Typology of useful knowledge.
External Professionals knowledge transfer

"We know more than we can tell"
Polanyi 1976

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Abstract

In the process of acquiring knowledge, companies often rely on external professionals (EP). The degree to which it is possible to extract knowledge from EP may be related to the extent to which EP rely on tacit and explicit knowledge. The theoretical model of Levin & Cross, (2004) is used to elicit the perceptions regarding the nature of knowledge used by EP. In this way we are able to shed light on the question to what degree knowledge of EP can be disseminated to companies. Thereby adding valuable empirical data to the knowledge management discussion.

Qualitative as well as quantitative research is used to test the propositions and hypotheses. An interview with clients is used as a qualitative instrument to test the stated propositions. Interviews, a qualitative parameter among clients, were performed in a variety of branches. The hypotheses were tested via a mail survey. The questionnaire for this survey was based on existing five point scales. This study was carried out among the EP of a temporary work agency in the logistic & procurement competence who have their work area at the actual customers organization. In this investigation we provide empirical support for a model of knowledge transfer. There are three key findings. First, we show that transfer of tacit knowledge is a factor that contributes to the perceived receipt of useful knowledge. Second, this phenomenon contributes to the perceived transfer of useful knowledge. And we revealed that informal communication is related to transfer of tacit knowledge. Furthermore, trust between both parties is found to be crucial to the value of the knowledge transferred.

Additional research is needed to recover answers about the relevant factors to increase the organizational maturity related to the knowledge transfer of both parties, external professional and client organization. A longitudinal research of both, receiving and sending side of the knowledge transfer could give more insight. This holds for client as well at EP side during the actual assignment.

Keywords; Knowledge transfer, tacit and explicit knowledge, usefulness, external professionals, temporary work agency.
Agenda;

Title P. 1
Abstract P. 2
Agenda P. 3

1. Introduction P. 4

2. Literature review P. 7
   2.1. Tacit and explicit knowledge
   2.2. Its effect on organizations
   2.3. Its effect on temporary work agencies
   2.4. Related to external professionals
   2.5. Components of tacit and explicit knowledge
   2.6. Factors that influence tacit knowledge transfer

3. Methodology P. 18
   3.1 Instrument development
   3.2 Research items

4. Results P. 21
   4.1 Qualitative
   4.2 Quantitative

5. Conclusion & recommendations P. 26

6. Reflection P. 28

References P. 29

Appendix A; Frequencies P. 32
Appendix B; Interview schedule P. 36
Appendix C; Client references P. 37
Appendix D; Survey items P. 38
1. Introduction

Gaining and retaining competitive advantage is crucial to a company’s growth and success. Within this competitive advantage, creating knowledge and the ability to learn are seen as core competences. Generation of knowledge is required to innovate and to survive in today’s knowledge based competition. It is crucial to have the right knowledge for the job to maintain competitive advantage (Slater, 1995; Tsang, 1997; Nonaka, 1998; Foote et al, 2002; Lin et al, 2007).

Reduced lifecycles indicate today’s speed of innovation. At present agility and flexibility in organizations are very important (Johnston, 1996; Galbraith, 1994; Mohrman et al, 1995; Uzumeri et al, 1998). With the evolution of customer smartness and competitors with innovated and alternative products more companies operate in more complex integrated supply chains. The ongoing focus on core competence, makes that supply chains consist more and more on networks of more or less dependent companies. Within the integrated function of supply chains, supply chain management (SCM) becomes complex and needs a new and changed performance focus. SCM becomes more mature (Axelsson et al, 2005; Fynes et al, 2005; De Man, 2004).

Continuous improvement and the introduction of new innovations require knowledge flows throughout the supply chain. Collaborative knowledge trading takes place between parties at different stages within these chains (Caniëls et al, 2007; Axelsson et al, 2005; De Man, 2004).

Knowledge workers have become the most vital asset in a knowledge-based society. Therefore the effective distribution and allocation of knowledge to maximize its utility is very important. The importance of learning through others is recognized, their views are actively sought and people are willing to adopt alternative perspectives (Slater & Narver, 1995; Dawes et al, 2007). A number of organizations have implemented organizational learning (OL) strategies to capture and share the individual’s knowledge in knowledge management (KM) programs (Lin et al, 2007). Sharing with other group members improves the performance of the whole group and every member will benefit (Womack et al, 1990).

Usually companies acquire knowledge from consultants and specialized suppliers (Caniëls, 2007; Mitlacher, 2006; Johnston, 1996; Dawes et al, 2007). To gain outside knowledge directly and the difficulty to recruit personnel, often results in hiring of external professionals (EP). Temporary work agencies (TWA) observed dramatic growth in the request for EP’s in the last two decades (Mitlacher, 2006). TWA typically offer highly qualified specialized skills to companies (Johnston, 1996). The EP as knowledge
provider is also recognized within the discussion of OL and KM. Selective hiring, purchasing and assimilating external knowledge are possible goals that can be attained by employing EP (Upton et al, 1998; Uzumeri et al, 1998; Hyland et al, 2003). It is widely accepted that EP can be regarded as external resources of knowledge, which are likely to impact upon OL in a variety of contexts (Dawes et al, 2007). Related to the senior level of execution, these EP must be highly educated and act on a management level (Mitlacher, 2006). Hence, they can be of growing importance for organizations. It is argued that learning from an EP is likely to be an important factor in the process of OL (Dawes et al, 2007). They can be of increasing importance in providing competitive knowledge.

In the evolution of KM, two characteristics of knowledge can be identified. One that first focuses on exchanging knowledge objectively named explicit knowledge. Explicit knowledge can be expressed in words and numbers and easily shared (Osterloh & Frey, 2000; Bloodgood & Salisbury, 2001; Ambrosini & Bowman, 2001; Bradley et al, 2006). And one that emphasizes the importance of tacit knowledge, experiences, skills and attitude, knowledge that is not objectively transmittable. Tacit knowledge such as subjective insights or emotions is non-articulated and embedded in contexts and actions, highly personal and hard to verbalize or communicate (Chilton et al, 2007; Conner & Prahalad, 1996; Osterloh & Frey, 2000; Ambrosini & Bowman, 2001). Tacit knowledge, such as bodily skills or mental models, is deeply rooted in individual’s action and experience as well as in the ideals or values he or she embraces.

Many investigators assert that knowledge is created through interactions between tacit and explicit knowledge, rather than from tacit or explicit alone. (Nonaka et al, 2000; Axelsson et al, 2005; De Man, 2004). Explicit knowledge without tacit insight quickly loses its meaning. Knowledge might consist for a large part of tacit knowledge. The preference to rely on explicit knowledge rather than accessing both explicit and tacit knowledge can result in suboptimal outcomes (Chilton & Bloodgood 2007).

