Knowledge Management Research & Practice (2016) 14, 178–185

www.palgrave-journals.com/kmrp/

Knowledge management in client–supplier relationship: emergent *vs* deliberate approach in small KIBS

Ettore Bolisani[1]
Enrico Scarso[1] and
Luca Giuman[2]

[1]*DTG – University of Padua, Vicenza, Italy;*
[2]*Infonet Solutions, Curtarolo (Padova), Italy*

Correspondence: Ettore Bolisani, DTG – University of Padua, Stradella San Nicola, 3, Vicenza 36100, Italy.
Tel: +39 0444998725;
Fax: +390444998888;
E-mail: ettore.bolisani@unipd.it

Abstract
It is often argued that small–medium enterprises (SMEs) do not manage knowledge the same way as large firms, but may need appropriate approaches to capture and exploit external knowledge effectively. This paper compares two opposite approaches to knowledge management (KM): one is called 'deliberate' or 'planned', and the other 'emergent'. These approaches are analysed with reference to the management of knowledge pertaining to client–supplier relationships, which are particularly important in the case of small companies providing knowledge-intensive business services (KIBS). A case study of a small KIBS company is illustrated, which has developed two different projects, based on different approaches to KM, for managing knowledge referring to clients. The case shows that, for a small company, an emergent approach to KM can be more suitable than a deliberate one for managing such knowledge. The implications of this result for KM research and practice are then examined.
Knowledge Management Research & Practice (2016) **14**(2), 178–185.
doi:10.1057/kmrp.2015.11; published online 21 September 2015

Keywords: client–supplier interaction; small–medium enterprises; KIBS; case study; deliberate KM approach; emergent KM approach

Introduction

The issue of knowledge management (KM) in small companies still requires investigation (Durst & Edvardsson, 2012). However, scholars agree on two aspects. First, small–medium enterprises (SMEs) do not manage knowledge the same way as large firms (Chan & Chao, 2008; Wee & Chua, 2013): their KM initiatives are not simply a scaled-down reproduction of large companies' practices (Desouza & Awazu, 2006). Second, KM processes of small companies generally involve several players (Edvardsson & Durst, 2014): it is fundamental for them to effectively absorb and integrate knowledge coming from outside sources (Alvarez *et al*, 2015).

This paper analyses these issues with reference to a particular class of small companies, the so-called KIBS (knowledge-intensive business services). These companies represent a paradigmatic example because knowledge is their main production input and output. Furthermore, the services they provide require an in-depth interaction between supplier and client, who are both involved in cognitive interactions and mutual learning processes (Bettencourt *et al*, 2002). Consequently, knowledge coming from or related to clients is a crucial asset for KIBS companies (Landry *et al*, 2012), and needs to be properly managed.

Received: 13 January 2015
Revised: 2 June 2015
Accepted: 5 August 2015

This topic is here analysed by means of a case study of a small KIBS that provides computer services. The goal is to deepen our understanding about the way SMEs plan, implement and use KM for managing knowledge coming from or related to clients. The unit of analysis is represented by the KM practices that the company has adopted for improving client–supplier knowledge exchanges in the delivery of their services.

The paper is organized as follows. The second section discusses the relevance and implications of client–supplier interactions for small KIBS. The third section briefly reviews the literature on KM in SMEs, and focuses on the different KM approaches that can be adopted by these companies. The section 'Research questions and method' outlines the empirical research methodology, and the section 'The case study' illustrates the case study in detail. The section 'Discussion' discusses the main points arising from the case study. Specifically, an approach to KM that can be defined as deliberate or planned (that is typical of large companies) is contrasted with one that is defined as emergent or unplanned, which has proven to be successful in the investigated case. The last section discusses the implications for research and management that can be drawn from the study, as well as its limitations.

Knowledge exchanges with clients

Recent studies recognize that the management of client–provider relationships is a key ingredient of KIBS (Sweeney *et al*, 2011). Knowledge coming from clients or about clients, value co-creation through repeated interactions, and knowledge exchanges between supplier and customer are generally considered the hallmark of such companies (Stucky *et al*, 2011; Santos-Vijande *et al*, 2013). Bagdoniene *et al* (2007) claim that successful KIBS companies follow a 'relational' approach that consists of understanding the dynamics of supplier–customer relationships, how they evolve, and what factors affect their development. This process, whose ultimate aim is to reduce the cognitive asymmetry between supplier and client, implies exchanges of knowledge between KIBS and customer, throughout the different phases of the customer relationship. It involves not only the areas of a company that are generally deemed to be in direct contact with clients (i.e., the sales force) but also all the other ones: technical staff, administration, post-sales assistance.

