicated I use the phone. This proceeding is also due to my area of responsibility. As we are doing the specification we do not have any 'soft' topics, only concrete requests regarding

the concepts themselves. This is much easier to express than potential negotiation topics on senior management level which can be better solved when meeting personally.

In-person workshops were scheduled on short notice if the existing situation required a face-to-face meeting. This spontaneous aspect of communication practices is reflected in the following statement by BANK's project manager, explaining the decision to hold one face-to-face workshop:

When it is clear that there is a gap and it is clear that we need to close this gap, then I take the responsibility and organize shortly an on-site workshop with all necessary people to get things fixed.

Furthermore, despite the project's global reach, a biweekly onsite vendor meeting occurred at the project management level, made possible only because IMPLEMENT's global delivery model was designed to ensure proximity to the customer. A project team member from IMPLEMENT explained:

The teams are built up in accordance to the requirements of the customer. First, the project lead is selected. In the case on hand, the customer is based in Europe, so a project lead from this region and same time zone has been selected. The further configuration of the project team depends on the individual needs of the customer. To realize significant cost savings, the Brazilian development center can be used. In case of a more complex project which requires close alignment with the customer, the project team is required in regional proximity.

Thus, BANK was able to choose whether it prioritized cost savings, speed of service, or access to specialized experts. For this project, BANK decided on a combination of the various options and relied on development centers in Spain and Brazil. BANK was in direct contact with the centers in Spain, allowing for frequent onsite visits to Germany, and used the development center in Brazil as an extended workbench, with transparent jobs for which the greater distance in terms of kilometers and time zones had no impact on the frequency of onsite meetings.

As an example of communication practices established to match task characteristics, we note the systematic use of document and issue management tools during technical subprojects (e.g., design, implementation) to reduce the overall amount of communication. By applying document or issue management tools, the distributed project team could collaborate in the context of the specific object under discussion. Available collaboration mechanisms such as URL sites for sharing content, annotations, and comments about the focal object directly, as well as possibility to preserve this discussion and comments for future reference, were often used to structure communications. Thus, development-related communication was restricted mainly to tools that allowed for unstructured communication, and e-mail and telephone contacts were reduced to the necessary minimum. A sub-project leader thus commented:

Due to the distance with regard to language and time zone, communication via phone and email always bears the risk to encounter misunderstandings. The usage of the tool has mitigated this risk as all involved persons have the opportunity to get a documented

outline of the status quo at any time. At this point the issue of communication touches the issue of documentation.

Our analysis revealed that different communication channels evolved as useful for different purposes; the emergence of communication behavior is driven by context rather than by definition or top-down expectations. The mindful management practices helped the parties overcome the management challenges of a global ISD outsourcing project with multiple vendors.

## **4 Discussion and implications**

In this study, we have addressed the management of the vendor portfolio in a global multi-sourcing ISD project, identifying four mindful management practices for such kind of projects. Below, we discuss our findings in the light of extant literature.

Prior research in the global ISD outsourcing domain features various studies that address specific aspects of the management of global ISD projects. Many of these studies also focus on management aspects related to global sourcing-specific distances between the client and vendor, which comprises geographic distance (Carmel and Agarwal 2002; Espinosa et al. 2006; Rao 2004), language barriers (Carmel and Agarwal 2002; Rao 2004; Zatolyuk and Allgood 2004), and cross-cultural differences (Carmel and Agarwal 2002; Heeks et al. 2001; Krishna et al. 2004; Nicholson and Sahay 2001; Rao 2004). Other studies note the importance of managerial tasks such as communication (Gupta and Raval 1999; Heeks et al. 2001; Kotlarsky and Oshri 2005; Kotlarsky et al. 2008; Rottman 2006) and managing expectations and trust (Gupta and Raval 1999; Heeks et al. 2001; Levina and Vaast 2008). However, they have focused predominantly on dyadic global IS outsourcing relationships.