Referring to the above discussion the following question emerges. What mix of tacit and explicit knowledge is used by EP while disseminating their knowledge to client companies? Increasing the understanding of what type of knowledge that EP are most likely to use and whether companies are able to retain the knowledge after the EP is gone help to improve KM practices of TWA. The overall research on temporary agency work and EP related to KM is sparse, as is the research within the context of OL with EP involved in the supply chain. Research within this area could help to understand the role of tacit knowledge in transferring useful knowledge. This study tries to shed light on
issues like the degree of reliance on tacit knowledge of EP by means of a survey among the logistics & procurement interim professionals of Yacht. The tacitness of knowledge and the perception of transfer of useful knowledge is measured based on the research of Levin & Cross (2004).

This study intends to give insight in the reliance of EP on tacit and explicit knowledge. Furthermore, to be able to understand strategic and other competitive elements within knowledge management practice. Moreover, to understand and to be able to cope with customers reliance on types of knowledge. A growing body of empirical literature is added with the focus on classification of knowledge held by external professionals in the supply chain area. The research participants are from a temporary work agency. This study particularly targets external professionals on high educated level in logistics and procurement area and explores their perception of the explicit and tacit knowledge.
2. Literature review

2.1. Tacit and explicit knowledge

The literature about KM distinguishes between explicit and tacit knowledge. Explicit knowledge refers to the objective exchange of knowledge. This type of knowledge is also called declarative knowledge (Kogut & Zander, 2003). Explicit knowledge can be codified and transferred easily (Lahti & Beyerlein, 2000; Chilton et al, 2007). It can be conveyed through methodical language (Lahti & Beyerlein, 2000), transferred verbally or coded in writing, using words, numbers and symbols. It is discrete and can be represented through books, archives, databases and groupware technology (Lahti & Beyerlein, 2000; Chilton et al, 2007). The ease in expression of explicit knowledge makes it readily written down, encoded, explained or understood. This type of knowledge can easily be shared and imitated. Furthermore explicit knowledge is characterized as a public good (Osterloh & Frey, 2000; Bloodgood & Salisbury, 2001; Ambrosini & Bowman, 2001; Bradley et al, 2006).

On the other hand, tacit knowledge encompasses experiences, skills and attitude, knowledge that is not objectively transmittable. It cannot be transferred or traded as separate entity (Osterloh & Frey, 2000). It is procedural knowledge embedded in contexts and action. (Kogut & Zander, 2003; Chilton et al, 2007; Ambrosini & Bowman, 2001; Koskinen et al. 2003). Tacit knowledge is acquired by and stored within individuals and deeply rooted in the individual’s action and experiences. With the characteristic of tacit knowledge that it is personal knowledge and hard to communicate (Chilton et al, 2007; Conner & Prahalad, 1996; Osterloh & Frey, 2000; Ambrosini & Bowman, 2001).

One of the characteristics of tacit knowledge is that it is difficult to write down, to formalize. It has a cognitive dimension, in the sense that it is scripted (Ambrosini & Bowman, 2001). Tacit knowledge can be transferred through methods that help convey contextual information, broken down into cognitive and technical elements. E.g. training, coaching, counselling, modelling, storytelling and learning by doing along with methods of collaboration involving teamwork. Using analogies in mind, paradigms, schemata and beliefs that assist people in understanding their environment. Technical with definite skills and know how in a specific context. Tacit knowledge can best be transferred through personnel movement and the collaboration of individuals (Lahti & Beyerlein, 2000). It is a knowledge typically acquired on the job or in the situation where it is used. Such knowledge emerges over time and is learned by immersion rather than by rote. It becomes a habit or routine (Chilton et al, 2007; Bloodgood & Salisbury, 2001; Ambrosini & Bowman, 2001).
For an optimal mix of both types, knowledge might consist for a large part of tacit knowledge. Explicit knowledge without tacit insight quickly loses its meaning. Information becomes knowledge once it is understood and its value, including how it can be used, is learned (Lahti & Beyerlein, 2000).

The preference to rely on explicit knowledge rather than accessing tacit knowledge as well may result in suboptimal outcomes. Explicit knowledge without the concomitant tacit knowledge is incomplete. Codifying knowledge into more explicit form for transmission using less rich media can result in a loss of critical components of the knowledge. Much people believe that it will result in a suboptimal solution when used in a problem solving task. (Bloodgood & Salisbury, 2001; Chilton & Bloodgood 2007; Bradley et al, 2006).

Knowledge is created through interactions between tacit and explicit knowledge, rather than from tacit or explicit alone. In the real world nearly all complex skills are acquired with a blend of the explicit and the implicit (Reber, 1989; Nonaka et al, 2000; Axelsson et al, 2005; De Man, 2004). The knowledge transfer process for a certain situation is likely to involve a simultaneous transfer of degrees of tacit and explicit knowledge (Lahti & Beyerlein, 2000). Tacit knowledge exists in the mind and governs the use of explicit knowledge. Codified pieces of knowledge serve as a basis for exchange, nonetheless tacit knowledge plays the central role in interactions (Bradley et al, 2006; Creplet et al, 2001). The conversions between these two kinds of knowledge are the essence of knowledge creation (Nonaka, 1994; Nonaka et al, 1998).

It can be argued that tacit knowledge remains ahead of explicit knowledge. That tacit knowledge is prior to explicit knowledge. As tacit learning is the default mode (Reber, 1989; Ambrosini & Bowman, 2001).

2.2. Tacit and explicit knowledge and its effect on organizations

Gaining and retaining competitive advantage is crucial to a company’s growth and success. Within this competitive advantage, creating knowledge and the ability to learn are seen as core competence. Generation of knowledge is necessary to innovate and to survive in today’s knowledge based competition. It is a must to have the right knowledge for the job to maintain competitive advantage. Adherents of the resource based view generally agree that the most strategically important resource is knowledge (Slater, 1995; Tsang, 1997; Nonaka, 1998; Foote et al, 2002; Lin et al, 2007; Osterloh & Frey, 2000; Collins & Hitt, 2006).

Bloodgood & Salisbury (2001) argue that four characteristics of a resource should be available to be the basis of a sustainable competitive advantage. A resource should be
(1) valuable, (2) rare, (3) inimitable and (4) non-substitutable. Tacit knowledge is a crucial source of sustainable competitive advantage, because it is difficult for competitors to imitate it. Moreover, it contributes to several of the above aspects (Osterloh & Frey, 2000). Tacit knowledge is argued to be difficult to imitate, to substitute, to transfer and to be rare. These characteristics show why tacit knowledge can be argued to be a source of advantage according to the resource-based view (Collins & Hitt, 2006). Skills that are explicit are skills that are unlikely to be source of sustainable competitive advantage, because they are easy to imitate and transfer across organizations. Indicating that as the knowledge becomes more codified and more easily taught, the more likely it will be transferred to a third party rather than to a wholly owned subsidiary. This does not mean that they are not valuable (Ambrosini & Bowman, 2001; Kogut & Zander, 2003; Collins & Hitt, 2006).

