The Drama of Knowledge Transfer in a Merger Environment

A Case Study

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Abstract

The Drama of Knowledge Transfer in a Merger Environment

A Case Study

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This research explores the links between organizational learning and knowledge management, emphasizing the roles that organizational culture and infrastructure play in supporting and facilitating organizational learning. A review of the literature is followed by a discussion of the development of one specific corporate event – the implementation of knowledge structures at a large hi-tech company during a merger. The research begins with a retrospective look at Merger 1 between Company A and Company B, focusing on what was learned from the knowledge management process during the merger.

As a result of Merger 1, forming Company A[1], knowledge management and transfer was recognized as the conscious control of a key corporate asset for the purpose of advancing organizational learning, strengthening the organization's ability to sustain and expand its core competencies and securing competitive advantage (Foley Curley and Kivowitz, 2001). In the corporate boardroom of Company A[1], senior management postulated, "...that knowledge management and transfer is a key business process to ensure business continuity..." Management asserted that these processes would be implemented in Merger 2, a subsequent union of Company A[1] and Company C.

This research explored the knowledge transfer process, as a case study using quantitative and qualitative methodologies. My research question deals with the perceived effectiveness of knowledge management / transfer, including the capture of intellectual capital during Merger 1 and Merger 2. The study examines the business practices, and barriers to employee participation in the knowledge management / transfer process during Merger 2.

This research contributes to the scant literature on knowledge transfer and knowledge management in a merger environment. Specifically it documents the merger parameters and the trials and tribulations of implementing a systematic knowledge transfer approach in a merger environment. It contributes to management studies an understanding of the interplay of organizational structure and roles and responsibilities for knowledge transfer in a merger. To sociology it contributes understanding the pivotal role culture plays in the knowledge transfer process. To educational technology it supports the varied human performance technology literatures and tests various elements of it using case study methodology. Kakabadse and Kouzmin (2003), eloquently state "it can be argued that knowledge management is not about managing knowledge, but about changing entire business cultures and strategies of organizations to ones that value learning and sharing" (p. 86).

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To the employees who participated in the research, I thank them and am grateful for their input. Their participation contributed to the completion of the dissertation. This research would not have been possible without the leadership from the organization in question. I am particularly indebted to the President who believed in the research and supported the proposal. He created the opportunities that contributed to my development both professionally and academically, for that I remain obliged.

Dedicated

To my parents …

To Rosa whose courageous battle with cancer continues to motivate me …

To my family, Joe and particularly my children, Natasha and David

who continue to inspire my thoughts …

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CHAPTER 1

The Beginning

Introduction

It is easy to see how knowledge transfer gets confined to hallway conversation during a merger or acquisition. Things are happening fast: synergies must be realized, strategies fused, communications conveyed, employees realigned, and tensions mollified all while Wall Street watches with ever demanding eyes. It seems that the only time people are actually able to talk is in the hall on the way to the next meeting.

But wait... What if the merger doesn't transfer the knowledge and intellectual capital stored in people's heads and, or at least on their computer? All the plans that were made during the pre-merger rush can be lost. Elizabeth Lank, program director, knowledge management at ICL (Houlder, 1997) has argued, "managing knowledge is expensive but the cost of not managing knowledge is enormous" (p.10).

At the top of the CEO's agenda has to be knowledge transfer and knowledge management including acquisition of intellectual capital from exiting employees to ensure business continuity and business longevity as a critical success factor of the merger. These are topics everyone seems to be comfortable talking about – at an abstract level. Delve into the details, however, and the same people tend to get lost quickly. They possess little insight into how to actually transfer and manage knowledge, and so they tend to over-compensate by over-using the few techniques they might know.

While a number of authors and scholars have attempted to define "knowledge" including some dating back to Plato and Aristotle, to more recent authors such as

Davenport and Prusak (2000), Nonaka (1991) the question remains: what is knowledge and exactly how do you transfer, and manage knowledge? Davenport and Prusak (2000) defined knowledge as:

> "A fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes imbedded not only in documents or repositories but also in organizational routines, processes, practices, and norms" (p. 5).

This research reviews the processes that were used for knowledge transfer during the merger (Merger 1) of two hi-tech companies, A and B. The exploratory case study examines why the implementation of knowledge transfer and knowledge management alone (in the absence of support structures) was insufficient for successful execution of knowledge transfer during the integration forming Company A[1].

In addition, it examines how the lessons from Merger 1 were used to define a process, timeline, and infrastructure to develop a plan for knowledge management and transfer during Merger 2 (Companies A[1] and C). The timeline below (Figure 1) illustrates the sequence of events that began in 1999.

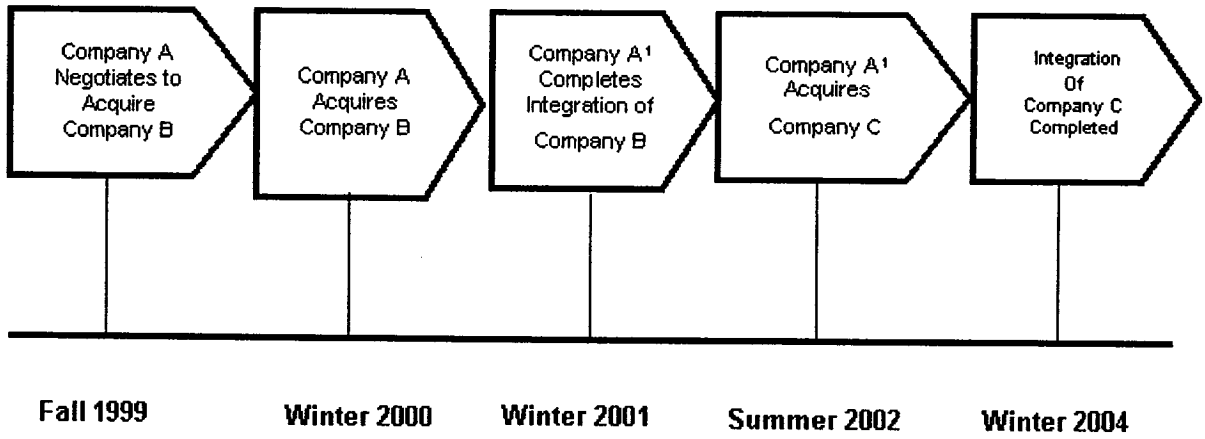

Figure 1 – Acquisition Timeline

This is an exploratory case study that applies mixed method research methodology, which is a procedure for collecting, analyzing, and mixing both quantitative and qualitative data to understand a phenomenon (Johnson & Onwuegbuzie, 2004, p. 17). Follow-up one-on-one interviews have been conducted with those involved in Merger 1 including senior management, managers, and project managers, representing a cross section of managers. The objective of this exercise was to determine whether the overall knowledge transfer initiative succeeded, identify the different techniques used for the process, and discuss lessons and best practices. The interviews occurred during the months of October and November 2000. The discussion document used to guide the discussion is presented in the Appendix section.

Intended Contribution to Knowledge

This research offers a practitioner's perspective on knowledge transfer. In addition the research proposes a Knowledge Transfer Model (KTM), which builds on the lessons from Merger 1 and aspects of the knowledge management literature.

A retrospective look at lessons from Merger 1 contributed to the development of the knowledge transfer process during Merger 2. A survey questionnaire anchored in the following merger parameters, identified in Merger 1, was used to measure manager's perceptions of the knowledge transfer process during Merger 2. Each merger parameter contributes to knowledge transfer.

- Communication
- Process
- Culture
- Individual commitment
- Personal attitudes

The model below (Figure 2) shows how the merger parameters relate to the interaction between the individual and the organization. It demonstrates that the flow of knowledge is a continuous process of interaction among individuals and the organization. It is this on-going interaction that shapes and transforms knowledge from tacit to explicit and explicit to tacit (Nonaka, 1991) to ensure business objectives are reached.

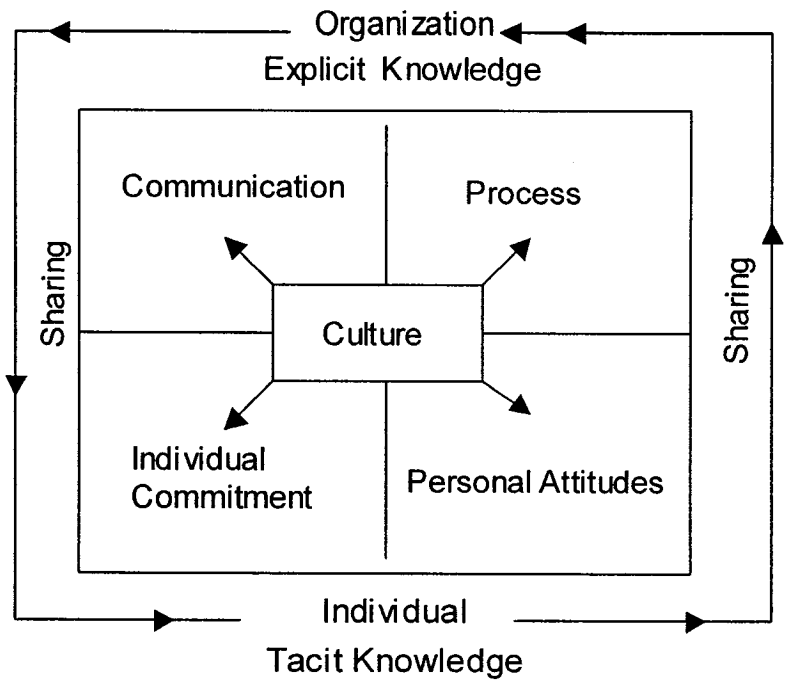

Figure 2 – Knowledge Transfer Model / Framework

In the article, "The Knowledge-Creating Company", Nonaka discusses the notion of a "spiral of knowledge" (Nonaka 1991 p. 4), proposing that the distinction between tacit and explicit knowledge creates four patterns for creating knowledge in an organization: from tacit to tacit; from explicit to explicit; from tacit to explicit; and from explicit to tacit. "In the knowledge creating company all four of these patterns exist in dynamic interaction, a kind of spiral of knowledge" (p. 4). "The act of articulating tacit knowledge into explicit knowledge is the critical step in the spiral of knowledge. The reason is that both require the active involvement of the self – that is, personal commitment" (p. 5).

In Figure 2, the upper two quadrants (communication and process) and the central rectangle (culture) focus on the organization. It is the organization's responsibility to ensure there are appropriate structures in place that are conducive to

knowledge transfer. The two lower quadrants focus on the individual and reflect the individual's commitment and personal attitudes. The respective merger parameters work in unison to contribute to successful knowledge transfer, regardless of the business environment. The model builds on the notion put forward by Nonaka and Takeuchi (1995) where they note, "knowledge is related to human action; and individuals create knowledge, but organizations can create a context for individuals to create and amplify knowledge" (p. 58). Takeuchi (1998) argues, "knowledge conversion is a social process between individuals as well as between individuals and an organization. But in a strict sense, knowledge is created by individuals ... an organization cannot create knowledge by itself" (p. 9). The model also takes into account the fact that knowledge is not static and "is changeable and changing even in its use and reuse" (Dixon, 2000, p. 159). The proposed Knowledge Transfer Model (KTM) will be further discussed in the chapters that follow.

The following section discusses frameworks suggested by other researchers. Note these frameworks are discussed in the context of a normal business environment unlike the Knowledge Transfer Model / Framework which evolved in the context of a merger.

Davenport and Prusak (2000) offer measures that may contribute to creating a culture that values the creation, sharing, and use of knowledge (p. xii). They include from (p. xiii):

- Incentive structures that reward people on their basis of knowledge contributions
- Senior executives that set an example of knowledge behaviors

- Evaluating decisions and decision making on the basis of the knowledge used to arrive at them
- Celebrating and rewarding people for sharing knowledge
- Hiring new workers partly on the basis of their potential for knowledge behaviours
- Giving workers and managers some "slack" for knowledge creation, sharing, use and general reflection
- Educating all employees on the attributes of knowledge-based business and knowledge management

Syed-Ikhsan and Rowland (2004) "put forward the following conceptual framework complete with five main groups of factors to explore the relationship between the particular variables and the creation of knowledge assets and explain the performance of knowledge transfer" (p. 98):

- Organizational culture
- Organizational structure
- Technology
- People/Human Resources
- Political Directives

The success of any project depends on the integrity of the implementation plan. Pritchett (1997), emphasizing the need for a systematic project management approach, says " the absence of the discipline and structure that a project management approach makes possible, results in a poorly run integration that results in resource drain, loss of focus for both organizations and serious slippage in productivity" (p. 117).

Figure 3 depicts the conceptual framework, including a series of activities and tools for knowledge transfer, developed by the author as a result of the integration of lessons from the two mergers. Note that the framework shows that a project orientation and a culture of collaboration and knowledge sharing are prerequisites to knowledge transfer. Additionally, the framework highlights the ongoing interaction between the individual and the organization. The framework takes into consideration the need to have tools to codify knowledge, build relationships, and implement training on the process and track the knowledge transfer process. These tools produce the input that eventually is shared within the organization and stored in company repositories such as e-room, email, and intranet available to the organization to ensure business continuity and build an organizational memory. According to Lau, Ning, Pun, Chin & Ip (2005), "it has been proven that the best way to capture and share knowledge is to embed knowledge management into the job of the workers, and to ensure that knowledge is no longer a separate task that requires additional time and effort to input what they have learned and to learn from others" (p. 89).

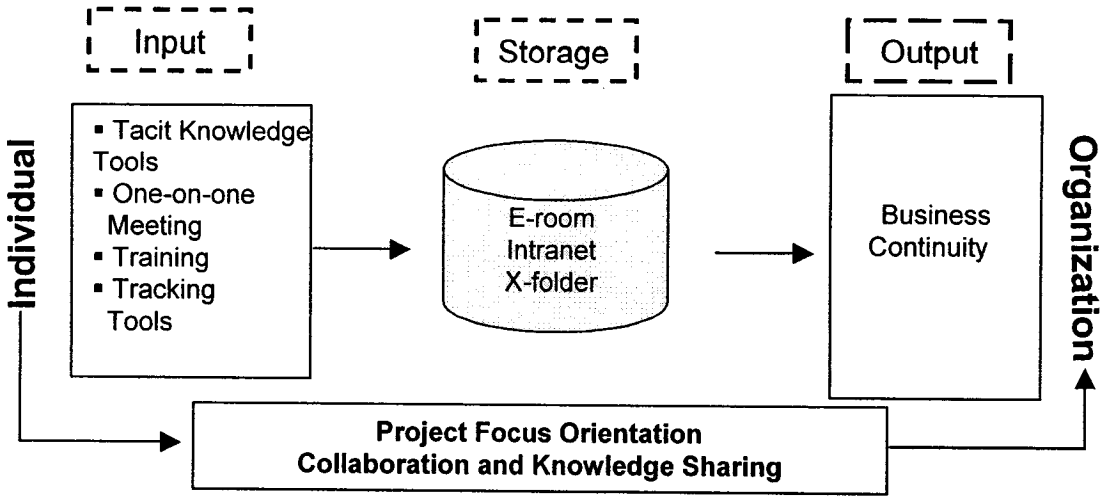

Figure 3 - Conceptual Framework for Knowledge Transfer

This research contributes to the existing literature on knowledge transfer and management and contributes to the limited research on mergers and knowledge management and transfer. More specifically, it will demonstrate the importance, in terms of value added, of knowledge transfer in an organization that is in a chaotic state, at the mercy of its people to ensure a successful integration of two companies, two cultures, two philosophies and two ideologies. While this daunting task was underway, both companies had to remain focused and ensure business continuity and achieve business objectives.

The research begins with an introduction and background information on the companies in question during Merger 1. This is followed by a literature review on knowledge management, knowledge transfer, and mergers in Chapter 2. Chapter 3 introduces Merger 1 lessons and briefly discusses the implications of these. Merger 2 is introduced and discussed in Chapter 4. The discussion includes the development of the knowledge transfer and management process during Merger 2. This is followed by

Chapter 5, an evaluation of analysis of the knowledge transfer process during Merger 2. Chapter 6 concludes the dissertation with a discussion and research implications.

The Company A Story

In early 2000, Company A announced that the deal to merge with B Inc. was completed, signed, sealed, and delivered. This brought closure to a bitter battle between A, B and a third company X. Company A began negotiations with Company B in the Fall of 1999, following news that Company X had placed a bid to merge with Company B. Senior Management was astounded to hear this news - thus the battle began ... this was new territory, a new era for Company A.

A was no stranger to B, with a track record of collaboration going back to 1996. Since 1996, A had been co-promoting with B a major product Q. Product Q was the most successful product for both organizations. B owns product Q but Company A was selected as the co-promotional partner. A's senior management team acknowledged that the proposed merger of B with X could potentially jeopardize the co-promotion relationship that had been established with B; thus X was perceived as a major threat to A's success.

Committed to not permitting X to merge with B, A initiated a takeover. Over the course of two months, senior management engaged in negotiations and a merger was conceived between Company A and Company B. The story begins.

The literature on mergers documents that the reasons commonly cited as to why companies merge are synergies, scale, and research and development (product pipeline), (Koberstein, 2000, p. 48). Koberstein notes that when two companies "marry",

they place a value on the redundant staff and services they can then get rid of (p. 48). The following section documents the background and rationale for Merger 1.

A, a successful hi-tech company, had risen from ranking 20th in 1993 to top 3 in 1999. In addition, it had forecast growth to place it in first place by the year 2000 – one year ahead of the strategic vision. B presents another success story: Product Q had put the hi-tech company on the map. In 1999, B ranked top 10 in the industry. Upon completion of the merger, the "new" A positioned itself as the largest Canadian hi-tech company, ranking number one in sales.

Both organizations were financially healthy, with similar founding principles, values, culture, competencies, and large amounts committed to research and development. Koberstein (2000, p. 48) notes that even in a "merger of equals" one company tends to dominate, creating disruptive asymmetries and instability; at least until the fight finally goes out of the losing side. Merger activities began in early spring, 2000, a brief seven weeks after the official announcement. Senior Management's goal was to move quickly and merge the two companies, while ensuring business continuity.

A governance structure was designed with employees from both entities selected to participate in the integration process. The structure included a Steering Committee, composed of senior managers and a program management office. The Steering Committee was composed of leaders from both organizations. The Program Management Office (PMO) included employees from both organizations. It formed the link between the two organizations and the Steering Committee and was responsible for planning the merger and coordinating the execution of all the projects supporting the merger.

It is well established in the merger literature that mergers and acquisitions are multi-step processes that involve shareholders from both organizations and government bodies. The Shareholder's voice is heard through the voting process usually held at special meetings of shareholders of both companies, while the government's voice is heard through either acceptance or refusal of the merger. Day One is the term used to describe the first business day following the completion – or "closing" – of the acquisition. A number of conditions need to be met before the deal gets to Day One; conditions that must be met before the acquisition can be completed include receiving approvals from regulators.

Upon completion of all the necessary approvals, plans were in place to inaugurate the new company, A[1], on Day One. Day One was long awaited by both organizations, as it marked their ends as separate entities, two cultures, and two collectivities of employees. It was an extremely symbolic day, with well-orchestrated activities at both organizations.

Hagen (2003), senior manager, Intellectual Capital Solutions at Deloitte & Touche has developed a model to proactively derive value from knowledge management intervention strategies in a merger. She recognized that "the challenge for an organization involved in a merger is how to become ready for Day One, the first day of the new organization so they can get to business as usual as quickly as possible" (Hagen, 2003, p.139).

As mergers can send shock waves to the external environment (Koberstein, 2000), throughout the integration planning process senior management's mantra was that "...we need to remain focused. When Day One occurs, the goal is to present one

face to the world – to customers, and partners – with no disruptions to the business". This is of interest because customer perceptions of company brands and image naturally shift when the company merges into another entity (Koberstein, 2000).

In the spring of 2000, the PMO was formally kicked off by both organizations. This was the beginning of a series of meetings with an emotional group of employees from B. At the kick-off meeting roles and responsibilities were defined, communication processes, conflict resolution, and decision-making process were agreed to. It was critical that the interventions that were developed be targeted and have a significant level of rigor including risk assessments as Dormant (1999, p. 242) says "it is not enough for an intervention to be good; it must also be perceived as good by its targeted users" (cp. "implementing human performance technology in organizations"). The success of the integration would be largely dependent on gaining commitment for the merger, trusting each other, and attaining information and cooperation from B. As Conner (1992, p.103) says, "Change management is perception management"; even when all the valued characteristics are present, users may not be able to see them unless they are helped to do so (cp. "implementing human performance technology in organizations" 1999, p. 242).

But given the circumstances under which the merger was conceived, A was perceived as the bad guy, and therefore, faced B employees who were on emotional roller coasters. Koberstein (2000) eloquently states in the article *Miracles, Madness or Mayhem* that "mergers can bring mayhem – a destruction of continuity, accomplishment and culture" (p. 46). It was important for Company A to avoid developing what's known in the merger and acquisition literature as "merger syndrome" (Marks & Mirvis, 1998), described as an organizational response to crisis that can be observed at three levels:

personal level, organizational level and cultural level (Stahl, 2004, p. 1). Stahl defined each level as follows. While the "*personal level* relates to employees' resistance to change and the state of a culture shock that employees experience, the *organizational level* focuses on the executives mode of operation, for example, they adopt a crisis-management approach, the quality and quantity of communication decreases and decision-making becomes centralized; and the *cultural level* experiences dysfunctional culture clashes; for example in-group out-group bias increases and stereotypes become a source of hostility and distrust" (p. 1).

Early in the integration planning process, it became apparent to the program management office that knowledge management was critical to the success of the merger. They acknowledged that it was critical that the intellectual capital, the employee experiences and the know-how that resided in the acquired company be transferred to the acquiring company to ensure business continuity. O'Dell and Jackson (1998) acknowledged that knowledge management is a "conscious strategy of getting the right knowledge to the right people and helping people share and put information into action in ways that strive to improve organizational performance" (p. 4). Getting the right knowledge to the right people appears to be somewhat of a simplistic statement; however, Prokesch (1997) attempts to illuminate the thinking and suggests that,

> "You can't expect others to share their knowledge and resources with you unless you have a strong relationship with them ... We must view relationships as coming together that allows us to do something no other two parties could do – something that makes the pie bigger and is to your advantage and to my advantage ... It is the key to transforming a contractual relationship into a collaboration." (p. 154).

