

# Knowledge Centers in Professional Services Firms

## An Exploratory Study

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**Abstract:** The knowledge-intensive processes of professional services firms (PSF) demand instruments with which to store, review, and exchange knowledge. Knowledge centers (KCs) are centralized units that meet this demand. They concentrate knowledge on certain business-relevant topics and share it through integrated knowledge management structures. This paper illustrates the concept as well as the different strategies of KCs in an exploratory study on PSF and aims at providing the first characteristics of a reference model for KC.

## 1 Introduction

Having knowledge about competitors, markets, or customers is crucial in times of quickly changing markets [Ca04]. Professional services firms (PSF), specifically, rely strongly on such knowledge. This not only puts pressure on knowledge management (KM) to manage knowledge, but also to help produce and provide knowledge quickly. Integrated KM supports business processes by addressing businesses' KM strategy, KM organization, KM systems, and the organizational culture [Ri04]. Consequently, companies either follow a codification or a personalization strategy [HNT99]. In this context, knowledge centers (KCs) can be of major importance. KCs are groups of experts that provide an organization with access to specific knowledge. KCs can be used to quickly obtain and distribute knowledge throughout the organization wherever it is needed.

Although the first KCs were established some time ago, there is almost no literature on them to date. KCs have not yet caught the attention of many researchers. However, they have a high potential to yield benefits to organizations, not only by providing external knowledge, but also by being the KM service component, thus enabling knowledge to be collected and dispersed throughout the entire organization. Thus, it makes sense to examine the influence of the surrounding strategy on the organization and functions of KCs.

Accordingly, it is this paper's objective to gain a basic understanding of the KC concept and to identify basic organizational and conceptual design aspects. Furthermore, this paper investigates how the surrounding strategy, which is classified as either a personalization or a codification strategy, influences the organization and design of KCs. Therefore, three functional pillars of the integrated Knowledge Management Systems (KMSs) architecture – “content”, “collaboration” and “competence” [Ri04] – are examined. Finally, we investigate the integration of KCs into a KM strategy. To identify the correlations mentioned above, we report on an exploratory study conducted with five PSF by means of interviews with the persons in charge.

Section 2 describes the theoretical foundations of KCs in PSF and describes the difference between a codification and personalization strategy. Designs of KCs are introduced in section 3. In section 4, we explain how we collected the empirical data in the PSF. Section 5 outlines the results and findings. To conclude, we summarize the paper's contributions, refer to the limitations, and present suggestions for future research.

## **2 Relevant Terms and Concepts**

The integrated Knowledge Management Systems (KMSs) architecture is this paper's reference framework (for other frameworks see, e.g., [Bo02], [MR02], [Za99]). This architecture was chosen because it addresses both KM dimensions and links KM and KMSs to business processes. The integrated KMSs architecture was developed by means of a combination of desk research, multiple case studies, and action research. The field research involved a two-year KM project at PricewaterhouseCoopers, as well as studies and workshops with ten organizations in the context of the Customer Knowledge Management competence center at the University of St. Gallen [Ri04]. The architecture consists of three layers (strategy, process, and system) and four pillars (content, collaboration, competence, and orientation). Finally, all the above elements are influenced by organizational culture [Ri04].

The strategy layer is composed of the business strategy, the KM goals and strategy, as well as the measurement system. Metrics are defined in the latter to monitor the progress of the KM initiatives [Ri04]. The process layer encompasses business and support processes. KM processes constitute support processes executed by employees with KM roles. KM roles bundle specific KM activities, such as localizing and collecting, exchanging, using, and (further) developing knowledge [Ri04], undertaken by individuals and/or groups. The system layer describes the KMSs, which are accessed through a portal, and comprise the following functional pillars [Ri04]: Content, which relates to the management of content, its context, and the information objects in which it is contained; competence, which addresses all aspects related to the competencies of individuals and groups within the organization; collaboration, which supports individuals and groups who use content and apply their competencies to identify, exchange, and create knowledge; and orientation, which provides the search, navigation, and administration functions that the other pillars require.

Professional service firms (PSF) are an important and increasing economic parameter for all developed countries. Overall, PSF are those organizations that provide a service as their main activity. This includes mainly law firms, consultancies, or advertising agencies [We99]. Professional services are highly dependent on knowledge, involving high degrees of customization, discretionary effort, and personal judgment [Lo05], [PH96], [We99]. Knowledge is the primary resource in PSF [Ca01], [We99]. Therefore, knowledge has to be nurtured and developed, as it is the essence of future value creation for clients. Moreover, it is the only way to remain competitive in a highly volatile and competitive knowledge environment “where markets quickly shift, technologies rapidly proliferate, competitors multiply and products and services become obsolete almost overnight” [Ca04]. Thus, KM plays a very important role in PSF, as it is a way of cultivating their most important asset.