A necessary condition for trade among companies and among countries is comparative advantage: differences in productivity in carrying out economic activities make it desirable for companies and nations to specialize and trade the products and services that reflect their superior capabilities. Companies have sustainable competitive advantage when they consistently produce product/delivery systems with attributes which correspond to the key buying criteria for the majority of the customers in their targeted market. (Hall, 1992; Kogut & Zander, 2003).

It can be argued that EP are knowledge brokers. They can be seen as the providers of appropriate knowledge to help their customer’s organization in its struggle to create and maintain competitive advantage. They are containers of knowledge and related to tacitness, the key factor to make the knowledge available. As EP are knowledge brokers because of their experience level, it can be argued that they are asked to fill in the gap for tacit knowledge.

**Proposition 1:** High need for tacit knowledge is positively related to a high need for an EP.

As tacit knowledge is prior to explicit knowledge. And competitive advantage is most sustainable when the knowledge is tacit knowledge. Creating knowledge is most effective if blended from both types explicit as tacit as well. Herewith it can be argued that the tacitness of the knowledge is related to the degree in which the transferred knowledge is useful within the perception of receipt of knowledge.
Proposition 2: High level of tacitness of the knowledge transferred is positively related to a high level of perceived receipt of useful knowledge.

2.3. Tacit and explicit knowledge and its effect on temporary work agencies.

TWA for professionals are companies within which knowledge is the key asset. These companies are major actors of the knowledge-based economy since they are both influenced in their activity by the new paradigm and among the most active heralds of this new economy. They claim to have relatively high statuses and complex knowledge bases (Creplet et al, 2001; Morris & Empson, 1998). In such companies, different forms of knowledge are capitalized and exchanged. These pieces of knowledge come both from experiences gained in missions carried out in client companies and from codified sources. Although knowledge transfer (KT) is necessary for all organizations, it is especially critical for the TWA, because knowledge is the asset of the services such a company offers its clients. The most important asset of the TWA is the knowledge it holds and the way it uses it. A company’s competitive advantage is based on the value it can develop for its customers-value that emanates from the knowledge of its employees. Their fundamental assets thus rely in the cognitive ability of their employees (Lahti & Beyerlein, 2000. Creplet et al, 2001). TWA for professionals are thus knowledge catalysts, one of the assets of the economics of knowledge. And their knowledge workers are knowledge agents for the companies they are in contact with (Creplet et al, 2001). Within the TWA companies, this accumulated knowledge of the EP is enabled by using IT as a means to catalogue who has the knowledge, and then enabling individuals in the organization to coordinate face to face meeting times where the on-the-job training that enables the transmittal of tacit knowledge can more readily take place (Bloodgood & Salisbury, 2001). The above provide support for the contention that TWA specialize in the transfer of knowledge that is difficult to understand and codify. Such when a TWA company shares its expertise with its clients (Lahti & Beyerlein, 2000; Kogut & Zander, 2003).

The most important asset of the TWA is the knowledge it holds and the way it uses it. A company’s competitive advantage comes from the value it can develop for its customers-value that emanates from the knowledge of its employees. Their fundamental assets thus rely in the cognitive ability of their employees (Lahti & Beyerlein, 2000. Creplet et al, 2001). As knowledge broker from a TWA not only external transfer of knowledge but also the internal transfer of knowledge is important in terms of sustaining competitive advantage. Hence, the perception of the EP related to the transfer of knowledge is a crucial factor.
2.4. Tacit and explicit knowledge related to external professionals

An EP is someone who is characterized by superior performance within a specific domain of activity. The knowledge of an individual professional consists of a cognitive element, the individual’s viewpoints and beliefs and a technical element, the individual’s context specific skills and abilities. It can be concluded that experience alone is not an indicator of expertise, other factors, such as cognitive ability to correctly structure those experiences, must also be present (Bradley et al. 2006).

Typically in the literature, knowledge workers are considered as highly educated individuals who often have been trained in a particular profession. Drucker (1993) also characterized knowledge workers as individuals who had high level of education and special skills and combined these assets with the ability to identify and solve problems. Knowledge workers deliver an interpretation of reality highly conditioned by the type of demand they face. They have the capability to rely on previous knowledge (experience) and to reshape pieces of knowledge in a new way (Creplet et al. 2001). EP are supposed to have more experience and knowledge since they occupy, by the very nature of their activity, a privileged position in several companies. Through the temporary assignment, the EP is connected to many companies in different industries. The EP is confronted with a stimulus environment about which knowledge must be acquired in order to respond effectively (Reber, 1989; Creplet et al, 2001; Morris & Empson, 1998). Morris and Empson, 1998 also argue that such expertise increases with seniority. Knowledge is viewed as information which professionals acquire through experience and training, together with the judgement which they develop over time which enables them to deploy that information effectively in order to deliver client service. The variety of individual experiences in interaction and the knowledge of the experience. (Creplet et al, 2001; Morris & Empson, 1998). On the practical level many experts are often unable to express clearly all they know and are able to, and how they make their decisions and come to conclusions. (Koskinen et al. 2003) They process information and create new tacit knowledge but their visible output is mostly communicated as information. (Sveiby, 1996).

As a result of this position the EP is aware of a large set of business problems as well as a large set of solutions. EP work more efficiently since they benefit from a large empirically validated and highly varied knowledge basis. They act as ‘knowledge brokers’ and are recognised as such by clients. They are part of and within the various organisations in which they have to intervene. An EP is then an intervener who is temporarily involved in a particular process of knowledge creation (Creplet et al, 2001). Using a number of means to transfer knowledge, including technology such as
Tacit knowledge is prior to explicit knowledge. And competitive advantage is most sustainable when the knowledge is tacit knowledge. Creating knowledge is most effective if blended from both types explicit as tacit as well. Herewith it can be argued that the tacitness of the knowledge is related to the degree in which the transferred knowledge is useful related to the perception of the sender.

**Hypothesis 1:** High level of tacitness of the knowledge transferred is positively related to a high level of perceived transfer of useful knowledge.

Figure 1; research model.