A's goal was that representatives from both organizations would support and expedite the knowledge transfer initiative.

With an integration plan developed and milestones identified, integration activities started quickly. A top priority was the integration team's operating norms: collaboration, sharing of knowledge, commitment, with speed driving the process. Senior management was completely dedicated and devoted to achieving success. Resources were allocated and the program management office, implemented as a temporary parallel organization structure that focused on the integration process was put in place. Members of the various teams, and committees were relieved of day-to-day responsibilities. The model implemented has elements of Nonaka and Takeuchi (1997) "hypertext" organizational structure, which is representative of an open system concept and ensures the ability to "switch context, moving easily in and out of one context into another" (p. 107).

The guidelines and principles provided the program management office with solid ammunition to plan for the merger. In this case study, the focus falls on the knowledge transfer and management part of the plan.

A brief literature review follows, examining areas that play an important role in supporting a knowledge transfer initiative.

Before we continue with the literature review, a few definitions are in order. While Stewart, Wingate and Smith (1963) defined a merger as "an acquisition that takes place with the agreement of the board of the acquired company", Bengtsson (1992) stated that most companies use the terms loosely and interchangeably, and are most likely to settle on a term which is likely to be best received by the business world, confuse competitors, and protect their products (cited in Carrillo & Anumba, 2002, p. 151). Pritchett (1997) extended the definition of merger / acquisition and categorized it

into four broad acquisition postures: rescue, collaboration, contested situation and raid. Each category he says "has its own idiosyncrasies plus unique implications regarding how management should gear up to cope with the difficulties that routinely develop" (p. 17). Koberstein (2000) used the term dominant / dominated company in the merger literature. For the purposes of this research, the terms merger; acquisition; acquired / acquiring company; and dominant / dominated company will be used interchangeably to indicate a change in business ownership.

CHAPTER 2

Literature Review

Introduction

Mergers create a unique business environment for both the 'dominant' company and the 'dominated' company, to borrow Koberstein's terminology. In this environment the transfer of knowledge is indeed imperative if the newly formed company is to continue to perform. A variety of research has been conducted on the technological tools that facilitate knowledge transfer and management. As well, many organizational and sociological research studies have been conducted to understand the dynamic social aspects of an organization. Over the past decade much research has been conducted on knowledge transfer and on international joint ventures. However, no study (to my knowledge) has been conducted to examine the "marriage" of these two: knowledge transfer and management in a merger environment with adequate depth. This exploratory case study explores these dimensions. The following section introduces the literatures on mergers and knowledge transfer.

Introduction to Mergers

In a global organization, mergers are not planned locally. Typically, advance warning is not given. It is an event that is planned at the most senior executive levels and abruptly communicated to the global organization. Mergers historically create uncertainty and chaos in organizations. However, "despite the assumed economic benefits behind them, research indicates that most mergers fail to achieve the synergistic results expected" (Anderson, 1999, p. 1). Furthermore, "empirical studies repeatedly demonstrate that at best, only half of all mergers and acquisitions meet initial financial expectations" (Pikula, 1995, p. 1); "mainly because the deal-makers fail to

anticipate the psychological and philosophical clashes that can undermine the alliance" (Sleek, 1998, p. 1); "only 23 percent of all acquisitions earn their cost of capital" (Huang, Kleiner, 2004, p. 54) and "some corporate mergers, like marriages, end up on the rocks" (Sleek, p. 1).

Following the merger announcement, employees from both companies start experiencing discomfort and the unknown about their future. For employees, mergers can mean opportunity or major disruption in their life. Anxiety spreads; everything employees have worked for in their lives quickly appears to evaporate. This fear permeates as the media sensationalize the merger and focus on the organization's intent to downsize. The marathon of fear begins as employees start questioning the trust they had in their employer, asking 'why the merger?' and wondering how much longer they will remain employed. It is critical that both organizations address this anxiety immediately so that both businesses continue to achieve business objectives and employees get an alternative perspective on the merger.

A growing body of literature indicates that mergers and acquisitions can be a traumatic event in the lives of individuals (Morrison and Robinson, 1997, p. 228). The employment contract between employee and employer is no longer valid, as a new "player" (organization) is now in the cards. Shweiger and Denisi (1991); and Ivancevich, Schweiger and Power (1984) stress that mergers create high levels of stress and uncertainty in terms of how employees view what was and will be expected of them. Blake and Mouton (1984) say, "confronted with a new owner and new reporting relationships, managers are likely to feel tense" (p. 42). Furthermore, they emphasize, "having been employed in an organization in which their memberships were secure, they now find themselves "sold" as a commodity; their expectations from the past are

violated, and they suffer from feelings of worthlessness" (p. 42). "It disrupts your life. You have to make some very hard decisions", said a former manager of Company B, (Krauskopf, 2003, p. 1). Surveys conducted as to why mergers and acquisitions fail to produce anticipated results attribute it to the "botching on the part dealing with people, process, and culture" (Lesowitz, Knauff, 2003, p. 30). Anderson (2003) summarizes and notes that although "executives may be optimistic about the merger, the majority of staff are typically pessimistic or angry about the change" (p. 2).

Mergers usually mean streamlining the business, achieving synergies and more than likely it can be expected there will be many employees from both organizations who will lose their employment. This is coupled with the fact that "in the first four months that follow a deal, productivity may be reduced by up to 50 per cent" (Huang and Kleiner, 2004, p. 54). The irony of it all is that those very employees will be given a critical role in ensuring a smooth transition.

While the merger announcement brings about chaos and employees are reflecting on the past, present and future, management is planning for implementation of the merger. As the merger's primary goal is to achieve synergies quickly, while ensuring business continuity, the acquiring organization needs to find a balance to achieve this goal. Although it is critical to move quickly to plan for the merging of the two companies, there are government rules and regulations that one must adhere to prior to implementing the merger. For example, the merger approval is a critical milestone that allows the merger to forge ahead. While waiting for the required approvals, both organizations work towards maintaining stability in their respective organizations while continuing to achieve business results. It is important for the organizations to create stability as the people in both companies are needed to implement the merger and it is

those very people who will affect the knowledge transfer. They are often the very people who may be deemed redundant at the conclusion of the merger.

Due to antitrust rules that forbid companies from sharing sensitive business information, the knowledge transfer cannot start until the merger receives government and regulatory approvals. This is to avoid the transfer of competitive knowledge prior to the legal approvals. In the meantime, people are ensuring business continuity while the company is planning for synergies and the main objective and platform is completed with speed. "Speed also helps diminish the uncertainty that plagues organizational change, and that ends up making people work less and worry more – or just plain leave" (Croyle & Kager, 2002, p. 2). Pritchett, Robinson, Clarkson (1997) say, "Speed is your ally. A rapid integration approach that reflects a strong sense of urgency holds far more promise than a strategy based on caution" (p. 130).

The success of any organization is its people. During this period of uncertainty people are planning and pondering their future. They are the conductors who make a company successful. The organization's obligation is to ensure the identified constraints do not de-motivate employees, as it is those very employees who will be implementing the integration plan including the knowledge transfer plan.

Figure 4 (below) visually depicts the constraints on knowledge transfer. The figure highlights that people are at the center and are the main actors who ensure business continuity, wait for the merger approvals, plan the synergies and ensure the integration is completed quickly; it is the same people (or a subset of) who will facilitate the knowledge transfer.

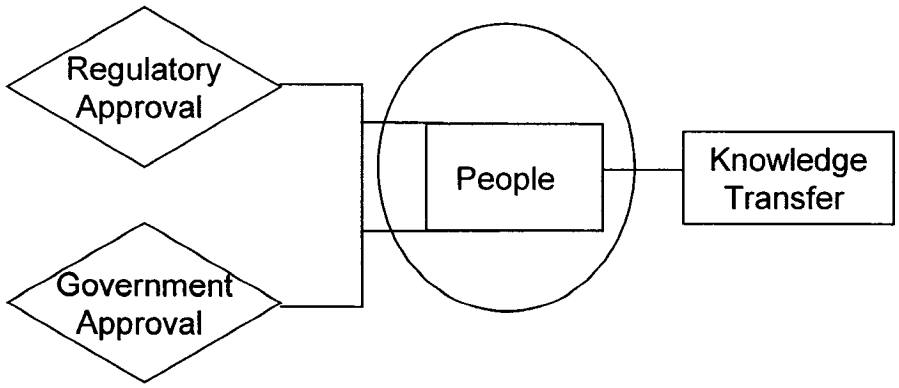

Figure 4 – Constraints to Knowledge Transfer

The big task ahead for the 'take charge' company is to ensure that the knowledge that resides at the other company is transferred and becomes embedded within the new company's business processes. However, the task is challenging as emotions are tender, trust is questionable, and achieving business goals while minimizing business disruption is the critical imperative.

Typically mergers, acquisitions, and joint ventures create an environment in which organizations can gain access to new sources of knowledge (Barney, 1991, Haspeslagh & Jemison, 1991). Knowledge transfer in this context is a complex, multi-faceted, multi-layered process that requires alignment between the merging organizations. It requires employee commitment from both organizations, a multitude of aligned communications, a trusting work environment, and processes to support the transfer. The particular context of a merger adds to this complexity, as those required to transfer knowledge may be those who may be deemed redundant. The challenge for managers of merging companies is to convert the opportunity for knowledge transfer into a reality.

Statistics on Merger Success and Failure

"Mergers are big, risky business and they frequently fail" (Bryson, 2003 p. 14). According to Pritchett, Robinson, Clarkson (1997), "a very precise set of statistics regarding the success rate for mergers and acquisitions in the United States is not available. However, available statistics generally indicate that, on the whole, companies have less than a 50-50 chance of being successful in merger/acquisition ventures" (p. 5). Bryson (2003, p. 14) emphasizes that quoted failure rates vary from 50 percent to 80 percent depending on the industry and measures used (Booz Allen & Hamilton, 2001; Tetenbaum, 1999). Research by McKinsey & Company found a failure rate of 61 percent in acquisitions; with failure defined as not earning a sufficient return (cost of capital) on the funds invested (Pritchett, Robinson, Clarkson, 1997, p. 6). Mergers and acquisitions therefore offer the mechanism for rapid (but less than optimal) growth (Fellows et al., 1983; Friedman, 1984; Ball, 1988).

This section has provided background information on mergers and the impact it has on people. As mergers create a chaotic business environment, ensuring a solid knowledge management and transfer plan is critical to the success of the merger. The sections that follow review the knowledge management literature.

Knowledge Types

Knowledge is defined by Webster (1961) "as a clear and certain perception of something; the act, fact, or state of understanding". "Knowledge has been identified as one of the most important resources that contributes to the competitive advantage of an organization" (Pan and Scarborough, 1999, p. 359). Polanyi and Nonaka both acknowledge that knowledge comes in two forms – explicit and tacit; also known as formal or codified knowledge and informal or uncodified knowledge. Codified knowledge

is defined as knowledge that is stored in documents, books, CDs, while uncodified knowledge is knowledge that is intangible and stored in individual 's heads. As Sanchez and Heene observe, tacit (uncodified) knowledge is difficult to exploit organizationally even when it is clearly articulated (cited in Pan and Scarborough 1999, p. 362). This is because to appropriate knowledge from someone else means having a shared code or mental model that enables the other to understand and accept that knowledge (Schwenk, cited in Pan and Scarborough, 1999, p. 362). Nonaka (1991) argues that "tacit knowledge has an important cognitive dimension consisting of mental models, beliefs, and perspectives so ingrained that we take them for granted, and therefore cannot easily articulate them" (p. 4). O'Dell and Jackson (1998) view knowledge "as dynamic – a consequence of action and interaction of people in an organization with information and with each other" (p. 4). It is tacit (uncodified) knowledge that organizations should be concerned with as Bollinger and Smith (2001) explained:

> "Tacit knoweldge is unarticulated knowledge that is in a person's head that is often difficult to describe and transfer. It includes lessons learned, know-how, judgment, rules of thumb, and intuition ... it is the key characteristic of team-based learning organizations" (p. 9).

Further clarification is provided by Lang (2001, p. 46) who states that, "... knowledge is both produced and held collectively rather than individually in tightly knit groups or "communities of practice" ... organizational knowledge is social in character."

Dixon (2000) talks about common knowledge, "To share" has two meanings in English; it means to give away a part, which is an act of generosity, and it means to have in common, as in a "shared belief system". If I share my knowledge, then we can both have it in common. Common knowledge is always linked to action and has components situated as a "continuum from explicit to tacit" (Dixon, 2000, p. 26). "Knowledge is

paradoxical in that the more you share, the more it grows", (Roth, 2003, p. 35). Dixon offers five categories of transfer that deal effectively and efficiently with both types of knowledge: Serial Transfer, Near, Far, Strategic and Expert. In her book, *Common Knowledge,* she acknowledges that each category of transfer requires unique design elements to assure success. Takeuchi (1998) explains that explicit knowledge "can be expressed in words and numbers and shared in the form of data, scientific formulae, product specifications, manuals, universal principles, and so forth ... and can be transmitted across individuals formally and systematically" (p. 7). Tacit knowledge, on the other hand, "is highly personal and hard to formalize, making it difficult to communicate or share with others ... tacit knowledge is deeply rooted in an individual's action and experience, as well as the ideals, values or emotions he or she embraces" (p. 7).

In relation to explicit and tacit knowledge, Hansen, Nohria and Tierney (1999) discuss two knowledge management strategies: codification and personalization. Codification strategy focuses on tangible assets that usually reside on the computer, or in binders and filing drawers, while the personalization strategy focuses on direct person-to-person contact. They note that companies that follow a codification strategy rely on the "economies of reuse". The authors note that the reuse of knowledge saves work, reduces communication costs, and allows a company to take on more projects. However, it may also mean being locked into obsolete knowledge and weighed down by data. By contrast the authors note the personalization strategy relies on the logic of "expert economics". This strategy is noted for being expensive, slow, and time consuming. According to Takeuchi (1998), "in order for tacit knowledge to be communicated and shared within the organization, it has to be converted into words or numbers that anyone can understand." (p. 8). Furthermore, he adds, "it is precisely

during the time this conversion takes place – that is, from tacit to explicit – that organizational knowledge is created." (p. 8). Regardless of whether knowledge is explicit or tacit, in order to ensure organizational efficiencies, knowledge needs to be shared throughout the organization. Teece (2001) notes, "knowledge, which is trapped inside the minds of key employees, in filing drawers and databases, is of little value if it is not supplied to the right people at the right time" (p. 128).

Knowledge Management

The knowledge management concept was introduced in corporate circles several years ago and has become a powerful business concept, repeated often in a number of industries. Management seems to realize that what an organization and its employees know lies at the heart of how the organization functions. As the knowledge that resides in employee's heads (intellectual capital) is an organization's biggest asset, during a merger / acquisition or joint venture, the acquiring organization may request that employees from the acquired organization do not leave their current position for a position in another line of business. This is due in part to the fact that the acquiring company does not want to deplete the knowledge base of the acquiring company, thereby potentially reducing the business value. Knowledge itself is valuable because it tells people how to do things and how they might do them better (Davenport & Prusak, 2000). Knowledge is now considered the most strategically important resource and learning the most strategically important capability for business organizations (Zack, 1999). Nonaka and Takeuchi (1995) note, "knowledge is related to human action; and individuals create knowledge, but organizations can create a context for individuals to create and amplify knowledge" (p. 59). In simplest terms, knowledge management refers to strategies and processes for using knowledge to enhance competitive advantage and / or support professional communities. According to Takeuchi (1998),

"knowledge management is about capturing knowledge by individuals and spreading it to others in the organization" (p. 5).

Knowledge Management is described as "a systematic process of finding, selecting, organizing, distilling and presenting information in a way that improves an employee's comprehension in a specific area of interest" (Herschel, Jones, 2005, p. 45). Knowledge management is concerned with bringing together intellectual resources and makes them available across organizational boundaries (Davenport and Prusak, 2000). "Effective knowledge management results from providing individuals with the opportunity to create, retain, and transfer knowledge" (Argote, McEvily, and Reagans, 2003, p. 575). Webb (1998) defined knowledge management as the identification, optimization and active management of intellectual assets to create value, increase productivity and gain and sustain competitive advantage. According to Carillo and Anumba (2002), "if implemented effectively, knowledge management appears to offer a partial solution to organizations for gaining sustainable competitive advantage" (p. 149). However, questions remain as to whether knowledge management is yet another management fad. Wiig (1997) argued that previous fads were one-dimensional and led to brief performance improvement. He stated that knowledge management's objectives and scope were quite different, providing a broad, multi-dimensional perspective and covering most aspects of an organization's activities.

According to Clark and Rollo (2001), knowledge management is concerned about making tacit knowledge more accessible since it accounts for much of an organization's collective memory. Lang (2001) explained the goal of knowledge management as follows:

> "knowledge management must connect people to enable them to think together and to take time to articulate and share information and insights they know are useful to their company" (p. 44).

Stonehouse and Pemberton (1999, p. 132) also suggested "... it is the role of knowledge management to ensure that individual learning becomes organizational learning".

Davenport and Prusak (2000) state, knowledge is not something new; it has always been used and exchanged within the organization. According to them, "what is new is to recognize knowledge as a corporate asset and to understand the need of managing it and involving it with the same care given when obtaining the value of other more tangible assets" (p. 117).

According to Ferrari and de Toledo (2004) "organizations need to look for more structured approaches to knowledge management and organize resources in order to obtain the value of the knowledge" (p. 117). They propose a holistic vision of knowledge management that could be analyzed according to the knowledge management vision. The model is composed of four elements: 1) principles, 2) contents, 3) processes, and 4) infrastructure. They stress that these elements are essential and must coexist in the organization (p. 118).

Wilig (2000) discussed knowledge management as the "systemic and explicit management of knowledge related activities, practices, programs and policies within an enterprise" (p. 109). The goal of knowledge management as discussed by Alavi and Leidner (2001) is to effectively apply an organization's knowledge to create new knowledge to achieve and maintain competitive advantage.

According to Thomas, Kellogg, and Erickson (2001) "knowledge management is not simply a matter of managing information. Knowledge management is essentially a deeply social process, which must take into account human and social factors" (p. 881). Thomas et al. (2001) argue that a successful knowledge management system is one that includes a knowledge community, where people can interact in the discovery, use and manipulation of knowledge (p. 881). Turban et al (2003) defined knowledge managament "as the process of accumulating and creating knowledge, and facilitating the sharing of knowledge so that it can be applied throughout the organization" (cited in Hoffman, Hoelschere, & Sherif, 2005, p. 93). Ferrari and deToledo view knowledge management from a different perspective. They say that for knowledge management, "the idealistic principle would be replacing the idea of "who holds the knowledge has power" to "who exchanges the knowledge has the power" (p. 118).

Ruggles (1998) identified three categories of the knowledge management life cycle as generate, codify and transfer. Tiwana (2000) identified four categories as the creation, location, capture, sharing and use of knowledge. Siemieniuch and Sinclair (1999) extended the classification of the knowledge life cycle into fives stages as generate, propagate, transfer, locate and access, maintain and modify.

Authors Hinds and Kiesler (1995) suggest that the goal of knowledge management is to create repositories of information accessible across the organization so employees can leverage each others' experiences and lessons learned. Knowledge management attempts to make information available across all organizational boundaries (Hinds and Kiesler, 1995). This facilitates the sharing of knowledge of individuals who otherwise would never meet each other. Knowledge management is a

complex business process notes Sarvary (1999) whose success depends on how the knowledge created is used (p. 96).

Much of the literature indicates that many consulting firms and software developers have implemented knowledge management databases driven by the following ideas:

- People and what they know are essential to organizations.
- Intangibles (such as conceptual models, processes and procedures, formulas, diagnostic algorithms or guidelines, and operations know-how) are marketable, competitive assets.
- Organizational agility demands that individual performers, groups, and organizations as a whole continue to learn in order to remain competitive.
- Organizations can strategically manage the accumulation and sharing of knowledge at a departmental or company wide level in order to improve performance and must implement processes and tools for doing so.

An international consulting firm Booz Allen and Hamilton has been a major player in knowledge management initiatives. The company identified five "unnatural" activities that require effective knowledge management:

- Using – tacitly admitting that somebody else's thinking may be better than yours
- Collaborating – building on ideas of other experts
- Improving – synthesizing new ideas continuously, while pursuing yesterday's idea
- Investing – establishing the infrastructure (people and technology) to facilitate sharing and collaboration

- Sharing – making your best thinking (an important part of your personal competitive advantage) – not just your opinions available to others

Consulting firms such as Anderson, and Booz Allen & Hamilton are prime examples of organizations that have implemented knowledge management strategies and structures in their firms. The literature suggests they have experienced some success. For example, turnaround time from responding to "Requests for Proposals" (RFP) to closing a sale decreased considerably from a traditional six months to two months at Anderson, (Holtshouse, 1998).

While the literature review highlighted that knowledge management is a complex process that requires an organization to pay attention to its people, processes and technology, other literatures suggests that the failure rate of technology initiatives and knowledge management remain high. For example, Malhotra (2005) notes "some industries have pegged the failure rate of technology implementations for business process reengineering efforts at 70 percent" (p. 8). Similar results have been suggested for knowledge management failure rates. According to Rossett (2002) "at least half of all knowledge management initiatives fail; some peg the failure rate as high as 70 percent" (p. 1). Rossett (2002) discussed KPMG's Knowledge Management Report 2000 (Barth, 2000) found that the benefits of knowledge management did not live up to expectations. They cited the following reasons for those frustrating results: lack of updates, failure to integrate knowledge management into normal working practices, complicated systems, lack of training, and the fact that users did not perceive personal benefits" (cited by Rossett, 2002, http://books.mcgraw-hill/authors/rossett/km/htm). Malhotra (2005) suggests that "increasing failure rates of knowledge management technologies often result from their rapid obsolescence given changing business needs and technology

architectures" (p. 11). Dixon (2000) eloquently attempts to summarize the discourse and says, "dichotomizing knowledge sharing into technological and culture components is misleading" (p. 162). Prusak (1998) states, "although IT is a wonderful facilitator of knowledge transmission, distribution and storage, it can never substitute for the rich inter-activity, communication, and learning that is inherent in dialogue" (p. 268). Call (2005) states, "too much information technology can actually doom a knowledge management effort" (p. 25).

