

PROBLEMS AND POSSIBILITIES OF KNOWLEDGE TRANSFER: A CASE STUDY ON POWEL ENERGY MANAGEMENT AB

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Abstract: This study identifies problems, and recommends solutions within the realm of knowledge transfer in Powel Energy Management AB. The focus is on knowledge transfer on the inter-organizational level between the Swedish subsidiary and the Norwegian parent company. The study is based on data collected during interview with leading representatives from the Norwegian and Swedish organizations. The analysis is based on Davenport and Prusak's (1998) seven knowledge transfer hurdles in combination with Wang's (2004) model for knowledge transfer between parent company and subsidiary. The two key problems, which have been identified, are the parent company's moderate capacity to transmit knowledge and the subsidiary's moderate intent to learn. The author's recommendations consist of seven actions: 1) Use the word knowledge, 2) Disperse the knowledge base in the development team, 3) Create a direct link between the developers in Norway and business units in Sweden, 4) Make developers work in the selling and consulting environment, 5) Make the developers introduce new software features, 6) Increase usage of video conferencing, and 7) Introduce rewards for knowledge transfer.

Key Words: Knowledge management, Knowledge transfer, Knowledge sharing.

1. Introduction

A knowledge advantage is a sustainable advantage (Davenport and Prusak, 1998). This belief has led to knowledge management being considered the backbone for knowledge intensive firms to gain sustainable competitive advantage and thus, to survive in the fierce, competitive market of today's knowledge economy. The Correct practices of knowledge management ensure the proper generation, sharing and exploitation of knowledge in the company context and here; knowledge transfer acts as a catalyst in the whole knowledge management process. This study will identify problems and recommend solutions within the realm of knowledge management, specifically in knowledge transfer, in Powel Energy Management AB (PEM). PEM is a wholly owned subsidiary of the Norwegian firm Powel ASA. The group is developing, selling and maintaining software and solutions for the energy sector handling all processes in the value chain, energy production planning, distribution, delivery to client and support. The structure of the Swedish firm is mirroring the Nordic part of the Norwegian organization with the exception that the software developing units are only present in Norway. PEM's total turn-over is divided into three categories: 40% consulting, 40% software sales (licenses) and 20% maintenance & support. The total contribution to the group turnover is 20%. Powel ASA has no official knowledge management initiative nor is it using the term knowledge management. However, as a knowledge intensive professional service firm, it is inherent in the firm's nature to deal with knowledge, consciously or not. The Swedish CEO has identified knowledge as a key ingredient for the company's success but also realized the lack of a systematic approach to knowledge sharing. With the recent introduction of Balance Scorecards (BSC) - a balanced approach to strategic management that measures among other things learning - the firm hopes to solve this. The Norwegian organization already has good experience with BSCs.

Our initial hypothesis, based on the first meeting with the company's CEO, was that the main problem within the context of knowledge management was knowledge transfer. Based on this assumption that was later confirmed during further discussions we decide to focus on knowledge transfer on the inter-organizational level between the Swedish subsidiary and the Norwegian parent company. Based on Davenport & Prusak (1998), we define knowledge transfer as equal to knowledge sharing. In the second interview and with further reflection, two knowledge transfer problems were identified that hindered the company in it's strive for growth. When tendering for new business and selling new software, the subsidiary does not posses enough knowledge about :

- a) new features in new software releases
- b) potential for new features and their impact on cost and developing time

Purpose

The purpose of this study is to identify the underlying reasons for the knowledge transfer problems between the Swedish subsidiary and the Norwegian parent company. Hopefully this will not only increase the author's theoretical and practical knowledge, but also deepen the company's understanding of knowledge transfer and its impact on organizational results and competitive advantage.

Objectives

The main objective of this study is to investigate knowledge transfer issue between parent and subsidiary company. In specific, we will look into the followings:

- a) To find out strengths and weaknesses of the knowledge transfer practice and their business Impacts,
- b) To describe technology used for Knowledge Transfer
- c) To evaluate the practices in the light of theoretical aspects
- d) To make recommendations for improved knowledge Transfer practices.