2.5. Components of tacit and explicit knowledge.

Knowledge may actually exist on a continuum, with explicit knowledge and tacit knowledge anchoring the respective ends. The definition of ‘tacit’ skills may encompass a range of different degrees of tacitness (Breite & Koskinen, 2004; Koskinen et al. 2003). As two anchor points we can have ‘explicit skills’ i.e. skills that can easily be communicated, codified and shared, and, tacit skills that are totally unavailable and not accessible to the knower’s because they are too deeply ingrained in the unconscious mind. In between these two extremes, one can find distinguish intermediate degrees of tacitness: tacit skills that are unarticulated but that could be articulated readily if organizational members were simply asked the question: how do you do that? There are also tacit skills that could be accessed but that cannot be expressed through the standard
use of words. They could however be articulated differently, maybe through the use of metaphors or storytelling (Lahti & Beyerlein, 2000; Ambrosini & Bowman, 2001). Nonaka, 1994, Nonaka et al, 1999 and Sveiby, 1996, describe these degrees of tacitness as an iceberg. Its explicit visible tip above and a large tacit part of the knowledge iceberg invisible below the surface. If observed part of the tacit iceberg below surface can be articulated and even a larger part needs metaphors and analogies to express or utilize.

Chilton et al, (2007) argue that the characteristics of tacit and explicit knowledge are of vital importance to managers and researchers as the competitive playing field expands, because they influence the nature of the creation, storage, transfer and the use of knowledge. As such, knowledge that is more explicit can be knowingly created, stored in an accessible manner, easily transferred and used in a conscious and intentional manner. On the other hand, knowledge that is more tacit is likely to be unknowingly created, stored in a manner that is only accessible in a non-conscious manner, difficult to transfer and used in a non-conscious and unintentional manner.

The characteristics of tacit and explicit knowledge can be classed according the four main characters as stated by Chilton et al, (2007). The tacitness of knowledge can be rubricated in (1) conscious awareness, (2) expressible, (3) demonstrability and (4) Formality.

First element of characterizing tacitness is the lack of conscious awareness, which means that when tacit knowledge is being used the user is not consciously aware of it. Many times the possessor of the knowledge is unaware of its existence, due to its implicit nature. It typically is created through personal experience, but the experience has occurred in the past and to such a frequency or repetition that the possessor is no longer aware of the particulars of its existence. That is, although a knowledge base from previous experience is present, an individual may automatically utilize this knowledge base when needed but does not consciously think through the steps, required to apply the knowledge. (Chilton & Bloodgood, 2007; Bloodgood & Salisbury, 2001; Ambrosini & Bowman, 2001; Lahti & Beyerlein, 2000.).

We are usually unaware of tacit knowledge, using terms like intuition or natural ability. A considerable portion of memorial content is unconscious, and, even more important, a goodly amount of knowledge acquisition takes place in the absence of intent to learn. The pickup of information takes place independently of consciousness or awareness of what is picked up. (Bradley et al, 2006; Reber, 1989; Sveiby, 1996).

This reduced conscious awareness contributes to the inability of the EP to fully explain their behavior. EP are not consciously aware of the tacit knowledge they use. (Chilton & Bloodgood, 2007, Bradley et al, 2006). By which it can be argued that conscious awareness of the knowledge is an indication for explicit knowledge.
Tacit knowledge is knowledge that is difficult to articulate and express to others. The management of this type of knowledge is a difficult process given that the knowledge is difficult to express. (Chilton & Bloodgood, 2007; Bloodgood & Salisbury, 2001; Ambrosini & Bowman, 2001). The ability to express covers both written and oral form. Explicit knowledge is easily captured, codified and expressed. When the domain knowledge is highly cognitive or complex: natural language may not be sufficient or appropriate for expressing domain models or involved procedures. (Bradley et al, 2006). The more difficult is to express the knowledge, it can be indicated that is has a more tacitness level.

Despite their best efforts, parties may find that language fails them. They resort of other means of communication instead. Demonstrations, learning by doing, and the like may be the only means of achieving understanding when such language difficulties develop. (Conner & Prahalad, 1996). This is represented by an EP ability to perform the necessary tasks based only on seeing the activity performed or the final outcome. The greater the ability, the greater the reliance on tacit knowledge and the better able is the person to complete all the steps within a task without as much detailed explicit instructions. (Chilton & Bloodgood, 2007). Especially in complex situations that contain steps that are relatively obscure, an individual with the appropriate tacit knowledge can more easily perform the functions necessary to complete the task. (Godfrey & Hill, 1995). Transfer of tacit knowledge requires either that it is made explicit or that it is taught through a process of observation and imitation. (Grant & Baden-Fuller, 1999). To observe the task at hand and the skills of others in solving the task, as in a master apprentice relationship. Observers come to share beliefs about which actions are successful and which are not. Increasing their potential to act in similar situations. (Krogh, Ichijo & Nonaka, 2000; Collins & Hitt, 2006). This relates demonstrability to tacitness of the knowledge.

Despite indications that all knowledge could be transferred, it is to agree that the most difficult kind to transfer was tacit, because it is informal. The degree to which an EP appears to be applying the knowledge base in a formal or informal manner is an indication of tacitness. The tacit knowledge did not necessarily seem to be transferred intentionally. Often, it would be a by-product of the process of collaboration and personnel movement (Lahti & Beyerlein, 2000; Chilton & Bloodgood, 2007). An informal community of social interaction provides an immediate forum for nurturing the emergent property of knowledge at each level and developing new ideas. The potential contribution of informal groups of organizational knowledge creation should be related to more formal

2.6. Factors that influence tacit knowledge transfer.

The personnel responsible for encoding and decoding must have similar backgrounds or operate in a similar environment, otherwise misunderstandings will arise because the implicit assumptions of the decoder will differ from those of the encoder. Cognitive limitations prohibit individuals from possessing identical stocks of knowledge (Kogut & Zander, 2003; Conner & Prahalad, 1996; Koskinen et al. 2003). There will be a difference in the knowledge that is brought to bear and hence in their joint productivity. This conclusion depends on the straightforward assumption that the customer and EP each possess experience, insights, or skills that are to some extent different from those of the other (Conner & Prahalad, 1996). The inclusion of new resources limits the applicability of existing tacit knowledge and provides for expanded role of explicit knowledge in the change strategy. Organizations do not possess tacit knowledge about new resources, because they have not worked with them (Bloodgood & Salisbury, 2001). If companies differ in their codes by which information is transferred, then it follows reasonably that they should differ in their capabilities to understand and apply knowledge. Resulting in functional differential results from knowledge, skills and experience of employees (Hall, 1992; Kogut & Zander, 2003).