In our study, we realized that managing global ISD outsourcing projects with multiple vendors necessitates new kinds of management practices that are different from traditional rules and norms of outsourcing management. Therefore, we focused on identifying management practices that relate to but go beyond widely discussed management aspects. We illustrate this view using communication management as an example: Prior research recommends conducting regular face-to-face meetings and offshore site visits to support communication (e.g. Kotlarsky and Oshri 2005; Kotlarsky et al. 2008), but in our focal project, in-person workshops were scheduled on very short notice triggered through actual project needs. That is, frequency appeared less important than appropriate timing, as determined by the current project situation. We thus draw attention to a communication aspect other than frequency, namely, situational awareness. In so doing, we enhance our understanding of communication behaviour in the global ISD outsourcing context.

As we started broadening our view and turned to management literature, we became aware that management practices emerging from our data were quite closely related to the cognitive processes that appear in OM theory as defined by Weick and Sutcliffe (2001, p. 42). Organizational mindfulness refers to an organization's ability to perceive information, interpret it, and respond appropriately (Butler and Gray 2006). Prior research has identified five interrelated cognitive processes that contribute to creating and sustaining OM: (1) preoccupation with failure,

(2) reluctance to simplify, (3) sensitivity to operations, (4) focus on resilience, and (5) deference to expertise (Weick and Sutcliffe 2001; Weick et al. 1999). By linking these cognitive processes to our findings in a late stage of our analysis, we could scale up our theory and enhance our conceptualization of the four management practices that emerged from our case study. We discuss how each practice extends theoretical knowledge and refers to the cognitive processes of OM next.

## 4.1 Practice 1

The importance of client-vendor relationships in global IS outsourcing arrangements is widely acknowledged and discussed from different viewpoints that mainly address the challenges associated with various forms of distance in global relationships. Gefen, Wyss, and Lichtenstein (2008) introduce the concept of business familiarity to the IS domain by examining how the number and related money transfers of previous business relationships (i.e., business familiarity) reduces reliance on contract controls, such as splitting large projects, penalties, or other formal management mechanisms. Business familiarity thus entails the vendor's knowledge about its client, based on its prior relationships and the implied future trust of the client in the vendor.

Our finding about the role of relational knowledge as an enabler but not as a recipe in global ISD outsourcing projects with multiple vendors extends such research by offering a more detailed understanding of the importance of relational knowledge in the vendor selection process. Existing relational knowledge certainly makes a significant contribution to client-vendor cooperation (as an enabler). It cannot be transferred easily during conventional knowledge transfer processes but instead accrues through experience, so joint prior business represents the only opportunity for its acquisition. Yet such benefits should not lead to an overemphasis on relational knowledge. Aspects such as project characteristics and requirements also must be taken into consideration when setting up a vendor portfolio.

We extend the discussion of client-vendor relationships in global ISD outsourcing projects by introducing deliberateness: Relational knowledge is valuable but not sufficient for project success. In OM terms, this idea is captured by the process category described as commitment to resilience, which refers to the firm's ability "to simultaneously both believe and doubt their past experience" (Weick et al. 1999). Thus, this OM process category provides strong support for this management practice as it includes the reassessing of existing action options (e.g., the value of long-term business relationships) and the employment of new combinations (e.g., switching from a single- to a multi-vendor strategy) (Weick et al. 1999).

## 4.2 Practice 2

Our findings of an explicit cross-organizational trial-and-error phase relates to prior research regarding the use of pilot projects to mitigate business risks (Rottman and Lacity 2004). However, this practice extends beyond the perspective of an individual organization and refers to a multiparty interplay, designed to facilitate intense cooperation over the course of the project. We also extend this research stream by offering a more detailed conceptualization of risk mitiga-

tion measures. The practice we identify pertains not only to upfront testing of a single vendor's service delivery capabilities but to a dedicated phase, as an official part of the project, that allows all involved parties to adjust to one another, practice their cooperation on several levels, learn from their failures, and align their approaches with the project's setup, objectives, and working modes. With this focus on leveraging experiences in general and generalizing and learning from failures in particular, the practice reflects the OM-process preoccupation with failure, which refers to an organization's ability and willingness to explicitly acknowledge failures as an important precondition of learning and as grounds for improvement (Weick et al. 1999).

