New technologies in consulting sector
– the paradigm of agility

Nowe technologie w sektorze konsultingowym
– paradygmat zwinności

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Abstract: In order to keep pace with the demands of the ever-changing knowledge economy, organizations must be aware of the knowledge sharing tools that are in use today, customizing the technology to help them maintain a competitive advantage in the global marketplace. Moreover because of the competitive environment the shift is towards agile paradigm. The outcome of this study will enable further understanding of knowledge sharing in consulting companies and will therefore contribute towards successful implementation of knowledge sharing as part of organizational knowledge sharing culture. The limitations identified were the use of interview as the only form of data collection, since the company did not authorize the collection of documents, the interviews were conducted via Skype®. The findings are based on one case study and the findings are not generalizable. The results of this research may be useful for academics and organizations because they deepen the discussion on knowledge sharing in global teams. Keywords: technology, knowledge sharing, agile paradigm.

Introduction

Nowadays, firms have recognized the fundamental wealth of information and knowledge. At the same time organizations are faced with uncertainty and fast-changing environments, and work tasks are becoming increasingly complex.

Moreover companies in response to customers scattered in different countries open their subsidies in different parts of the world in order to be close to them. As a natural response, organizations have adopted team-based work structures to respond to these challenges (Day et al., 2006; Morganst et al., 2010a).
Because global teams are inherently diverse, differences and similarities should be acknowledged and harnessed as a source of innovation and new ideas. Global teams are becoming the “new normal occurrence” as businesses expand across borders and as skill shortages force companies to tap into broader talent pools.

Companies increasingly rely on global teams to foster growth and innovation, yet too often these teams are assembled without a clear process to ensure success. Global teams represent a high stakes commitment, so it is imperative that these teams have a proven framework to promote optimal functioning.

For the purpose of this paper the global teams are defined as those with professionals located in different countries with different cultures and who interact on daily basis with employees scattered in different parts of the world.

Organizational agility is becoming a critical component of organization development and change due to the increasingly continuous and iterative nature of change. (Keiser, 2014). Agile organizations deploy teams, establish or join networks and ecosystems of people, many of them working outside the firm, who are coordinated horizontally and who deliver new value to customers in an interactive fashion. Everyone doing work has a clear line of sight to the customer. Therefore the aim of this paper is to find out if the new technology used for knowledge sharing makes the organization agile on the example of the consulting sector. This paper is one of the series concerning knowledge sharing. The research has been undertaken which investigates global teams located mainly in UK, China, India. The paper is structured as follows. The first part deals with the knowledge sharing in a context of team work, followed by importance of technology in knowledge sharing.

1. Knowledge Sharing Within The Context of Team Work

Teams are likely to become the primary vehicle through which internal and external knowledge is shared in a company. Given the distributed nature of team work communication and knowledge sharing across distance is also one of their biggest challenges. When teams become regular occurrence in the organization, knowledge sharing between and across teams and their various stakeholders becomes particularly important. Teams will need to:

- focus on their internal task,
- make sure they maintain relationships and interactions with their various stakeholders, whether company-internal or company-external; and
- become more outward-looking.

To enable knowledge sharing in organizations, members must have access to an arena in which to engage in interpersonal dialogue to share their experiences and knowledge with one another. Work team interactions provide a context in which individuals can engage in such dialogue (Engström, 2003), as they involve a group
of individuals embedded in a larger social system who work interdependently to perform tasks (Guzzo, Dickson, 1996).

Teams have an important role in knowledge sharing (Becker, 2003). In the context of team work, previous studies provide evidence that knowledge sharing in teams leads to superior team performance in different work environments such as research and development (Berends et al., 2006), new product development (Lee et al., 2010), and software development (Faraj, Sproull, 2000). Knowledge sharing among an organization’s team members is critical for competitive advantage (Grant, 1996; Halawi et al., 2006; Pemberton, Stonehouse, 2000). The literature suggests that the sharing of knowledge in team work settings succeed only if team members actively engage in knowledge sharing and by the efficient management of knowledge for the use by new teams with new projects (Berends et al., 2006; Lee et al., 2010).

