Virtualization of Consulting – Benefits, Risks and a Suggested Decision Process

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Abstract

Virtualization is a promising approach for consultancies to optimize their consulting processes and thereby an innovative option to gain a sustainable competitive advantage. Using state-of-the-art ICT enables consultancies to deliver customized solutions anytime and anywhere while the individual work load of every consultant can be optimized. The downside of the virtualization is the reduced direct interaction of clients and consultants and thus the risk of weaker client-consultant-relationships. Whether virtualization is the right approach for a specific client or project should be clarified within a sound decision process. We have designed a virtualization decision process based on insights from two Delphi studies with one client panel and one consultancy panel.

Keywords:

Introduction

Consulting traditionally is expected to be a “peoples’ business”. Normally experts will be sent to clients in order to interactively solve business problems. Usually they are being paid per-diem or per-hour. Until today this is the fundamental principle of many professional service firms including consultancies. But the market changes as new competitors with innovative business models and technology-based consulting approaches enter (Christensen et al. 2013). Big consulting firms already react to this competition and evolve into full-service-provider that offer a broad spectrum of services including technology-based consulting solutions (BDU 2014). But not only consultancies develop in new directions also the clients’ way of interacting with consultancies is evolving (Jung 2010; Polster 2012). As their sophistication continues more regulation, standardization, formalization and centralization of the interaction with consultancies takes place (Jung 2010). This is particularly noticeable within the tendering procedures of the clients when they evaluate both the quality and the prices of prospective project partners more critical than ever.

In order to remain strong in the market consultancies need to critically evaluate their own business model as well as the way they provide their consulting services. Consultancies can gain a sustainable competitive advantage if they use new and emerging technology to innovate the consulting process. Furthermore they can distinguish themselves from competitors by offering innovative consulting products that sustainably extend their service-portfolio. By rethinking the delivery-process of consulting itself consultancies can reshape the interaction with the client and reach new clients. A promising approach to reach these goals is virtualization. Virtualization here describes the removal of physical interaction between people and/or objects of a specific process (Overby 2008). A virtual process reduces the direct interaction of the process-actors to a minimum. In the context of the Process Virtualization Theory (PVT) virtualization depends on a virtualization-mechanism that enables the migration of the processes from the physical to the virtual environment (Overby 2012). Nowadays Information and Communication Technology (ICT) and predominantly web-based technologies are used as virtualization-mechanism. Numerous examples of virtualization can be mostly found in E-Commerce or E-Government (Becker et al. 2010; Boughzala et al. 2010).
Consultancies can apply virtualization to innovate their consulting services. The virtualization of consulting services describes the transformation of traditional and face-to-face services into innovative, virtual and even automated consulting. Consequently the direct interaction of consultants and clients will be reduced to only the most crucial moments within the consulting process. Virtualization is an important step towards innovative and complex consulting service systems that combine traditional and virtual consulting services. Independent from spatial and temporal restrictions, this system of innovative services integrates personal services and technology-based solutions into an integrated and seamless product that helps clients optimizing their business anytime and anywhere. Furthermore virtualization in consulting could reshape the way clients and consultants interact with each other. Virtualization of consulting services will change the traditional roles of the actors and their self-images. To realize this ambitious vision, suitable artefacts like consulting service platforms, mobile consulting applications, collaboration tools, data mining tools, semantic technologies as well as sound service design concepts and virtualization methods need to be developed.

Existing literature already covers virtualization of consulting services using terms like E-Consulting, Electronic Consulting, Online Consulting or Distance Consulting, all sharing the same idea of spatial and temporal separation of clients and consultants (Allegra et al. 2000; Davison et al. 2003; Deelmann 2009; Reineke and Bock 2007; Schuster 2005; Türk 2004; Wurdack 2001). Furthermore some consultancies already extended their traditional service portfolio with such innovative solutions. For example McKinsey\(^1\) offers technology-based consulting services for recurring business problems named “McKinsey Solutions” (Christensen et al. 2013). Another example of virtualization in consulting is Narrative Science\(^2\), a solution that uses artificial intelligence and big data to generate business narratives automatically (Christensen et al. 2013). Online-Coaching, offered by more or less independent management consultants, is another example for already virtualized consulting services (Taranovych 2013). These first examples show that virtualization is possible yet it is not as prevalent in consulting as in general E-Commerce. Thus barriers seem to exist, that prevent consultancies from virtualizing their services.