Generally speaking, the kind of knowledge exchanged with clients varies during the different steps of client–provider relationship (Bagdoniene & Jakstaite, 2008; Scarso & Bolisani, 2012): it can be knowledge *for* clients (i.e., delivered to clients as part of the provided service), knowledge *from* clients (i.e., acquired from clients and assimilated for internal purposes, e.g., making experience for designing new services or products), and knowledge *about* clients (i.e., concerning their features, needs, investment capabilities, etc.). While the three kinds of knowledge are all relevant and are intertwined, our empirical analysis has focused especially on the last one.

Approaches to KM in SMEs

Although there is no total agreement on what KM is or should be (Wallace *et al*, 2011), many authors underline its deliberate and planned nature, maintaining that only systematic practices directly and evidently targeted to managing knowledge should be intended as KM (Wong & Aspinwall, 2004; Daft, 2007). Accordingly, KM initiatives are related to deliberate actions aimed to enhance the distinctive capability of the organization though a systematic approach to generating, capturing, disseminating and exploiting knowledge (Chua & Goh, 2008).

The above definitions derive from studies of large organizations and multinationals, characterized by a formal and systematic planning of all the activities, including KM. However, KM cannot be limited to large companies (Wei *et al*, 2011): in some respects, implementing KM may be even more crucial for SMEs, because knowledge can be their key resource (Dotsika & Patrick, 2013). Scholars generally underline that it would be wrong to assume that SMEs apply KM in similar ways as large organizations (Desouza & Awazu, 2006). In particular, the management of knowledge in SMEs seems to go beyond the introduction and practice of formal or nominal KM initiatives (Hutchinson & Quintas, 2008). SMEs, in fact, without 'being fluent' in the language of KM, or even recognizing their behaviours as KM, are often proactively engaged in what can be called 'informal KM practices'. In addition, tacit knowledge appears to be particularly crucial for them: as Edvardsson & Durst (2013) underline, small companies tend to be more oriented towards the management of such knowledge and its exchange with other companies. Therefore, formal systematic approaches are less diffused among SMEs whose KM processes can take place naturally regardless that a formal charter has been set in place (Wee & Chua, 2013), and KM is often practised without being recognized as such.

The above suggests that two opposite approaches to KM can be detected: one can be called 'deliberate' or 'planned', and the other can be denoted as 'emergent' or 'unplanned'. To delineate them, it is useful to refer to the strategic management literature and particularly the distinction between deliberate *vs* emergent approach towards strategic planning (Mintzberg & Waters, 1985). The former consists of an explicit and rational formulation of goals, plans and means that originate from precise intentions of the company. All is generally decided by central leadership, progressively articulated in detailed tasks that involve different parts of the organization, and backed up by formal controls in a top-down logic. Conversely, the latter is one where actions result to be consistent but only over time, in the absence of intentions, clear leadership, and predefinition of goals or plans. In other words, in an emergent approach, goals and plans of a company are the ex-post formalization and co-ordination of actions, decisions and tasks that have proven to be effective and beneficial to the organization. Although, as Mintzberg & Waters (1985) highlight, a purely emergent approach is impossible in real life, there are situations that are (more or less) close to that abstract definition.

In accordance with the mentioned literature, the deliberate and the emergent KM approaches are defined as follows (Bolisani *et al*, 2015):

> Deliberate or planned KM approach is an approach where practices, tools and methods of managing knowledge are linked to the general strategic orientation of the company and are deliberately designed at a top management level. KM goals and methods are selected on the basis of a rational analysis of company's needs, objectives and resources, and are later implemented and spread across the company with deliberate efforts and investments.

> Emergent KM approach is an approach where practices, tools and methods of managing knowledge originate from the daily practices and learning processes of company's employees. Employees develop their own methods of learning, storing, retrieving and sharing knowledge in relation to their actual needs and practical problems. The methods and tools that prove to be effective, useful and/or compatible with the daily business practice are later developed and become established practices; only later they can be recognized as 'the KM approach' of the company.

Research questions and method

This study aims to compare the effectiveness of a deliberate *vs* an emergent approach in a small KIBS company, with particular reference to the knowledge pertaining to client–supplier relationships. In detail, the research questions are as follows:

- What are (if any) the advantages of an emergent KM approach in this case?
- What conditions can favour the adoption of an emergent approach?
- What implications for KM research and practice can be drawn?