Knowledge Transfer during a Merger

The literature on knowledge transfer in a merger environment is rather scant; however, there is a body of literature on international joint ventures (IJV) and on knowledge transfer. While a joint venture may or may not continue to survive as a business entity, the reality is that in a merger environment one or more of the companies will cease to exist as a distinct business entity in a determined timeframe. However, regardless of the business environment, the desired outcome of the knowledge transfer exercise is affirmation that the acquired knowledge becomes embedded within the new organizational business processes. This adds to the urgency of ensuring knowledge transfer is inherent in the integration plan, with process, tools, and milestones well identified. As a primary objective of a merger is to achieve synergies, this places additional pressure to ensure a speedy integration of people, processes and knowledge. Rafferty (2000) summarized the merger and knowledge transfer dilemma,

> "When mergers are contemplated, synergy and value often depend on the effective transfer of knowledge. As knowledge becomes an increasingly important corporate asset, it's critical to capture the best practices of each company for maximum return. It starts with the relatively easy task of identifying the people and processes needed to keep the business operating as usual. It moves to training on systems, specific job skills and procedures. Ultimately, it involves capturing the tacit knowledge and informal networks that enable an organization to get things done" (p. 83).

International Joint Venture (IJV)

A joint venture presents a set of challenges as the "product of two or a few existing organizations which, by right of equity ownership, jointly – though not necessarily equally – may exercise control" (Kogut, 1998, p. 39). In an International Joint Venture, two companies that join to form a joint venture remain as two distinct organizations, albeit, perhaps in a different form. Traditionally, according to Wong, Maher, Luk, (2002) the "purpose of a joint venture is to consolidate management and share resources for the purpose of enlarging the profit of the partners themselves in conducting a particular enterprise." (8). Inkpen and Li (1999) note a "joint venture is formed when two or more distinct firms (the parents) combine a portion of their resources to form a separately owned organization" (p. 33). Although the IJV literature presents a variation of IJV compositions, a merger presents no option other than one company will become extinct. This subtlety is important from a knowledge transfer perspective, as there is a need to manage employees who are at risk of leaving the company and ensure they continue to contribute to the organization's business objectives and transfer knowledge at the appropriate time.

Inkpen & Li (1999) discuss the importance of planning for a joint venture. Specifically they note, "adequate early planning can eliminate many of the problems that plague joint ventures" (p. 34). They also state that "for a joint venture to be successful, it

cannot be one-sided. All parties need an incentive to form and remain in a joint venture." Although this is the situation for joint ventures, it is not necessarily the case for a merger and certainly not in an acquisition. In a merger or acquisition, at least one company will cease to exist, therefore the notion of "it cannot be one-sided" noted by Inkpen and Li (1999) is not applicable. Nevertheless, in the case of a merger it is important for the dominant company to ensure it forms alliances with employees from the dominated company, in order to continue to operate the business while awaiting regulatory approvals for the merger and ensure knowledge is transferred in a timely manner.

Lyles and Salk (1996) determined in the international joint ventures in Hungary that knowledge acquisition requires a flexible IJV organization, the provision of training, technology and managerial assistance by foreign parents (p. 3). They also advanced the IJV literature by testing the common assumption that the more knowledge learned from foreign parents, the better the IJVs performance. Si and Burton (1999) studied international joint ventures in China and note that the "criteria by which the success of an IJV is judged is the knowledge transfer between the parties and the synergy that this brings to the joint venture" (p. 2).

Building Relationships

To describe the similarities between mergers and joint ventures is beyond the scope of this research; however, the notion of trust is common to both. Trust is a fundamental element when building relationships and is important in both a merger and joint venture environments. The importance of trust has been stressed and has been referred to by Inkpen and Li (1999) who state "managers often lose sight of the reality that partner trust and forbearance are directly linked to the strength of interpersonal

relations" (p. 39). Employees who do not have a sense of job security or trust their colleagues or new owners are unlikely to cooperate with any knowledge management initiatives. Siemieniuch and Sinclair (1999) argue that "people will not make good use of knowledge management processes if they do not have trust in the organization and the people working in it – trust that revealing errors, mistakes and the knowledge will be respected and used properly by others" (p. 518). Lyles, Aadne and Von Krogh (1998) studied knowledge transfer between companies involved in joint ventures. They note, "there is strong evidence that a climate that fosters trust, care and personal networks among employees is one of the most important conditions for spreading technical and administrative knowledge effectively" (cited by Von Krogh, Ichijo, Nonaka (2000), p. 28). Trust according to Stahl (2004) "is important in a number of ways: it can improve the quality of employee work performance, problem solving, and communication, and can enhance employee commitment and citizenship behaviour" (p. 2).

While trust and building relationships are fundamental concepts that should be leveraged in all spheres of life, for example, public and private, it is a challenge in a merger / acquisition context. Building relationships and developing trust requires time and effort - scarce resources during a merger. Typically mergers are called for synergistic purposes, this usually means more work for those in the acquiring / dominating organization who will be leading the merger of the two companies. Companies in this context need to make a concerted effort to build trust, as it is a prerequisite to ensuring employees in both companies remain engaged and committed to the merger, particularly the knowledge transfer process.

Governance Structures

Inkpen and Li (1999) also discuss the importance of the governance structure in joint ventures and recognize that "the nature and form of joint venture governance structures will evolve over time as the joint venture strategy emerges and partners interact" (p. 41). In contrast to a merger, until the day the merger receives regulatory approval from the governing bodies, the governance structure at the merging organizations remain as is; in other words the separate organizations remain intact. However, upon receipt of regulatory approvals, the new company develops a governance structure specific to the execution of the merger. Employee reaction to the new governance structure is generally unfavorable, as the merger becomes a reality. As there is evidence that not all mergers are approved (for numerous reasons), there is a tendency for employees at both organizations to secretly wish that the governing bodies would not approve the merger. The approval of a merger is a pivotal milestone in a merger. While the dominant company generally receives this event positively, for the dominated company it tends to generate negative emotions. Following this event, the new organization is generally faced with much resistance and needs to ensure that all employees at both old companies remain committed and will continue to work to achieve business objectives.

Capacity to Learn

Regardless of the business environment, "individuals are the primary learning entity in an organization" (Dodgson 1993, p. 386) and organizations "know how to learn because their people know how to learn" (Kanter, 1990, p. 320). A research study by Lyles and Salk (1996) found that the "capacity to learn, mainly the flexibility, creativity and knowledge about employees is a significant indicator of knowledge acquisition from the foreign parent" (p. 11). This is consistent with the work of Cohen and Levinthal

(1990), who suggested that knowledge acquisition depended on interactions of organizational members that encouraged creativity. Crossan and Inkpen, (1995) noted that differences in knowledge and skills between partners have been shown to impede learning. To use Hamel's (1991, p. 97) terms: "if the skills gap between partners is too great, learning becomes almost impossible." Grant (1996, p. 116) articulated similar comments at the individual level under the notion of "commonality of specialized knowledge" as it relates to knowledge integration within the firm:

> "There is something of a paradox in this. The benefit of knowledge integration is in meshing the different specialized knowledge of different individuals – if two people have identical knowledge there is no gain from integration – yet, if the individuals have entirely separate knowledge bases, then integration cannot occur beyond the most primitive level" (p. 116).

Simonin (1999) summarizes,

> "learning is limited by the degree [and kind] of experience of the knowledge seeker. In the context of knowledge transfer between strategic alliance partners, the implication is thus straightforward: the greater (lower) the level of prior experience of the knowledge seeker with the underlying knowledge domain the less (more) ambiguous the knowledge to be transferred" (p. 601).

The literatures on international joint ventures and mergers appear to deal with similar challenges: regardless of the business context (merger / acquisition / international joint venture), the human factor – people - requires attention. However, Inkpen & Li (1999) claim that "many joint ventures fail to achieve their potential and joint venture failure rates remain high" (p. 33). This is not unlike mergers, where McKinsey & Company found a merger failure rate of 61%.

Related Frameworks and Knowledge Management

The literature on knowledge management and transfer in a merger context contains limited research directly related to this topic. Some of the literature presented

knowledge management and transfer processes as they relate to the normal course of business e.g. intra-company, intra-divisional sharing and storing of best practices. Bresman, Birkinshaw, and Nobel (1999) concluded that the knowledge transfer process between companies, as in acquisitions for example, is distinctly different from the process under other business circumstances, for example intra-company knowledge transfer (p. 447). They claim this is due to a rapidly evolving relationship between the separate organizations. Pan and Scarborough (1999) define knowledge management "as the capacity within an organization to maintain or improve organizational performance based on experience and knowledge. It is socially constructed and embedded in social networks and communities of practice" (p. 360).

Other work broadly on this topic was formulated by the "process" school of thought discussed by Bresman, Birkinshaw, and Nobel (1999, p. 449). They note the school is concerned with the creation of value through post-acquisition integration. Another related body of literature looked at the acculturation process when two different organizations are brought together. Bresman, Birkinshaw, Nobel (1999) noted in their research that the "contribution of such studies to the current work is that knowledge transfer between the merging organizations depends on the development of a cooperative relationship" (p. 444).

Carillo and Anumba (2002) discussed the "*C*ross sectoral Learning in the *V*irtual enterprise" (CLEVER) a conceptual framework developed at Loughborough University. The framework offers organizations a holistic approach to knowledge management applicable in mergers and acquisitions (p. 153). They note that the framework helps to identify the organization's "as-is" knowledge management state, and recommends tools

and techniques for achieving its "to be" state while considering internal and external factors that may impact on the organization.

Knowledge Management Tools

What came first, knowledge management or the knowledge economy? Although some may argue that the answer matters, in reality it does not. The permeation of technology has enabled organizations to quickly develop digital databases and knowledge repositories. However, knowledge management is not only about building databases but more about ensuring a culture of collaboration, among people who share knowledge, and creating a practice of connecting those who have knowledge with those who need it. O'Dell and Grayson (1998) suggest that "knowledge is information in action" (p. 5). Furthermore, they say, "knowledge is what people in an organization know about their customers, products, processes, mistakes, and success, whether that knowledge is tacit or explicit" (p. 5). Old (2003) summarized the importance of the human element stating, "Organizations are living organisms not engineering artifacts". David Snowden with the Institute for Knowledge Management and a pioneer in the field of knowledge management uses three principles to test if technology will work to help spread knowledge:

1. "Knowledge can only be volunteered; it can't be conscripted.
2. People always know more than they contend and they can tell more than they can write.
3. People only know what they know when they need to know it."

These principles are addressed in the way we engage others in transferring knowledge to the successor.

As is evident, the debate as to whether knowledge management tools consist of both technological tools and non- technological tools continues. Patel et al (2000) categorized knowledge management tools into four areas: knowledge generation, knowledge representation, knowledge retrieval and knowledge sharing. Carillo and Anumba (2002) argued that any knowledge management system must support the full knowledge management life cycle – from knowledge generation through to transfer and eventual retirement (p. 155). Malholtra (2005) notes, "Deployment of intranets, extranets, or groupware cannot of itself deliver business performance. These technologies would need to be adopted and appropriated by the human users, integrated within their respective work-contexts, and effectively utilized while being driven by the performance outcomes of the enterprise" (p. 14). Some industry estimates have pegged the failure rate of technology implementations for business process reengineering efforts at 70%" (Malhotra, 2005, p. 8). Wong and Aspinwall (2005) note "technology should not be seen as an absolute answer to knowledge management, since it is only a tool" (p. 75).

People and Mergers

Mergers and acquisitions offer the mechanism for rapid growth (Fellows et al., 1983; Friedman, 1984; Ball, 1988). The rapid increase in company size through mergers causes uncertainties and instability. Mergers are a time of relentless change. Feldman and Spratt (1999) eloquently stated that a merger "is not the time to call up the latest management fad. It's the time for a financially driven, solidly pragmatic, results oriented approach to accelerating change – an approach that is focused on creating economic value and stakeholder opportunity" (p. xv).

As the literature on mergers and acquisitions suggests, organizations are combined with the expectation that synergies will create a body of knowledge greater than the sum of the two individual parts (Carillo and Anumba, 2002). However, Carillo and Anumba (2002) explain that this seldom occurs because the merger creates a period of job uncertainty. The announcement of a merger creates a highly stressful environment of uncertainty fear and distrust (Cartwright and Cooper, 1992; Marks and Mirvis, 1992). Even if redundancies are not planned, employees at both companies fear loss of employment, loss of status and loss of confidence due to the anticipated changes (Hunt, Lees, Grumbar, Vivian 1987). They may react by resisting management's plan to cooperate with the acquired company and may resign (Buono, Bowditch 1990). Hubbard and Purcell (2001) identified "seven factors as influential in shaping employees' expectations in acquisitions: quality of communication, believability of information, trust in management action, credibility of leadership, fairness of action, consistency of action and communication and logic of management action or behaviour" (p. 18). Burrows (2000) confirm, "human assets are more crucial today than ever to the success of a deal" (p. 36). Burrows continues and supports the critical importance of the workforce in the information age, "the value of many firms lies in the intellect and creativity of its employees, ... one of the key assets that the acquirer is buying is the target's work force, which is the vital link to the company's customers" (p. 37).

These extensively researched negative reactions are likely to be particularly problematic when knowledge transfer is an explicit merger objective. Furthermore, employees who do not have a sense of job security or trust their colleagues and new owners are unlikely to cooperate with any knowledge initiative. However, Feldman and Spratt (1999) note that the most important resource for most companies is human capital – the knowledge embedded in the minds of people (p. 28). Then why do individuals

resist knowledge transfer in the context of mergers? An article written by the Corporate Leadership Council states that "mergers and acquisitions fail 50 to 60 percent of the time and the high failure rate comes from many sources, most notably the failure to manage the "human factor".

Knowledge management within the context of mergers and acquisitions should allow companies to build their knowledge capacity and disseminate it effectively and efficiently to those who need it, thus reducing costly errors (Carillo and Anumba 2002, p. 152). However, they note that "organizations find it difficult to manage efficiently their own knowledge resources through each phase of the knowledge life cycle" (p. 151). Knowledge management, they claim "becomes more complicated when companies suddenly change their size through organizational changes such as downsizing or growth through mergers or acquisitions". In summary, they assert, "this means that either the organization's intellectual capital is lost or another organization's knowledge assets have to be managed within the context of changing organizational structures, politics and culture." With respect to the rapid growth an organization experiences through a merger, it becomes increasingly difficult to determine "what the organization knows" and "who knows what" (Carillo and Anumba, 2002, p. 151).

Numerous studies suggest the organizational and knowledge-based factors impeding knowledge transfer are at an inter-firm and intra-firm level. Some of the impediments identified in previous studies can be categorized as characteristics of knowledge (Empson, 2001, p. 2). For example, tacit knowledge is inherently difficult to transfer because it cannot be fully articulated through written and verbal communication but must be learned through experience (Nelson and Winter, 1982; Nonaka and Takeuchi, 1995, Polanyi, 1966).

Crawford (2005) notes, "if all knowledge were codified and formal, or explicit, then the function of knowledge management would be little more than compliance and management" (p. 7). Transferring embedded knowledge is also problematic because such knowledge is highly context-specific and resides in an organization's interrelated systems of physical, human and organizational capital (Brown and Duguid, 1991; Reed and DeFillippi, 1990). Szulanski (1998) participated in research to understand what prevents transfer of practices across a company (p. 17). The research identified four barriers: 1) ignorance, 2) lack of absorptive capacity, 3) lack of preexisting relationships and 4) lack of motivation (p. 17). He further acknowledges that such important barriers to knowledge transfer "have received scant systematic attention from researchers" (Szulanski, 1996, p. 37).

Barriers to knowledge transfer categorized by Gammelgaard and Ritter (2005) include fragmentation, overload and decontextualization. They continue and say "knowledge is dispersed throughout the organization thus "unknown" to the individual employees. Therefore, knowledge is often inaccessible to the relevant knowledge workers, which causes inefficiencies" (p. 133). Teece (2001) noted "knowledge which is trapped inside the minds of key employees, in filing drawers and databases is of little value if it's not supplied to the right people at the right time" (p. 128).

Differences in the content of the knowledge base may also lead to problems; for example Cohen and Levinthal (1990) have argued that an "organization's receptivity to new sources of knowledge or absorptive capacity is largely a function of its prior related knowledge" (p. 128). Furthermore, they add that firms can achieve a competitive advantage by recognizing the value of external information, effectively assimilating it, and applying it to commercial ends. They define this process as "absorptive capacity"

(p. 128). They propose that the ability to exploit external knowledge is a critical component in achieving a sustainable competitive advantage through perpetual innovation. "Internal mechanisms that influence the organization's absorptive capacity (Cohen and Levinthal, 1990, p.135) are the transfer of knowledge across and within subunits; the structure of communication between the external environment and the firm, i.e. the centralization of the interface function; a broad and active network of internal and external relationships; and cross-function interfaces."

Teece (1998) explains that a firm's absorptive capacity is greatest when the external knowledge is related to prior knowledge of a subject - somehow to what is already known. They note that "the more experience the firm has with similar knowledge, the more readily it can absorb and then diffuse new, similar knowledge throughout the organization, implying an interdependency between internal and external knowledge and a firms' absorptive capacity" (p. 56). Teece (1998) further supports Cohen and Levinthal's theory of absorptive capacity by stating,

> "the essence of the firm is its ability to create, transfer, assemble, integrate, and exploit knowledge assets. The firm's capacity to sense and seize opportunities, to reconfigure its knowledge assets, competencies, and complementary assets, to select appropriate organization forms and to allocate resources astutely constitute its dynamic capabilities." (p. 56).

Other impediments to knowledge transfer can be categorized as characteristics of the organization. In large and complex organizations, the lack of an appropriate knowledge management infrastructure will pose problems (Sveiby, 1997; von Krogh et al, 2000). Where technologically based knowledge management systems do exist, their effectiveness will depend upon an appropriate combination of individual incentives and cultural norms of trust and cooperation (Amit and Schoemaker, 1993; Morris and Emspson, 1998; Starbuck, 1992). Without trust the internal market for knowledge will

not function effectively because individuals cannot be sure they will be rewarded appropriately for sharing their knowledge (Davenport and Prusak, 2000, p. 34). Furthermore, Davenport and Prusak (2000) note, "without trust knowledge initiatives will fail, regardless of how thoroughly they are supported by technology and rhetoric" (p. 34).

The Value of an Organizational Memory

Knowledge transfer described by Pearlson and Saunders (2004) in their book "*Managing and Using Information Systems* " involves transmitting knowledge from one person or group to another person or group, and the absorption of that knowledge. Once transferred, the ability of an organization to capture, store, disseminate, and retrieve knowledge is often referred to as "organizational memory", Jones, Herschel, Moesel (2003, p. 54). In other words, if an organization can collect and store the knowledge both explicit and tacit of its employees within an easily accessible and searchable "organizational memory mechanism", then if an employee leaves the organization, their knowledge skills and expertise do not necessarily leave with them. In summary, with an effective knowledge management system, an organization may not have knowledge gaps when their employees resign, as knowledge retention will be addressed. Thus, an organizational memory represents a dynamic repository for knowledge, ideas, and expertise, for example, technical, social expertise that are crucial in a continuously changing environment. Anand et al (1998) further contend that providing relevant information for decision-makers in a timely manner represents an important tool to build competitive advantage in an increasing global turbulent environment. Knowledge management within an organization creates the potential for a sustainable competitive advantage, particularly from tacit knowledge (e.g. an associate's expertise and other non-tangible knowledge) that is rarely imperfectly tradable, and

costly to imitate (Lane and Lubatkin, 1998). However, Garvin (2000) provides a different perspective:

> "Knowledge must also be shared collectively; new ideas must diffuse rapidly throughout the organization, extending from person to person, department to department, and division to division. Eventually, they must become embedded in organizational "memory" appearing as policies, procedures, and norms to ensure that they are retained over time" (p. 11).

What Garvin describes requires organizational norms that encourage knowledge sharing and collaboration and demonstrate a flexible and adaptive culture. In summary, he states, "learning requires action" (p. 11); "learning organizations are not simply repositories of knowledge, they take advantage of their new learnings and adapt their behaviour accordingly" (p. 15). Lucas (2005) argues, "knowledge transfer cannot be successful in the absence of individual cooperation. He continues, "for knowledge transfer to take place, individuals must be willing to change the way they do things and expose themselves to the possibility of failure because they perceive some positive benefit from doing so" (p. 88).

While much of the discussion on knowledge management thus far has focused on the various types of knowledge, and storing options, there is a body of literature that discusses organizational knowledge structures. Authors such as Nonaka and Takeuchi present their arguments focusing primarily on organizational structure.

Organizational Structure

Nonaka and Takeuchi (1997) developed a theoretical and practical basis for a new organizational structure, referred to as a "hypertext" that enables an organization to create knowledge efficiently and continuously (p. 99). They suggest that as knowledge

and innovation become more central to success, the value of a traditional organization structure such as bureaucracy is questionable. The bureaucracy concept goes back to the 19th century to Weber's notion that the most rational and effective organization has bureaucratic characteristics. While a bureaucratic structure emphasizes control and predictability of specific functions and is effective in a stable environment (p. 100), the "hypertext" model proposed by Nonaka and Takeuchi (1997) is an "open system and offers its members the ability to shift context, moving easily in and out of one context into another" (p. 107). A hypertext organization as defined by Nonaka and Takeuchi (1997) "is made up of interconnected layers or contexts: the business system, the project team, and the knowledge base" (p. 106). Nonaka and Takeuchi introduce the KOA Corporation as a transitional stage in this transformation – with a business-system layer structured as flat as possible, which encourages active information sharing and direct employee interaction" (p.110). "The principal view that defines KOA's organization is information sharing using mechanisms such as open floor allocation, free access to information, and open meetings" (p. 111); which is effective in a turbulent environment where issues usually require immediate attention and decisions are time sensitive.