Tacitness will increase costs of transfer and decrease the speed by which knowledge is transferred within the company or between partners. Tacit knowledge cannot quickly migrate, i.e. it cannot be transposed to other companies, because the knowledge depends upon specific relationships (between colleagues, customers, etc.). Relationships are adjusted to meet the communication requirements and thus the structure of knowledge is modified in the elicitation process (Bradley et al, 2006; Kogut & Zander, 2003; Ambrosini & Bowman, 2001). Learning tacit knowledge and skills requires continuous day-to-day contact with the person, team or organization possessing such knowledge through an apprentice like relationship where skills are directly observed and practice (Ambrosini & Bowman, 2001). Tacit knowledge can be efficiently marketed only if it is encapsulated in goods or services. The transfer of tacit knowledge within and between teams cannot be directly observed and the output cannot be attributed to a particular employee. At best, managers can observe the result of knowledge generation and transfer in terms of output (Osterloh & Frey, 2000).
Cultural values and frames of reference directly affect the creation and transfer of knowledge. Because knowledge is socially constructed, the human capability to capture and understand complex knowledge is culturally constrained (Collins & Hitt, 2006). Companies desiring at acquire or transfer knowledge must emphasize the development of positive inter-personal dynamics (Collins & Hitt, 2006). Interpersonal skills enable people to represent and subordinate themselves to project work. Without losing the EP’s autonomy, because the organization may increase the possibility to introduce unexpected opportunities (Nonaka, 1994). The way of perceiving knowledge is revealed through interaction, as part of the social world as a social process. It is also facilitated by intensive personal contact (Collins & Hitt, 2006; Koskinen et al, 2003).

Hypothesis 2: Communication is positive related to the level of tacitness of the knowledge transferred.

The presentation of the EP self as a social identity is based on trust, which build itself through interaction and which corresponds to its environment (Koskinen et al, 2003). A physically shared situation enables with building a field of interaction (Koskinen et al, 2003; Nonaka, 1994). Accessibility determines the type and frequency of interactions that occur (Koskinen et al, 2003). For sharing experience, it first needs to build mutual trust among members. Trust as a determinant of the amount of cooperation (Nonaka, 1994; Kandemir & Hult, 2005).

Koskinen et al, 2003, argue that the greater the level of trust, the greater the level of accessibility and efficient transfer of tacit knowledge. The inherently complex process of transferring tacit knowledge requires greater attention to the relational dimension of social capital than does other forms of knowledge. Tacit knowledge transfer requires greater trust than does explicit transfer (Collins & Hitt, 2006). In reviewed literature trust is the most common mentioned element in transferring tacit knowledge. Trust is an important feature of relationship quality (Kandemir & Hult, 2005; Collins & Hitt, 2006; Nonaka, 1994). Successfully transferring tacit knowledge requires that EP intentionally cultivate relationships that create common experiences and a mutual understanding of symbolic meanings (Nonaka, 1994; Collins & Hitt, 2006). Interpersonal skills have a direct effect on trust. Trust builds incrementally and it accumulates, directed by the process of relationship development (Breite & Koskinen, 2004).

Trust is based on expectations. Expectations are based on the trust giver’s perception of the motives and abilities of the trustee. Sharing of knowledge within the supply chain context is assisted by the parties’ strong commitment to the goals of the transaction.
(Breite & Koskinen, 2004; Nonaka 1994). Without intention, it would be impossible to judge the value of the information of knowledge perceived or created. According to Nonaka, 1994, “The intentionality of the mind not only creates the possibility of meaning, but also limits its form”. Transferring knowledge is a natural process driven by the need for organizational knowledge. It is a social process. And therefore this process need not be formal (Koskinen et al. 2003). Based on the commitment to goals and the level of formality this should be balanced properly. Trust is the abstract of the social arena in which the knowledge transfer takes place.

**Hypothesis 3: Trust is positively related to the level of tacitness of the knowledge transferred.**

The complete research model is shown in Figure 1. The model represents the relevant hypotheses and research design.
3. Methodology

Both qualitative and quantitative research is used to test the propositions and hypotheses. An interview with clients is used as an instrument to test the stated propositions. The interview, a qualitative research among clients was performed in a variety of branches. To find the answers to the propositions, six clients of the TWA were interviewed to reassess the factors of transfer and sustainability and to be able to relate the internal findings with the outside world. The hypotheses were tested via a mail survey. The questionnaire for the survey was based on an existing five point scales. The survey was carried out among the EP of a TWA. The EP have special logistic and procurement competences. We surveyed 206 EP within a TWA organization in the logistic and procurement competences who have their work area at the actual customer’s organization. To encourage completion respondents were promised, and received, a summary of the research findings. Two repeat mailings of the instrument were carried out to improve the overall response rate.

3.1. Instrument development

To examine the propositions six clients were interviewed. These clients are direct responsible for the content of the EP assignment. The questions are based on the findings within literature review. Prior to the interviews a pre-test interview involving 1 client was executed. The clients were contacted randomly from a list of A status customers. The customers of the TWA were selected within different areas. From Non-profit, water supply, Food and Electromechanical engineering.

To examine the hypotheses, we gathered data from external professionals active within the logistic and procurement area. All professionals originated from the same TWA organization. Preliminary interviews revealed that the group EP engaged in knowledge-intensive work. The results of the quantitative research are used to select the relevant factors within the survey questions. Prior to data collection, we assessed the face validity of the scale items and the general quality of the research design. Via pre-test involving 3 senior and 3 junior professionals. To ensure the quality of informants, we omitted any potential respondents who were not in an internal position within the TWA. We also instructed respondents to answer the survey only if they had finished at least one complete project in a customer’s environment. We used a survey, administered via e-mail as an attachment, which took 20 minutes to complete.
The instrument is submitted to EP in the logistic and procurement competence. Every EP is assigned by the TWA to a specific project within customer’s organization. The environment and characteristics of the customer is new for every assignment. For EP it is required to have a substantial knowledge base in order to complete the project within the specific area. In communication with the TWA every EP has a procedure of follow-up concerning a project plan, mid-term and end evaluation. Part of this end evaluation is describing the used and learned knowledge. By which every EP operates within the same context. In first place six EP where interviewed to gather the factors of transfer and sustainability. The relevancy of the survey questions checked.

Respondents were informed that all responses would be processed anonymously and handled strictly confidential. Before answering the survey questions respondents were asked to have their latest finished assignment in mind in which information / advice was transferred. When within questions referred to a person, to have the person in mind they have transferred knowledge to. The person with whom they had their assignments evaluation should be in mind when there is mentioned client in survey questions.

3.2. Research items

Both interview and survey questions are based on existing research. We adapted the survey items from pre-existing scales in literature. For an appropriate fit, some of the items where modified. See appendix D; Survey items, includes all measurement scales for specific details. It is a combined established scale, used to measure tacitness of knowledge. We combined eight items. Three from Levin & Cross (2004) and five from Chilton & Bloodgood (2007). The first three tacitness measures are based on previous work by Levin & Cross (2004). The latter five tacitness measures are based on the research of Chilton & Bloodgood (2007). The transfer of useful knowledge is measured based on the established scale of Levin & Cross (2004). The factors communication and trust are measured based on research of Fynes et al (2005).

A total of 54 (26%) respondents completed the entire survey. This is above the average response expected for an email survey, which is usually 15 – 20%. The answers were possible within a five point scale. The results are all within an ordinal scale. There are non missing values within the response data received. See appendix A for frequency details. The reliability of the respondent’s data Cronbach’s Alpha (table 1) is above 0,671.
To be able to combine the scores for tacitness, the results of the questions 3, 6 and 8 of the survey were reverse scored. Scores can therefore range from 8 (complete reliance on tacit knowledge) to 40 (complete reliance on explicit knowledge).