To address these questions, the case of Infonet Solutions was investigated. In different times of the history of this company, it is possible to find both a deliberate and an emergent approach to managing knowledge pertaining to clients: this gives the opportunity to contrast the two approaches and their effectiveness.

We used the case-study methodology given the descriptive and exploratory nature of the research, and the complexity of the investigated issue (Leedy & Omrod, 2005). Specifically, this can be seen as a revelatory case in Yin's (2003) terminology as it offers the opportunity for an in-depth analysis of internal features that are generally less accessible to outside researchers. The case has been elaborated by using information provided by six people in the company (including the CEO and one of the owners), and from documental sources (e.g., website, internal quality management documentation, technical schemes, etc.) that have been examined during the last 5 years. As regards the generalization of the findings, the goal is not to draw conclusions of general validity, but rather to derive useful insights into the possible KM approaches followed by SMEs, as well as to provide suggestions for further analysis or KM implementation in similar situations.

The company was studied for two main reasons. First, it has the typical features of a KIBS company as described by Muller & Doloreux (2009), that is, a firm where knowledge is the main competitive asset that must be suitably managed. Second, it was possible to have direct access to relevant information, thanks to the participation of a company executive in the study: this allowed revealing aspects that are often difficult to discover by an external observer. The potential bias in the analysis was mitigated by separating the 'collection' phase from the 'analysis' that was conducted by the non-company researchers.

The case study

The company

Infonet Solutions is a small computer services company located in the North East of Italy. It has 30 employees and 5 external collaborators, and an annual turnover of about €5 million. They provide high-level custom-made solutions to optimize the computer platforms of clients, which are mostly medium-sized organizations of different sectors. Customers are all located in Northern Italy, especially in the Eastern part. Their offering includes: cloud computing, data centre, virtualization, and business continuity. The company was founded some decades ago and now is organized into five departments: Management, Accounting, Sales/Marketing, Support and Delivery. The last two are its technical core: the first one deals with the design and implementation of new computer solutions, while the second manages technical assistance and maintenance of installed systems.

Infonet is a dynamic company that has undergone a huge evolution in the last decade. Until 2003, when it counted 12 people including the owners, it was a typical small private company exclusively run by its owners, who had little managerial competence. It worked only on a job-order basis, and delivered installation services of computer infrastructures. For Infonet to grow, it was necessary to hire people with more managerial competence; so, an outside manager was entrusted as Chief Executive Officer. Since then, the company has begun to improve the supporting services, that is, the management of systems installed at the customer site for the years of operation. At the same time, the company also started improving the marketing activity, and to expand its market to North-western Italy.

KM needs in Infonet's service delivery

To better understand the KM needs of Infonet it is useful to recall its nature of KIBS company. As such, Infonet acts as innovation broker (Leiponen, 2006) and occupies an intermediate position between external sources of knowledge and local recipients. This implies operating as interface between the more tacit and specific knowledge buried in the daily practice of client firms, and the more generic knowledge that is available in the economic environment as a whole (Bolisani *et al*, 2011; Scarso & Bolisani, 2012).

Hence, the management of external knowledge is a particularly crucial issue for Infonet, and especially that pertaining to the business relationship with customers.

As any firm that supplies project-based technical solutions, Infonet usually resorts to a sequenced project activity that involves the following steps:

- first contacts with a customer;
- preliminary analysis, requirement identification;
- feasibility study, formulation of a business proposal;
- negotiation, contract;
- technical development;
- release, test, and implementation;
- post-sale assistance.

Three issues should be underlined here. First, the whole delivery process can use a long time: the lifecycle of a computer infrastructure lasts several years, and may end with another project to replace or renovate the previously installed solution. During this period, the provider keeps ensuring the proper operation of the infrastructure. Second, as clearly illustrated in Figure 1, the various phases engage different people, with different capabilities and skills, and belonging to different departments. Third, the successful service delivery requires an active contribution by the customer during the different phases.

Therefore, the entire process calls for effective knowledge flows that not only involve different parts of the internal organization, but also come from and go to customers. All this requires an appropriate management of knowledge exchanges with clients and inside the company.