In Chapter 1, I introduced the Program Management Office (PMO) structure and discussed the importance of implementing a temporary parallel organization with parameters similar to the hypertext model described by Nonaka and Takeuchi (1997) above. This structure afforded the Program Management Office the ability to regularly discuss issues and opportunities; quickly share lessons; easily involve the leadership team in the organization; and it allowed the group to solve problems fairly rapidly.

Although the KOA discussion centers on the development of the hypertext organization, it parallels the work of other researchers, for example Dixon's theory on

tacit and explicit knowledge. Regardless of whether knowledge is driven by individuals or organizations, it involves sharing and learning.

Learning Culture

Researchers have noted that successful knowledge management initiatives are linked to culture change in the organization. Nonaka and Takeuchi (1995), argue that organizational culture orients the mindset and action of every employee. The most important component in the organizational learning context is culture, consisting of the values, attitudes and beliefs that steer the actions and behavior of the individuals making up the organization (Schein, 1992). Senge (1990) has claimed that "organizations that will truly excel in the future will be the organizations that discover how to tap people's commitment and capacity to learn at all levels in an organization" (p.23). Schilling (1998) contends, "learning engenders learning". In other words, as organizations invest in technology and learning, individuals "increase their future ability to assimilate knowledge". Knowledge management is built on the principles that knowledge continues to evolve in an organization thus encouraging organizational learning. The individual act of sharing knowledge produces a foundational knowledge that continues to grow.

The culture existing within the learning organization places great emphasis on learning and knowledge, creating an atmosphere of trust within which individuals feel empowered to experiment with new approaches to business.

Davenport (2000) noted change is always a threat when it is done *to people*, but is an opportunity when it is done *by people*. Furthermore, he stresses, the purpose of organizational learning and the acquisition of organizational knowledge is to provide the

foundation for rapid, dramatic organizational change. *Profound knowledge* – coined by Demming (2000), involves the acquisition of new knowledge and competence, as well as the ability to transfer that understanding to others so that they come to have the same level of knowledge together with the ability to pass it on to others. This is the essential ingredient in moving from individual learning to organizational learning, the process of transferring knowledge across the organization in an on-going process.

Confining knowledge management to an isolated process is analogous to entering into a relationship and forgetting the baggage the individual carries with him / her. Organizations are composed of people who work within a set of values, norms and culture. To think of knowledge management as simply a process is undermining the very essence of the organizational culture. Sarvary (1999) acknowledges that a good knowledge management system incorporates the organization's culture (p. 97). The author adds that an organization that adds such a system must sell the system to its employees; it has to ensure that they use it; but also that they feed into it (p. 97). If people see the system as a powerful resource, they are also more likely to contribute to it (Sarvary, 1999, p. 97).

Nonaka and Takeuchi (1995) discuss the notion of trust in their study of Honda City. They suggest, "new knowledge always starts with the individual" as "the organization cannot create knowledge on its own" (p. 56). Personal knowledge is transformed into knowledge that is valuable for the organization as a whole through "dynamic interaction" between individuals, which involves making tacit knowledge explicit – thus allowing its transfer to others – and is fundamental to the creation of new knowledge. The roots of "dynamic interaction" are embedded in dialogue and communication, which facilitate the development of social relationships; this is the basis

for knowledge transfer and sharing (Nonaka and Takeuchi, 1995). Equally important is trust. Trust is fundamental to most working processes because trust promotes opening up without fear of exploitation, and facilitates the learning process. Portes (1998) notes that members of communities with a substantial stock of social capital find it much easier to work. Coleman (1988) suggests that this is largely a result of the trust engendered through social capital effects such as the existence of closure and social norms.

Davenport and Prusak's (2000) discussion on culture is more inclusive – they review culture holistically and draw the following links between knowledge management and culture (p. xii). They include from (p. xiii):

1) Incentive structures that reward people on the basis of their knowledge contributions,
2) Senior executives who set an example of knowledge behaviors (e.g. reading books and talking about them),
3) Evaluating decisions and decision making on the basis of knowledge used to arrive at them,
4) Celebrating and rewarding people for sharing knowledge and using "stolen" or borrowed knowledge,
5) Hiring new workers partly on the basis of their potential in knowledge behaviors,
6) Giving workers and managers some "slack" for knowledge creation, sharing, use and general reflection,
7) Educating all employees on the attributes of knowledge-based business and knowledge management.

Brown and Duguid (1998) discuss the social nature of learning and discuss "communities of practice" and how informal settings create opportunities for learning.

They continue, while knowledge is often thought to be the property of individuals, a great deal of knowledge is both produced and held collectively. Such knowledge is readily generated when people work together in groups, known as communities of practice. Communities of practice often have been assessed as efficient in transferring tacit and complex knowledge among their participants (Brown and Duguid 1991). Lesser and Storck (2001) discuss communities of practice as "a group whose members regularly engage in sharing and learning based on their common interests" (p. 831).

Transfer Methodologies

What is knowledge transfer? Mahor and Cordey-Hayes (2002, p. 411) see transfer of knowledge as a conveyance of knowledge from one place, person, ownership, etc., to another. It involves two or more parties and there has to be a source and a destination. Generally, when something is being transferred, someone will gain it and some else will lose it. However, Sveiby (2001) differentiates between an intangible asset and a tangible asset. "Tangible assets tend to depreciate in value when they are used, but knowledge grows when used and depreciates when not used" (Sveiby, 2001, p. 346). This means that knowledge will keep on growing whenever a person shares the knowledge that she/he has; when someone transfers their knowledge, they do not lose it.

Syed-Ikhsan and Rowland (2004) argue "knowledge transfer requires the willingness of a group or individual to work with others and share knowledge to their mutual benefit. Without sharing, it is impossible for knowledge to be transferred to other people" (96). This shows that knowledge transfer will not occur in an organization unless its employees and work groups display a high level of cooperative behaviour (Goh, 2002, p. 25). Knowledge is transferred not only from individual to individual but

also involves "individual to a team or group, team or group to individual, or team or group to team or group" (Bender and Fish, 2000, p. 130). According to Davenport and Prusak, knowledge transfer involves two actions, which are "transmission (sending or presenting knowledge to a potential recipient) and absorption by that person or group" (Davenport and Prusak, 2000, p. 101). They further stress that "transmission and absorption together have no value unless they lead to some change in behavior, or the development of some idea that leads to new behavior" (Davenport and Prusak, 2000, p. 101).

Although knowledge transfer is very important in an organization, Jacob and Ebrahimpur (2001, p. 75) believe that the actual transfer of knowledge within organizations still remains a problematic issue for managers. Argote argues that one of the reasons why knowledge is difficult to transfer is because "some of the knowledge acquired through learning by doing is idiosyncratic to the particular constellation of people, technology, structures and environment conditions" (Argote, 1993, p. 42).

The literature on knowledge management discusses the difference between explicit and tacit knowledge. Brown and Duguid (1998) note that for companies to make the most of knowledge – to know what it knows, it needs to take practice, practitioners and the communities that practitioners form seriously.

The literature review describes the concepts that need to be taken into consideration when initiating a knowledge management and transfer initiative. Building relationships, developing processes, tools and engaging champions who are accountable for the initiative are all to be encouraged. As knowledge is recognized as providing organizations a competitive advantage, it was essential that a knowledge

management system that systematically captured and stored information and ensured easy access at all levels of the organization be recommended for implementation. If we examine this from a sociological perspective, we can build the analogy that the individual – the microcosm of the larger universe the organization, contributes to the overall competitiveness, and success at the macro level - society.

A qualitative analysis conducted by Mason and Parlen (2003) reveals that the main barriers to successful knowledge management implementation are all management related issues. The issues raised in the research indicate a general perception of a culture hostile to knowledge management; a lack of leadership by top management; and a lack of awareness of knowledge management. Sarvary (1999) notes similar challenges and stresses that in addition to an IT infrastructure, knowledge management needs the organizational infrastructure, appropriate incentives, organizational culture; and critical people and teams involved in knowledge management. McKersie and Walton (1991) emphasize "there is a need for alignment between technological requirements and organizational capabilities; the former can only be fully realized through the latter" (p. 248-249).

In summary, building a good knowledge transfer / management culture requires implementing support structures and evolving to a culture of sharing knowledge. Implementing knowledge management requires the development of trusting relationships that need time to nurture and develop. But remember the context is a merger; in such an environment, who has the time to nurture and develop trusting relationships? Time is of the essence; as the clock keeps ticking synergies are expected. Paradoxically, releasing the employees can contribute to achieving synergies

through transfer of explicit knowledge. But on the contrary, developing relationships can contribute to successfully transferring tacit knowledge.

Conclusion

Overall, the literature suggests that knowledge management is not just about technological tools, but rather it requires the human element, an infrastructure, and the ability to interact. The current research builds on the work of Davenport and Prusak (2000) who assert that the factors that contribute most to building a knowledge foundation are:" a knowledge oriented culture, human infrastructure, and senior management support" (p. 160). Research completed by Thomas, Kellogg, and Erickson (2001) complements and continues the discourse to the effect that knowledge management is about people and concludes that it must take into account social factors. Additionally research completed by Sarvary (1999) states, "knowledge management needs an organizational infrastructure, appropriate incentives, organizational culture, critical people and teams involved in knowledge management" (p. 96).

These studies are conducted under normal business conditions, however, given the limited research that exists on mergers, the study will contribute to advancing knowledge transfer in a merger environment. This research is influenced by these studies but is also influenced by the lessons garnered from Merger 1.

Overall the literature suggests that knowledge management focuses on strategies for increasing value and accessibility to it repeatedly (Rossett, 1999). The following issues and questions are highlighted in the literature and reflect the questions discussed with senior management at Company A in order to formalize knowledge management as an organizational priority during Merger 1.

Questions from the literature follow (Rossett, 1999, p. 160).

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1) How do we [elicit] and capture information?
2) How do we find what it is that our employees know?
3) How do we make certain that this information reflects not just the obvious but also the more subtle, cultural aspects that are essential to success?
4) How do we make this information available to more people, and how do we make it available in more ways?
5) How do we begin to take advantage of technology?
6) How do we ensure that the information is kept current?

Much like other organizational processes, elements such as management and ownership of information, maintenance and updating are critical to the long-term success of knowledge management. The literature suggests that knowledge management is inherently focused on maintaining up to date information for users, because when information becomes out of date, users will quickly abandon the resource as unreliable. Users, instead, will turn to other mechanisms such as phone calls, e-mails, or informal discussions with individuals whom they consider to be knowledgeable (Brown and Duguid, 1998).

Mergers and acquisitions offer organizational changes that add yet another dimension to knowledge management. As there are two organizations, with two very different strategies that are merged at a certain point in time without any advance warning or knowing. Both organizations have different levels of knowledge stored in their organization in different media and designing strategies that ensures the right information is transferred to the right individual is inherently critical. The challenge is to

manage efficiently the knowledge that is held by these two organizations so as to enhance their collective knowledge assets and thereby create the synergy anticipated by the merger or acquisition. Call (2005) notes "knowledge is something everyone seeks. Every day members of an organization are faced with new problems, and opportunities for improvement" (p. 20). Davenport and Prusak (2000) point out "people search for knowledge because they expect it to help them exceed in their work. Knowledge is the most sought after remedy to uncertainty" (p. 26).

Over time A has distinguished itself from other hi-tech companies by developing a culture where learning is encouraged and compensated. On an annual basis, development plans for all employees including a budget for training and on-going development is available annually. Employees at all levels are encouraged to take risks, innovate, conduct lessons learned in workshops and share best practices. For a number of initiatives, communities of practice have mushroomed throughout the organization and are strongly encouraged in Company A.

The following chapter introduces the lessons from the knowledge transfer process during Merger 1. This is followed by a discussion of the identified gaps. Chapter 4 introduces Merger 2 and Chapter 5 discusses the evaluation analysis for merger. Chapter 6 is a combination of discussion, conclusions and a discussion of areas for future research.

CHAPTER 3

Merger Lessons

Introduction

This chapter describes the lessons gathered from Merger 1 in 2000. Following common practice at Company A, the merger project was formally closed. Project closure is the last phase of the project management process. The objective was two–fold: 1) to gather lessons on the knowledge transfer process in order to understand what worked and what did not work; and 2) to give the new company A[1] the opportunity to explore the need for an organizational knowledge management strategy.

Merger Implications

Mergers are frequently a means by which organizations can gain access to new sources of knowledge (Barney, 1991, Haspeslagh and Jemison, 1991). The context of a merger adds complexity in that the employees required to transfer knowledge may be those who become redundant. The challenge for managers of merging companies is to convert the opportunity for knowledge transfer into a reality. Rafferty (2000) suggests, "when mergers are contemplated, synergy and value often depend on the effective transfer of knowledge" (p. 82).

Immediately following the merger announcement in 2000, as a human resource practitioner, employed full-time by the organization in question, I held a number of focus groups with a representative sample of employees in management and non-management positions. The objectives of the focus groups were to gain an understanding of employees' merger perceptions, their fears, and concerns. Many of the issues and questions that arose sensitized the organization to the needs of the

employees. Questions such as: "What does this mean for me? Will I have a job at the end of this? I've survived a number of mergers and they are difficult," confirm that mergers create employee anxiety. The focus groups provided Company A with the ammunition needed to ensure the needs of its people were addressed. Company A recognized that in order to complete a timely and successful merger; it needed its people, the very people that were anxious.

Like any change initiative, a merger merits support from the organization, particularly from senior management. A health-check survey (qualitative and quantitative questions) conducted mid-way during Merger 1 with managers confirmed that management support contributes to merger success, as the following comments by participants indicate.

> "Starting with the President, the integration team had strong executive commitment and management support. This commitment and management support are the number one reason for the success of the merger. A close second is the work of the integration team mobilized through management commitment and support." (Senior Manager, 2000)

> "The integration was a success because the leadership team all bought into the merger and made it a top priority. It was the key priority, shared by all. There was full alignment and there was time pressure. If there was an issue that could not be resolved, then the leadership team cleared their calendar to meet again the next day." (Senior Manager, 2000)

A support infrastructure is also important to ensure the implementation plan is executed on time, on budget, on quality, and on strategy. Processes such as on-going communication, developing a culture of sharing and collaboration and ensuring knowledge transfer tools and training are available will contribute to the experience. According to Davenport and Prusak (2000), "factors that lead to successful knowledge

management initiative are a knowledge oriented culture, human infrastructure, and senior management support" (p. 160).

O'Dell and Grayson (1998) note that "knowledge management is consistent with the emerging business models that involve people in teams coming together on a project basis, then moving onto new relationships" (p. 10). Over the years, Company A has developed a collaborative work style. This means that it has evolved into a workplace that encourages teamwork, transparency, honesty, and an obsession with communication and knowledge sharing. Many of the organizational projects are worked on by cross-functional teams, which foster a collaborative work style. The mergers studied here have benefited greatly from such a style. The question then becomes "whom do you engage in both organizations to share and learn from each other?" "Part of the answer is giving the people in merging companies opportunities to explain their worlds to each and find new ways to work together" (Seeman, 2000, p. 2). Knowledge management makes an organization more transparent. It creates a context for shared meaning and understanding that empowers employees to use their capabilities more effectively, creates value for the company and contributes to innovation.

Knowledge Management at Company A

The literature suggests that a culture of learning and an appropriate knowledge management infrastructure are important elements for knowledge transfer. Development of the knowledge management process during Merger 1 was the responsibility of the program management office (PMO). The program management office defined the process, and developed tools to codify knowledge and support the execution. They defined knowledge management as, "transforming information and intellectual assets into enduring values for the organization and its people". Retention of

knowledge via targeted strategies, such as: knowledge sharing days, face-to-face meetings, exchanging electronic files, and recording histories, were provided as examples. It was imperative for stakeholders to understand and learn what type of organizational knowledge existed; and if the knowledge was valuable, to provide for wider dissemination. The knowledge transfer process was designed to ensure departing employees completed the transfer process prior to their departure. For example, one of the conditions of the severance payout was that departing employees complete knowledge transfer. The knowledge transfer strategy and process, including suggested tools was communicated to employees in departmental meetings by the human resources generalists.

Merger 1: Company A acquires Company B

The research begins with a retrospective look at Merger 1 between Company A and Company B, focusing on what was learned from the knowledge management process during the merger. The study then examines the business processes, and barriers to employee participation in the knowledge management / transfer process during Merger 2 and explores the processes involved in the knowledge transfer process and contributes to the understanding of knowledge transfer in the context of mergers / acquisitions.

Methodology

The research is an exploratory case study and has been carried out using mixed methods research (Johnson and Onwuegbuzie, 2004), using both qualitative and quantitative methods. Mixed method research is "defined as the class of research where the researcher mixes or combines quantitative and qualitative research techniques,

methods, approaches, concepts or language into a single study" (Johnson and Onwuegbuzie, 2004, p. 17). Labuschagne (2003), describe the differences between qualitative and quantitative research. Quantitative research, he suggests, "is mainly concerned with the degree in which phenomena possess certain properties, states and characters, and the similarities, differences and causal relations that exists within and between these" (p. 1). Qualitative research on the other hand, "is mainly concerned with the properties, that state and the character, for example the nature of the phenomena. The word qualitative implies an emphasis on the processes and meanings that are rigorously examined, but not measured in terms of quantity, amount or frequency (p.1) and permits one to understand the world as seen by the respondent" (p. 3).

Since this study uses semi-structured interviews and a survey, the data analysis was

> "open-ended and inductive ..., in contrast to the focused and deductive analysis common in conventional inquiry. Since the form of data will be produced by the human instrument is unknown in advance, the data cannot be specified at the beginning of the inquiry" (Lincoln and Guba, 1985, p. 224).

This section on Merger 1 relies on qualitative research methods. An important characteristic of qualitative research is that the process is inductive; that is "researchers gather data to build concepts, hypotheses, or theories" (Merriam, 2002, p. 5). Merriam (2002) continues and says, "qualitative research builds toward theory from observations and intuitive understandings gleaned from being in the field" (p. 5). The information gathering method I used to capture lessons during Merger 1 was one-on-one interviews with managers discussing the techniques used for knowledge transfer, key frustrations, lessons learned and best practices.

In Yin's (1994) view, the most important element in a case study is the researcher's ability to recognize and handle a variety of evidence derived from diverse data collection techniques and to use each type. He notes that the evidence can then be treated in a converging manner, by applying the concept of triangulation, to establish the facts of the case. Here, other data that will be reviewed include documented participant observations and results of the qualitative survey (discussed in the next chapter). Case study is recommended when "how" or "why" questions are being asked, when the investigator has little control over events (Mittman, 2001). According to Chenail (1992), the case study approach can involve a single event or multiple cases and be short or long.

Qualitative research is characterized by an emphasis on describing, understanding and explaining complex phenomena. The focus according to Mittman (2001) is "on understanding the full multi-dimensional, dynamic picture of the subject of study" (p.12).

Data Collecting Process

Data was collected over a period of approximately six months in the fall of 2000, during the integration period of the two companies. In this period, I attended and participated in the planning and implementation of the merger of the two companies and developed recommendations for the new organization's structure and capabilities. In retrospect my status on this project was dual: I was present both as a researcher and as a change agent managing the planning and implementation of the merger. The role of the change agent is significant as Dormant (1999) notes, "the change agent needs to

accentuate the positive and defuse the negative" (cp. "implementing human performance technology in organizations", p. 242)

Data were primarily collected in semi-structured interviews with the members of the new Company A[1]. The interview technique was used to "understand how insiders view a situation (Foshay, Moler, Schwen, Kalman, Haney 1999, p. 895). The interviews were guided by questions taken from the literature on the implementation of mergers and organizational learning. See Appendix A - Discussion Document used to guide the one-on-one meetings.

Table 1: Questions from the literature and used to support structuring the one-on-one discussions with Managers

Questions
1) How do we [elicit] and capture information?
2) How do we find what it is that employees know?
3) How do we make certain this information reflects not just the obvious but also more subtle, cultural aspects that are essential to success?
4) How do we make this information available to more people, and how do we make it available in more ways?
5) How do we begin to take advantage of technology?
6) How do we ensure that information is kept current?

Rossett, (1999, p. 160)

Data Gathering Methodology

Twenty-five employees from diverse management positions in the new Company A[1] were invited via e-mail to participate in the interviews. The criteria used to select

participants included active participation in the knowledge transfer process during the merger of Company A and Company B. Participants were free to either accept or decline the invitation. One-on-one meetings were held if the invitation was accepted. The meetings took place in the individual's office and lasted between 60-75 minutes. Given that the meeting was held in the participant's office, it gave the participant the opportunity to showcase any tools that were used and reports that were generated. In general, participants were animated, contributed to the discussion, and answered the questions. If the invitation was declined, no reason was sought; however, a second invitation was sent to solicit a meeting later.

The objective of the semi-structured interview was to determine whether the knowledge transfer process during the merger was effective and to identify and document knowledge transfer best practices, for future use. At the outset the "researcher" provided the reason for the meeting and described the expected outcomes.

Meeting Purpose

Following a brief good day and introduction if I did not know the employee, I presented the following rationale for the meeting.