The need for social interaction to efficiently manage and transfer complex knowledge, and the need for fast knowledge retrieval and creation call for a support of KM in an organization. Over the past few years, PSF have started to face these challenges by implementing KCs. A *knowledge center* is defined as a formal group of experts who collect and provide access to the firm’s knowledge and experiences as well as to external knowledge resources [MB99], [MMT02], [OI00]. KCs are commonly focused on specific dimensions, either on functional areas or industry sectors [OI00]. They therefore ensure that relevant information is gathered and bundled.

Moreover, the KCs’ knowledge sources include the personal expertise of their members, who help the employees to examine documents, generate documents from projects, and to identify best practices, solutions to specific problems, experts directories in sector areas, methodologies, and background information on their specific domains [OI00]. Through its members, KCs act as service centers and serve as hubs of expertise in particular areas [OI00]. Such a service is beneficial by facilitating the search for documented knowledge as well as the documentation of knowledge for the clients of KCs. Thus, KCs can be very beneficial for professional service firms [Sc05].

The KCs’ KM strategy is a major prerequisite that needs to be investigated, specifically with regard to *codification* versus *personalization*, as presented by Hansen et al. [HNT99]. These authors observed that consulting companies use one of two KM strategies. Codification, which relies on “economies of reuse” [HNT99], depends heavily on computers and databases. As a major characteristic of this strategy, knowledge is codified, thus made independent of its creator, stored, after which access to it is offered to anyone in the company as often as preferred. Organizations that rely on the codification strategy are likely to focus on content management, which forms the first functional pillar of the integrated KMSs architecture. Service centers that manage databases and help consultants to find and use information are common, and are therefore actually KCs. Thus, KCs in organizations that apply the first approach are likely to first start off as centers offering services to search databases for relevant knowledge.

In this context, collaboration and competence management, the second and third pillar of integrated KMSs architecture, do not play such an important role in KCs. On the other

hand, in organizations that apply the personalization strategy, people are at the crux of KM. Thus, direct person-to-person contact is much more important. Employees derive deeper insights collectively by jointly solving problems and sharing their deep knowledge. If KCs are applied in this context, competence and collaboration management are more important, as knowledge has to be passed on personally. While content management does still play a role (e.g., external databases as sources of information), personal networks are much more important. Databases are only used to update knowledge on certain topics, while authors and knowledgeable individuals are thereafter approached personally. Translated for KCs, collaboration and competence management do play a bigger role. Overall, companies do not exclusively use one of the approaches – they merely use one strategy to support the other [HNT99]. Similarly, KCs need to offer services in the three functional pillars. However, it makes sense to follow the KM strategy and focus on one of two approaches.

### **3 Design of Knowledge Centers**

#### **3.1 Basic form of Knowledge Centers**

Primarily, the basic type of KCs is concerned with searching internal and external databases for relevant content as well as helping clients understand the databases, and retrieve relevant information from other repositories.

Members of KCs do not need expert knowledge but need to be familiar with different databases and require methodological competence. Moreover, if they develop expertise in certain knowledge domains, they are able to handle inquiries more quickly and can pass on deeper insights to their clients [Co06]. Accordingly, the value and the productivity that KCs offer, are likely to increase over time.

Typically, KCs receive an inquiry about basic conditions in certain markets or areas. Inquiries can be addressed via email, telephone, or personal contact. If the inquiry requires expert knowledge, it is passed on to the internal expert. Otherwise, the KCs' members try to process the inquiry themselves. The internal knowledge base, external databases, and information objects are used to process the inquiry and create an information object as a reply. Hence, this type of KCs offers a helpdesk function.

Overall, this basic type of KCs is expected to be of great benefit to PSF. Looking at the cost side, KCs merely need a handful of employees to handle inquiries, to access external knowledge sources such as databases or the Internet, and a location. Bundling external sources in one access point can significantly reduce license costs and those of redundant study orders. At this stage, the main benefit of this type for the business of KC is that business line employees save time and may possibly gain higher quality information than if they were to do such searches themselves. The saved time may, in turn, be crucial to win bids (e.g., in consultancies or law firms) or just to work more effectively, increasing productivity.