The item correlation matrix of the scores for usefulness show negative scores for the questions G and H. The reversed scores show the same results. Both items G & H do not make part of further analyze of the received data. Both questions do refer to the factor time. Within the interviews with clients, absence of enough time is mentioned as the obstruct for transferring tacit knowledge. Tacit knowledge takes time to explain and learn, and so tends to slow the capacity and projects (Kogut & Zander, 1995; Bradley et al, 2006; Kogut & Zander, 2003; Ambrosini & Bowman, 2001).
4. Results

4.1 Qualitative

All the interviewed clients make use of EP. The clients interviewed use an average of 17% EP on their departments workforce. This is a ratio of 1 EP on every 6 employees. With a median of 12% (1:8) and a range of 48% (1:1 – 1:50). Clients use EP for regular and project assignments in most project oriented organizations. Five out of six interviewed clients use EP as extended capacity, not as knowledge provider. The need for EP is for operational capacity to fulfill the operational request. From interviewed clients one has put its request for knowledge on paper. One out of six interviewed clients of customer organizations has a strategy and policy of transferring and retains the tacit knowledge as transferred by the EP. This one client evaluates the assignment based on the practical knowledge transferred to internal employees. As this one client says; “The project delivery is a result of teamwork of the whole team. If the team is still able to do the job again after the EP has left, the knowledge is transferred”. Only this client put its expectations in an agreement with the TWA. Overall the EP delivers its assignments value to client satisfactory due to the overall team performance. To reach the assignments goal when the team reaches due dates and milestones because of extended capacity to control operational lead time. One client starts asking questions concerning the matter of delivered value; “Is the EP pushed or pulled into clients organization? Is there a good match? What is the commitment?”. Not all the knowledge or advice has been written down. If so there are fixed internal structure of procedures to archive the explicit knowledge into an information platform such as intranet.

When placed on a scale the percentage of transferred tacit knowledge is on average 39%. From the knowledge transferred by the EP, clients classify 39% to be tacit knowledge. A ratio between tacit end explicit knowledge of 2:3. With a median of 30% and a range of 90%. The transfer of tacit knowledge can be stimulated with the right personal competencies of the EP. Positive factor of transferring tacit knowledge is matching with client’s organizations culture. Personality and gained trust is seen as key element. Trust is a crucial factor between the sending and receiving party. For this we found confirmation within the relevant literature (Breite & Koskinen, 2004; Collins & Hitt, 2006; Koskinen et al, 2003; Nonaka, 1994; Kandemir & Hult, 2005). To place the EP with employees of client organization into the same room and side by side is an operational factor to stimulate tacit knowledge transfer. This just as found within literature (Collins & Hitt, 2006; Koskinen et al, 2003; Ambrosini & Bowman, 2001). The absence of enough
time is a minor to the transfer of tacit knowledge (Bradley et al, 2006; Kogut & Zander, 2003; Ambrosini & Bowman, 2001).

Four out of six clients give back that they have difficulty in managing the tacit knowledge within their own organization. In four cases the maturity of the client’s organization to absorb tacit knowledge is mentioned as factor. The maturity level of knowledge management and the reliance on intranet and applications for sharing knowledge withhold a good base for tacit knowledge transfer. To retain the transferred tacit knowledge the conditions within the receiving organization should be changed. Another factor is the payment structure of TWA. The clients pay the EP by the hour. Financially there is a commitment based on time, not on the usefulness of the knowledge transferred.

Three clients see the tacit knowledge transferred as a well appreciate by-product and not as part of the EP assignment. For this we found confirmation with the research of Lahti & Beyerlein (2000) and Chilton & Bloodgood (2007). And therewith managing the knowledge transfer of EP is not something with priority. One of the clients mentioned that 15% of the knowledge transferred was tacit, responsible for 60% of the added value the EP represents. EP who transferred tacit knowledge was kept longer in mind of the client.

As there is no formal request for delivery of knowledge, the tacit knowledge transferred not intentionally becomes of greater importance after there is a working relationship started. An informal community of social interaction provides an immediate forum for nurturing the emergent property of knowledge at each level (Koskinen et al, 2003; Nonaka, 1994). In several occasions the transfer of knowledge becomes a formal part of the assignment.

Proposition 1:

High need for tacit knowledge is positively related to a high need for an EP.

We did not find prove for the first proposition. EP are mostly requested for deliverance of extended operational capacity. Contrary to Creplet et al (2001) the EP of the TWA are not recognized as knowledge brokers by clients. Different research show that companies acquire tacit knowledge assimilated from EP (Mtlacher, 2006, Johnston, 1996 & Dawes et al, 2007). That we didn’t found similar results could be, referring to Hall (1992), because of the ratio between perceived value and delivered cost, as reputation as well. Within the interviews results, the payment structure of paying by the hour, just
as the low skilled sector is mentioned as factor. Which is a consequence of strategic choices in TWA (Mitlacher, 2006). When the focus is on cost it will decrease the possibility of transferring tacit knowledge (Kogut & Zander, 2003). When time is money and lack of time is mentioned as key factor within the assignment, it could withhold the transfer of tacit knowledge.

Proposition 2:

High level of tacitness of the knowledge transferred is positively related to a high level of perceived receipt of useful knowledge.

As predicted the receipt of useful knowledge is positively related to the level of tacit knowledge. It increases in importance during the assignment and works as a lever for the added value of the total knowledge spectrum. Although knowledge is not always first assignments request, it is recognized and defines the status and assignments value of the EP. In several interviews it is mentioned a by-product. Just as stated in different research this by-product of not intentionally transferred tacit knowledge taking place in the process of movement of personnel and collaboration (Lathi & Beyerlein, 2000; Chilton & Bloodgood, 2007). The result is similar to that of other research in which is stated that knowledge becomes useful when tacit knowledge makes part of it (Lathi & Beyerlein, 2000; Bloodgood & Salisbury, 2001; Chilton & Bloodgood, 2007; Bradley et al, 2006; Creplet et al, 2001).
4.2 Quantitative

Because of the limited number of results of ordinal scale the correlation of the factors is measured based on Spearman’s rho rank correlation. The coherence is not in all combinations significant. As is shown in table 2; Correlations. Within the cases the coherence interpretation is significant, the correlation between the variables is moderate. In which 0,250 represents a weak and 0,750 represents a strong coherence.

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* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Table 2; Correlations

Hypothesis 1:

High level of tacitness of the knowledge transferred is positively related to a high level of perceived transfer of useful knowledge.