### **4.3 Practice 3**

With our finding about the reorganization of intervendedor power relations based on expertise, we respond to requests for further research into relational management mechanisms, such as the so-called guardian vendor model (Bapna et al. 2010). In contrast with research that analyzes scenarios in which the main contractors monitor subordinate ones (Cross 1995; Goldfayn 2006), our case study offers a view of a specific constellation in which one vendor manages another under the direct surveillance of the client, even though all vendors have been explicitly and equally contracted by the client.

In a multisourcing arrangement, power thus might arise not only from contractual status but also through knowledge and experience. This natural form of authority contrasts with the contract-based authority of a guardian vendor, which might have a positive impact on its acceptance in the vendor portfolio. That is, this practice advocates a kind of expertise-based leadership among the involved vendors being jointly responsible for a smooth service delivery. With this interpretation, the practice offers an empirical instantiation of the OM category of "subordination of hierarchy to expertise and experience" (Weick et al. 1999, p.103) and therewith reflects and explains the experience-driven dynamics within the project's vendor portfolio.

### **4.4 Practice 4**

Finally, we note that IS researchers repeatedly have pointed to the importance and difficulties of communication in global IS outsourcing projects (Carmel and Agarwal 2001; Gopal et al. 2002; Rottman 2006). With our findings about multichannel communication within the vendor portfolio, we extend prior research to global outsourcing projects (Gupta and Raval 1999; Imsland and Sahay 2005). In particular, in the context of global multisourcing ISD outsourcing projects, generalized recommendations regarding communication might not be useful. Rather, factors such as the characteristics of the project's current situation or the area of responsibility should be taken into account when choosing communication modes. The availability of various action alternatives subject to context and current situational characteristics is associated with the OM category "sensitivity to operations" (Westrum 1988). This cognitive process focuses on constant situational awareness and uses the indication of arising errors to initiate small adjustments (such as switching from phone to e-mail to overcome language problems) (Weick et al. 1999).

In summary, the four management practices reflect important characteristics of OM theory. Only the OM process “reluctance to simplify interpretations” was not directly discovered in our data. However, as this process focuses on decision making with consideration of contextual characteristics it is closely associated to the fourth management practice dealing with the importance of contextual characteristics for successful project communication behaviour. The four management practices, a short explanation of each practice, and its linkage to our meta-theoretical lens organizational mindfulness are depicted in table 5.

<i>Management practice</i>	<i>Explanation</i>	<i>Link to OM theory</i>
Viewing relational knowledge as an enabler but not as a recipe	Reliance on existing business relationships but also anticipating project-specific challenges	Commitment to resilience
Consciously leveraging cross-organizational trial and error	Dedicated period to practice cooperation and subsequently learn and generalize from shortcomings or mismatches	Preoccupation with failure
Expertise-driven reorganization of inter-vendor power relations	One vendor served as an extended arm of the client to control and support another vendor	Under-specification of structures
Allowing for context-driven multichannel communication	Different channels of communication for various task characteristics and project situations	Sensitivity to operations

Table 5: Management practices overview

Even though the four identified mindful management practices represent, at first sight, management mechanisms from the perspective of the client organization, a careful inspection suggests that in global multivendor ISD outsourcing projects, the focus of OM should be the interplay of the involved parties, not individual organizations. To ensure a smooth overall service delivery that meets the client’s requirements and expectations it becomes insufficient to rely on OM only within each individual organization. The interplay of the involved organizations must be characterized by mindful interactions; such “interorganizational mindfulness” might be expressed as the readiness of the involved vendor companies to render assistance, e.g., beyond their contractually agreed roles and responsibilities. Mindful interplay across organizations also helps overcome the boundaries that are inherent to global multivendor ISD outsourcing projects as the involved vendors are competitive by nature. Although OM theory thus far has referred only to single organizations (Weick et al. 1999), we extend it to interorganizational relationships and network contexts in global multisourcing arrangements. The four management practices that emerged in this study thereby represent a starting point for further research aiming at identify-

ing more elements and defining aspects of mindfulness in the interorganizational context as well as potential contextual factors.

## 5 Conclusion

This article is a first step toward a better understanding of the management of global ISD outsourcing projects with multiple vendors. Many prior studies have addressed how to manage dyadic global ISD outsourcing relationships, but few have investigated management practices in global ISD multisourcing projects. We offer a contribution by enhancing understanding of this highly relevant phenomenon.