2. Methodology

We have selected this company purposively for the case study because it is a knowledge intensive SME. The knowledge intensity makes this company more interesting to analyze as knowledge is its main asset and thus knowledge transfer issues will occur in a more clear form than in a labor-intensive firm. SMEs in contrast to large firms often don't have full time professional working on these problems and thus our contribution to the firm's understanding of knowledge transfer will be greater. For data collection, we have used mainly four sources: interview, documentation (website and printed company material), email and telephone conversations. We performed two face-to-face interviews with the Swedish CEO and two short telephone interviews with the Norwegian vice president of the Nordic operations. The interviews with the Swedish CEO were semi-structured discussions based on a list of open-ended questions covering different aspects of knowledge transfer, knowledge management, and organizational structure amongst others. The interviews lasted about 5 hours. The telephone interviews were similar both lasted only 1 hour. Both persons have also been very generous with their time by letting us make e-mail and telephone call when in need of further clarifications. This is a qualitative study. The facts and information have been analyzed on the basis of the theoretical foundation and reflection was used for an in-depth understanding and knowledge development.

3. Theoretical framework

The theoretical foundation to handle the problem of knowledge transfer is based on Davenport and Prusak (1998) and Wange et. al. (2004), both of which deal with the

problems of knowledge transfer. To find possible explanations for the company's problems, we looked at Davenport's Seven knowledge Transfer Hurdles, namely (1) lack of trust, (2) differences in culture, vocabulary and frame of reference (3) lack of time and meeting place, (4) status and reward goes to the knowledge owner, (5) lack of absorptive capacity (6) knowledge is the prerogative of a particular group and (7) intolerance for mistakes or need for help. Davenport and Prusak also argue that knowledge transfer consists of two parts: knowledge transmission and knowledge absorption. This is the connecting point with the second component of our theoretical framework: Wang et. al. (2004). Wang and his colleagues investigated knowledge transfer between the parent and subsidiary of a multinational corporation. Based on the research, they created a model that explains knowledge transfer in terms of the parent company' capacity and willingness to transmit and the subsidiary's capacity and intent to learn or in other words absorb knowledge. The parent company's willingness to transfer depends on the importance of the subsidiary and the type of ownership while the capacity to transfer depends on the knowledge base and expatriate competencies. The capacity of the subsidiary to absorb knowledge depends on the qualification of employees and the emphasis on training while the intent to absorb depends on the intent to learn and on the link between learning and reward. This model is using a one-way perspective- it only investigates the flow from parent company to subsidiary. Nevertheless, it does still shed light on the problems and possible solutions.

4. Technology

Powel Energy Management (PEM) uses e-mail, Internet, video conferencing and telephones to communicate and share knowledge with the Norwegian parent company. There is also a central database called " Access Request" to collect all problems that clients experience with the company's software. Until recently, PEM did not have direct access to that database, Locally PEM save client information on a file server. Even though all employees in the local organization can access this information, it tends to be fragmented, as there are no procedures or structures to enforce the collection and categorization of the information. The lack of a central repository for client information has prompted the parent company to initiate the acquisition of a Customer Relationship Management (CRM) system.

5. Evaluation of knowledge practices

Establishing mutual trust between the transmitter and the absorber of knowledge is key for knowledge transfer to occur (Davenport and Prusak, 1998). Without it, the willingness of both transmitter and receiver to engage in qualitative knowledge exchange will dramatically decrease. There are three main activities that can positively contribute to an increased trust between the Norwegian and the Swedish

organization: a yearly company get-together, monthly sales meeting using video conferencing and yearly or biyearly business unit meetings. The reason for this is that spending face-to-face time is the only way to gain personal trust. The level of trust in an organization will also depend on the understanding of differences in cultures, vocabularies and frames of reference (Davenport and Prusak, 1998). This is related to national, organizational and professional cultures. Even though Norway and Sweden according to Hofstede (1980) is very similar in terms of cultural, there is a perceived difference in the Swedish organization, which might hinder knowledge transfer. Identifying the reasons is outside the scope of the report, but more face-to-face interaction is generally an effective cure. A common hurdle for knowledge transfer is simply lack of time and meeting place (Davenport and Prusak, 1998). This hurdle is especially serious for trans-national companies like Powel since frequent meetings are often a temporal and financial impossibility. Powel's use of video conferencing is a powerful way of overcoming this problem as it has proved to have some of the properties of a physical meeting. People seem to be more likely to stick to deadlines decided during video conferences than during normal phone conferences. If status and reward goes to the knowledge owners, knowledge transfer is hindered. (Davenport and Prusak, 1998), At Powel the problem is that there is no direct and explicit reward system for knowledge transfer. Individual learning and competence development is considered in the balanced score cards, and the results will affect the yearly staff appraisals, but no financial or other extrinsic rewards are directly tied to knowledge transfer. Reward has been identified as an enabler to learning. In the time-constrained reality of today's business, employees might be reluctant to "waste" time on activities that are not directly tied to measurable results or financial reward.