KCs can therefore be organized in numerous ways. However, the distinction between personalization and codification strategy, presented by Hansen et al. [HNT99], appears to be of great importance. Two main forms of KCs, one for each of these KM strategies, are therefore described.

### **3.2 Knowledge Centers in a Codification Environment**

According to the codification strategy, economies of reuse are the central economic logic. This means that in this environment KM rely heavily on the codifying and reusing of knowledge, thus making intensive use of content management systems and reliable IT inevitable. Accordingly, KCs focus strongly on codified knowledge. Their main task is content management, while competence and collaboration management are used only to support the main logic of codifying and reusing knowledge. Hence, this type of KCs is closely linked to the basic type described above, as the helpdesk is still of major importance to KCs that follow a codification strategy.

Since the helpdesk of the basic type of KCs primarily handles content management processes, it is no big step to develop this functional pillar further. It makes sense to develop a group of experts who can handle more complex requests on their respective knowledge domain. Consequently, inquiries, which are primarily all handled by the helpdesk, can be passed on to the respective experts, as they have the time and resources to work on more complex inquiries. A second task of the experts in KCs is to “manage” their respective knowledge domain. That is, they need to manage content management processes, including localizing and collecting relevant, emerging knowledge about their knowledge field, organizing internal databases by reviewing and updating them, and creating documents, not only as part of inquiries, but also proactively to develop their knowledge domain. That is, they have to moderate their knowledge domain.

Regarding the KC processes, the helpdesk is still the main point of reference for clients. All inquiries are gathered here and, if possible and no expert knowledge is required, also processed here. More complex issues are handed on to experts of KCs.

Overall, the development of KCs in a codification environment can yield large benefits, while keeping investments low. This is due to the member to client ratio in KCs being quite small, as standardized solutions are provided and inquiries will usually be processed quickly. Moreover, limiting access to external databases to the members of KCs will keep license costs and time spent on searching to a minimum, while allowing effective collaboration with external knowledge providers. Bundling knowledge at KCs will ensure a quick response time, which is also important for clients of PSF. The services offered by KCs can, on the whole, also be charged quite easily as standardization is high.

### **3.3 Knowledge Centers in a Personalization Environment**

The second stereotype of more sophisticated KCs is built around the KM strategy of personalization. In keeping with Hansen’s classification of KM strategies, organizations

using the personalization approach focus on “expert economics,” developing highly customized solutions to complex problems, thereby using person-to-person contact and personal interaction to solve such problems [HNT99]. Following this strategy, KCs are likely to strongly focus on collaboration and competence management. While still a helpdesk, the basic form of KCs is required and useful, as general knowledge is of great relevance for the ability to act quickly and, therefore, important to save time and resources. Consequently, a second layer of the organization of KCs becomes important. This second layer consists of experts in industries and knowledge domains, as well as in market regions.

Personal contacts and collaboration are very important in this KM environment. Employees in such KCs actively moderate and manage communities of practice, or other forms of rather informal collaboration. Accordingly, experts of KCs need deep expert knowledge of a specific domain or sector. Furthermore, it makes sense to use rather experienced staff who knows the organization well to ensure that their network is large enough.

Owing to the close relation of KCs to knowledge, especially to organizationally relevant, strategic, and important knowledge, it makes sense to use members of KCs, especially experts on specific domains to proactively shape that knowledge in an organization, including providing analyses of knowledge gaps, indicating future knowledge needs, and future staff requirements.

In respect of processes, the helpdesk builds the central unit which initially processes all inquiries. The helpdesk can also handle basic inquiries directly. More complex inquiries are then passed on to the relevant experts, who can be congregated in centers of excellence, thus forming a second-tier helpdesk.

This stereotype’s main benefit is to have a central service unit that has strong problem-solving skills in specific domains. Moreover, KCs can proactively become part of an organization’s network of knowledge, moderating and shaping knowledge domains, and be an important part of an organization’s competitiveness. Consequently, the introduction of a sophisticated KC can be of great value to an organization.