Scholars view knowledge sharing as an organizational innovation, which leads to the dissemination of innovative ideas that has the potential to improve work processes and to develop new business opportunities (Lin, 2006, 2008; Nonaka, Takeuchi, 1995; Yi, 2009).

Knowledge sharing is argued to lead to better performance due to improved decision making and better coordination (Zarraga, Bonache, 2003). In practice, however, knowledge sharing has proven challenging (Szulanski, 1996; Argote et al., 2000). And if knowledge is not shared, the cognitive resources available within a group remain underutilized (Argote, 1999; Cabrera, Cabrera, 2005). This is particularly challenging in global teams where cultural and linguistic differences create barriers to communication and understanding (Hambrick et al., 1998; Von Glinow et al., 2004).

2. Importance of technology in the process of knowledge sharing

The advent of new communication technologies1, from as simple as e-mailing from anywhere to anywhere using Internet and Intranets, to more sophisticated audio and video-conferencing, shared electronic white-boards, group-ware has helped people to overcome the barrier of distance and time significantly. Technology infrastructure is considered as an essential enabler in the knowledge-based economy. Such infrastructure plays a vital role in the knowledge management system of an organization. To create and use new knowledge, the sharing of the existing knowledge needs to be facilitated by incorporating various technological platforms.

Several scholars (Ho et al., 2012; Abouzeedan, Hedner, 2012; Zhang, Jasimuddin, 2012) emphasize on technology infrastructure as an element crucial to the knowledge

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1 For the purpose of this paper the notion technology is used interchangeably with the notion information communication technologies (ICT).
sharing in organizations. Recently, there has been a trend toward the application of advanced technology (e.g. the Internet, intranets, Web browsers, data warehouses, data mining and software agents) to facilitate knowledge-sharing activities. Technology infrastructure is an important variable in the proposed framework. While hardware, networking and bandwidth are important, they are assumed to be part of any modern organization landscape.

The use of technology in supporting knowledge management opens new capabilities (Standing, Benson, 2000) in business processes. Therefore, information technology (IT) is considered as an indispensable tool that supports discovery of useful knowledge (Ho et al., 2012). Collaborative tools such as intranet-based systems allow people to work together and collaborate interactively. Individual knowledge is thus converted into organizational knowledge through knowledge sharing with the help of IT (Ryan et al., 2010; Zhao, Luo, 2005).

To build knowledge-sharing capabilities, an organization must develop a comprehensive IT infrastructure. Knowledge is transmitted and created within an organization with the use of technological infrastructure (Ryan et al., 2010). Technology refers to the infrastructure of tools, systems, platforms and automated solutions that enhances the development, application and distribution of knowledge (Chong et al., 2010). Technology platforms can only assist in stimulating knowledge flow, but their effect on knowledge sharing is perhaps less visible without a proper cultural and organizational context in which people are encouraged to develop and share their knowledge (Clarke, Rollo, 2001).

The new wave of digital technologies has given organizations an enormous opportunity to bring together their distributed workforce and develop the ability to work together despite being apart. The state-of-the-art information and digital electronic communication technologies are at the heart of the operating environment of these teams. These teams rely very heavily on them and have much less face-to-face interaction. At times many conversations are asynchronous e-mailing) and only sometimes are synchronous methods like audio/video conferencing used.

3. The culture of agility

A culture of agility involves rethinking the basic assumptions of management. It reflects a recognition that hierarchical bureaucracy is too slow and clumsy for a market place in which fickle but powerful customers are in charge. Now, “predictable” and “reliable” performance isn't good enough. For true success, the organization has to deliver experiences that add continuous value and delight customers – a much more difficult undertaking, and something that can't be accomplished by hierarchical bureaucracy.
A culture of agility means drawing on the full talents and capacities of those doing the work, whether inside the firm or outside. It means doing work with self-organizing teams, networks and ecosystems of people. It means giving everyone doing the work a clear line of sight to the customer, to whom new value is delivered in an interactive fashion. The customer now plays an active role in the organizational picture. The principles of a culture of agility are not a random collection of fixes. They fit together as a mutually reinforcing set of management patterns. Once a company embraces a culture of agility, it affects everything in the organization – the way it plans, the way it manages, the way people work. Everything is different. It changes the game fundamentally. Making the transition to a culture of agility includes five major shifts:

1. Instead of a goal of maximizing financial metrics, the goal of the organization is to add value for and delight the customer. The implicit assumption is that financial success follows continuous innovation to provide unique value to customers.