Especially, successful delivery and post-sale assistance require that all concerned employees have a quick but complete understanding of the system that is installed at the customer's site. This is not as simple as it may seem, given the long duration of the project and the many actors involved. For instance, an employee that is called to assist the customer (e.g., in case of system breakdown or other maintenance tasks) needs to handle both explicit components of knowledge (system configurations, network structures, functioning details) and tacit components (specific explanations of the reasons for some particular configuration) that have been collected or produced by others. Typically, the employee that carries on post-sale assistance is generally not the one that designed or installed the system, or sold it to the client. Similarly, sales agents who want to offer a new solution to old or new clients may need to exploit the knowledge of previous projects and their characteristics. Again, this knowledge consists of both explicit components (i.e., technical data) and tacit ones (perceptions of user needs, business value of a system, etc.).

Path towards KM

As previously said, the knowledge required by Infonet to effectively handle the relationship with customers is crucial, and thus it deserves to be managed in the best possible way. This is complicated by the fact that this knowledge is a mix of technical knowledge (i.e., technical aspects of the installed solutions) and commercial knowledge (namely business requirements and other features of the client). At Infonet, two different approaches to the adoption of KM practices and systems have been followed: one relating to the introduction of a wiki system, and the second to a customer relationship management (CRM) application.

The wiki project

In the first years of activity, when Infonet started to sell installation services of computer systems, there was no need of documenting and keeping track of the work being done: the information contained in product catalogues

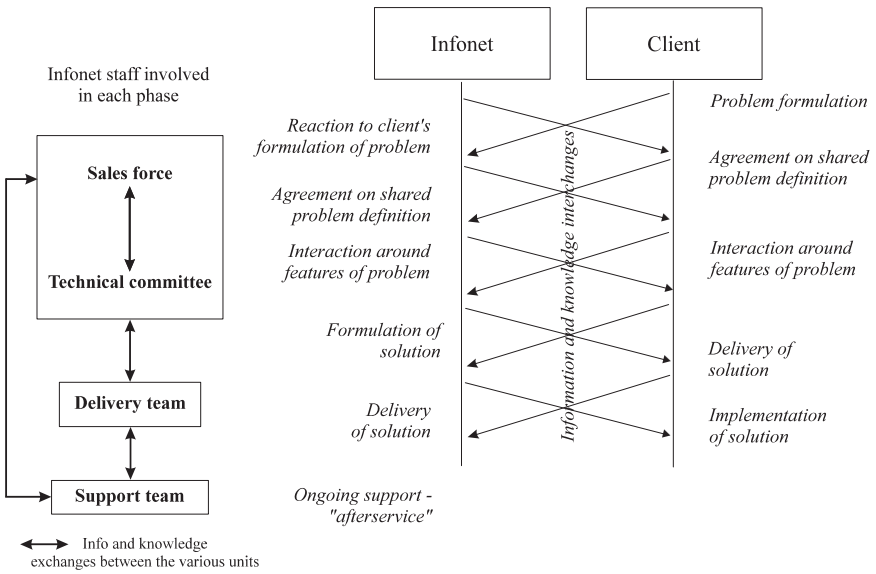

Figure 1 Different phases of service delivery at Infonet.

was sufficient. Five–six years later, the company began to sell design, delivery and maintenance of computer systems. The business radically changed from spot transactions to partnerships with customers. Typically, relationships with clients start with a consulting activity, continue with delivery of the solutions, and then with customer support. Therefore, executives realized that it was important to store pieces of knowledge about the installed systems to facilitate the interactions between the client, the delivery people (those who design and install the system) and the support people (who perform the post-sales activity). Hence, employees were asked to compile a written report for each installed system, called 'libretto di impianto' (book of the system). Seen as a KM practice, this was not a structured approach, but consisted of a simple and intuitive paper archive.

The first important step towards a real KM system was made in around 2003, when the importance to manage and share the technical knowledge about installations was becoming more and more evident. Infonet started to use Microsoft Exchange Server to store details about any new installation. Public folders were used as a flexible way to share e-mails and attachments that the internal staff and the clients exchanged regarding installations. In principle, this required only a minimal ability to archive documents properly, and to use an intuitive search tool. However, there were some limitations: the tool was flexible, but this resulted in increasing confusion. Also, it was difficult to classify, locate and understand a specific piece of knowledge as everyone was free to write and manage their own e-mails as preferred: the risk was that the staff would not use the system. The company tried to give some rules (concerning, e.g., the possible subject of an e-mail, or the kind of content in specific circumstances) but with no significant results.