## **4 Methodology**

Qualitative interviews conducted with the heads of the PSF’ KCs were chosen for several reasons. First of all, there is hardly any literature on KC. Accordingly, there is little theoretical or empirical knowledge of such centers in general. Thus, the nature of our paper is rather explorative. Secondly, qualitative interviews were used in order to gain as much qualitative and explorative insight into KCs in PSF as possible. While this method cannot provide empirical proof, the purpose was to suggest a general direction for implementing KCs and discover their basic characteristics. While an interview guide was prepared, a semi-structured approach was chosen [MN07]. Although this research method yields some problems, such as the artificiality of the interview, the lack of trust, time, and entry, as well as the ambiguity of the language and other problems [MN07], it

is presupposed to be the most suitable way of gaining valuable insights in a limited time. As organizational design is always company specific and bound to historic context, undertaking data gathering by means of an exact questionnaire would make no sense. Qualitative interviews can nevertheless provide insights into the nature of KCs, thus also providing an idea of whether the basic design options stated in the hypotheses are a suitable foundation.

The five companies under observation are from consulting and auditing/business consulting branches. One interview was conducted in each of the companies with the person in charge of the KCs.

The interview guideline was structured as follows: in the beginning, basic information was asked about the company. Furthermore, the KM strategy and basic considerations such as the objectives and history of the KCs were noted. Additional questions examined the type of strategy environment in the company under observation. The interview guide’s main focus was on the organization of the KCs and the value of the functional pillars “content,” “collaboration,” and “competence.” To conclude, additional questions were asked about the future strategy and cultural influences.

## 5 Results and Discussion

Table 1 shows the results of the interviews with regard to the companies’ strategy environment, the organizational relationship between KM and the KCs as well as the value of the three functional pillars “content,” “competence,” and “collaboration.”

Participant	Strategy	Organization	Functional pillars		
			Content	Competence	Collaboration
PSF 1	<ul style="list-style-type: none"> <li>• Codification</li> </ul>	<ul style="list-style-type: none"> <li>• Closely related to the overall KM program</li> <li>• Focus strictly on searching for relevant information in internal and external sources</li> </ul>	<ul style="list-style-type: none"> <li>• Focus on content: external sources and internal knowledge stored in a database</li> <li>• Proactive recognition of new topics, white spots, and knowledge gaps</li> </ul>	<ul style="list-style-type: none"> <li>• Hardly important</li> <li>• Competence gaps are not anticipated due to the lack of focus on customized, complex solutions</li> </ul>	<ul style="list-style-type: none"> <li>• Plays an inferior role in the KC</li> <li>• Assignment to a project is impossible due to the small number of employees at the KC</li> <li>• As KC members are not specialists, they are not part of specialized communities</li> </ul>
PSF 2	<ul style="list-style-type: none"> <li>• Codification</li> </ul>	<ul style="list-style-type: none"> <li>• KM and KC are part of the service lines</li> <li>• KM is responsible for internal content, while the KC is responsible for gathering external knowledge and</li> </ul>	<ul style="list-style-type: none"> <li>• The main functional pillar, in which the KC operates</li> </ul>	<ul style="list-style-type: none"> <li>• As the competence management is based on informal contacts rather than on Yellow Pages, the functional pillar competence is of little importance</li> </ul>	<ul style="list-style-type: none"> <li>• Not very important for the KC</li> <li>• The KC is, however, part of several communities in which knowledge is distributed and shared</li> </ul>

		information			
PSF 3	<ul style="list-style-type: none"> <li>• Focuses on personalization (it is located in the HR department)</li> </ul>	<ul style="list-style-type: none"> <li>• KM and KC functions are independent of each other</li> <li>• KM manages all internal content, while the KC is responsible for providing external content</li> </ul>	<ul style="list-style-type: none"> <li>• Only plays a basic role in the research centers</li> </ul>	<ul style="list-style-type: none"> <li>• Of greater importance to the KC</li> <li>• The identification of competence gaps and the development of knowledge are important tasks of the KC</li> </ul>	<ul style="list-style-type: none"> <li>• Is a very important part of the KC's work</li> <li>• Emphasis on internal collaboration as well as on those with clients</li> <li>• KC members work directly in projects</li> </ul>
PSF 4	<ul style="list-style-type: none"> <li>• Personalization</li> </ul>	<ul style="list-style-type: none"> <li>• KM and KC are almost totally separated</li> <li>• The KC is responsible for the search and provision of external knowledge</li> </ul>	<ul style="list-style-type: none"> <li>• Only basic functions of content management</li> </ul>	<ul style="list-style-type: none"> <li>• Owing to the proactive nature of KC processes, competence management processes are not conducted by the KC</li> <li>• Nevertheless, experts can be contacted via Yellow Pages</li> </ul>	<ul style="list-style-type: none"> <li>• Networking is very important for the work of the KC members</li> </ul>
PSF 5	<ul style="list-style-type: none"> <li>• Personalization</li> </ul>	<ul style="list-style-type: none"> <li>• Owing to the almost total separation between KM and KC, the KC is specifically responsible for providing business lines with external content</li> </ul>	<ul style="list-style-type: none"> <li>• Main processes: choosing the right external sources</li> </ul>	<ul style="list-style-type: none"> <li>• Main task: bearing a researching competence in the organization</li> </ul>	<ul style="list-style-type: none"> <li>• Networking and the use of internal experts is not very important</li> </ul>