We have addressed how to manage the vendor portfolio in a global ISD outsourcing project with multiple vendors and thus contribute to IS multisourcing domain literature. Using GTM techniques for data collection and data analysis, as well as OM theory as meta-theoretical lens in the later analysis to boost the conceptualization of our findings, we inductively developed four mindful management practices that extend the commonly discussed practices in this area. Two of these management practices apply to the initial setup of the vendor portfolio (practice #1) or the initialization of cooperation across this portfolio (practice #2); the other two pertain to control and coordination mechanisms among the involved vendors (practices #3 and #4). By contributing these theoretical concepts to OM theory, we were able to provide insights on a higher level of abstraction while still being able to root back our contribution to the underlying exploratory case study.

Therefore, this paper provides two main contributions: first, we contribute and extend OM theory toward the context of interorganizational mindfulness, exchange relationships, and networks. Future research should explore the concept of interorganizational mindfulness and continue to extend OM theory in this direction. Second, we introduce and extend OM to the domain of global multivendor sourcing by illustrating successful mindful management practices. In particular, we apply OM theory to the context of global multivendor ISD outsourcing projects and thus extend the discussion of mindful management behavior with a domain-specific theorization about mindful management practices.

Our detailed case analysis also has implications for global sourcing practices. The identified management practices should be in particular valuable to practitioners that aim to set up and manage vendor portfolios for global multisourcing ISD projects as we reveal several connecting points for establishing these projects. First, we confirm the importance of relational knowledge. Practitioners should take the results into account during the course of their vendor selection process: Instead of applying only a best-fit-for-task strategy, they should consider pros and cons of existing relationships. Second, we reveal the importance of a positive culture of errors, in the sense that failure and misunderstanding can encourage learning and improvement if handled appropriately. We suggest managers should embrace rather than avoid the effort associated with a dedicated initialization period, because it will pay off later. Third, regarding coordination among the vendors, we find that expertise-oriented sub-structures and flexible communication processes both help improve such cooperation in a multivendor constellation, as well as leading to less management effort on the client side. Our findings thus can help project managers

keep the management overhead associated with multiple-vendor constellations within reason. In particular, we illustrate with our case study that practitioners sometimes need to step away from established best practices (e.g. long-term vendor relationships or frequent face-to-face meetings) to be able to further reduce the negative impact of global and organizational boundaries. In other words, global outsourcing practitioners must focus on established best practices and their current project's idiosyncratic challenges in parallel to actively manage the inherent dynamics of global multivendor ISD outsourcing projects.

We also note several limitations of our study that should be taken into account. First, the study's empirical analysis is based on a single case. Even though a research approach employing only one case as data source is generally accepted (Eisenhardt and Graebner 2007), there are limitations of building theory from so-called single-case studies, in particular with respect to the achievable extent of generalization (Yin 2003). Whereas the use of multiple cases allows for comparisons between different cases in different contexts to substantiate the emerging findings, results from a single case could possibly be non-generic and thus not replicable by other cases or contexts (Eisenhardt 1991). However, there are numerous examples of single-case studies in IS showing that significant theoretical contributions are nevertheless viable (e.g., Garud and Kumaraswamy 2005; Levina and Vaast 2008). Second, we did not have the opportunity to interview any representatives from one of the vendor companies, TEST, which was responsible for the software testing in a new factory in India. The ramp-up phase for this test factory had not worked out as planned, causing major problems for the project in the testing phase and noticeable dissatisfaction by the client. Perhaps then this vendor was not willing to talk about the challenges it faced. We could not identify any potential inaccuracies that might result from the missing perspective of the fourth vendor though. Third, our results are specific to large, technology reengineering projects in the financial services industry. We encourage researchers to continue to study the posed research question in other contexts and settings. Fourth, our analysis of management practices in global multisourcing ISD projects could be extended to identify other practices that matter. In this context, further research should also examine how the vendors' behaviors developed after the completion of the project. It would be in particular promising to analyze whether the characteristics of interorganizational mindfulness persist in subsequent projects with other clients or if their behaviour revert to conventional, contract-based, client–vendor relationships.

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