\(^1\) http://mckinseysolutions.com/ (Last access: February 18th 2015).

\(^2\) http://www.narrativescience.com/ (Last access: February 18th 2015).
Existing work regarding virtualization of consulting services focused on empirical studies or conceptual artefacts (Deelmann 2009; Hoven et al. 2012; Korytko 2011; Neuert 1990; Schuster 2005; Türk 2004; Wurdack 2001). Only few scholars cover the development, realization and evaluation of virtualized consulting services (Hoven et al. 2012; Taranovych 2013). There is a lack of scientifically rigorous and practically relevant concepts or prototypes for virtualizing consulting services. This can be attributed to the fact that only little effort has been put into the investigation which consulting services, project phases and activities could be virtualized successfully in which way. With respect to PVT the investigation of the virtualizability of consulting processes is one critical step towards realization of virtualized consulting services. Furthermore adequate design-methods, analysis-tools and prototypes of virtualized consulting services need to be developed. First concepts to evaluate and realize virtual services exist in the field of E-Commerce or E-Government (Becker et al. 2010; Boughzala et al. 2010). A solid body of virtualization-knowledge for consulting is missing although it is the base for all future virtualization projects. As virtualization can be expensive – especially if comprehensive individual developments are involved and because business relations to clients are at stake – consultancies should not engage in virtualization lighthearted. Instead they should assess the advantages and disadvantages thoroughly. A structured decision process in respect to virtualization does not yet exist. Scholars of other problem areas, e.g. outsourcing, already have analyzed the critical factors that determine the decision and sketched suitable decision processes (Attari et al. 2012; Kremic et al. 2006; Ordoobadi 2005; Yang and Huang 2000). The main research question we are addressing within this paper therefore is: How should a decision process for virtualization in consulting be designed? Consequently the expectations from clients and consultancies as well as the prerequisites of the decision in favor or against virtualization need to be analyzed.

In the following, we will briefly outline our research method before the identified benefits and risks will be described from a client and consultant perspective. Then, the virtualization decision process will be presented by first explaining its organizational anchor and stakeholders and second by defining the necessary process steps in detail, taking into account both the identified benefits and risks. The paper closes with some indications for further research.
Research Method

Exploratory Study within Design Science Research

As we aim at creating artefacts that help consultancies to decide where and how to virtualize consulting services, the methodological framework for our research is based on the Design Science Research (DSR) paradigm. We follow the well-known DSR process model of Peffers et al (2008). DSR focusses on solving a practically relevant problem through the design of novel artefacts like process models, software prototypes or analysis methods (Hevner et al. 2004; Peffers et al. 2008). The artefacts mainly address important business problems that have not been solved yet or have not been solved sufficiently (Peffers et al. 2008). DSR embodies a both scientifically as well as practically rigorous and relevant design process that focusses on the development, evaluation and publication of the artefact (Hevner et al. 2004; Peffers et al. 2008). We use the DSR process to remove barriers to the development of virtualized consulting services by providing consultancies with artefacts that enable them to successfully realize virtualization.

One such artefact is a virtualization decision process that will be developed in this paper. The decision process aims at supporting consultancies by increasing transparency with
respect to the problem space of virtualization. Knowing what clients’ and consultants’
effect from virtualization and how to integrate this knowledge into a solid decision
process is important for the decision in favor or against virtualization. Moreover, it helps in
the design of artefacts for the virtualization of consulting services. Once this decision has
been made in favor of virtualization, objectives of a virtual consulting solution can be
specified and the actual design process is started. We aim at adding practically relevant and
empirically based insights (leading to a decision process considering risks and benefits) to
the existing knowledge base of Consulting Research (Nissen 2007).