Table 1: Characteristics of the KC under observation

The detailed design of KCs differs from company to company. Nevertheless, it was possible to recognize patterns and design aspects that seem similar to the stereotypes described in section 3.

The KM of PSF 1 is characterized by a strong focus on the codification strategy. This is translated by its KC, as its focus is strong on content management processes. Accordingly, research skills and a high processing rate are at the crux of the KC of PSF 1. This KC can thus be characterized as a KC in a codification environment. The KC of PSF 2 is very new. Accordingly, it still operates as a basic KC, as it is the central hub from which knowledge is provided from external sources. It is very reactive and has only a small number of members. Thus, the KC of PSF 2 can be characterized as a basic KC form.

The KC of PSF 3 is an example of a KC in a personalization environment. It has a very sophisticated network of researchers with expert knowledge and who are dispersed

around the world. The depth of knowledge they provide, as well as their strong involvement in projects shows that their approach is clearly different from that of the other examples. The KC of PSF 4 is very young and thus merely focuses on providing external information. Furthermore, it is not yet dependent on KM. It can therefore be regarded as another example of a basic KC. Finally, the KC of PSF 5 is another example of a KC in the initial phase. Owing to KM's bad reputation in this firm and the strong separation between the KM and the KC strategy, the KC is stuck in this phase.

Summing up, every theoretical stereotype could, to some extent, be observed in practice. However, three of the five KCs only provide rudimentary search services, as they are still regarded as initial research centers. Only two organizations have more sophisticated KCs. There are a few main reasons for this situation. Firstly, and seemingly most important, is the strong separation between KM and KCs in three of the organizations. The KCs are almost untouched by KM programs, although there is a strong correlation between their basic processes and goals. This seems to hinder the development of KCs. Furthermore, internal and external knowledge are often regarded as existing independent of each other, although knowledge creation and development should follow an overall KM strategy. Economies of scale and scope as well as one clear direction are lacking.

While this separation often has historical reasons, most organizations do not realize that KM and KCs are very closely related concepts. The best counterexample is the KC of PSF 1, which is almost inseparable from KM. Accordingly, PSF 1 was able to set up a KC that, in a very short time, was able to develop into a sophisticated, codification-based KC that offers more than mere research services. However, PSF 1 is a rather small organization. On the other hand, PSF 3, which has a very large KC, has the advantage of a long tradition of research services in the organization. It was therefore able to develop a KC that comprises many experts and much expertise. This example indicates that it takes time to develop a more sophisticated KC. As most of the organizations did not start their efforts until after 2000, the majority of the KCs are still in the initial phase.

## **6 Conclusions and Further Research**

The paper provides a basic understanding of the concepts and designs of KCs. Furthermore, the influence of different strategy environments on the design of a KC is examined. All three types of KCs – as described in section 3 – were observed in practice. As three KCs still only offer basic functions (see section 3.1) like research services, a KC's design seems to correlate with its dependence on a KM and a KC strategy. If the KC strategy is strongly associated with the KM strategy, the functions and the benefits seem to increase.

To conclude, it appears that KCs still have a long way to go before they reach maturity. They are still regarded as independent units that provide basic services. Although their service orientation, also that of internal departments is increasing, it remains questionable whether KCs will ever be more than mere research units. From a KM perspective, it makes sense to integrate them into the overall framework and use them as the service component of KM. The lack of extensive literature suggests that KCs have

not yet caught the attention of researchers. However, the potential benefits of KCs, as pointed out in this paper, are worth further research.

The following suggestions, based on the presented results, are offered in respect of further research: The results should be verified by means of other practical examples to produce a larger data source. Furthermore, KCs should be described with all their functions, processes, modifications, and limitations. In this context, an explicit differentiation should be made between KCs and similar organizational units like communities (communities of practice, communities of interest, etc.) or shared services centers for a better definition. Additional attention should be paid to the correlation between KCs and KM, as the integration of a KC into a KM strategy could reveal further benefits.

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