If the receiver of knowledge does not absorb the knowledge transferred, no knowledge transfer has actually occurred. (Davenport and Prusak, 1998). The absorptive capacity will depend on a web of interrelated factors such as trust, shared language and willingness. As just mentioned, the lack of a reward structure for learning and knowledge management decreases the absorptive capacity. Some organizational cultures are treating knowledge as the prerogative of particular groups, which hinders both transmission, and absorption of knowledge. (Davenport and Prusak, 1998). In matrix organizations, this is less likely to occur, as the dynamic and flexible nature of the matrix organization encourages meeting and interaction between different people. Even though Powel does have a matrix organization, the separation of the development departments from the Swedish organization might create hidden walls between sales and consulting on one side and development on the other. Also the fact that the number of hierarchical levels is relatively high might further increase the risk for the knowledge prerogative problem. The last hurdle in knowledge transfer is the intolerance for mistakes or

need for help (Davenport and Prusak, 1998) - otherwise known as a macho culture. No practices or procedure have been found that could increase the likelihood of this. Furthermore, as both the Swedish and Norwegian cultures according to Hofstede (1980) are some of the least masculine cultures, the risk for this hurdle to occur is small. When reviewing the knowledge transfer problems in light of Wang's model (2004), we have found that the parent company's capacity to transfer knowledge is lacking because the knowledge needed by the subsidiary is often concentrated to just a few individuals in the development team. Lack of time to share the knowledge within the development team is the probable cause as the well-educated software developers normally have a high capacity for knowledge transfer. This is supported by the "lack of time and place" hurdle identified by Davenport and Prusak (1998). The willingness to transfer depends on the importance and ownership of the subsidiary. The Swedish firm is fully owned by the parent company and contributes 20% of total turnover. Furthermore, Sweden has been identified as a key growth market considering risk and returns of the market. Therefore, the willingness to transfer knowledge from the point of view of the parent company is considered high.

The subsidiary's capacity to learn depends on the employee's qualifications and the organization's emphasis on training. The Swedish organization consists of highly educated engineers and IT personnel who are fairly young. Training in the form of courses is limited. Instead the firm uses extensive on the job training by letting different people participate in different projects. Therefore, the subsidiary's capacity to learn is considered high.

For knowledge transfer to occur the subsidiary must have the intent to learn. However, it is not the subsidiary that is learning but rather the individuals within it. Therefore, the first aspect of the subsidiary's learning is the employees' intent to learn. Young and well-educated people are, according to Wang et. al. (2004), more probable to have this intent. The second aspect of the intent to learn is the link between learning and reward. At Powel the employees are well educated and fairly young, but the link between reward and learning is missing. Thus the subsidiary's intent to learn is moderate.

Business Impacts

The two problems identified above namely the parent's moderate capacity to transmit knowledge and the subsidiary's moderate intent to learn is explaining the missing knowledge that is needed for tendering and selling in the subsidiary. (Figure 1.) The missing knowledge increases the time and the complexity for a tender proposal to be produced and thus decreased the company's actual growth rate a very serious business impact considering that a key objective in Powel is growth.

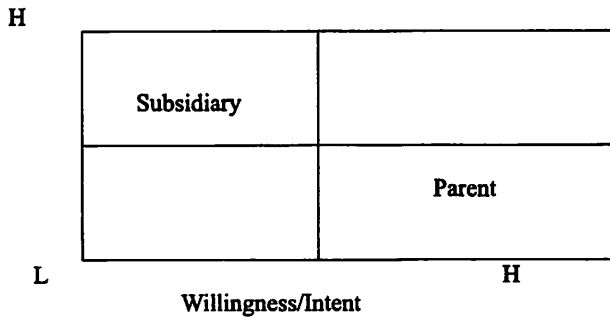


Figure: Simplified picture of knowledge transfer positions

6. Recommendations

Based on the theoretical foundation we have identified strengths and weaknesses in the company's knowledge transfer practices and their business impacts. Here we focus on how to overcome the most important weaknesses and problems.