> "The purpose of the meeting is to gain an understanding, from your perspective, whether the knowledge transfer process during the merger was effective, for example discuss lessons learned and identify best practices. The focus should be on your specific area of responsibility. The reason I asked you to participate is that your manager identified you as having responsibility to ensure the knowledge transfer occurred prior to your counterpart leaving the company. The over-arching objective of this exercise is to collect data from each division, consolidate and help the organization to decide whether there is a need for an organizational knowledge management strategy. In other words it will help the organization to determine whether it should be a priority for the next planning cycle; in that way the company can budget accordingly in terms of dollars and resources, if they deem it to be a necessary strategy.
>
> As such, I ask that you be candid and honest and help us to understand what worked and what didn't work during the process. I have some questions that I can use to drive the discussion. The results will be completely anonymous, as titles and names will be withdrawn and results be discussed in a summarized format and presented by theme. Following our meeting, I will summarize the discussion. When presenting the summarized thematic results to senior management, we will describe participants as follows: percent participation, and organizational representation e.g. whether all divisions were represented. As I mentioned earlier, neither gender nor position title will be identified.
>
> If you agree to participate, then we can start the discussion. Feel free to ask clarifying questions and if you don't want to answer a question, please say so and we'll move on. "

Participants

Of the 25 employees invited, 20 participated in the one-on-one meeting, an 80% participation rate. The rationale, objective, and expected outcome were discussed, and if the invitee agreed to participate the discussion started, supported by the discussion document (see Appendix A). Each meeting lasted between 60 and 75 minutes.

The participants hold diverse management positions, representing all divisions within the organization (see Table 2). The respective manager recommended the participants based on their involvement in the knowledge transfer process.

Table 2: Participants in One-on-One Meetings.

Division	**# of Managers**
Business Technology	2
Finance	2
Human Resources	3
Marketing	3
Medical	2
Sales	2
Strategic Planning and NPD	3
Government and Public Affairs	2
Legal	1
Total	20

The criterion for selection was that they were involved in the knowledge transfer process during Merger 1.

One-on-One Meetings

The one-on-one meetings concentrated on the participants' perceptions of the knowledge transfer process during the merger. In these interviews, a "story telling" approach was used: the interviewees were asked to recount their experiences of the knowledge transfer process. The use of storytelling is encouraged as a methodology by Brown and Duguid (1998) who stress that storytelling is a good means for presenting events sequentially, for example, this happened, then that happened. Stories present events casually and are a powerful way to understand what happened and why.

The one-on-one meetings occurred over a two-month period as some were rescheduled due to conflicts and priorities. Conducting the meetings in the participant's office allowed the participant to retrieve documents and processes used during the transfer process.

Meeting Results

During the meeting, notes were taken of all discussion points. Following the meeting, the notes were transcribed into a Word document exactly as recorded. Upon completion of all one-on-one meetings, a content analysis of the notes was conducted with the individual interviews as the unit of analysis. This analysis revealed consistencies among the respondents in terms of what was important for a successful transfer of knowledge. The overall frequencies of themes that emerged are indicated in Table 3.

Table 3: Frequency of Emergent Themes

Themes	**Frequency**
Personal Commitments: Reward and Incentives	15/20
Process	12/20
Cultural Diversity	7/20
Change Management and Communication	6/20

Details on the themes that emerged, key words, and supporting comments from the participants are presented in Table 4.

Table 4: Themes, Key Words, and Supporting Comments Emanating from Discussions with Managers

Themes	Key Words / Phrases
Change Management and Communication	• Lack of tools and techniques for the transfer process • Lack of training on knowledge transfer / management • Lack of communication during the process • Who owns the data/information (questions of intellectual property)
Supporting Comments from Participants	
• "Some areas are more systematic than other areas; we just did a brain dump" • We had complaints such as: "you have no agendas; it turned out it was let's just do it." "Who owns the process? Should HR own it? As a result there was no support for the process. We should ensure there is a checklist." "We had employees who were leaving on a specific day and they literally brought us their PC (computer) and said I'm leaving, do what you have to do with the information in the computer." • "Who owns the data / information, for example, does the employee own the data or does the company. If information resides in an employee's head, is it their intellectual capital or does it belong to the acquiring company? Need for training and tools on this." • "We did not know how to do it."	
Cultural Diversity	• Organizational culture • Divisional culture • Departmental culture • Different sets of values

Themes	Key Words / Phrases
Supporting Comments from Participants	
• Comments were around "can't assume we have one culture", we have the organizational culture, and then we have divisional / department culture and this is driven by a different set of values.	
Process	• Decentralized process • One size doesn't fit all • Ill-defined roles and responsibilities • Owner of knowledge transfer not known • Milestones, deliverables and objectives not well-defined • Unrealistic expectations, given speed, and business continuity (recruiting and hiring)
Supporting Comments from Participants	
• A one size fits all solution is not effective. We had a decentralized process and this is an issue. • The ill-defined roles and responsibilities is an issue – as we needed more information as to who was going to do what. • The knowledge transfer milestones were not well defined. • The company imposed unrealistic expectations given the amount of day-to-day work and the integration was piled on top including recruiting and hiring. All this is very time consuming.	
Personal Commitments: Rewards and Incentives	• What's in it for me syndrome? • Rewards and incentives (linked to timing – not even sure employee had a job at the end of the process!) • Motivation and trust issues

Themes	Key Words / Phrases
Supporting Comments from Participants	
• An issue for both companies: departing employees asked "what's it in for me to give you what I have learned over the years?" and the remaining employees said, "Why I should bother to do this, I have enough work? I am not being recognized for the extra effort". • There were motivation issues as employees identified as redundant were no longer motivated to participate in the transfer process. Their goal was to get out and get on with their life. • There were trust issues identified among the employees remaining at the new merged company. They felt unsettled about the fact that those employees who were going to leave were hanging around their office for a long time; they were cognizant of the fact that confidential / competitive information was available in their office.	

Data Results and Analysis

The interviews revealed that although employees, in general, perceived Merger 1 as "successful," the knowledge transfer process had a number of gap identified in the qualitative data, and associated with the four themes.

Change Management and Communication

The participants frequently referred to shortcomings in change management and communication in the knowledge transfer process. Kotter (1996), a leading theorist in change found that the most critical element of successful change is not strategy, structure, culture or systems. Although all are important, the single most critical task is

changing the behavior of people. Changing people's behavior requires speaking to their feelings, identity and allegiance. In highly successful change efforts, according to Kotter (1996), leaders help others see the problems or solutions in ways that influence their emotions, not just their reasoning. Effective implementation of any major change effort requires that employees understand the changes being made, what they need to do to support the changes, and how the changes affect them as individuals. This can only be achieved through ongoing communication that is simple and concise.

Respondents suggested that they required more information and details about how the transfer process was to evolve. Comments included the following.

- "Lack of communication during the process"
- "Lack of training on knowledge transfer / management"
- "Who owns the data / information"
- "Some areas are more systematic than others; we just did a brain dump"

The knowledge transfer process during Merger 1 was a decentralized process, which empowered management to select and /or develop their own tools and techniques to transfer knowledge. The program management office (PMO) provided a set of principles, suggested knowledge transfer tools, such as knowledge sharing days, face-to-face meetings, exchanging electronic files and recording histories. Additionally, an explanation on the different types of knowledge, for example tacit and explicit knowledge was provided. However, the manner in which they chose to transfer knowledge as well as the tools selected to ensure the transfer remained the responsibility of the manager.

The literature on change management and communication suggests that complex projects require a well-orchestrated change plan including communication tactics, and as discussed by the participants, "change is a process, not an event" (Dormant, 1999, p. 245). A knowledge management project combined with a merger environment is an example of a project that warrants such a plan. "Knowledge management is change management and if you don't understand people's perspective, all the strategy and technology in the world serves very little," says Carol Kinsey Goman, President of Kinsey Consulting Services, (shrm.org/hrmagazine/articles/o504/0504covstory.asp). Similarly Babcock (2004) asserts knowledge management failures can be attributed to a number of reasons. But most important, she says is "that organizations don't give enough consideration to the barriers human nature poses to information sharing" (cited by Goman, (shrm.org/hrmagazine/articles/o504/0504covstory.asp). The change dynamics people experience during a merger / acquisition are not the same. The literature on mergers / acquisitions indicates that employees consider a merger a traumatic event in their lives (Morrison and Robinson, 1997, p. 228); employees are confronted with a new owner and new reporting relationships and they are likely to feel tense (Blake and Mouton, 1984, p. 42). As the transition period is highly emotional, each individual experiences and reacts to change at different levels and at different rates. The inverted curve is based on Bridges (1993) book *Transitions* (in the Figure 5 below), which illustrates the cyclical path that people's reactions typically follow when change is introduced.

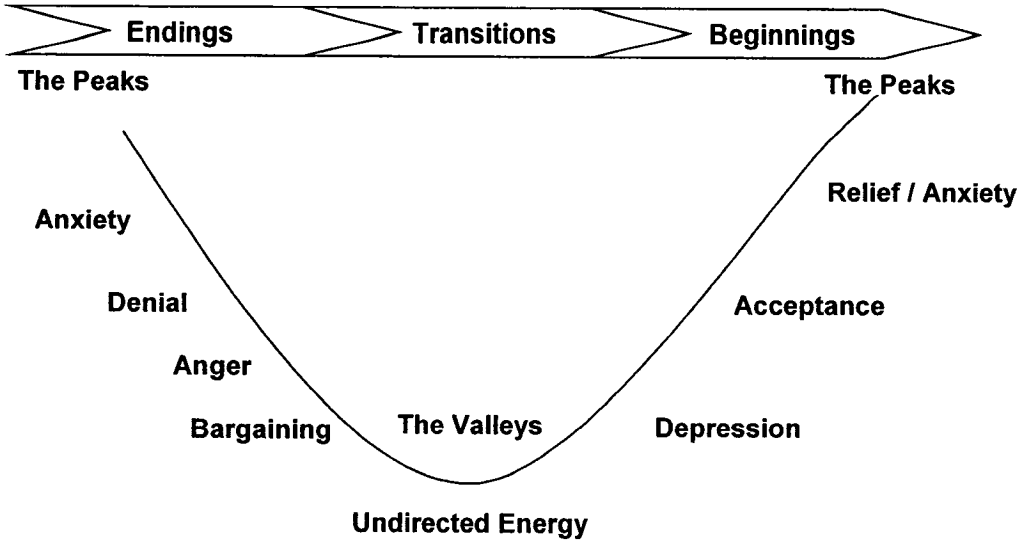

Figure 5 – Change Dynamics during Transitions
(Bridges (1993), *Transitions*)

The magnitude of change that a merger creates for employees is enormous. The diagram above (Figure 5) shows the range of emotions that individuals experience throughout the change cycle. Emotions range from anger during the ending phase to relief in the beginning phase and the following comments documented during the interviews reflect those from the table above.

> "There were motivational issues as employees identified as redundant were no longer motivated in the transfer process. Their goal was to get out and get on with their life." (Manager, 2000).

> "There were trust issues identified among the employees remaining at the new merged company." (Manager, 2000).

Process

It appears from the supporting comments in Table 4, that participants were confused with the process and required clarity on types of knowledge. The following

comment is telling: "if information resides in an employee's head, is it their intellectual capital or does it belong to the acquiring company?" According to McCann, and Bucker (2004), "at the core of this issue is the question of who owns the knowledge and what rights do organizations, groups and individuals have to that knowledge. Furthermore, employees become concerned that the organization simply wants to suck all their knowledge from them" (p. 49). During the one-on-one interview a manager noted that a departing employee was surprised when asked to elaborate on a particular business framework that lacked documentation. The departing manager said, "I developed the framework, it was my creativity at play". Although one could argue there is some merit to the comment, given that a corporation employed the employee and he developed the framework while employed, the framework remains company property. Metaxiotis, Ergazakis, Psarras (2005) argue that "knowledge has the highest value, the most human contribution ..., it is also the most difficult to manage, because it originates and is applied in the minds of human beings" (p. 13).

Additionally, participants noted that appropriate structures such as data repositories and training on how to use the tools to support the implementation were needed. Goh (2002) claims, "the main purpose of knowledge management is to help create a learning organization that continues to improve the ability to cope with the ever-changing market place" (p. 7). He identifies a misconception "...that by investing in advanced IT equipment, new knowledge will emerge. The truth is that it is the interaction of humans through certain media or instruments that creates new knowledge and adds to the pool of organizational knowledge" (p. 7). Given that the company in question continued to perform following the merger, and the products acquired through the merger continued to perform, it is safe to assume that knowledge was captured and regenerated through the network of remaining employees who were involved in the

knowledge transfer process. Furthermore as every effort was made to minimize disruptions to customers and none were formally noted, we can deduce that the immense focus by senior management in the dominant company where they clearly and incessantly said, "on Day One, the goal is to present one face to the world – to customers, and partners" was both prudent and effective.

Cultural Diversity

Sharkie (2003) elaborates "a successful culture will provide a work environment in which employees are engaged, challenged, motivated and rewarded in a positive way for their performance and contribution to the organization's success" (p. 20). The interviews revealed that employees required more tools to facilitate the knowledge transfer process and that "one size does not fit all". According to Nadler and Tushman (1999), "the transfer system needs to appropriately "fit" the kind of knowledge and task it is intended for" (p. 47). Roth (2003) complements Nadler and Tushman by saying "the same method of sharing cannot be used for all kinds of knowledge. Different methods need to be used to enable different types of knowledge to be shared that is dependent on the context, the objectives of sharing knowledge and the type of complexity in the setting" (p. 35).

When the time arrived for employees declared to be redundant to leave the organization, many went to the business technology department to return their laptops and notified the technology department that they were leaving. This approach provided very little time for the technology department to systematically deal with the issue, so the Technology Department just adopted the approach that they stored all information on computer tapes for future reference. This was a gap that required attention.

A process to handle explicit knowledge needed to be developed and communicated to both the acquiring and acquired companies. This lack of planning approach created a mismanagement of resources and compromised the speed and potential to reach synergy targets. Hansen and Nohria (1999) cited in Malhotra (2005) suggest that "in companies that provide highly customized solutions to unique problems, knowledge is shared mainly through person-to-person contacts; the chief purpose of computers is to help people communicate" (p. 15).

Rewards and Incentives

In recounting their stories, participants mentioned they needed to know "what's in it for me" to ensure a successful knowledge transfer. The question of rewards and incentives was discussed and it was mentioned that the "redundant employees received a severance package while the remaining employees did not receive anything for their extra efforts and the additional work the merger created".

The literature on mergers suggests that mergers create a chaotic environment and that employees need to get on with their lives. This is evident in the comments that follow provided by a senior manager during the one-on-one meeting:

> "Knowledge is only as good as people who give it, therefore, with the absence of some people, it became difficult."

When probed for clarification, the senior manager, said,

> "Employees were not available as they were either actively searching for new employment and going to interviews instead of being at work. Information transferred but the knowledge has not been transferred because of people's unavailability".

When probed for clarification the manager mentioned the following:

> "Physical documents and documentation were transferred to us, however, what the information meant and how to use the knowledge was absent. For the most part, the manager continued, employees at the acquired company were working merger hours and it was difficult to get people to cooperate; they were actively looking for jobs. People were losing their jobs at the acquired company and people were frustrated."

Another senior manager noted that it

> "was very important to develop relationships with employees, and the fact that we had a severance package and release date was very helpful in the knowledge transfer process".

Other comments from the participants include:

> "It was difficult, we didn't have good tools and processes to do the transfer, people at the acquired company were frustrated with us and we didn't address it. We just asked for all the information they had."

> "We were faced with a huge increase in the amount of work at the acquiring company and the workload was tremendous. We were not provided with resources to support us."

> "You can never plan too much; your can never communicate too much; don't take anything for granted, even the smallest project can turn into a nightmare!"

"Knowledge management initiatives need to create sufficient trust within an organization to minimize ownership issues, which must also be supported by rewards and incentives system to reinforce knowledge creation, sharing and retention norms" (Solman and Spponer, 2000; cited in McCann and Buckner 2004, p. 49).

Conclusion

The results identified a number of themes and gaps that emerged in the knowledge transfer process. The organization had acquired lessons that would be

available for review should another merger occur or could be useful in any number of change initiatives. The results provide insights into the complexity of knowledge transfer and the need to structure and plan the merger and the transfer of knowledge in a systematic and holistic manner. Adopting a holistic approach and designing interventions that address the issues rather than the symptoms "improves the lives of their targets" (Stolovitch and Keeps, 1999, p. xiii). The areas that required thinking systematically included "how do you engage employees from both merging companies in such a complex activity? What mechanisms do you implement in doing so?" McCann and Buckner (2004) propose a systemic approach: "knowledge management requires linked, compatible, and coordinated interventions at multiple levels, for example, individual, team, business unit, and total enterprise level" (p. 50).

The process implemented during Merger 1 included tactical aspects of knowledge transfer and focused on ensuring knowledge was captured and transferred to the dominant organization. However, this approach appears to be one-sided, as it did not allow employee engagement and participation from the dominated company and it did not allow time for both parties to develop a relationship. Research by Uzzi (1997) reveals that strong inter-company relationships ease the transfer of knowledge (p. 43). Likewise, Hansen (1997) studied product development teams and indicated that strong ties are conducive to the transfer of complex knowledge, while weak ties aid in the search for new knowledge.

The lessons learned in Merger 1 provide ample information for an organization to think about knowledge management as an integrated solution that impacts employees and the organization simultaneously. Just as Company A[1] was regaining a sense of stability and had adapted its merged business processes to meet the needs of its

customers, and employees, it announced that it had made the bold move to acquire Company C. The following chapter discusses Merger 2, paying particular attention to knowledge transfer.

CHAPTER 4

Two Years Later: Company A[1] Acquires Company C

Introduction

During the summer of 2002, an early morning CNN broadcast reported that Company A[1] was to acquire Company C. The news came as a complete and disturbing surprise to management and employees. For much of the day, employees at Company A[1] milled around the organization in disbelief and reminisced about what had been learned in the first merger, the gains, the gaps, and the enormous effort required to plan and implement a marriage of two firms. Speculation began in earnest, rumors started, questions arose, questions like: "Why another merger? What will the governance structure look like? What was management thinking?" Will we have jobs available to us or will they be given to employees from the other company? Where will the head office be located? As days and months passed the questions continued until the Company started to provide some answers.

Although the merger with B had been acclaimed in the literature as one of the most successful mergers in recent history, as Chapter 3 illustrates there were many integration processes that could have been executed more rigorously. This was most evident in the knowledge management and transfer process. Participants engaged in knowledge management during Merger 1 suggested there was a gap between expectations and implementation.

The largest gap identified was a lack of understanding of how to build a culture of trust between the dominating organization and the dominated. Thomas, Kellogg, Erickson (2001) suggest, "knowledge management is essentially a deeply social process, which

must take into account human and social processes" (p. 881). Employees at Company B during Merger 1 reported that they felt cheated by their organization; "we contributed to the success of company B and now they agreed to merge with Company A" noted a senior manager; "why should I share with you how and what contributed to our success?" complained another.

Shortly after the announcement, a transition team embarked, under the direction of Senior Management, on planning for and implementing Merger 2. In order to keep the organization focused and ensure business continuity, the transition team was limited to two key employees who reported to the Steering Committee composed of the executive team of Company A^1. New members were added to the transition team as the planning process increased in intensity.

As I played an integral role in the success of Merger 1, I became a primary cast member for Merger 2 as the transition co-lead. The transition team reviewed lessons from the previous merger, with particular attention to the knowledge transfer process. This in-depth analysis was driven by the need to ensure continuity for Company A^1 and to continue to grow its business. The team also acknowledged that Company C employees leaving the organization could take with them critical knowledge that should be retained. Merger 1 revealed the need for a well-structured, respectful process to capture the expertise of selected departing colleagues. Given the size, scale and complexity of the merger, leaving knowledge transfer to informal discussions at water coolers and in hallways was a risk the organization was not willing to take.

Based on lessons from Merger 1 discussed in the previous chapter, the transition team developed a knowledge transfer implementation process. It became obvious that

collaboration between employees of the two organizations was required to ensure a successful process. O'Dell and Grayson (1998) state that "knowledge management is a conscious strategy of getting the right knowledge to the right people at the right time and helping people share and put information into action in ways that strive to improve organizational performance" (p. 6). To ensure the right knowledge was transferred to the right person Company A^1 implemented a formal knowledge transfer process. The concepts "knowledge donors" and " knowledge recipients" were established. A knowledge donor was an employee from Company C identified as holding key knowledge that was deemed critical and needed to be transferred to Company A^1. A knowledge recipient was the employee at Company A^1 accountable to plan for the transfer and ensure this knowledge was transferred, and embedded within the appropriate business process to ensure continuity. It was also the responsibility of the knowledge recipient to ensure that the knowledge donor was treated with respect and dignity.

Development of the Knowledge Transfer Implementation Process

Dixon (2000) reminds us "to be effective a knowledge transfer system needs to be designed for a specific population that has a specific need" (p. 163). In this case, the transfer process was designed for a merger environment, which is a daunting environment in itself. Given the complexity of the knowledge transfer and management project, the approach taken was to chunk out the work by process (see Figure 6 on next page) to engage and collaborate with employees from both companies. A systematic, holistic approach (cp. the "anatomy of performance" approach, Rummler, 1999, p. 66) guided the development of the knowledge transfer / management process. Stolovitch and Keeps (1999) defined a systemic approach with five clearly defined phases: defining the problem, conducting the analysis, designing and developing the intervention,

implementing and maintaining the intervention, and evaluating the intervention (p. 657). Similarly, Spitzer (1999) says "performance improvement interventions are created with what is typically called the systems approach with five discrete, sequential phases" (p. 165) identified in Figure 6 below.

The development of the knowledge transfer and management process was an iterative process and included an assessment of organizational readiness for both companies. Data such as lessons from Merger 1 were systematically gathered, analyzed, and comprehensive solutions to drive performance were developed (Rummler, 1999, p. 66). The illustration below, Figure 6, represents an adapted version of the approach presented by Spitzer (1999, p. 166). Throughout the process the roles of both companies were taken into consideration, and communication, flexibility, and knowledge sharing was the modus operandi.