Current literature does not provide a sufficient list of risks or benefits of virtualized
consulting services. Existing work indicates only some risks and some benefits, mostly
from a consultant perspective (Wurdack 2001; Schuster 2005; Neuert 1990; Türk 2004).
Exploratory research is a promising approach to deliver the missing insights about the
clients’ expectations (Briggs and Schwabe 2011). As the DSR process model by Peffers et
al. (2008) is open to use different methodologies in the individual steps, exploratory
methods, such as interviews, surveys or group discussions, can easily be integrated in the
eyearly phases of the process model (see Figure 1). In order to identify expected benefits and
risks of virtualized consulting services from both a client and a consultant perspective, we
conducted two Delphi studies based on the guidelines of Häder (2009).

Goal of the Studies

The overall goal of the Delphi studies is to create a list of benefits and risks that clients and
consultants relate to virtualization of consulting services. By analyzing the expectations of
clients and consultants and relating them to existing results in the literature, we aim at
creating a holistic picture of the pros and cons of virtualization. The virtualization of
consulting services will only be successful if the client and the consultancy perspective are
being considered in every phase of the design process (Wurdack 2001). The Delphi study
as a method of exploratory research enables researchers to access the knowhow of field
experts. Thereby it offers the possibility to get insights of personal experiences and
practical know how that can be used to evaluate and extend theoretical knowledge about
virtualization in the context of consulting (Briggs and Schwabe 2011).
Composition of the Panels

In order to deliver the required insights we decided to use two different panels - one panel of clients and one panel of consultants. The experts for each panel have been selected according to different requirements (Table 1) in order to ensure the rigor and relevance of the results. For the consultancy panel we gathered experts with considerable professional experience in consulting (Table 2), whereas in the case of the client panel we stressed the importance of including a wide range of industries as well as experience in working with consultants (Table 3).

<table>
<thead>
<tr>
<th>Nr.</th>
<th>Requirements for Consultancy Panel</th>
<th>Requirements for Client Panel</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Currently engaged in consulting</td>
<td>Direct involvement in consulting services</td>
</tr>
<tr>
<td>2</td>
<td>Substantial professional experience</td>
<td>Different company sizes</td>
</tr>
<tr>
<td>3</td>
<td>Experience in sales</td>
<td>Different branches of industry</td>
</tr>
<tr>
<td>4</td>
<td>Managing experiences</td>
<td>Business as well as IT-departments</td>
</tr>
<tr>
<td>5</td>
<td>Focus IT-consulting</td>
<td>Different managerial positions</td>
</tr>
<tr>
<td>6</td>
<td>Different company sizes</td>
<td>Use of in-house and external consulting services</td>
</tr>
<tr>
<td>7</td>
<td>Availability for the study</td>
<td>Availability for the study</td>
</tr>
<tr>
<td>8</td>
<td>Different internal units and fields of consulting included</td>
<td>Broad professional background / broad knowledge</td>
</tr>
</tbody>
</table>

Table 1. Requirements for the Consultancy and the Client Panel

Virtualization is supposed to be an approach that can be used to optimize the competitive advantage of consultancies of different sizes. Consequently in our consultancy panel we integrated a mix of small, medium and big consulting firms. Additionally all surveyed experts should have experiences with consulting services either in the role of a client or in the role of a consultant. The email-addresses of the experts were gathered in order to be able to send out the cover letter as well as the actual surveys personally.
### Table 2. Original Consultancy Panel