Later, the company tried to use another software (Owl Intranet Engine), a Content Management Systems with an internal database. This tool was chosen by considering that the actual owners of the useful knowledge were not the 'internal' staff (i.e., people that work in the company offices) but the technicians who carried out the installations materially, at the client's site. Most of the key knowledge is collected on the ground, by those who do the work with clients, and Owl was a web-based tool that allowed getting the right knowledge at any time, and in a shared way. Given the huge amount of stored data, it was decided to classify documents into a tree divided into two parts: one for 'the products' (i.e., technical components) and the other for 'the customer installations'. The idea was that technicians would keep a record of the intervention they had made for a customer, in a free format; later, this knowledge would have been revised and stored in the second area of the tree, in a more structured format. Hence, the KM process was organized in two stages: a first phase of knowledge collection, where people wrote notes in a free way, and a second of elaboration of the collected knowledge, for making it usable by others.

This was however complicated by the method by which Owl indexed topics: searches often yielded unsatisfactory results. In addition, documents could be of different kinds (texts, datasheets, images, zip or pdf files, webpage links, etc.) and it was difficult to integrate all them in a common classification framework.

These first experiments showed that designing a KM system based on a particular technology and then adapting the actual flows of knowledge to it may be ineffective. Therefore, the company considered other approaches and tools. To improve flexibility, it was decided to focus on systems that allowed dynamic templates for uploading information contents, document revisions, process workflows, and so on. After some tests, the company eventually decided to adopt a wiki system – specifically MediaWiki, the free open-source wiki software – seen as a more free and user-friendly platform. Also, wikis retain all the contents that are uploaded, even in the case they are unstructured, but some logical order is preserved so that contents are retrievable and usable for the daily work. Furthermore, the logics of operation and content management can be decided in a shared manner, and is modifiable dynamically.

The wiki was designed in 2009 by two members of the Support Department, and was configured by reflecting on the knowledge contents that are 'really' needed by the different people that collaborate in a project and interact with a client, and on its usability. The first version was totally devoted to the technical staff; later, in 2013, it was extended to the commercial staff. A recent survey among employees has confirmed that the introduction of the wiki is successful, and that the instrument is now one of the main sources of knowledge for them.

In the implementation of the wiki as a KM tool, the key role was played by the two members of the Support Department that promoted its introduction. In this regard, it should be recalled that the need to collect and store knowledge about clients and their installations originated from this Department, because its members must resolve maintenance requests that come from clients, and hence they need knowledge about the systems that other people have previously installed. In addition, the propensity of the CEO and the company owners towards experimentations – at least in a controlled way – has given a positive impulse to the process.

The two promoters of the KM system configured the software, provided the taxonomies, created the templates, added the needed functionalities, and so on. In doing this, they were helped by the fact that they are engaged in the daily business of the company and, therefore, they have the sensibility to capture the relevant cognitive requirements and problems. Even today, despite their direct actions in KM, the two promoters carry on their usual business. This means that there is no one who is formally in charge of the KM system: no knowledge manager, no chief knowledge officer, and so on. There is not even a 'supervisor' that controls those that upload new contents: the monitoring of the contents inserted in the wiki is left

to the 'communitarian control' typical of wiki systems. There is only a person that occasionally checks the contents and their readability for inexperienced employees.

A key aspect, which is very important for a small company, is the availability of free open source software: MediaWiki. High licence costs of proprietary software would have been detrimental. Infonet, indeed, did not allocate a specific budget for the development of KM projects, which were mainly spontaneous experiments: some proved to be ineffective, some others (such as the wiki) were successful.

To sum up, the successful introduction of the wiki can be mainly ascribed to the following factors: a bottom-up approach to its design and implementation, a full compatibility with the current way of working of technical employees, the propensity of top management to promote innovation through experimentation, the availability of a free open-source software, and a progressive trial-and-error process of learning.

The CRM project

Differently from the previous case, the introduction of CRM software was a planned activity that, however, did not produce the expected results. When a new employee was hired to follow the marketing activities, it was decided that a CRM was necessary to help her job. Hence, on the initiative of the top management, a preliminary study was made (in collaboration with the local University) to map the flows and needs of knowledge of the Sales Department, and to configure the CRM system accordingly. The company also bought commercial CRM software (SugarCRM).

The idea was to store and track all relevant knowledge collected about clients and during interactions with clients: every phone call or commercial visit would have been classified and stored in the CRM together with any other relevant piece of knowledge that would have been retrievable and used in the future.