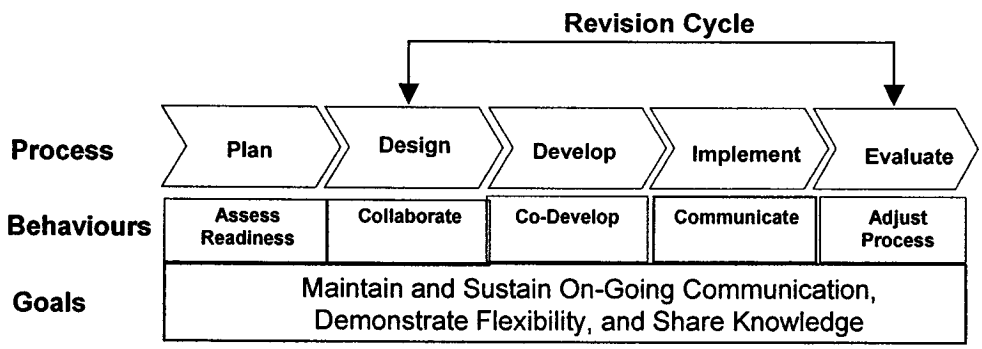

Figure 6 – Phases of knowledge Transfer / Management Development Process

As mentioned in the literature review, a merger environment typically creates chaos in an organization. Although the transition team made every effort to engage employees from the acquired company and encourage a culture of collaboration, the

process presented challenges. During such emotionally driven times, employees have mentally prepared to "check out" and are actively seeking employment, and as a general rule make limited effort to communicate with you. Given that employees were not forthcoming when we tried to reach them, either by phone or email, the transition team decided to hold regular weekly meetings at the acquired company (this plan was implemented following receipt of regulatory and government approvals for the merger). The strategy and approach to engage employees proved successful as we started to develop a trusting relationship with employees at the acquired company. We held a number of meetings at the acquired company office where the objective was to listen to employee issues, capture them, and follow-up with answers, when appropriate. Over time, with the help and support of senior management, we introduced employees to the knowledge transfer concept. As the knowledge transfer process was highly dependent on people, and "people are not things" (Neill and Mindrum, 2000, p. 341), who react very differently depending on the situation, the timely engagement of people was critical to the success of the merger and the knowledge transfer initiative. We emphasized that the development and implementation of the knowledge transfer process was slated to be a collaborative initiative that engaged employees from both organizations. They were to be consulted during the development phase of the knowledge transfer process. Although the required time was allocated to build relationships with employees, the transition team was cognizant that the "organization's success depended on the speed at which it captured knowledge and then disseminated it to develop capabilities that are not easily replicated by competitors" (Sharkie, 2003, p. 22).

Behaviours

The behaviours highlighted in Figure 6 (on previous page) enhanced the development of the knowledge management and transfer process in the different phases of the process.

During the planning phase, it is important to assess the readiness of the organizations and their employees to undertake the changes implied in a merger. In developing tools and processes it is important to engage those who will be impacted in both organizations, in order to gain buy-in. The objective was to nurture a culture where employees were engaged and motivated to contribute to the organization's success.

As Spitzer noted "the design phase is where the creativity takes place, like an architect the designer/s takes all the previously acquired information and transforms it into a blueprint of the solution" (p. 172). During the development phase, the design plan is converted into a form that can be implemented (Spitzer, 1999, p. 181). The design and develop phases encourage collaborative behaviour and co-development. As each organization has its own values and norms, engaging those who will be impacted by the process creates an environment favourable to change.

To fully optimize the planning and development phases, communications at the two organizations must be aligned. The communications should mirror each other, be adjusted for respective organizational culture, and carry the same message. As the participants / employees provide feedback, the process must be adjusted to add value, as far as the timeline allows. Reinforcing the need to communicate on an on-going basis demonstrates flexibility while sharing knowledge.

Communicating with Company C

The transition team from Company A^1 developed an infrastructure based on the phases outlined in Figure 6 to support successful knowledge transfer including the development of tools, processes, and training in trust building (see details in next section). The next step was to "sell" it to Company C. Prior to meeting with Company C, the transition team met to discuss the best way to sell the process to an organization whose destiny was pre-determined; in the very near future it would cease to exist. The team addressed questions such as "why should employees from Company C participate in the process, what's in it for them?"

The team met with the leadership team at Company C to discuss knowledge transfer. During the meeting the transition team was cautious and apprehensive; they anticipated that every single word, every single sentence would be scrutinized. To their pleasant surprise, the leadership team at Company C agreed the transfer process was critical to Company A^1's success. They were also puzzled that we had not begun the process sooner and were quick to point out that "many valuable employees have already left the organization and their knowledge left with them". Many opportunities were missed. An article in the Ascribe Newswire, March 23, 2001, (cited in Journal of Knowledge Management) addressed this type of missed opportunity.

> "Research on acquisitions of nearly 100 high-tech companies in sectors such as software, telecommunications and networking equipment, and biotechnology demonstrates that in recent years there has been a surge of such deals, made for the primary purpose of securing high-tech talent – gaining the acquired firm's programmers, scientists and engineers, plus their marking of entrepreneurial wizards. Their individual skills and collective capabilities are often the most valuable, and sometimes are the only assets of the acquired firms. Unlike physical or financial assets, this high-tech talent can walk out the door at any time – and the workers very often do leave after their firm is acquired, leaving a failed acquisition in their wake."

Following the positive reaction from the leadership team at Company C, the transition team was ready to implement the knowledge transfer process at both companies.

Knowledge Transfer Tools and Processes

The transition team developed a number of processes and tools to ensure an effective and efficient knowledge transfer process to build the newly formed company's corporate assets. The team was cognizant that knowledge has a number of properties; knowledge is either explicit or tacit. While explicit knowledge is tangible, tacit knowledge on the other hand, referred to by Stewart (1997) as intellectual capital and described by Nonaka (1994) as "subjective and experience-based knowledge that cannot be expressed in words, sentences, or numbers because it is context-specific" (p. 22), is more challenging to access. Consequently, integrated tacit and explicit knowledge transfer processes were designed to ensure both types of knowledge were transferred to A^1.

The lessons from Merger 1 indicated that there was a need for knowledge elicitation and transfer tools, particularly as it relates to tacit knowledge. A significant amount of time and resource investment was dedicated to ensure tacit knowledge was elicited and captured; hence a tool was designed and developed. It facilitated the capture of tacit knowledge through face-to-face meetings from four knowledge perspectives:

1. Organizational: how things get done
2. Relational / Network: who is involved and how are they involved, social capital

3. Technical: specific to the asset or area of research or expertise
4. Industry/Business: relevant or strategic knowledge of the business / industry environment

The tool helped an individual define the scope and scale of their work, including the identification of networks, people and resources and specialized tools where needed.

The transition team also recognized the need to develop a strategy and related processes to transfer explicit knowledge including all documents situated in the employee offices as well as those in filing rooms. For example, a process was developed to ensure documents and binders stored in offices and filing rooms were transferred to the acquiring company. The process was organized to ensure that packed boxes were shipped to the acquiring company in a systematic manner and to ensure that there was time for the knowledge recipient and knowledge donor to interact and have a conversation prior to the employee departure.

The following commentary from a manager who participated in the survey (discussed in next Chapter 5) relates to this issue. The explicit knowledge strategy was also developed to avoid receiving thousands of boxes at the same time at the acquiring company. A timetable was developed and the knowledge recipients coordinated shipping of the packed boxes.

> "Close to the final weeks, boxes of files were distributed but by then the employees who could provide knowledge transfer had already left company (this happened primarily in the non-strategic areas) but this information would have been useful to know."

Although much effort was made to ensure packed boxes with explicit knowledge were transferred to the acquiring organization in a timely manner, the process requires revisiting. In anticipation of potential litigation, legal counsel strongly encouraged the transition team to convey the message to the acquired company that all documents residing at the acquired company were to be shipped to the acquiring organization. The following commentary from a manager who participated in the survey (discussed in next Chapter 5) is aligned with the direction from Legal.

> "Archives should be looked into much more carefully as upon a merger we are legally responsible for all products."

In order to avoid the situation identified during Merger 1, where departing employees dumped their computers in the information technology department, a process to transfer knowledge from employee computers was developed. It involved coordination between the technology departments at both companies and required coordination with the Human Resources department to ensure alignment with employee departure dates.

Figure 7 highlights the various tools and processes that were developed and put in place during Merger 2. Those identified as input in the dotted oval will be discussed in more detail.

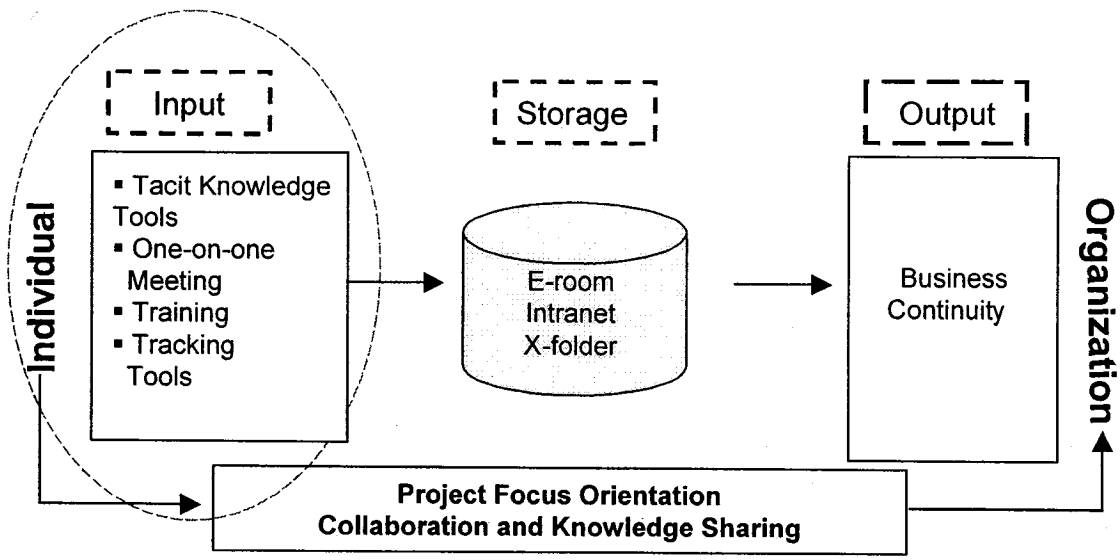

Figure 7 – Conceptual Framework for Knowledge Transfer

The figure 7 (above) illustrates that the development of the process and tools begins with the individual employee and categorized as input. Individuals are taught to be responsible for completing the tools and interacting with the appropriate employees. The subsequent step provides storage for the collected knowledge in the company repositories, for example, intranet and e-rooms. The ultimate goal is to build and streamline the quality of company's corporate assets to ultimately ensure business continuity.

Tacit Knowledge Tools

The transition team developed a set of tools to capture tacit knowledge. The tools were designed by a group of managers known as knowledge management experts (these resources were external to the transition team) with input by the transition team. Tools to support capturing tacit knowledge were designed, tested, and implemented. The tacit knowledge tool was developed to formalize the managers' opportunity to

engage employees who had prior knowledge of a subject in a conversation and storytelling to:

1) Capture vital information about their role, and
2) Provide parting employees with an opportunity to share points of view on their role, the organization, the business, and the industry.

The tools were a set of templates that facilitated a discussion, elicited, and captured knowledge from four different perspectives (as discussed in previous section): organizational knowledge, relational / network knowledge, technical knowledge, and industry / business knowledge.

A comprehensive process involving both companies was implemented and is discussed in the next section on Training. The literature on knowledge management supports the notion that trust is important to engage people in sharing their knowledge and expertise. This implied that building a relationship was a key step in the process.

A critical characteristic of this process was that it was imperative for the employees from Company A[1] to have prior knowledge of the subject matter. This builds on Cohen and Levinthal's (1990) absorptive capacity theory that prior cognitive structures facilitate knowledge transfer. The tool was designed to facilitate an open, fact-based respectful dialogue with knowledge critical employees. The act of meeting, and conversing with the purpose of eliciting and capturing knowledge in a tool changes the status of the tacit knowledge to explicit knowledge. Conversing allows a group to share the mental models and skills of individual members reinforce the conversion. "To the cognitivists, knowledge is explicit, can be encoded and stored and is easy to transmit to others" (Nonaka, 1991, p. 7). "In order to share personal knowledge, individuals must

rely on others to listen and react to their ideas" (Von Krogh, Ichijo and Nonaka, 2005, p. 45).

According to Von Krogh, Ichijo, Nonaka (2000), "conversing allows a group of people to share the mental models and skills of individual members. This reinforces the elicitation and conversion of tacit knowledge into explicit knowledge" (p. 181). Figure 8 (below) depicts the knowledge transfer process and is labelled as a "continuous renewal process". The figure highlights the knowledge journey as tacit knowledge that is identified and generated by the individual is codified and transformed into explicit knowledge. The act of codifying knowledge and sharing it transforms it into explicit knowledge. The four step process: 1) identify; 2) elicit; 3) codify; and 4) transfer is reflective of the process that knowledge donors undergo to prepare for the discussions with the knowledge recipient.

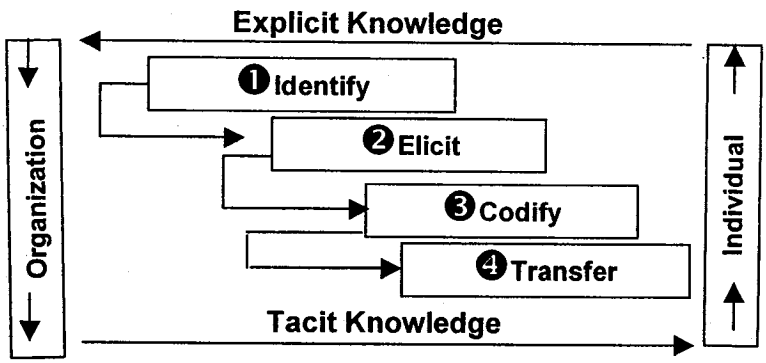

Figure 8 – Knowledge Transfer: A Continuous Renewal Process

For example, *identify* refers to the identification of possible critical knowledge that requires transferring; *elicit* refers to cataloguing and supplying demonstrations and enunciations 'teaching out'; *codify* refers to the act of codifying the knowledge to ensure

business longevity and *transfer* is the act of transferring the knowledge from the individual knowledge donor to the knowledge recipient.

Once completed, the process results in the capture of knowledge and transfer of business critical knowledge and accelerates the learning curve of the individual and / or team assuming the role and responsibilities. The tool facilitates the codification of knowledge – as Davenport and Prusak (2000) note, "codification gives presence to knowledge that may otherwise exist only inside an individuals mind" (p. 87).

Training as an Enabler

Dixon (2000) recommends that "organizations designate resources, people with specific skills or who have had additional training to make all the parts of a knowledge transfer process work" (p. 164). As Smith (2001) argues, "adequate training may enable employees to translate their knowledge into the organization's tacit and explicit knowledge, whereas those who lack training will have to struggle to keep up" (p. 421), training was provided to selected employees destined to follow through on knowledge transfer at both organizations, independently. Multiple training sessions were offered at each organization and training dates were sent via email to participants. Each employee selected the most convenient time to participate in the training. Training sessions were first held at Company A[1] and approximately 75 employees in total participated over a two-week period. A maximum of 15 employees per session participated in the training. Training at Company C began in earnest following training completion at Company A[1]. Approximately 100 employees participated in the training. The training duration time was approximately two hours and occurred over a two-week period.

The objective of the training for employees at Company A^1 was to understand the knowledge transfer and management processes and to discuss how to approach identified employees at Company C. While the training objectives for both companies were the same, there were specific objectives that were different. For example, for employees from Company A^1, it was important that they buy-in into the notion of building trust. We explained that "trust" is the epicentre of knowledge transfer and to develop it requires time to build a relationship.

The specific objectives for participants from Company C was that they buy into the notion of completing the knowledge transfer activities and that they remain actively engaged in the process until the manager at Company A^1 (knowledge recipients) agreed with the knowledge garnered. In order to reassure departing employees that they added value and helped build the acquired company, the following message was reiterated: "Company A^1 is committed to continuing the work you contributed to building the company." If designated employees missed the training and/or requested a refresher, members of the transition team were available to hold one-on-one sessions or additional group training session(s) were given.

Furthermore, objectives common to both groups included introduction to the tacit knowledge tool, the use of e-rooms (document repository) and explicit knowledge transfer process. Following the training, employees from both companies were encouraged to have face-to-face meetings to build relationships and develop trust with their counterpart. Von Krogh, Ichijo, Nonaka (2000) eloquently state "human skills that drive knowledge creation have much more to do with relationships and community building than databases, and companies need to invest in training that emphasizes emotional knowledge and social interaction" (p. 27).

Tracking Tools

A tool to track the development and the progress of the transfer process was developed using Excel (Microsoft spreadsheet). The spreadsheet collected the following information.

1. Listed the knowledge that was deemed critical to transfer
2. Identified the mechanism of transfer
3. Listed issues, escalation process, and plan of action
4. Provided a status update

The tracking tool was also used to provide knowledge transfer status update reports to the transition team and to track the progress of the overall merger integration plan and to problem solve merger inter-dependencies. The tracking tool was completed on a weekly basis by the knowledge recipients and emailed to the transition team.

Knowledge Identification

The identification of critical knowledge that needed to be transferred to the acquiring company was a multi-step, iterative process. It began with the transition team tasked to identify a list of critical knowledge topics. The list was then circulated to the respective division of the acquiring company for review and validation. Once completed, the revised list was circulated to senior management at the acquired company to ensure it was comprehensive and complete. This process allowed the acquired company to take ownership of the process and encouraged dialogue among senior management at both companies. The overall objective of this process was to ensure all critical, relevant knowledge was identified and targeted for transfer to the acquiring company.

Organizational Memory: Repositories

In order to ensure that the acquiring organization had access to the knowledge transferred and ensure knowledge retention, a series of e-rooms were set-up to store the codified knowledge (transformed from tacit to explicit). Note that a plan was implemented to store explicit knowledge, for example, the use of existing databases, email, use of CDs, was encouraged. An e-room is a virtual knowledge repository designed to play the role of a "temporary" organizational memory. Access to the e-rooms was given to those managers (knowledge recipients) from Company A^1 involved in the knowledge transfer process. The repositories were set-up by knowledge type and were accessible at anytime by the authorized managers. The acquired company did not have access to the repositories. The overall goal of the e-room was to build the company's temporary corporate memory. The newly formed Company A^2 expected that employees visit the e-room to access pertinent knowledge, and transform it (if need be) and ensure business continuity. The ability to create knowledge and to continue to learn from it can become a competitive advantage because innovative knowledge developed today will become the core knowledge of tomorrow (Zack, 1999).

The knowledge transfer processes described in this chapter were implemented mid-year in 2003 and the integration including the knowledge transfer was completed by mid-year 2004. The following chapter describes the merger parameters that were developed to assess the perceived effectiveness of the knowledge transfer process implemented during Merger 2.

Conclusion

This chapter introduced Merger 2: Company A[1] acquires Company C, and presented the phases of the knowledge management processes including the associated behaviours and goals. Additionally, it discussed the pivotal processes where Company C involvement was critical and had high impact on the perceptions developed by those remaining to execute the knowledge transfer process. In a normal business environment, the integration of elements, for example, collaborative behaviours, training, tracking tools, require a carefully orchestrated and an integrated plan to ensure that the "parts do not contradict or work against each other in ways that defeat the intent of the knowledge transfer process" (Dixon, 2000, p. 164). This is of particular interest as a merger environment offers little room for error as employees are anxious, synergies need to be achieved with speed and the capture of good knowledge is critical to the long-term survival of the newly formed company.

The integrated collaborative knowledge transfer process was designed as a hopeful response to a traumatic business event such as a merger. The process presented introduces the notion that it is essential to engage employees during emotional upheaval by applying the right processes and tools at the right time, and involving the right people. For Dixon (2000) "the issue is not about adding human components to a technological system, but how to build an integrated system in which each element integrates with each other to make the whole work as a system" (p. 162).

The following chapter discusses methods used to assess the success of the knowledge transfer processes during Merger 2 and their results.

CHAPTER 5

Analysis of Merger 2

Introduction

Merger 1 was acclaimed as a success in the literature as noted by Global Fin@nce (2000) a publication targeted at the investment community where the newly formed Company A^2 received top honors in the hi-tech industry. The editors said that it was the "audacity and ability to restructure a big company's activities on the fly that characterizes most of our honoured companies this year. Other factors such as the rate of business growth, profitability, success with mergers and acquisitions" were taken into account to determine the winners.

Management recognized Merger 1 was a success and a major accomplishment. The President highlighted this in the company newsletter as follows. "We set the standard for speed of integration. We welcomed many new employees and our quarterly results clearly demonstrate we did all this without missing a beat in results. This was not a perfect process, but we should all take great pride in what we have accomplished" (Company Newsletter, Oct. 2000). The newly formed Company A^1 continued to prosper; product performance continued, and market share results indicated the company had achieved leadership status.

The focus of this chapter is to discuss the method used to determine the effectiveness of knowledge transfer as perceived by employees during Merger 2 and present the results of this assessment. Based on an analysis of the lessons from Merger 1, and contributions from the literature a survey questionnaire was developed to

assess the following parameters that have been identified as features of successful mergers.

1. Communication
2. Process
3. Culture
4. Individual Commitment
5. Personal Attitudes

The following sections discuss the survey methodology and the resultant measures of the effectiveness of knowledge transfer during Merger 2.