<table>
<thead>
<tr>
<th>Expert Nr.</th>
<th>Professional Experience (years)</th>
<th>Position / Department</th>
<th>Size of the Company (employees)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>14</td>
<td>Innovation Center, Sales</td>
<td>120</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>Managing Consultant/Advisory</td>
<td>100,000</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>VP Strategy Development/Strategy Development</td>
<td>50,000</td>
</tr>
<tr>
<td>4</td>
<td>20</td>
<td>Management Consultant/Security Service</td>
<td>400,000</td>
</tr>
<tr>
<td>5</td>
<td>30</td>
<td>Associated Partner/Management Technology</td>
<td>1,000</td>
</tr>
<tr>
<td>6</td>
<td>9</td>
<td>Manager/Advisory/Sales</td>
<td>140,000</td>
</tr>
<tr>
<td>7</td>
<td>14</td>
<td>CEO/Consultant</td>
<td>30</td>
</tr>
<tr>
<td>8</td>
<td>20</td>
<td>Sales &amp; Business Development/Sales</td>
<td>20,000</td>
</tr>
<tr>
<td>9</td>
<td>5</td>
<td>Technical Architect/Custom Solution Development/Sales</td>
<td>130,000</td>
</tr>
<tr>
<td>10</td>
<td>18</td>
<td>CEO/Sales</td>
<td>45</td>
</tr>
<tr>
<td>11</td>
<td>8</td>
<td>Senior Manager/Technology Architecture</td>
<td>280,000</td>
</tr>
<tr>
<td>12</td>
<td>19</td>
<td>Director Marketing &amp; Sales</td>
<td>110</td>
</tr>
<tr>
<td>13</td>
<td>14</td>
<td>CEO/Innovation</td>
<td>100</td>
</tr>
<tr>
<td>14</td>
<td>22</td>
<td>CEO/Sales</td>
<td>80</td>
</tr>
<tr>
<td>15</td>
<td>9,5</td>
<td>Senior Project Consultant/Education/Certification</td>
<td>50,000</td>
</tr>
<tr>
<td>16</td>
<td>20,5</td>
<td>Principal Enterprise Architect/Business Technology</td>
<td>127,000</td>
</tr>
<tr>
<td>17</td>
<td>18</td>
<td>Senior Manager/IT-Consulting</td>
<td>180,000</td>
</tr>
<tr>
<td>18</td>
<td>15</td>
<td>Manager IT Consulting/Advisory</td>
<td>180,000</td>
</tr>
<tr>
<td>19</td>
<td>16</td>
<td>Senior Manager/Risk and IT-Service</td>
<td>180,000</td>
</tr>
<tr>
<td>20</td>
<td>18</td>
<td>CEO/Sales</td>
<td>200</td>
</tr>
</tbody>
</table>

### Table 3. Original Client Panel

<table>
<thead>
<tr>
<th>Size of the Company (employees)</th>
<th>Industries</th>
<th>Departments</th>
<th>Contact with Consulting Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>51 - 250</td>
<td>1x</td>
<td>Business</td>
<td>occasional 1x</td>
</tr>
<tr>
<td>251 - 1000</td>
<td>1x</td>
<td>Engineering</td>
<td>2x often 6x</td>
</tr>
<tr>
<td>1001 - 2000</td>
<td>4x</td>
<td>Chemical Industry</td>
<td>daily 6x</td>
</tr>
<tr>
<td>&gt; 2000</td>
<td>7x</td>
<td>Energy</td>
<td>Finance</td>
</tr>
</tbody>
</table>

### Data Collection and Analysis

We used the *Questback* software to conduct the Delphi studies online. After a successful pretest the first round of the studies was conducted in autumn 2014. An email was sent to every expert containing an introduction into virtualization as well as the actual URL for access to the online-survey. The introduction into the context of virtualization was important in order to create a common understanding of virtual consulting services. This
was particularly important in order to increase the validity of the benefits and risks. The experts had two weeks to answer the online-survey. In this first wave of the study we asked two open questions to gather as many benefits and risks as possible. Clients and consultants were asked to write down benefits and risks. After a two week period of collecting answers, analysis and planning of the next round, the second survey started. Again participants had two weeks to answer the questions. This time we asked the clients to evaluate their consent with each benefit and risk using a 5-point Likert scale. The aim of this phase was the evaluation of the previously identified factors and the generation of a majority opinion. We were able to generate a list of final benefits and risks with a strong consensus by removing items that most experts were undecided about or did not agree with. At the end of two rounds a total of 10 clients and 12 consultants had participated. According to Häder and Häder (2000) we thereby fulfilled the minimum requirements for the number of participants.

Results

The following section summarizes the results of the two Delphi studies. The benefits and risks from the consultancy-perspective are shown in Table 4. The expectations from the client-perspective are shown in Table 5.

Benefits of Virtualization

Clients as well as consultants primary expect financial advantages from virtualization of consulting services. Clients assume that the reduction or even absence of consultant presence on-site and direct interaction results in lower prices. Consultants expect lower costs as travelling expenses could be reduced. Virtualized consulting services, therefore, are not being perceived as premium services but rather as standard services. The lower price is also expected because virtualized services are considered to be more standardized and less individual than traditional consulting services. Another expected benefit on the client side is the higher reaction speed and speed of work. The characteristics of the virtualization mechanism, especially the greater (spatial and temporal) reach of virtual services, promise faster working. Urgent client-problems could be solved faster as travelling time is not necessary. Additionally standardized solutions that need only minimum effort for customization would be available instantly. The reach of the
Virtualization mechanism offers the possibility to select the right consultant from a greater pool of consultants. Even consultants that usually do not work in a specific region could be assigned to projects virtually. The surveyed clients and consultants expect increased flexibility in terms to where and when to cooperate because of use of ICT for distributed work.