The system was considered very cumbersome by their users. This happened even though it had been previously examined and approved by the sales staff. In other words, despite the careful planning, once the system was put into operation, none of the commercial department practically used it. An internal analysis was conducted to understand the reasons, and the answer was always the same: 'The system is difficult to use'. Also, the sales staff perceived that inserting new contents was a too heavy burden, compared with the benefits that the system may have given to their usual business.

The factors that have apparently hindered the introduction of the CRM software as a tool for managing commercial knowledge can be listed as follows:

- A 'top-down' approach to adoption: the idea of using a CRM software came only from the top management, while the potential users (i.e., the commercial staff) were involved just later.
- Lack of enthusiasm by the head of the Sales Department, who is a shareholder of the company, and prefers to use non-procedural approaches to sales management.
- A perception of extra work imposed to the sales force in order to enter data that had not been handled before.
- Poor integration of CRM with the tools actually used by the sales people (in particular mobile phone and e-mail).
- Perception by the sales force that they would not gain direct advantages for their daily work.

Discussion

The history of the introduction of KM systems at Infonet highlights interesting points that deserve to be discussed. The case shows two different approaches adopted by the same company in different circumstances, but both related to the management of knowledge pertaining to client–provider relationship.

The pathways followed in the two situations are significantly different. The adoption of the wiki was not the consequence of a planned strategy but a solution that has emerged along the way. Actually, the goals of the project have gradually but significantly modified over time: from a system targeted mainly to the technical areas, to one devoted also to the commercial staff (and maybe others in the future). As well underlined by one of the promoters of its introduction, the approach followed in the development of the system 'was contingent'. In other words, the wiki project is a good example of what can be labelled as an *emergent* KM approach.

Conversely, the adoption of the CRM was the result of a deliberate strategy as its introduction had been planned in advance, as confirmed by the fact that the CEO considered it appropriate to perform a preliminary study on the knowledge needs of the Sales Department. So, this can be seen as a *deliberate* KM approach.

The experience of Infonet offers some answers to the research questions raised earlier.

With regard to the first question, that is, what are (if any) the advantages of an emergent KM approach in this kind of company, the investigated case suggests that an emerging approach seems to fit a small-scale enterprise, as it provides the following advantages:

(a) *No model of knowledge in advance is needed*: The implementation of a deliberate KM approach implies modelling the knowledge possessed or exchanged by a company in advance, but this can be difficult and costly especially in a small company. In designing the CRM system, the management attempted to pre-establish the structure, contents and use of knowledge that the system would have to handle, which proved to be unfeasible. For the wiki system, a bottom-up approach was adopted where the KM solutions were derived from the daily experience on the ground, and not from a pre-defined idea of what the company should do.

(b) *Easier management of tacit knowledge*: The emergent approach can make it easy to handle tacit components of knowledge, which may have great importance especially in the case of small companies and their client–supplier relationships. The two systems differ as regards the kind of knowledge they treat: the CRM

system must contain explicit knowledge (i.e., data and information about the clients), pre-defined and pre-structured in advance, while the wiki system is able to store both explicit and tacit knowledge: ideas, experience, opinions, and so on, expressed in various possible formats. The introduction of contents in the CRM system occurs in a highly structured manner, while, in the wiki, contributors are allowed greater freedom because the purpose was to satisfy knowledge needs about clients emerging from the ground.

(c) *Flexibility*: The emergent approach adopted in the case of the wiki is mainly based on a trial-and-error mechanism and has a flexible character, which is particularly important considering that the company cannot predict all the situations that will characterize the business in the future, nor has the power to impose a certain model to its relationship with clients: in other words it can be adapted to the current and emerging future issues and situations.

Coming to the second research question, the adoption of the emergent approach may have been favoured, in the investigated case, by the following circumstances. First, given its small size, Infonet is not able to monitor and map the internal and external environment. Therefore, modelling all the knowledge required to manage the relationship with clients in advance would be too complex and costly, especially for the lack of resources and competence that executives and employees can devote to KM. Second, they cannot have the contractual power to plan and guide the relationship with clients; in other words, a small supplier cannot pre-define and pre-structure the procedures and the approaches to clients as a big company would do. This means that a KM approach should allow managing not only explicit knowledge contents (completely pre-defined in advance based on the strategy of a company) but also tacit components (i.e., coming from contingent feelings and perceptions of the single employees that work in contact with clients). Third, for Infonet, the relationship with clients is dynamic and requires flexibility and a capability of learning from experience. This is why a trial-and-error approach that allows adapting the KM approaches to the contingent situations and the changing needs of markets can be precious.