2. Instead of those doing the work reporting as individuals to bosses, the work is done in self-organizing teams. The role of management is not to check whether those doing the work have done what they were meant to do, but rather to enable those doing the work to contribute all that they can and remove any impediment that might be getting in the way.

3. Instead of work being coordinated by bureaucracy with rules, plans and reports, work is coordinated by agile methods with interactive work cycles and direct feedback from customers or their proxy.

4. Instead of a preoccupation with efficiency and predictability, the predominant values are transparency and continuous improvement.

5. Instead of one-way, top-down commands, communications tend to be in interactive conversations.

The principles are not a random collection of improvements. Together they also form a mutually reinforcing sequence, one that is the basis for an organizational culture change.

4. Methodology

This a qualitative research which is based on interviews in the company A that has global teams. As it was requested the name of the firms will not be revealed. This research followed the recommendations of Dubé and Paré (2003) regarding the protocol development and expert validation of the interviews. A pilot study was carried out in Poland office with three interviewees between September and October 2015. The pilot study provided an opportunity to test the research instrument (Roberts-Holmes, 2005). Following minor revisions to the wording of the questions, the main study was carried out between November and December 2015;
The main form of data collection was a semi-structured interview based on eight (8) employees from A company with headquarters in London – UK. Second, the interviewees were based in different functional departments and were chosen with the aim to obtain a broader view of key influences that shape their perceptions. Firm A is a consulting company acting as the specialist in research and advisory for the maritime sector. There are four integrated business units: maritime research, maritime advisors, supply chain advisors and maritime equity research. Although the company is integrated along business units people are working in project teams and in may times the solution is worked out by cross-over teams. Founded in 1970 company A provide information and advice to the global maritime industry it has since then worked with over 3,000 clients in more than 100 countries. The company is privately owned and has offices in London, Delhi, Singapore and Shanghai, supported by associates across the world. The aim of this paper is to analyze if the new technology used for knowledge sharing makes the organization agile on the basis of the consulting sector. The research questions are as follows:

- What tools are used to knowledge sharing in global teams in consulting sector?
- What are the advantages and disadvantages of knowledge sharing with the help of new technology in global teams?
- Does new technology make consulting companies agile?

The choice of interviewees was based in key people who possess knowledge about the process of the firm, and people capable of responding to the survey questions.

The data were analyzed using content analysis, as recommended by Bardin (2008). The interview was validated by two professors with experience in that area. The script included the followings points related to knowledge sharing: process, new technology tools used and barriers. The interviews were conducted with the use of Skype® and lasted on average 15 minutes each.

In firm A, eight employees were interviewed, six based in UK, one in China and one in Singapore as shown in table 1.

The thematic content analysis involves generating codes in this case ICT tools; classifying the interviews; and interpreting the results. The codes were generated a priori based on the available ICT tools. The interviews were classified into initial codes (ICT tools) and when necessary, new codes were created to categorize a new ICT tool used by the interviewed. To ensure the quality of the analysis, this was performed twice by the author to ensure stability and with a view to the reproducibility. During the research process the following limitations were identified: the use of the interview as the main form of data collection, since the firms did not authorize any collection of documents, the use of Skype®.
Table 1. Profile of the interviewees in Firm A

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Time in the firm (years)</th>
<th>Experience with global firms</th>
<th>Working in country</th>
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</thead>
<tbody>
<tr>
<td>A1</td>
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<td>3</td>
<td>UK</td>
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<tr>
<td>A2</td>
<td>5</td>
<td>5</td>
<td>China</td>
</tr>
<tr>
<td>A3</td>
<td>3</td>
<td>20</td>
<td>UK</td>
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<tr>
<td>A4</td>
<td>7</td>
<td>20</td>
<td>UK</td>
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<tr>
<td>A5</td>
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<td>A6</td>
<td>1.5</td>
<td>1.5</td>
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<tr>
<td>A7</td>
<td>3</td>
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<td>UK</td>
</tr>
<tr>
<td>A8</td>
<td>10</td>
<td>20</td>
<td>India</td>
</tr>
</tbody>
</table>