Once the virtual consulting service started and the project is running clients expect benefits that relate to the continuous logging and monitoring capabilities of the virtualization mechanism. All the information that was exchanged within the consulting process and every tool or result could be monitored and stored more easily. This information could later be used for upcoming projects or in other projects that somehow relate to the current one. Clients expect that efforts for project documentation are lower as many processes and results are already documented within a virtual consulting process. Additionally clients and consultants expect that sharing information is easier within virtual consulting services.

When virtualization is combined with standardization and automation the level of consulting quality is feared to be at risk by the clients. On the other hand, the uncertainty that comes along with engaging in consulting services would possibly be reduced via standardization (Dichtl 1998). Clients expect it would be easier to select a specific (virtual) consulting product among similar products, as their properties would be easier to compare. Clients do think that virtualization goes along with the opportunity to introduce and regularly use innovative consulting tools that will help them optimize their business autonomously. Partly or fully automated consulting services would help clients to gain flexibility within their daily business while always having the option to get in contact with experts when they are needed (Christensen et al. 2013).

Summarizing the identified benefits, it can be stated that clients and consultants expect similar benefits. Higher flexibility and lower costs are the core benefits that have been mentioned from both panels. It is surprising that, considering the different characteristics of the two panels, almost identical benefits were stated. Based on our previous literature analysis, we expected consultancies to mention some additional benefits: the potential to increase the service quality, the chance to create a better reputation, to create more transparency, to innovate their own business model or the extended potential for knowledge management (Christensen et al. 2013; Dichtl 1998; Polster 2012; Türk 2004; Wurdack 2001) – however, they were not stated.
Table 4. Consultants' Benefits and Risks of Virtualization

Risks of Virtualization

Besides the above shown benefits clients and consultants expect certain risks that come with virtualization. First of all, clients as well as consultants are afraid that the quality of the interaction will be worse compared to traditional consulting. Referring to PVT this is related to the process characteristics and especially to the relationship requirements of the consulting process. Clients and consultants feel the need to personally interact with the consultant in order to directly discuss possible solutions to their problems. Consultants particularly fear that the effort for coordination and alignment will increase in case of virtualization. Furthermore, the lower interaction quality promotes another expected risk. The risk of a weaker client-consultant-relationship is one of the biggest risks that clients and consultants think of in the context of virtualization. Trust, commitment and satisfaction are critical factors that determine the strengths of the client-consultant-relationship (Jeschke 2007). In the opinion of the clients and the consultants conducting consulting virtually reduces the strength of the relationship, as direct interaction is important to build
up personal relations, to create trust, to show commitment and to cooperate in order to reach the best solution possible.

Standardization and virtualization promise increasing efficiency at lower costs compared to traditional consulting. Clients fear that standardized virtual consulting services are not individualized enough. In respect to that, consultants fear that the satisfaction of clients will be lower as expectations do not match the standardized solutions. In most cases these expectations will result from past experiences with traditional consulting. Virtualized consulting services now will have to live up to these expectations. Additionally clients feel the risk, that automatically created or standardized solutions will not be approved by their management because the acceptance of such solutions could be low. Another risk that is perceived by the clients is the risk of data abuse. Virtual and automated consulting services will require the exchange of data with a certain criticality. Consequently, the clients fear losing control over their information. Using ICT to communicate and cooperate, clients also fear that their employees could be overwhelmed with the new technology and may not be able to use it properly. Thus the perceived dependency on technology seems to be higher and consequently clients fear losing control over their own business processes. Consultants fear that client-specific security and authorization restrictions could block the use and consequently the success of virtual consulting services.