As predicted the level of tacitness of the knowledge transferred is positively related to a high level of perceived transfer of useful knowledge. Although the correlation is moderate (Spearman’s rho 0,325). The result is similar to that of other research in which stated that knowledge becomes useful when tacit knowledge makes part of it (Lathi & Beyerlein, 2000; Bloodgood & Salisbury, 2001; Chilton & Bloodgood, 2007; Bradley et al, 2006; Creplet et al, 2001). The contribution of tacitness of the knowledge in transferring useful knowledge is proven. This result is also similar to that of Lathi & Beyerlein (2000)
in which knowledge transfer for a certain situation is likely to involve a simultaneous transfer of degrees of tacit and explicit knowledge. EP use a mix of tacit and explicit knowledge while disseminating their knowledge to the client organization. The result that knowledge is acquired with a blend of tacit and explicit knowledge is similar to that of other research (Reber, 1989; Nonaka et al, 2000; Axelson et al, 2005; De Man, 2004).

Hypothesis 2:
Communication is positive related to the level of tacitness of the knowledge transferred.

As predicted by hypothesis 2, there is a correlation between communication and the level of tacitness of the knowledge transferred. Although the correlation is moderate (Spearman’s rho 0.318). With reference to the four characters involved within the communication of tacit knowledge, as stated by Chilton et al (2007). Conscious awareness, expressible, demonstrability and formality. The latter is similar to the research of Lathi & Beyerlein (2000). The degree to which an EP appears to be applying the knowledge base in an informal manner is an indication of tacitness. Tacit knowledge emerges from informal activities. (Lathi & Beyerlein, 2000; Hyland et al, 2003).

As relationships are adjusted to meet the communication requirements, interaction as part of the social world as a social process such as intensive personal contact is required to communicate tacit knowledge (Bradley et al, 2006; Kogut & Zander, 2003; Ambrosini & Bowman, 2001; Collins & Hitt, 2006; Koskinen et al, 2003).

Hypothesis 3:
Trust is positively related to the level of tacitness of the knowledge transferred.

In contrast, there is no significant correlation found between trust and the level of tacitness of the knowledge transferred. Research show that the level of trust is related to the transfer of tacit knowledge (Koskinen et al, 2003; Collins & Hitt, 2006). Levin & Cross, (2004) refers to considerable evidence that trusting relationships lead to greater knowledge exchange. When trust exist, people are more willing to give useful knowledge and are more willing to listen and absorb others knowledge. Benevolence-based trust is likely to always matter despite of typology of the knowledge transferred. Competence-based trust had a major impact on knowledge transfers involving highly tacit knowledge.

The significant correlation (Spearman’s rho 0.438) between communication and trust is a possible explanation for the measure of trust to be of the benevolence-based type.
5. Conclusion & recommendations

This study is a step toward integrating knowledge research on knowledge exchange, related to temporary workers or so called external professionals from a temporary work agency. As part of this, we assessed the role of perceived receipt of useful knowledge with the tacitness of that knowledge as mechanism. We are able to show a model that includes communication and trust as relevant factors of knowledge transfer within. Although the tacitness of knowledge is subject of prior research, no one to our knowledge has investigated it specifically within the area of a temporary work agency.

The empirical material presented in this research provides support for a model of knowledge transfer. Both qualitative as quantitative research show that EP use a mix of tacit and explicit knowledge while disseminating their knowledge to the client organization. This is similar to the research of Lathi & Beyerlein (2000) in which knowledge transfer is likely to involve a simultaneous transfer of degrees of tacit and explicit knowledge. The results indicate that tacit knowledge contributes to the usefulness of the total knowledge spectrum.

![Figure 2; Conclusion.](image)

There are three key findings. First, we show that the transfer of tacit knowledge is a factor that contributes to the perceived receipt of useful knowledge. Second this phenomenon of tacit knowledge contributes to the perceived transfer of useful knowledge. These findings support prior research in which it is concluded that knowledge becomes useful when tacit knowledge makes part of it (Lathi & Beyerlein, 2000; Bloodgood & Salisbury, 2001; Chilton & Bloodgood, 2007; Bradley et al, 2006; Creplet et al, 2001). And we revealed that informal communication is related to the transfer of tacit knowledge (Figure 2; Conclusion). It is a confirmation of one of the four major elements to tacitness related to the research of Chilton & Bloodgood (2007). Furthermore, trust
between parties is found to be crucial to the value of the knowledge transferred. Koskinen et al. (2003) also declares that trust is the abstract of the social arena in which the knowledge transfer takes place.

Our study contributes to the knowledge learning literatures. The results adds empirical material in the area of organizational learning strategies. Building at the knowledge about knowledge management programs when external professionals are involved. It ads valuable empirical data to the knowledge management discussion. The similarity in results from our study and existing literature raises the question to what extent our findings reflect the conditions of other competences and other TWA.

Finally, this study holds significance for practitioners. This research offers main insight that can be helpful to practitioners. We offer evidence that tacitness of knowledge contributes to the usefulness of that knowledge. Awareness of this finding can help to improve the assignments content. The results suggest that individual EP and client organization could benefit from developing a common focus of the assignments results. This in terms of a shared vision of what should be achieved related to transferred knowledge. The findings within this research should be an impulse for both TWA and client organizations to invest in further research that could help to increase the maturity of inter-organizational knowledge transfer policy. EP fit in the profile of highly educated employees with a lot of experience and knowledge and although the knowledge is not first interest of clients it is key criteria of their added value to clients organization afterwards.

This study is a first attempt to identify possibilities for transfer and retain tacit knowledge related to a temporary work agency (TWA). More research is needed within other TWA and client organizations in order to establish whether our findings are part of a more general picture. Further research should examine a larger quantity of client’s perceived receipt of useful knowledge related to the tacitness of that knowledge. Moreover, a longitudinal research of both, receiving end sending side of the knowledge transfer could give more insight. The research could be enlarged to other competences and other TWA. Case studies of factual knowledge transfer may give more information regarding the factors of tacitness and the optimal mix of both types of knowledge. This should be done at client as well at EP side during the actual assignment. Also the knowledge content of the assignment could be a topic of research. Additional research is needed to find the relevant factors to increase the organizational maturity related to the knowledge transfer of both parties, EP and client organization.
6. Reflection

This study with its limitations that should be acknowledged is focused on the perception of the EP, all employees of the same TWA within the logistic and procurement competence. We cannot draw general conclusions since this research is based on only a single TWA. An additional study within other TWA and client organizations in order to establish whether our findings are part of a more general picture could overcome this limitation. This also holds for the limited responses of external professionals and just a few clients. Furthermore, all respondents have their actual field of work within the logistic and procurement competence. The conclusions taken from this research should not be generalized without noticing this. An enlarged study within other competences and other TWA, a longitudinal research could give more insight.