Source: own development

5. Results analysis – knowledge sharing in firm A using ICT tools and their benefits

The interviewees from Firm A were unanimous in pointing out that knowledge sharing occurs indirectly through the use of repositories such as the portal “Share Point”. The portal works by storing all documents generated throughout the various phases of the project. In Firm A, sharing also occurs through interaction between team members, either in person or by means of tools for members located in remote units. Interviewees A2 and A5 also cited the existence of lessons learned meetings (meetings where the best practices learned during the project are identified) and project kick-off meetings (the project’s initial during which the group members are introduced and the demand, responsibilities and working methods are defined). Moreover A5 and A6 mentioned that after a successful and difficult project they gather together for dinner to celebrate the success.

All interviewees from firm A are using paid and non paid ICT tools. The most popular is Skype* (unpaid) and Lync (paid). When asked what are the benefits of using ICT solutions for global team work the respondents from A firm assumed that managing workflow is easier and if managed well it can improved efficiency. The participants had a chance to express their view on the statement if technology wins over face to face meeting and all interviewees agreed that face to face meeting wins over technology.

A2 interview said: “face to face meeting is and will always be very important, it can not be replaced but IT sharing and communication platforms permit communication exchange to happen at a much cheaper level and convenient for global team work”.


A5 interviewee agreed on that commenting: "using skype or other tools are great to get people together from other offices but nothing beats face to face meetings when difficult or political issues need to be tackled". Moreover the same interviewee confirmed that: "knowledge sharing is a key to any company but it depends on the individual person's philosophy of working. Even if the company edict is to do so, it depends on the individuals every time".

Face to face meeting in global teams is often not possible to arrange due to several reasons:

- Teams members or clients are in different countries/offices.
- Team members from the same office travelling a lot so they are away from the office
- The consultancy business of firm A is based on associates who are not based in the office as they are working from home.

An interesting point considering disadvantages of ICT tools was pointed out A8 respondent “you can always communicate the concept but at times context is lost…technology is a winner in routine matters”.

All the interviewees from Firm A consider that the current tools meet their everyday needs. These tools are: e-mail, chat, share point, videoconferencing, phone and Skype. However, on some occasions, improvements in the tools were suggested, as for example in the opinion of interviewee A2 on the quality of videoconferencing tool: “video conferencing’s quality is very important, when the quality is poor, it is a waste of time for all the meeting participants. And it happens. Both face to face and video conferences are necessary, depending what is the meeting for and the interaction between participants”.

An interesting approach is exemplified by A4 interviewee who thinks that “technology means people talk less and write more”. A6 interviewee thinks that “knowledge can be shared equally through all mediums, however video conferencing and face to face meetings lead to open and frank discussions. People find it easy to ask questions and get answers to their concerns instantly…via these routes”.

A7 interviewee pointed out as the main disadvantage of ICT tools is the fact that “its value is dependent on the quality of the internet connection for all participants, which can vary significantly across different countries. This means meeting can be disrupted/delayed”. Moreover he assumes that: “knowledge sharing is a key part of a successful consultancy business – not having access to team members, that may have the knowledge or expertise that you do not have, or even to discuss together the best way to complete tasks depends strongly on knowledge sharing”.

A8 interviewee concluded by saying that “It is an integral part of modern work culture”. E-mail was said to be the most widely used tool and is regarded as a tool for official business and sharing documents. Instant messaging is used for minor queries and questions but skype/Lync for discussions with team members on project issues.
6. Consulting companies having an agile mindset

Operational agility is increasingly necessary for a firm to survive. As the agile mindset and processes – small cross-functional teams, a focus on customer value and network collaboration – increasingly enter the management mainstream, firms are learning how to draw on the full talents of those doing the work, involve customers at every stage of product development and generate innovations that customers value (Denning, 2017).

Agile organizations deploy teams, establish or join networks and ecosystems of people, many of them working outside the firm, who are coordinated horizontally and who deliver new value to customers in an interactive fashion (Denning, 2016).

Advocates of Agile consider it a better fit for a marketplace in which the value of products and services increasingly derives from the delivery of superior customer experiences through continuous innovation (Pine and Gilmore, 1998).