<table>
<thead>
<tr>
<th>Clients</th>
<th>Benefits</th>
<th>Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher reaction and working speed</td>
<td>Communication, coordination and cooperation difficulties</td>
<td></td>
</tr>
<tr>
<td>Lower prices of consulting services</td>
<td>Weaker client-consultant-relationships</td>
<td></td>
</tr>
<tr>
<td>Better flexibility in selecting consultants</td>
<td>Lower performance and quality of service</td>
<td></td>
</tr>
<tr>
<td>Easier international work</td>
<td>Higher chance of data abuse</td>
<td></td>
</tr>
<tr>
<td>Use of innovative consulting solutions</td>
<td>Lower level of trust</td>
<td></td>
</tr>
<tr>
<td>Better knowledge access and sharing</td>
<td>Lower level of loyalty</td>
<td></td>
</tr>
<tr>
<td>Better reuse of results and project documents</td>
<td>Insufficient individualization</td>
<td></td>
</tr>
<tr>
<td>Better flexibility in tasks management</td>
<td>High technological dependency</td>
<td></td>
</tr>
<tr>
<td>Better availability of consulting services</td>
<td>Higher chance of loss of control</td>
<td></td>
</tr>
</tbody>
</table>

Table 5. Clients’ Benefits and Risks of Virtualization
Summarizing the insights, clients and consultants share similar concerns in respect to risks of virtualization. Although the results generated from the client panel are more differentiated the core of the concerns refers to communication difficulties, insufficient individualization and weak business relationships. We had expected more differentiated risks coming from the consulting panel. This may have been prevented by the high professional positions of the interviewed consulting experts. Consultants that have more project-oriented responsibilities would perhaps have delivered more detailed risks related to daily operative work.

Decision Process for Virtualization

The decision process for the virtualization of consulting services is important for the development and management of virtual consulting services. Before a consultancy commits itself to virtualization a sound decision needs to be made. The decision process we suggest in the following is based on the benefits and risks that have been identified in the two Delphi studies. In order to sketch a complete process we also analyzed existing literature about E-Consulting, Electronic Consulting and Online Consulting. Thereby we were able to identify critical factors that needed to be included in the process as well. The following section presents the decision process, its integration in a consulting processes model, the stakeholders of the decision process as well as its individual steps.

Integration in the Business Process Landscape of Consultancies

At first the organizational anchoring of the decision process for virtualization must be clarified. It will be hard to specify responsibilities and stakeholders of the decision making process without knowing which organizational unit and which business process should frame the decision process. We use the process reference framework Consulting C as a starting point (Nissen and Seifert 2008). The Consulting C enables us to place our suggested decision process within a framework that, one the one hand, is specific enough to identify the relevant business processes and on the other hand, is universal enough to be applied to different consulting firms (Figure 2).
As most impulses for innovative ideas will originate from the Sales-CRM-Consulting-cycle this should be the anchor of the virtualization decision process. Most ideas for innovations in consulting derive from interaction with clients and partners within specific projects (Polster 2012). Predominantly the decision process will start either within a running project (the Consulting part of the cycle) or within the acquisition and sales process (the Sales & CRM part of the cycle). Additional virtualization ideas could be generated within the Knowledge Management, Product Development or the Strategic Management of the consultancy (Polster 2012).

For our decision process we focus on the Sales-CRM-Consulting-cycle. This is expected to be a proper approach as business processes like Knowledge Management or Product Development may not be as elaborated in small and medium-sized consultancies as they are in big consultancies (Nissen and Dauer 2007; Polster 2012). Although the Sales-CRM-Consulting-cycle ideally should be the owner of the virtualization decision process, the other business processes of a consultancy will be affected by the virtualization as well. The more far-reaching virtualization will be, the more business process will need to be integrated into the decision making process as well as the virtualization project itself. The internal stakeholders of the decision process are the managers and consultants that are responsible for the creation of an offer or the planning of a specific project. The most
important stakeholder nevertheless remains the client. The client specifies the main boundaries in respect to time, budget and quality. Within this frame the other stakeholders have to define the best solution either including or excluding virtualization. The integration of the client in the early stages of a consulting project is crucial for its success (Leimeister 2012; Maister 2003; Türk 2004; Wurdack 2001).