Implications and limits

The analysis of Infonet case has important implications for both research and practice, which also provides an answer to our third question. In terms of research, there may be the need to better define and study KM approaches that fit smaller companies (not only in the KIBS sector) and can be more suitable for them as is the case of client–supplier knowledge exchanges.

In terms of practice, it suggests that there may be the need to introduce KM in the typical background of executives, and especially of those that work in small companies (e.g., how KM fits into an organization, what KM processes, existing tools and practices are). Although an emergent approach is by nature unplanned, companies should learn how to make their KM practices emerge from the daily business practices, and how to help employees to learn and develop them properly. So, even if a company is oriented towards an emergent approach to KM, executives must have essential competence of KM that allows them to recognize the needs and practices that emerge 'from the bottom' and later to transform them into an established part of the business.

This study has some limitations that should be also highlighted. Especially, as any single case study, generalizations are risky. However, it can at least represent a starting point for a novel approach to studying KM implementations in small companies based on a principle of emergent strategy. Further research is needed both to confirm the findings of the present analysis, and to investigate the factors that can influence the introduction and use of emergent KM.

References

Alvarez I, Cilleruelo E and Zamanillo I (2015) Is formality in knowledge management practices related to the size of organizations? The basque case. *Human Factors and Ergonomics in Manufacturing and Services Industries.*

Bagdoniene L and Jakstaite R (2008) The relationships between providers and clients of knowledge intensive business services and its marketing. *Economics and Management* **13(2008)**, 220–226.

Bagdoniene L, Kunigeliene D and Jakstaite R (2007) Relationship marketing as factor for competitiveness of knowledge-intensive business services' providers. XVII International Conference of RESER,13–15 September, RESER publications, Tampere, Finland.

Bettencourt LA, Ostrom AL, Brown SW and Roundtree RI (2002) Client co-production in knowledge-intensive business services. *California Management Review* **44(4)**, 100–128.

Bolisani E, Paiola M and Scarso E (2011) KM issues in KIBS companies. In *Proceedings of the 12th European Conference on Knowledge Management* (Lehner F and Bredl K, Eds), 1–2 September, Academic Conferences Limited Publishing, Passau, Germany.

Bolisani E, Scarso E and Zieba M (2015) Emergent versus deliberate knowledge management strategy: literature review and case study analysis. In *Proceedings of the 16th European Conference on Knowledge Management* (Garlatti A and Massaro M, Eds), 3–4 September, Academic Conferences Limited Publishing, Udine, Italy.

Chan I and Chao CK (2008) Knowledge management in small and medium-sized enterprises. *Communications of the ACM* **51(4)**, 83–88.

Chua AYK and Goh D (2008) Untying the knot of knowledge management measurement: a study of six public service agencies in Singapore. *Journal of Information Services* **34(3)**, 259–274.

Daft RF (2007) *Understanding the Theory and Design of Organizations*. Thomson South-Western, Matson, OH.

Desouza KC and Awazu Y (2006) Knowledge management at SMEs: five peculiarities. *Journal of Knowledge Management* **10(1)**, 32–43.

Dotsika F and Patrick K (2013) Collaborative KM for SMEs: a framework evaluation study. *Information Technology & People* **26(4)**, 368–382.

Durst S and Edvardsson IR (2012) Knowledge management in SMEs: a literature review. *Journal of Knowledge Management* **16(6)**, 879–903.