Globalization, deregulation, knowledge work and new technology had changed the marketplace in fundamental respects. Facing greater competition, faster pace of work, the digitalization of everything and technology that enshrined the customer as the boss, these firms concluded that they could not survive if they continued with traditional management. A central feature of the agile mindset is an overriding preoccupation with delivering increasing value to customers. As the Agile Manifesto states as its first principle, “The highest priority is to satisfy the customer” which is very important in consulting companies. The focus in Agile on delighting the customer implies an ideology of enablement, with an explicit trust in the talents and capabilities of those doing the work, along with the belief that if the organization provides the right environment, values and goals, those doing the work will usually deliver continuous value and innovation for the ultimate users and customers, and generate revenue for the organization itself. In the world of agile management, delivering value to customers is the goal of every individual in the organization. Profits are seen as the result, not the goal. From an Agile perspective, the mindset of an organization that sees itself as a pyramid of management boxes misleads thinking because the most important actor – the customer – is totally missing from that mental model. In contrast, the Agile mindset, promotes an interactive relationship between the customer, the managers and those doing the work (Fig. 1).

The characteristics of the mindset include:

- Goals, attitudes and values that focus on added value and innovation for customers and users, rather than a preoccupation with short-term profits.
- Managers seeing themselves, and acting, as enablers, rather than controllers, so as to draw on the full talents and capacities of knowledge workers.
- The use of autonomous teams and networks of teams, in some cases operating at large scale with complex and mission-critical tasks.
The coordination of work through structured, iterative, customer-focused practices, rather than bureaucracy. Embodying on a daily basis the values of transparency and continuous improvement of products, services and work methods.

![Diagram of Agile Mindset]

Communications that are open and conversational, rather than top-down and hierarchical. The embrace of physical workspaces that are noticeably open, egalitarian and collaboration-friendly.

7. Discussion and Conclusion

Knowledge sharing technologies can add great value to global team work, especially when the tools are used as knowledge sharing enablers. However, technology does not completely replace face-to-face contact within global teams.

Consulting business is of specific character. The lack of knowledge sharing implies a large financial risk. Since, if the consultant decides to leave the company, his ideas and knowledge will also leave the company. The consultant can also join a competitor who can acquire this knowledge. “Much of the key knowledge is held by individuals unless there is some structure to retain it within the organizational memory” (Dunford, 2000, p. 296).

Consultants are very often very communicative persons and they like to use new technology to impress the client. This also may be a signal to customers that I know what is happening on the market. Consultants spend much of their time talking, presenting and conveying solutions and convincing others. These activities mainly take place orally.

Considering the particular setting in which consultants operate, the author states that a fruitful approach to stimulate knowledge sharing is to increase the number
of informal knowledge exchange opportunities between consultants as these people willingly exchange ideas through self-developing teams. Innovative ideas are often raised in an informal knowledge-sharing setting, because of the easy access, and relaxed atmosphere and because of the lack of formal knowledge sharing. In the long term this will increase the overall knowledge base of the consultancy base as well as its innovative capacity. This is consistent with the work of Sturdy et al. (2006), who describes the importance of informal settings such as lunches, drinks and dinners. These informal meetings have proven to facilitate smooth knowledge exchange between consultants and their clients.

The organizational setting in Firm A is very friendly, people responding the surveys were open and it looks like they like each other which helps in knowledge sharing and it really does not matter in which part of the globe they are located. This result is consistent with Argote et al. (2003) who claims that business relations between colleagues, and friendship relationships (close ties) between the members, will enlarge the possibility of knowledge exchange.

Technology influences: the distance, because it helps to solve communication problems; the relationship as it contributes to the creation of relationships within the investigated firm A and the reduction of communication costs (Firm A). It can be stated that consulting companies have been born to be agile.

This research offers a new perspective and a better understanding of the importance of technology to knowledge sharing and agile paradigm in self-organising consulting teams. The results of this research may be useful for academics and organizations because they deepen the discussion on knowledge sharing in global teams, and also show the peculiarity of the consulting business in relation to that issue.

Pursuing this line of research the author proposes to deepen the research extending it as to analyze other sectors and see if the agile paradigm is of importance to modern organizations of today.

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