Activities of the Decision Process

Once it has been specified where to start and who to involve the first decision needs to be made. The decision process (Figure 3) can be stopped quickly if the service is not eligible to be migrated from the physical into the virtual environment. Therefore it is necessary to assess the virtualizability of the anticipated consulting process (Overby 2012; Wurdack 2001). The criticality, complexity and integrativity of the consulting process are among the important factors for the determination of the virtualizability (Büttgen 2007; Dichtl 1998; Neuert 1990; Reichwald et al. 2000; Schuster 2005; Trefz and Büttgen 2007; Türk 2004; Wurdack 2001). Business opportunities that are critical, meaning they have a great potential risk, are not eligible for virtualization and should be conducted traditionally (Neuert 1990). The higher the complexity of a consulting process is the lower the virtualizability is, as with higher complexity of the task more complex interaction is required (Wurdack 2001). High integrativity indicates strong dependence of the consulting process on the input of the client and therefore lowers the virtualizability (Büttgen 2007; Dichtl 1998; Wurdack 2001). The stakeholders should briefly assess these three criteria and try to develop a sense of the process’s virtualizability. If the stakeholders agreed on an overall-virtualizability – even on an only low level – the next step in the decision process would be the assessment of the previously identified benefits and risks.

The next step is to evaluate whether the consultancy can deliver the expected benefits through virtualization. Furthermore it is necessary to evaluate if the perceived risks either can be minimized by adequate mechanisms or not. The benefits should outweigh the potential risks. If not, virtualization does not seem to be a promising approach to optimize the consulting process nor will it help fulfilling financial, legal or strategic targets.
Besides the comparison of benefits and risks, a business case needs to be created. This business case, usually already part of an offer, helps assessing the financial dimensions of the virtualization. Consequently, the stakeholders of the virtualization process will need to critically evaluate the expected savings of virtualization as well as the expected additional costs, for example for additional collaboration-tools or training. If the business case results in an insufficient profitability then the virtualization might be canceled due to the missing value contribution. If the business case is positive then the virtualization can be integrated in the project-planning as well as the offer. The next steps then ideally would be a detailed assessment of the virtualizability of the tasks as well as the selection of suitable virtualization-technologies and tools. The identified tasks and tools need to be combined within a virtualization-concept which again needs to be integrated into the project plan, considering all other project elements. Changing conditions will require additional runs of the virtualization decision process.
Conclusion

Virtualization is a promising approach for consultancies to optimize their consulting processes and thereby an innovative option to gain a sustainable competitive advantage. Using state-of-the-art ICT enables consultancies to deliver customized solutions anytime and anywhere while the individual work load of every consultant can be optimized. The downside of the virtualization is the reduced direct interaction of clients and consultants and thus the risk of weaker client-consultant-relationships – a critical resource of consultancies. Whether virtualization is the right approach for a specific client or project should be clarified within a sound decision process. Such a decision process has not yet been defined for virtualization and especially for a consulting context. The virtualization decision process, which was suggested in this paper, includes the assessment of the process virtualizability, the assessment of the benefits and the risks as well as the analysis of the financial dimensions. Based on the results of the assessment, virtualization could be used within a consulting project in order to fulfill the financial, strategic or legal goals. If the decision process resulted in a negative decision then traditional consulting (peoples business) will be conducted.

We have designed a virtualization decision process based on insights from two Delphi studies with one client panel and one consultancy panel. The decision process proposes a structure to systematically assess the relevance of virtualization within the sales-consulting-cycle of consultancies. Knowing that ideas for virtualization can origin from various sources the most critical source are the processes with direct customer contact. Managing partners, account managers, project managers and consultants need to follow the virtualization decision process in order to fulfill the economic and quality targets of both the client and the consultancy. The results demonstrated in this paper are limited by the number of clients and consultants that have been interviewed. Additional limitations must be made as virtualization in consulting is still a new approach and therefore broad experiences, both on client- and consultants-side, are still missing. Furthermore we focused on IT-Consulting and therefore did not consider other fields of consulting like HR-Consulting or Organizational Development. In order to be able to fully realize the potential of virtualization in consulting further research is necessary also in the direction of methods and tools for the systematic development and successful management of virtual consulting services. Finally, research aiming at ensuring the quality of virtual consulting services will be crucial for a continued strong client-consultant relationship.
References