EDVARDSSON IR and DURST S (2013) Does knowledge management deliver the goods in SMEs? *Business and Management Research* **2**(**2**), 52–60.
EDVARDSSON IR and DURST S (2014) Knowledge creation in SMEs: comparing Germany and Iceland. In *Proceedings of the 7th CKWS* (YIGITCANLAR T, LEPIK K-L and KRIGUL M, Eds), pp 107–111, Tallinn University and World Capital Institute, Tallin, Estonia.
HUTCHINSON V and QUINTAS P (2008) Do SMEs do knowledge management? Or simply manage what they know? *International Small Business Journal* **26**(**2**), 131–134.
LANDRY R, AMARA N and DOLOREUX D (2012) Knowledge exchange strategies between KIBS firms and their clients. *The Service Industries Journal* **32**(**2**), 291–320.
LEEDY PD and OMROD JP (2005) *Practical Research – Planning and Design*, 8th edn, Pearson, Upper Saddle, NJ.
LEIPONEN A (2006) Organization of knowledge exchange: an empirical study of knowledge-intensive business service relationships. *Economics of Innovation and New Technology* **15**(**4**/**5**), 443–464.
MINTZBERG H and WATERS JA (1985) Of strategies, deliberate and emergent. *Strategic Management Journal* **6**(**3**), 257–272.
MULLER E and DOLOREUX D (2009) What we should know about knowledge-intensive business services. *Technology in Society* **31**(**1**), 64–72.
SANTOS-VIJANDE ML, GONZÁLEZ-MIERES C and LÓPEZ-SÁNCHEZ JA (2013) An assessment of innovativeness in KIBS: implication on KIBS' co-creation culture, innovation capability, and performance. *Journal of Business & Industrial Marketing* **28**(**2**), 86–102.
SCARSO E and BOLISANI E (2012) Trust in knowledge exchanges between service providers and clients: a multiple case study of KIBS. *Knowledge Management Research & Practice* **10**(**1**), 16–26.
STUCKY SU, CEFKIN M, RANKIN Y, SHAW B and THOMAS J (2011) Dynamics of value co-creation in complex IT service engagements. *Information Systems & E-Business Management* **9**(**2**), 267–281.
SWEENEY JC, SOUTAR GN and MCCOLL-KENNEDY JR (2011) The marketing practices-performance relationships in professional service firms. *Journal of Service Management* **22**(**3**), 292–316.
WALLACE DP, VAN FLEET C and DOWNS LJ (2011) The research core of the knowledge management literature. *International Journal of information Management* **31**(**1**), 14–20.
WEE JCN and CHUA YK (2013) The peculiarities of knowledge management processes in SMEs: the case of Singapore. *Journal of Knowledge Management* **17**(**6**), 958–972.
WEI CC, CHOY CS and CHEW GC (2011) The KM processes in Malaysian SMEs: an empirical validation. *Knowledge Management Research & Practice* **9**(**2**), 185–196.
WONG KY and ASPINWALL E (2004) Knowledge management implementation frameworks: a review. *Knowledge and Process Management* **11**(**2**), 93–104.
YIN RK (2003) *Case Study Research. Design and Methods*, 3rd edn, SAGE Publications, Thousand Oaks.

About the Authors

Ettore Bolisani (Laurea 'Electronic Engineering' and Ph.D. 'Innovation Studies' – Padua University), was an E.U. 'Marie Curie' research fellow at PREST (University of Manchester) and a researcher at the Universities of Trieste and Padua, and is now Associate Professor at the Department of Management and Engineering of the University of Padua. His research centres on ICT management and Knowledge Management. He was visiting researcher at Coventry University, visiting lecturer at Kaunas Technological University, Chair of the European Conference on Knowledge Management (University of Padua, 2009), Editor of 'Building the Knowledge Society on the Internet. Sharing and Exchanging Knowledge in Networked Environment' (IGI Global). He is co-founder and first president of the International Association for Knowledge Management (www.iakm.net), and Series Editor of the IAKM Book Series on Knowledge Management and Organizational Learning (Springer).

Enrico Scarso is Associate Professor of Engineering Management at the Department of Management and Engineering, University of Padua (Italy). He received his Ph.D. degree in Industrial Innovation from the University of Padua. His current research interests are in the area of technology and knowledge management. He has published in several journals and has presented papers at various international conferences. He is member of IAMOT (International Association for Management of Technology) and IEEE Technology Management Council. He is co-founder and secretary of the newly created 'International Association for Knowledge Management' – IAKM.

Luca Giuman graduated in Statistics, has worked in service companies for more than 20 years. He was Program Manager, Database Administrator and System Architect in multinational and large companies. He worked at an international group as director of Information Systems, Sales director and Key Account Manager for Italian institutional customers. Since 2003, he is CEO at Infonet Solutions, a small services company based in the North East of Italy specialising in IT platforms design and management. He is VP (Vice President) of the 'Innovative and Technological Services' chapter of the Italian Confederation of Industries (Confindustria – Padua section). Since 2012, he is external member of the accreditation board of the Computer Sciences degree at the University of Padua. Since 2013 he chairs the North Eastern chapter of ITSFM Italy, and is member of the steering committee of the experiential training centre 'Cubo Rosso' (Padua).