Use the word knowledge

Even though the company on a daily basis is dealing with knowledge transfer problems it does not use the term knowledge but competence. All companies in all industries have to develop the competence of their employees, but not all companies are having knowledge as the main asset. By integrating the term knowledge into the company's vocabulary the true importance of knowledge for the company's survival will be highlighted and hopefully also an understanding of the tacit and explicit nature of knowledge and what implications this has on both operational and strategic activities.

Disperse the knowledge base in the development team

The reason for the parent company's moderate knowledge transmitting capacity is the concentration of knowledge. Key knowledge resides within just a few individuals. It logically follows that the knowledge needs to be dispersed within the development teams. It might, however, be a difficult task dispersing this knowledge within the development team of two reasons: (1) the knowledge is complex and tacit and (2) the key individuals might be unwilling to let go of the knowledge as it decreases their value to the company and thus their negotiation power. The first problem can only be solved by socialization (Nonaka, 1994) meaning creating opportunities for the developers to interact in the right context and with enough time. The second problem will be solved with a reward system designed to

discourage employees to keep knowledge and encourage them share knowledge.
See recommendation below:

Create a direct link between the developers and business units in Sweden

The consultants and sales people are dependent on knowing the software and the software developers are dependent of understanding the reality of the client problems. Today there is no direct interaction between the development team and the Swedish subsidiary. The knowledge transfer is going through the Norwegian business units. By creating a direct link, the knowledge transfer speed and the density of the knowledge can be increased.

Make developers work in the selling and consulting environmental

By letting developers work in the client environment for a limited time, they will gain a better understanding of the client problems and the consultants and sales people will gain a better understanding of the software. This will also create the necessary shared language and frame of reference that is impotent for mutual trust to grow. The trust will then be taken back to Norway when the developers return and thus, a more frequent and qualitative knowledge transfer can occur. As the two groups have a very different view of the world, there is an increased chance for innovation to occur through the interaction between them.

Make the developers introduce new software features

The developers should, on a regular basis, teach consultants and sales people about new factures in the software by holding sessions and seminars at the subsidiary. Not only will the sales people and consultants gain the knowledge necessary to do their job but trust and mutual understanding will grow between developers on the one hand and sales and consultants on the other.

Increase usage of video conferencing

Video conferencing seems to have some of the properties of physical meeting. Because financial and temporal constrains sometimes hinders physical meetings, video conferencing should be used as much as possible on all levels in the organization. Introducing small scale video conferencing through the personal computers is a way of increasing the penetration rate of the technology.

Introducing rewards for knowledge transfer

Knowledge transfer is time consuming, as it requires both time to build trust and time to transfer complex and tacit knowledge. People will find it difficult to justify this time spending if the reward structure is not aligned with the knowledge transfer objectives. Furthermore, knowledge transfer often involves change of behavior and

power structures, thus the company has to be clear what kind of behavior it rewards. The balanced score cards can be a helpful measurement tool on which to base the rewards.

Suggested readings

Von Krogh, G., Ichijo, K., and Nonaka I, (2000). *Enabling Knowledge Creation: How to Unlock the Mystery of Tacit Knowledge and Release the Power of Innovation*, Oxford University Press, New York and Oxford Davenport, T & Prusak L. (1998). *Working Knowledge: How organizations manage What they know*. Boston: Harvard Business School Press.

References

- Davenport, T & Prusak L. (1998). *Working Knowledge: How organizations manage what they know*. Boston: Harvard Business School Press. DeTienne K. et. al. (2004). Toward a Model of Effective Knowledge Management and Directions for future research: Culture, leadership and CKOs. *Journal of Leadership and Organizational Studies*. Vol. 10, No. 4, 26-43.
- Hofstede, G. (1980). *Culture's consequences: International Differences in work-related values*. (2nd edition). Beverly Hills, California: Sage
- Martin, V., Hatzakis, T., Lycett, M. & Macredie, R. (2004). Building the Business /IT Relationship through Knowledge Management. *Journal of Information Technology Cases and Applications*. Vol. 6, No. 2, 27-47.
- Nonaka, I. (1994). A dynamic Theory of Organizational knowledge Creation. *Organizational Science*, 5(1), pp 14-37.
- Wang, P., Tong., T., & Koh C. (2004). An integrated model of knowledge transfer from MNC parent to China subsidiary. *Journal of World Business*. Vol. 39, 168-182.