The choice for the type of questions with a five point scale, used in the e-mail survey, restricted the analysis of the data of the survey. All measurements are of ordinal scale, which has its limited ability in statistical analysis. We have tested perceptions of transferred as well as perceptions of received knowledge. We did not perform research of factual knowledge transfer between both parties. Case studies of factual knowledge transfer may give more information regarding the factors of tacit knowledge and the optimal mix of both types of knowledge. Results from the questions relate to trust did not reflect the complete spectrum of this relevant factor. Future studies should examine benevolence-based as competence-based trust as well.

Within the literature research differences in interim management, interim professionals, experts and consultancy were neglected. Because of the common main characteristics we treated them as one similar group of EP. Additional study should clarify if there are specific characteristics in nature within these sub-groups related to tacit knowledge transfer.
REFERENCES


Appendix A; Frequencies.

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a. Multiple modes exist. The smallest value is shown

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Communication
### Statistics

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### Trust

Typology of useful knowledge: External professionals knowledge transfer.  
Gudo Ebbers; juni 2010
APPENDIX B: Interview schedule (in Dutch)

Doelstelling:
Relateren van de perceptie van overgedragen bruikbare kennis aan de mate van “tacitness” van de externe professional.

Waarom;
Een groot deel van kennis is vrij beschikbaar. Door externe en interne netwerken kan alle beschreven kennis eenvoudig gedeed en opgevraagd worden. De kracht van de externe professional (EP) zit in de toepassing van deze “theoretische” kennis. Hiernaar is slechts weinig onderzoek gedaan. Vaak is de ontvangende kant onderwerp van onderzoek. Dit is tegenstelling tot de zender, bron ofwel de houder van deze kennis.

Inleiding;

De inbreng van de klant is noodzakelijk om met de uitkomsten van het verder interne onderzoek de aansluiting met de uiteindelijke doelstelling van EP, het bijdragen aan de bedrijfsdoelstellingen van de afnemer door het leveren van kennis, te waarborgen.

1. Hoeveel fte zijn er in dienst binnen uw bedrijf en hoeveel fte hiervan is EP?

2. Betreft de inzet van deze EP’s projectmatige of reguliere werkzaamheden?

3. Met welk doel zijn EP’s ingezet?
   a. Aan welk soort kennis was er behoefte?
   b. Is deze vraagstelling vastgelegd?

4. Welke bijdrage heeft de kennis / advies van de EP geleverd aan uw tevredenheid tijdens zijn of haar inzet?
   a. Op welke gebieden heeft dit betrekking binnen de organisatie?

5. In hoeverre is het advies van de EP op papier vastgelegd? Bijvoorbeeld door middel van rapporten, handleidingen, processchema’s maar ook door e-mail e.d.

6. In hoeverre is dit advies gedocumenteerd?

7. Hoe zou u het ontvangen advies willen typen?
   a. Wat is uw mening over praktische know-how?

8. Welke factoren beïnvloeden naar uw mening de overdracht van tacit knowledge tussen de EP en uw organisatie?
   a. Stimulerend?
   b. Belemmerend?

9. Kunt u aangeven welke factoren er voor zouden kunnen zorgen dat de overgedragen kennis behouden blijft als de EP uw organisatie weer heeft verlaten?
APPENDIX C: Client references

Mrs. S. Roijakkers  
Cluster manager technical center / Technical unit processing Surface Radar  
Thales Nederland BV, Hengelo (Ov)

Mr. J. Van Hout  
Director supply chain DMV  
FrieslandCampina, Lochem

Mr. S. Hemmer  
Afdelingsmanager inkoop  
Vitens, Zwolle

Mrs. A. Niesert  
Hoofd inkoop  
UWV, Facilitair bedrijf, Amsterdam

Mr. R. Jongbloed  
ANSC Supply manager  
Mr. J. Siero  
Regional supply chain manager  
Abbott Logistics BV, Zwolle

Mrs. E. v/d Berg  
Hoofd inkoop  
Unive, Zwolle

Due to the privacy of the individual interviewed, meeting reports are part of this report.
Appendix D: Survey items

Usefulness of the knowledge transferred;

A. The information/advice I transferred to this person made (or is likely to make) the following contribution to client satisfaction within this assignment.

B. The information/advice I transferred to this person made (or is likely to make) the following contribution to the team overall performance.

C. The information/advice I transferred to this person made (or is likely to make) the following contribution to this assignment's value to the organization.

D. The information/advice I transferred to this person made (or is likely to make) the following contribution to this assignment quality.

E. The information/advice I transferred to this person made (or is likely to make) the following contribution to this assignment coming in on budget or closer to coming in on budget.

F. The information/advice I transferred to this person made (or is likely to make) the following contribution to reducing cost on this assignment.

G. The information/advice I transferred to this person made (or is likely to make) the following contribution to client being able to spend less time on this assignment.

H. The information/advice I transferred to this person made (or is likely to make) the following contribution to shortening the time this assignment took.

Answering model A - H; five point scale.
Contributed very negatively; contributed negatively; contributed neither positively nor negatively; contributed positively; contributed very positively.

Tacitness of the knowledge transferred;

1. Did you explain all the advice/information in writing? (In written reports, manuals, e-mails, faxes etc.)

Answering model 1; five point scale.
none of it; To little extent; half of it; To great extent; all of it.

2. How well documented was the information/advice that you transferred to this person? Consider all the information or advice.

Answering model 2; five point scale.
not well documented; To little extent; half of it; To great extent; very well documented.

3. What type of information/advice is transferred?

Answering model 3; five point scale.
Only reports; Most reports; Half know how, half reports; Most practical know how; Only practical know how.
4. Could the knowledge you used be written down?
5. Could the information/advice be written down so that anyone could be successful?
6. Would you have difficulty writing down the information/advice you used?
7. Could the information/advice be explained so that anyone could be successful?
8. Would you have difficulty in explaining the information/advice?

Answering model 4 - 8; five point scale
Not at all; To little extent; To some extent; To great extent; Completely

Communication factor;

I. Exchange of information/advice in this assignments relationship took place frequently and informally, and not only according to a pre-specified agreement.

II. In this assignments relationship, any information/advice that might helped the other party will be provided for them.

III. Both parties in the assignments relationship would have provided proprietary information/advice if it can help the other party.

IV. Both parties in the assignments relationship kept each other informed about events or changes that may affect the other party.

Answering model I – IV; five point scale
Strongly disagree; Disagree; Neither agree nor disagree; Agree; Strongly agree

Trust factor;

i. Based on your past en present experience, how would you characterize the level of trust in its working relationship with this client?

ii. We feel that this client can be counted on to help us.

iii. We feel that we can trust this client completely.

iii. This client has a high level of integrity.

Answering model i – iii; five point scale
Strongly dissatisfied; Dissatisfied; Neither satisfied nor dissatisfied; satisfied; strongly satisfied