Merger Parameters

Knowledge transfer / management is a complex, multi-faceted, multi-layered process that requires alignment between the collaborating organizations. McKenzie, Truc, and van Winkelen (2001) note "knowledge management is not something that can be done alone, nor is knowledge valuable in isolation. Sharing and collaboration are implicit in any knowledge management initiative; we need people's participation and buy-in to make any knowledge management project's processes or technology work" (p. 116). It requires employee *commitment* in participating organizations, a series of aligned *communications* between companies, a trusting work *culture*, and *processes* to support the transfer. If an organization does not have open and honest communication, lack of trust leads to negative *personal attitudes* and little commitment. Klein (1996) argued "communication can be used to reduce resistance, minimize uncertainty, and gain involvement and commitment as the change progresses, which may in turn, improve morale and retention rates" (cited in Goodman, and Trust, 2004, p. 218). Armenakis and Harris (2002) argue that there are three communication strategies that need to be implemented to generate readiness for change and they include: persuasive

communication, active communication and managing, or sharing information about the change. "The manner in which they are deployed needs to be varied according to the context of the change program" (Goodman, Truss, 2004, p. 228). As noted in the literature review in Chapter 2, mergers create anxiety, and chaos in the organization. For the purposes of this research, the **communication construct** is defined as understanding that the means of communication and messages communicated lead to understanding the importance of knowledge transfer during a merger.

Individual commitment as defined by McKenzie, Truc and van Winkelen (2001) "...is both an intellectual and an emotional process and it is achieved through both internal motivation and external incentives" (p. 115). Rousseau's (1995) exchange theory assumes that the basis of cooperation and **commitment** is an intellectual transaction that says, "you give me what I need, and I will fulfill my part of the bargain to you" (p. 116). Rousseau's exchange theory is aligned with the incentive available upon completion of the knowledge transfer process.

Human skills, such as 'building relationships', drive knowledge creation; knowledge creation is not only about building databases (Van Krogh, Ichijo, and Nonaka (2000). Furthermore, as Van Krogh, Ichijo, Nonaka (2000) note, "investments in information technology alone cannot make the knowledge-creating company happen" (p. 27). Jones, Herschel, and Moesel (2003) claim that "knowledge management programs are rooted in an organization model known as open systems. An open systems framework assumes that the organization is highly collaborative and interacts with its environment" (p. 52). The infrastructure and the processes defined in Chapter 4 have been identified as contributing to the success of knowledge transfer. However, Fedor, Caldwell and Herold (2006) found that "even though you do a good job on the process

side, such as ensuring that the process is well managed may simply not be enough" (p. 25). Brockner (2002) notes, "although providing advanced notice, soliciting input from those affected and developing a rationale for the change are all important, they are apparently not sufficient to override the favorableness of the change" (p. 25). For the purposes of this research, **process** is defined as the perceived degree of effectiveness of the knowledge transfer processes such as the twinned concept; the tacit knowledge tools, and the training provided during Merger 2.

Trust and compassion can create a favorable competitive advantage. If an organization subscribes to a closed culture, it may not have open and honest communication. Lack of trust usually leads to employee negativity and potentially impacts personal attitudes and individual commitment. A culture lacking trust and compassion may also result in ineffective analysis and choice of tools to assist the knowledge transfer process. **Culture** is defined in its simplest form as the way things are done in an organization, which may include everything from shared values, attitudes and behaviours to a company's business practices that create a shared sense of reality (Lesowitz and Knauff, 2003, p. 31). According to Schein (1992) culture can be analyzed as a phenomenon that is always present, being enacted and created by our interactions with others. Thus, the culture of a group can be defined as "a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems" (p. 12). This notion is consistent with Kogut and Zander (1992, p. 395) who argue that "by relating to the issue of knowledge transfer, it can be argued that individuals will only participate willingly in knowledge exchange once they share a sense of identity or belonging with their colleagues." Fedor and Caldwell (2006) posit,

"successful implementation of organizational change often requires employee acceptance and support" (p. 2). Rousseau (1978) noted organizational context is important in the determination of attitudes and behaviours. Rousseau (1978) defined context as "the set of circumstances or facts surrounding an event ... context can refer to characteristics of the organizational setting, of the individual, of his or her role in the organization, and of any other environmental factor that may shape responses" (p. 522). During the merger, the dominant organization implemented a number of tactics to gain buy-in for the merger and knowledge transfer. These included an extensive communication plan, the "twinned concept", and training. Piderit (2000) suggests that individuals' attitudes toward a change can consist of multiple dimensions such as cognitive, emotional, and behavioural intent (cited in Fedor and Caldwell 2006, p. 15). For the purposes of this research, the **personal attitudes** construct describes the extent to which the organization communicated the importance of a successful knowledge transfer and the extent to which the company enabled participants to accomplish their knowledge transfer objectives.

Based on the lessons from Merger 1 and the merger literature, a questionnaire was developed to assess the five merger parameters discussed above: communication, process, culture, individual commitment, and personal attitudes. Each parameter attempts to explore key points identified in Table 5.

Table 5: Merger Parameters and Key Points to Explore

Area of Focus	Key Points
Communication	Does the organization ensure that the means of communication and the messages communicated lead to understanding the importance of knowledge transfer within a merger?
Process	Has the organization selected the best tools to assist participants effectively in the knowledge transfer process?
Culture	Does the organization foster a culture that facilitates knowledge transfer?
Individual Commitment	Does the organization foster an environment that stimulates individuals to participate wholly in the process of knowledge transfer?
Personal Attitudes	Has the organization communicated to all employees the importance of a successful knowledge transfer to the future of the company and enabled knowledge transfer participants to accomplish their knowledge transfer objectives?

Each parameter must be dealt with to ensure successful knowledge transfer, particularly in a merger environment. The following questions were used to assess how the knowledge management process addressed each parameter during Merger 2.

Communication

1. To what degree did communications from senior management clearly set out the goals of the Company A[1] / Company C merger?

2. To what degree did communication from management motivate you to do your best in making the merger a success?
3. To what degree did management convince you that the transfer of knowledge from Company C to Company A^1 was of utmost importance?

Process

4. As part of the knowledge management / transfer process were you "twinned" with the right person(s) from the other company to facilitate the transfer of knowledge?
5. How effective were the tools that were made available in facilitating the transfer of knowledge? (If none score 0.)
6. How effective was the training you were given to use these tools properly? (If none score 0.)

Culture

7. To what degree did the culture of your organization emphasize openness and candidness as being important in the transfer of knowledge between employees of both companies?
8. To what degree did teams operate effectively to ensure a successful transfer of knowledge?
9. To what degree does Company A^1 culture encourage you to share organizational knowledge with others in the organization?

Individual Commitment

10. To what degree were you motivated to ensure that the company would benefit from a successful knowledge transfer?

11. To what degree were you committed to participate with your team to maximize knowledge transfer?
12. To what degree were you able to participate successfully in the knowledge management / transfer process without being impeded by other commitments (i.e. time and work issues)?

Personal Attitudes

13. To what degree did you believe that a successful knowledge transfer would help you personally in your on-going job?
14. To what degree did you trust the company to deal with you fairly at the conclusion of the merger?
15. To what degree do you feel that the interpersonal relationship with your counterpart was important in the successful transfer of knowledge?

Methodology

A web-based survey questionnaire was selected as the tool to gather data. Surveys provide participants the opportunity to respond in an honest and truthful manner. According to Babbie (1989) surveys are "chiefly used in studies that have individual people as the units of analysis" (p. 237). To ensure confidentiality, an external supplier administered the survey and I did not have access to the participant results by name. However, survey participants were contacted via email by the author to invite them to participate in the research study (see Appendix B). The list of participants was submitted to the external provider. The external provider gave each participant a user name and password. The results were coded using the user name and not the name of

the participant. All questionnaires were identified numerically and provided to me in this format for analysis.

The Survey Questionnaire

The survey questionnaire was formulated only after extensive review of the lessons from Merger 1 (discussed in Chapter 3), based on the merger parameters discussed above. For each parameter, three questions were developed (See Appendix C for the survey questionnaire).

The questionnaire has fifteen questions using an 11-point scale, with 0 the lowest score and 10 the highest, and, two open-ended questions. The two open-ended questions offer an additional means for participants to articulate their views regarding impediments to the knowledge transfer process (question 16) and suggestions for improvement in the knowledge transfer process (question 17).

Questionnaire Validation Process

The survey questionnaire was pre-tested by two employees who had some involvement with the knowledge transfer process during Merger 2. The employees were asked to complete the questionnaire and record reactions including clarity of questions, reasonableness and time required. Further, the survey questionnaire was reviewed and approved by the legal department at Company A[1] and by my thesis supervisor. The feedback was positive; hence the survey was implemented shortly thereafter. To ensure confidentiality, an external company administered the survey.

Participants

The selection criteria for participation included "active participation in the knowledge transfer process during Merger 2". Employees who had actively participated in the knowledge transfer process were invited via email to participate. Active participation was measured by reviewing the weekly status reports that employees who participated in the knowledge transfer process submitted to the transition team. The reports were reviewed and assessed on the level of engagement, activity generated and evidence that efforts to transfer knowledge were made. Furthermore, the employees' respective Vice-President reviewed the list of participants and approved it based on the degree to which the individual participated in the knowledge transfer process and the level of activity they generated. This resulted in the identification of 64 employees, both male and female, in management positions, all current employees of the newly formed Company A^2, who were invited to participate. See Appendix B for the invitation letter.

The total group (N = 64) represented all divisions in the organization and approximately 13% of the total employee population. Although this may appear to be a limited sample of the total employee population, Company A^2 intentionally involved a minimum number of employees in merger activities where knowledge transfer was key. This limitation followed from the overall merger objectives, to achieve synergies, to execute the merger quickly, and to ensure business continuity while minimizing disruption. Although the transition team operated within the limits set by these objectives, the team also recognized that in order for the company to achieve them, broader involvement of employees would be required for successful knowledge transfer.

In order to determine whether there were differences in knowledge transfer perceptions, the entire sample (N = 64) was divided into five groups, roughly by type of business process. Each group represented a specific division or a combination of divisions of the organization; for example the sales and marketing division was combined to reflect their cooperation in a common business process. The support functions such as Finance, Business Technology and Strategic Planning were grouped as it was expected they would work together to ensure knowledge transfer. For example, the Strategic Planning division was responsible for ensuring the successful implementation of the integration plan, while Finance and Business Technology ensured that all technical aspects of the two businesses were merged using the best techniques for knowledge acquisition and transfer. Human Resources and Legal ensured that all employees were treated fairly and abided by legal parameters. Medical, and Government and Public Affairs were treated as stand-alone units. Table 6 below shows the constituency and sample size for each group.

Table 6: Grouping of Company Divisions and Sample Size

Constituent Company Divisions	**Sample Size**
Medical	12
Sales and Marketing	11
Business Technology, Finance, Strategic Planning and NPD	22
Human Resources, Legal	9
Government and Public Affairs	10
Total	**64**

To ensure confidentiality, each participant was given a user name and a password to access the web-based survey. When the participant completed the survey, the user name and password were no longer functional.

The survey contained two sections: scaled questions and open-ended questions. A message appeared on the screen reminding participants to answer all questions before pressing the submit button. If the survey was submitted, and a question remained unanswered, the participant was prompted until all questions were answered. To complete the survey on-line required no more than a 20-minute commitment. The author sent individual email invitations and participants were given one week to complete the survey. In order to ensure confidentiality the author received only the raw data that had been coded numerically by the external supplier. An email was sent to participants to remind them to complete the survey four days following the invitation. By the deadline, the participation rate was 30%. At this point, an email was sent to participants informing them that the deadline had been extended by one week.

In the final tally, fifty employees participated in the survey, representing 78% of the sample. All questionnaires were useable for the analysis. Informal and unsolicited feedback from the survey participants confirmed that the survey was very clear, easy, and required no more than 15 minutes to complete.

Survey Results

The participant breakdown and participation rate by constituent division follows in Table 7 below. The 50 respondents represented the five groups at participation rates ranging from 72% to 89%. See Appendix D for individual responses by question.

Table 7: Participation Rate by Constituent Division

Constituent Division	Participation Rate %
Medical	75%
Finance, Business Technology, Strategic Planning and New Product Development	77%
Human Resources, Legal	89%
Sales and Marketing	72%
Government and Public Affairs	80%

The total sample size used for statistical analysis was fifty (50).

Descriptive Statistics

The Statistical Package for Social Sciences (SPSS) was used to conduct quantitative analyses of the data collected from the 15 scaled questions in the survey. Since all of these questions deal with positive features of knowledge transfer, a higher score (maximum 10) indicates that the respondent views the transfer as being more successful. Means range from 5.32 for question 6 (process composite) "how effective was the training you were given to use these tools properly?" and 8.32 for question 15 (personal attitude composite) "to what degree do you feel that the interpersonal relationship with your counterpart was important in the successful transfer of knowledge?" Standard deviations range from 1.3 for question 11 (individual commitment composite) "to what degree were you committed to participate with your team to maximize knowledge transfer?" to 2.8 for question 6 (process composite) noted above.

The three merger questions that received the lowest mean scores are questions 5, 6, and 12. Questions 5 and 6, part of the merger parameter "Process", recorded the

lowest mean scores at 5.34 and 5.32, respectively and a standard deviation of 2.5 and 2.8 for questions 5 and 6, respectively. In reviewing the results more closely, we note that the Sales and Marketing group had the lowest mean average at 4.5 for question 6. All other group means for question 6 hovered between 4.5 (Sales and Marketing) and 5.6 (Finance, Business Technology, and Strategic Planning & New Product Development (SP&NPD)). Mean group scores for question 5 are between 4.4 and 5.8. The group mean scores for question 12 that form Individual Commitment composite, "to what degree were you able to participate successfully in the knowledge management / transfer process without being impeded by other commitments (i.e. time and work issues)?" range from 6.0 to 6.8 and a standard deviation 2.1.

Descriptive statistics for all items, including mean, standard deviation, range, skewness and kurtosis are reported in Table 24, Descriptive Statistics, in Appendix F. All values for skewness are negative, indicating that the distribution of responses for all items has a long tail towards the right, i.e., larger numbers of "positive" responses for each of the items on the survey. An investigation of the values for skewness and its standard error indicates that responses to questions 1, 2, 4, 6, 7, 8, 9, 11, 13 and 15 display a departure from symmetry (the value of skewness for each of the items is more than twice the value of its standard error), whereas responses to items 3, 5, 10, 12 and 14 do not depart significantly from symmetry. It was decided that parametric tests would be adopted for the purposes of the analysis, primarily because the data collected was ratio in nature, i.e., there exists an absolute zero on the scale used in the questionnaire and the difference between any two successive points on the scale are equivalent across the scale. Other assumptions for parametric procedures adopted, e.g., normality

of the distribution in the sample as well as homogeneity and/or homoscedasticity of variances/covariances are discussed as and when the relevant tests are employed.

Correlations and Internal Reliability

Pearson's *r* was calculated between each of the questions for each of the parameters communication, process, culture, individual commitment, and personal attitudes. In addition, Cronbach's alpha was calculated as a measure of internal reliability for each of the five sections of the questionnaire. Internal reliability helps us ascertain the reliability of specific constructs within the questionnaire; these constructs are represented by groups of questions. Cronbach's alpha, which is the measure of internal reliability adopted for the present analysis, allows the measurement of consistency in the reported perceptions across items for a given construct. Alpha is the mathematical equivalent of the average of all possible split-half estimates of reliability for a specific group of items representing a construct. Items in the *communication* parameter (question 1 through question 3) were highly correlated with one another at *p* levels of .01 or less (see Table 8); alpha for the *communication* section was found to be .75.

Table 8: Communication Correlations (Questions 1-3)

		q1	q2
q2	Pearson Correlation	.595	
	Sig. (2-tailed)	.000	
	N	50	
q3	Pearson Correlation	.439	.464
	Sig. (2-tailed)	.001	.001
	N	50	50

In the *process* section, question 4 did not display significant correlation with question 5, but the other two correlations were significant (see Table 9); alpha for the process section was calculated to be .63

Table 9: Process Correlations (Questions 4-6)

		q4	q5
q5	Pearson Correlation	.131	
	Sig. (2-tailed)	.360	
	N	50	
q6	Pearson Correlation	.300	.606
	Sig. (2-tailed)	.033	.000
	N	50	50

Items 7 through 9, i.e., the *culture* section, displayed significant intercorrelations at a *p* level of .01 or less (see Table10); alpha for the culture section was .83.

Table 10: Culture Correlations (Questions 7-9)

		q7	q8
q8	Pearson Correlation	.660	
	Sig. (2-tailed)	.000	
	N	50	
q9	Pearson Correlation	.562	.621
	Sig. (2-tailed)	.000	.000
	N	50	50

For the section on *individual commitment*, questions 10 through 12 also displayed significant intercorrelations at a *p* level of .01 or less (see Table 11 below); alpha for this section was calculated to be .74.

Table 11: Individual Commitment Correlations (Questions 10-12)

		q10	q11
q11	Pearson Correlation	.660	
	Sig. (2-tailed)	.000	
	N	50	
q12	Pearson Correlation	.407	.514
	Sig. (2-tailed)	.003	.000
	N	50	50

In the section on *personal attitudes*, item 13 and 15 displayed the only statistical significant correlation at a *p* level of .01; no other significant values of *r* were found (see Table 12) and alpha was found to be .49.

Table 12: Personal Attitude Correlations (Questions 13-15)

		q13	q14
q14	Pearson Correlation	.139	
	Sig. (2-tailed)	.330	
	N	50	
q15	Pearson Correlation	.349	.213
	Sig. (2-tailed)	.012	.133
	N	50	50

Composite Variables

Based on the intercorrelations and the internal reliability analysis, I decided to form composite variables for each of the five parameters examined in the questionnaire. The high intercorrelations and/or respectably high value of Cronbach's alpha supported the decision to collapse questions 1 through 3, 4 through 6, 7 through 9, 10 through 12, and 13 through 15 as measures of their respective parameters (despite the lack of more

than one significant intercorrelation and low reliability for the section on personal attitudes).

Composite variables were formed by summing the individual responses to the items in each of the subsections. Intercorrelations between the composite variables yielded significant values of *r* at the .01 level or less (see Table 13).

Table 13: Correlations (Communication, Process, Culture, Individual Commitment, Personal Attitude)

		Communication	Process	Culture	Individual Commitment
Process	Pearson Correlation	.507			
	Sig. (2-tailed)	.000			
	N	50			
Culture	Pearson Correlation	.484	.521		
	Sig. (2-tailed)	.000	.000		
	N	50	50		
Individual Commitment	Pearson Correlation	.599	.326	.650	
	Sig. (2-tailed)	.000	.020	.000	
	N	50	50	50	
Personal Attitude	Pearson Correlation	.496	.412	.670	.712
	Sig. (2-tailed)	.000	.003	.000	.000
	N	50	50	50	50

The table below shows comparison among the constituent groups. The overall average mean for the five parameters among the groups are all greater than 7 with the exception of the p*rocess at 6.1.* Interestingly, each group rated the process parameter between 5.8 and 6.3 and standard deviations between 1 and 2.7. This indicates that there is general alignment among the constituent groups that there was a gap in the *Process* parameter. It appears the results of the *culture* parameter are aligned among the groups with the mean between 7.3 and 7.9 and standard deviations between .2 and

1.8, except for the group combining Finance (F), Business Technology (BT), and Strategic Planning and New Product Development (SP&NPD) recorded at 6.5 and standard deviation 1.8.

Table 14: Group Comparisons (Mean and Standard Deviation)

Groups	N	Communication		Process		Culture		Individual Commitment		Personal Attitude	
		Mean	Sdev*	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev
Medical	9	7.4	1.26	5.9	1.05	7.9	.20	8.3	1.33	8.7	.799
F, BT, SP&NPD	17	7.6	1.27	6.3	1.86	6.5	1.78	7.3	1.37	7.9	1.10
Human Resources Legal	8	7.33	1.18	6.3	2.66	7.4	1.50	7.7	1.23	7.8	1.63
Sales and Marketing	8	7.4	1.17	5.8	2.03	7.6	1.50	7.4	1.58	8.4	1.06
Government & Public Affairs	8	7.5	1.54	6.0	1.90	7.3	1.05	7.1	1.23	8.0	.69
TOTAL	50	7.5	1.24	6.1	1.86	7.2	1.54	7.5	1.35	8.1	1.10

*Sdev = Standard Deviation

It was decided to conduct a multivariate analysis of variance (MANOVA) in comparing groups of respondents across the questionnaire sections. The MANOVA procedure considers the intercorrelations between the five sections simultaneously in conducting a single test of mean differences between the five groups of respondents. This allows the alpha level of the test to be kept constant (in this case, it is set at .05), thereby keeping the type I error rate at .05, or 5%. The continuous, interval-level dependent measures used were the five composite variables representing the sections of the questionnaire. The independent variable, i.e., the type of respondents, was a categorical variable with five levels.

In conducting the MANOVA, it was first ascertained that the violation of the assumption of normality (i.e., the negative skewness values and varied kurtosis values seen in Table 1 Descriptive Statistics) did not affect the robustness of the *F* statistic resulting from the MANOVA (Lindman, 1974). Next, it was confirmed that the minimum number of respondents (8) from each of the five groups was greater than the number of dependent variables (5) used in the MANOVA. The relatively large reliability coefficients for the items which comprised each of the dependent composite measures (except for the measure representing personal attitudes) reduced the possibility of making a type II error, i.e., concluding that there are no differences between groups when in fact there are.

Finally, the assumption of homoscedasticity, i.e., homogeneity of the variance-covariance matrices, was ascertained by calculating the Box's M statistic, which in the present case was found to be 80.80 at a *p* level of .56. The omnibus *F* test measured the Pillai-Bartlett V trace which was found to be .493. The *F* test was non-significant, $F(20, 176)=1.236$, $p=.23$. The observed power for this test at an alpha level of .05 was .839 - there is a very small likelihood of Type II error in the analysis. The effect size for the test was found to be .12, which is considered small (Cohen, 1988). Effect size for the MANOVA was also calculated using the partial eta-squared statistic. The calculated value of partial eta-squared (η^2) measures the proportion of total variability in the dependent measures which could be explained by the variability in the independent measure.

Regression Analyses

To better understand the relationships between culture and the other sections on the questionnaire for the entire set of respondents (n = 50), a regression analysis was conducted. Regression allows one to relate a predicted or dependent variable to a set of predictor or independent variables through a linear equation. Culture was used as a predicted variable as culture comprises the norms and beliefs that employees abide by, with Personal Attitudes, Process, Communication and Individual Commitment as the predictors.

An organization is shaped by the culture it upholds. As organizations are a collection of individuals with multiple personal cultures, an organization faces the challenge of influencing and motivating employees to live its values and norms, regardless of the environment and context. The degree to which the employees embrace the corporate culture determines personal attitudes towards and commitment to an organization. Table 15 below details the linear regression.

Table 15: Summary of Regression Analysis: N = 50

Predicted Variable	Significant Predictor Variables(s)	R^2	F	P	Df (regression)	Df (residual)
Culture	Personal Attitude, Process, Individual Commitment	.55	21.22	<.001	3	47

Data from the culture section was regressed on data from the other four sections of the questionnaire, viz., individual commitment, personal attitudes, process and communication (p to enter <. 05; p to remove >.10). Overall, a meaningful proportion of variance in the culture section was explained, with three significant predictors, $R^2 = 0.55$, $F(3, 47) = 21.22$, $p < .001$. The regression showed that 55% of the variance in the culture section could be explained collectively by the variance in the three significant predictors – personal attitude, process, and individual commitment. The values of β, the standardized regression coefficient reported below, represent the unique variance explained by each predictor. Shared variance is not included in the results of the analysis. The largest predictor of culture was individual commitment (β=.33), followed by personal attitude (β=.32), and finally, process (β=.28). The regression yielded an equation representing the relationship between the variables:

Culture = .44×Attitude + .23×Process + .38×Individual Commitment - 2.05

In the above equation, each of the variables is multiplied by an index, viz., the unstandardized B coefficient, and the equation contains a constant value of - 2.05. Note that tests of regression using other variables as predictors yielded no results. As organizational communication is critical to build a culture of sharing and collaboration, it is surprising to note that it was not identified as a predictor of Culture. This potentially

can be attributed to the design of the communication questions. These questions were set up to assess the communications specific to the merger environment rather than the strategic communication in the company. Furthermore, questions were set up to evaluate management's ability to communicate the goals of the merger and assess the degree to which the communication motivated employees to ensure merger success and gain commitment for the knowledge transfer process. Additionally, this phenomenon may be attributed to the construction of the individual commitment and personal attitudes questions (Merger 2 survey) in that the communication aspect may have been captured within each question and the variance embedded within these questions.

The purpose of the exploratory study was to gain an understanding of the perceived effectiveness of the knowledge transfer process during Merger 2. The parameters: communication, process, culture, individual commitment and personal attitudes lend themselves to the development of the Knowledge Transfer Model / Framework (KTM) below.

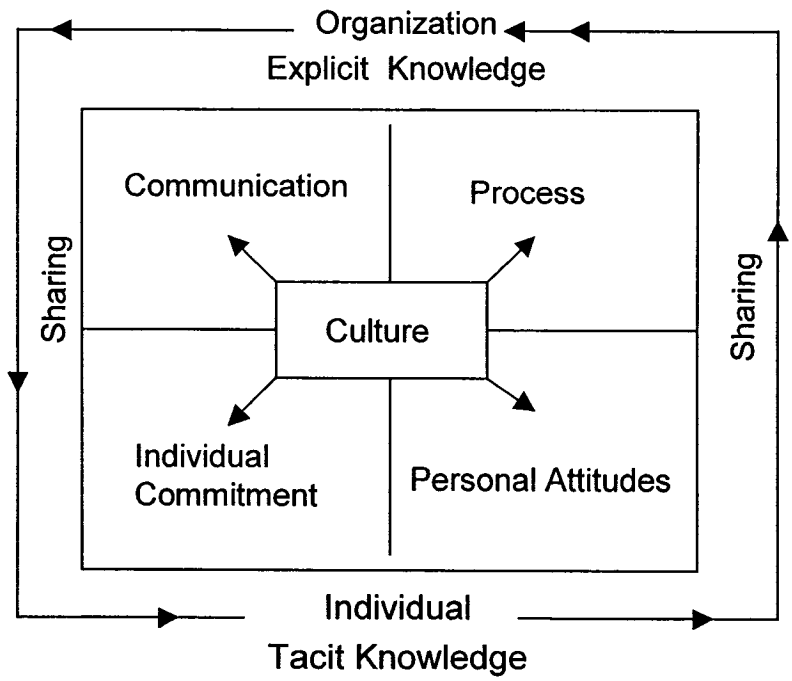

Figure 9 – Knowledge Transfer Model / Framework (seen in Chapter 1)

The KTM framework is illustrative of the five areas that require attention when an organization formulates strategy for a knowledge management initiative. The upper quadrants (communication, process) and the center rectangle (culture) are the organization's responsibility while the lower quadrants (individual commitment and personal attitudes) remain the responsibility of the individual. However, is it important to note that the individual's perceptions are developed based on the organization's ability to design and implement highly impactful tools and processes. It is the interaction of the organization and the individual that ultimately determines the success of the initiative. Although the regression analysis suggests that communication is not a predictor of culture, the author believes that this is due to the design of the survey instrument in that the communication aspect may have been captured within the individual commitment and personal attitudes questions. The following section discusses the survey results and analysis and uses the KTM / framework to guide the discussion.

Results and Analysis

The results will be discussed in terms of the knowledge transfer framework composed of five parameters (discussed above) and how knowledge transfer / management should be approached in light of the results compiled.

The Importance of Communication

The integration strategy and the manner in which it was communicated form a first step in shaping the culture of the merger partners. Employees need to understand what they need to do and why. Communicating this information is one of the most critical priorities in promoting the success of large change initiatives. A multi-faceted communication program including a range of tactics, such as newsletters, intranets, town hall meetings, and periodic surveys helps in ensuring common understanding. "Merger syndrome" can be managed if communication is open, frequent and honest at all levels and all employees of both organizations. This is supported by Pappanastos, Hillman, and Cole, (1987) who recommend frequent communications during and after the merger event. Cartwright and Cooper (1992) note, "organizations should inform all employees of merger plans at the same time as, or in advance of any press release" (p. 103). Both Merger 1 and Merger 2 occurred without the advantage of prior warning.

An informed employee is a committed employee and those who are kept informed on an on-going basis take a more favorable view of the merger than those who feel uninformed. The creation of frequent formal, internal communication mechanisms may limit much of the anxiety fueled by rumors, and "can provide decisive answers, dispel rumors, and reduce ambiguity" (Huang, Kleiner 2004, p. 58). Kotter (1995)

reminds us that speed of communication is vital in today's technological world. Pritchett, Robinson and Clarkson (1997) note,

> "In the past you worried about the grapevine and tried to control the rumor mill. Today that means controlling the light waves, the electron stream. You can't contain information like you did. Neither can you wait a week or so to respond to questions, concerns, suppositions or false stories" (p. 45).

During the planning and implementation phases for Merger 2, Company A[1] conducted a series of pulse surveys to gauge the level of employee commitment and perceptions of communication channels. These surveys were conducted six times during a one-year period and were received positively by employees. The results consistently indicated that communication throughout the merger process was exceptionally effective and that employee commitment was high.

Table 16 (below) shows the mean scores by group for questions 1, 2, and 3, which form the Communication composite. Mean scores for Q1 "to what degree did communications from senior management clearly set out the goals of the Company A[1] / Company C merger?" Q2 "to what degree did communication from management motivate you to do your best in making the merger a success?" and Q3 "to what degree did management convince you that the transfer of knowledge from Company C to Company A[1] was of utmost importance?" are all greater than 7.0. The only exception resides with Human Resources and Legal with a mean score of 6.6 (highlighted below in table below in gray); slightly below the average mean 7.4.

Table 16: Communication Mean Scores by Group

Constituent Division	Overall Mean	Question 1	Question 2	Question 3
Medical	7.6	7.0	7.0	8.1
Business Technology, Finance, Strategic Planning & New Product Development	7.1	7.7	7.4	7.6
Human Resources, Legal	7.3	7.6	6.6	7.8
Sales and Marketing	7.3	7.1	7.4	7.6
Government and Public Affairs	7.2	7.6	7.4	7.6
Average	7.3	7.4	7.2	7.8

It appears from the means that Company A[1] implemented a credible communication plan and that communication from senior management clearly set out the goals of the merger and motivated employees to do their best in making the merger a success. Furthermore, the results confirm that management convinced employees that knowledge transfer was important and a key business process to ensure business continuity and the generation of innovative solutions.

Building Supportive Processes

As the merger was executed Company A[1] considered the notion of absorptive capacity coined by Cohen and Levinthal (1990). Absorptive capacity is based on the cognitive theory that an individual's prior knowledge helps to continue to develop and expand new knowledge as it is acquired. Cohen and Levinthal (1990) define absorptive

capacity as a firm's ability "to recognize the value of new, external knowledge, assimilate it, and apply it to commercial ends" (1990, p.128). According to Lane and Lubatkin (1998, p. 462), Cohen and Levinthal view absorptive capacity as a firm-level construct, the ability a firm develops over time accumulating a relevant base of knowledge. Lane and Lubatkin shift the unit of analysis of their construct from the firm to "student-teacher" pairing, which they refer to as the "learning dyad" (p. 462). Furthermore, they argue "the ability of a firm to learn from another firm is jointly determined by the relative characteristics of the student firm and the teacher firm" (p. 462).

Teece (1998) and Makri (1999) further explain that a firm's absorptive capacity is greatest when the external knowledge is related somehow to what is already known. In other words, the more experience the firm has with similar knowledge, the more readily it can absorb and then diffuse new, similar knowledge throughout the organization. Teece further supports Cohen and Levinthal's theory of absorptive capacity in stating that, "the essence of the firm is its ability to create, transfer, assemble, integrate, and exploit knowledge assets. The firm's capacity to sense and seize opportunities, to reconfigure its knowledge assets, competencies, and complementary assets, to select appropriate organization forms and to allocate resources astutely constitute its dynamic capabilities." (p. 56).

The challenge in implementing knowledge transfer is to find ways to motivate employees to share their ideas and document them. But remember, the context is a merger, so one may ponder, how do you motivate employees when those very employees are those who will more than likely become redundant, and it is those very employees who have participated to build the organization that has been acquired. In addition, you need to motivate and encourage employees whom you did not hire and are

extremely disturbed at the thought of losing their employment. "Most organizations have to go through a cultural change to shift from hoarding knowledge to sharing ideas" (Kaplan and Norton 2004, p. 303). Two fundamental concepts, teamwork and knowledge sharing, increase the probability of knowledge transfer success. "Individuals sympathize and/or empathize with others, actions that inspire the care, trust and commitment that allow for knowledge sharing" (Von Krogh, Ichijo, Nonaka, 2000, p. 181). Efforts to align these two fundamental concepts were made during Merger 2, by "twinning" employees from each organization. An effort was made to reach out to employees at both companies as training was offered to employees (scheduled at different times, to meet their needs; discussed in Chapter 4) on the knowledge transfer process, use of tools, building relationships and building trust.

Figure 4 illustrates the "twinning concept" developed by the author. The matching of employees at each organization with similar expertise had two objectives: 1) to partner employees with similar backgrounds and prior knowledge to ensure absorptive capacity, and, 2) to foster teamwork and collaboration. To facilitate the knowledge transfer the knowledge donor (defined as employees from Company C) was responsible for codifying knowledge in the knowledge transfer tool provided. The role of the knowledge recipient (defined as employees from Company A[1]) was to probe for clarity of information and transfer the knowledge in the organization with the objective of solidifying knowledge retention. According to Davenport and Prusak (2000), "effective knowledge transfer is easier when participants speak the same or similar language, (not only English or French) but also share "technical" language" (p. 98).

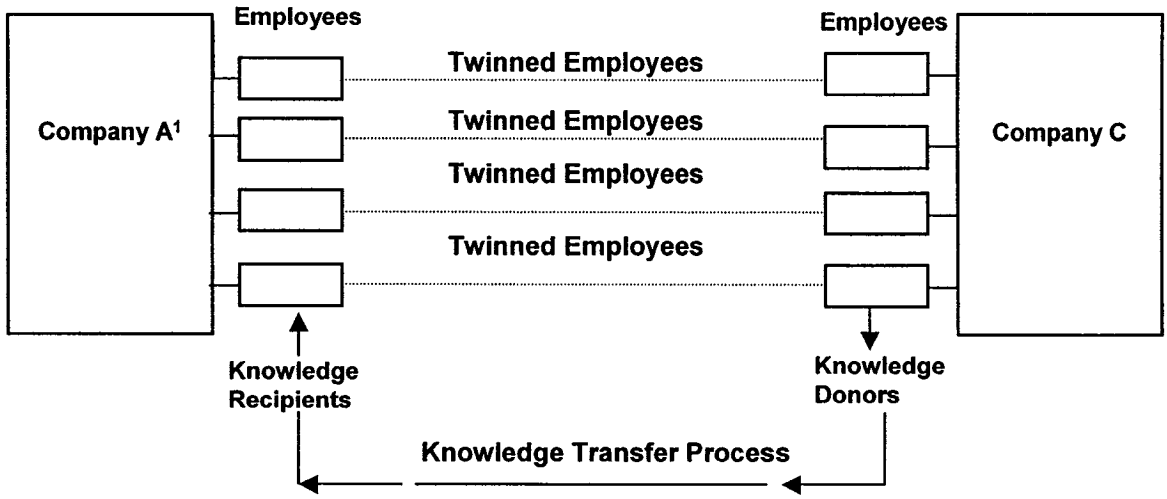

Figure 10 - Knowledge Transfer Process Conducted by Twinning Employees from Company A^1 with Relevant Employees from Company C

Aligned with Cohen and Levinthal's (1990) theory on absorptive capacity, a fundamental assumption made during the development of the knowledge transfer process was that employees with similar subject matter expertise and prior knowledge were more likely to experience success in knowledge transfer. Accordingly, ensuring employees were twinned appropriately increased the probability that knowledge would be transferred, retained, and entrenched within the organization business process and ensure business continuity. Employees with similar knowledge and backgrounds were twinned on a team with counterparts from the other company to ensure knowledge was transferred successfully. The recommended first step was that they first develop a relationship and build trust. As the literature demonstrates, a merger creates much anxiety and mistrust of the dominating organization. It was imperative that the twinned team members interact and meet face-to-face on a regular basis to ensure that knowledge critical to the longevity of the new company was transferred. Von Krogh,

Ichijo, Nonaka (2000), add, "individual face-to-face interaction is the only way to capture the full range of physical sensations and emotional reactions that are necessary for sharing tacit knowledge" (p. 181). It was important for the employee from the dominating company to have prior knowledge of the subject matter. As Cohen and Levinthal (1990) state prior knowledge increases the probability of knowledge absorption.

The *twinning* concept builds on the student / teacher dyad notion discussed by Lane and Lubatkin (1998) and the apprenticeship notion discussed by Cohen and Levinthal (1990). The knowledge donors (teacher) while interacting with the knowledge recipient (student) create a safe private environment that encourages storytelling, which is aided by the use of the tacit transfer tool. The tool is used as an enabler that takes away the pressure from both the knowledge donor and knowledge recipient. It sets the framework that allows the two to connect and share stories, experiences, talk to events and share best practices guided by the tool and created by connecting emotionally with the teacher thereby maximizing learning and innovation and minimizing loss of intellectual capital and organizational disruption.

Putting 'twinning' into practice required the collaboration of leaders to make the appropriate people available in the organization to help identify the type of information deemed critical to the overall integration of the two companies. The process resulted in a list of critical knowledge that the acquired company required to continue to grow the business and create innovation. This was followed by an extensive knowledge mapping exercise; the transition team mapped the two organizations to gain an understanding of the organization structure including who does what and who knows what. Hence the "twinning" concept was conceived. However, the term "twinned" is a construct of the author and supports the absorptive capacity theory coined by Cohen and Levinthal

(1990). The acquired and the acquiring organization agreed to what is now referred to as the "twinned" concept to ensure an efficient and effective knowledge transfer process. The knowledge transfer process reminds us of the three principles offered in the knowledge management literature, as follows.

1) "People always know more than they can tell and tell more than they can write." (Malcolm Gladwell (2005), *Blink*).
2) "Knowledge can only be volunteered; it can't be conscripted." (David Snowden, Former IBM Institute for Knowledge Management)
3) "People only know what they know when they need to know it." (David Snowden, Former IBM Institute for Knowledge Management)

Qualitative data from the open-ended question suggests that "twinning" contributed to knowledge transfer:

> "... Also I was matched with an exceptional person from Company C who wanted only good for the business."
>
> "My counterparts at Company C always made themselves available to ensure effective and timely knowledge transfer. As such, I feel this knowledge management/transfer activity was extremely successful."

A composite of five questions was used to determine whether the twinning concept encouraged transfer of knowledge. This composite builds on Cohen's absorptive capacity theory, on the notion that prior subject matter knowledge encourages greater knowledge absorption. The following five questions: 4, 8, 11, 13 and 15 form the composite variable.

Table 17: Survey Questions Grouped to Formed Twinned Concept

Question #	Question
4	As part of the knowledge management / transfer process were you twinned with the right person(s) from the other company to facilitate the transfer of knowledge?
8	To what degree did teams operate effectively to ensure a successful transfer of knowledge?
11	To what degree were you motivated to ensure that the company would benefit from a successful knowledge transfer?
13	To what degree did you believe that a successful knowledge transfer would help you personally in your on-going job?
15	To what degree do you feel that the interpersonal relationship with your counterpart was important in the successful transfer of knowledge?

In examining the data related to the twinning concept (questions 4, 8, 11, 13, and 15), seven of a possible 10 intercorrelations were found to be significant at a *p* level of .05 or less (see table 18 below); alpha for the twinning concept was found to be .77.

Table 18: Twinning Concept Correlations (Questions 4, 8, 11, 13, 15)

		q4	q8	q11	q13
q8	Pearson Correlation	.498			
	Sig. (2-tailed)	.000			
	N	50			
q11	Pearson Correlation	.252	.513		
	Sig. (2-tailed)	.074	.000		
	N	50	50		
q13	Pearson Correlation	.265	.291	.632	
	Sig. (2-tailed)	.060	.038	.000	
	N	50	50	50	
q15	Pearson Correlation	.507	.548	.265	.349
	Sig. (2-tailed)	.000	.000	.060	.012
	N	50	50	50	50

Descriptive statistics regarding the group responses for the twinning concept are highlighted in table below.

Table 19: Group Comparisons: for the Twinning Concept (Questions 4, 8, 11, 13, 15)

Group	N	Mean	Standard Deviation
Medical	9	8.5	1.18
Business Technology, Finance, Strategic Planning & New Product Development	17	7.5	1.02
Human Resources, Legal	8	7.8	1.63
Sales, Marketing	8	8.0	1.62
Government and Public Affairs	8	7.7	.94
Total	50	7.8	1.25

A one-way ANOVA (see Table 20 below) was conducted using the composite twinning variable as a dependent variable and type of respondent (five groups) as the independent variable. The test yielded a non-significant F-statistic, thereby leading to a conclusion that there was no significant difference between the five groups on the twinning variable. We can conclude that the five constituent groups perceived the "twinned" concept contributed to the effectiveness of the knowledge transfer process.

Table 20: ANOVA for the Twinning Concept (Questions 4, 8, 11, 13, 15)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.253	4	1.313	.828	.514
Within Groups	71.362	45	1.586		
Total	76.615	49			

The Importance of Culture

What is culture? The simplest definitions refer to the way things are done in an organization which may include everything from shared values, attitudes and behaviours to a company's business practices that create a shared sense of reality (Lesowitz, Knauff, 2003, p. 31). Weick (1985) argued that "an organization's culture imposes coherence, order and meaning" (p. 384). Corporate culture provides employees with identity and stability; employees tend to be committed to organizations with strong corporate cultures, which has the potential to create a barrier to the merger process. While Pikula (1995) noted that employees typically emphasize or exaggerate the differences between organizational cultures; they tend to perceive that their way of doing things is superior to the style and practices of the other company (cited in Anderson,

(2003, p. 3, *People Management: The Crucial Aspect of Mergers and Acquisitions).* A 1996 British Institute of Management survey also reported underestimation of the difficulties involved in merging two cultures to be a major factor in failure (Galpin and Herndon, 2000, p. 3). "Cultural difference is the major obstacle to the merger", according to Huang and Kleiner (2004, p. 54).

The existence of a strong cooperative and collaborative culture is an important prerequisite for knowledge transfer between individuals and groups. Research by Roth (2003), shows that there "is consensus within a company that the development of a sharing culture is vital to company success" (p. 43). In the absence of cooperation, interventions to facilitate knowledge transfer may not work. Goh (2002) asserts,

> "Establishing a collaborative and cooperative climate in an organization will not alone improve knowledge transfer. There is also a need to foster a culture of problem seeking and problem solving. An experimenting and innovative culture encourages employees to look for problems as a way to improve the organization" (p. 11).

The objective of the Culture composite variable was to measure the degree to which the organization fosters an on-going culture that facilitates knowledge transfer. The overall mean score for Culture is 7.2, with mean group scores ranging from 6.5 for the merged group that includes Finance, Business Technology, and Strategic Planning and New Product Development, to 7.9 for the Medical group. Given the mean scores, one can conclude that there is concurrence among the participants that Company A[1] has a culture conducive to sharing. Leibowitz, 1999 (cited in Wong and Aspinwall, 2005) stated, "it has been asserted that the success of knowledge management is 90 per cent dependant on building a supportive culture" (p. 75).

The Impact of Individual Commitment

Some impediments to knowledge transfer can be categorized as characteristics of the organization. As noted by Sveiby, (1997) and Von Krogh (2000), in large and complex organizations the lack of an appropriate knowledge management infrastructure will pose problems. On the other hand, Amit and Schoemaker, 1993; Morris and Emspson, 1998; Starbuck, 1992, claim that where technologically based knowledge management systems do exist, their effectiveness will depend upon an appropriate combination of individual incentives and cultural norms of trust and cooperation. Without trust the "internal market" for knowledge will not function effectively because individuals cannot be sure they will be rewarded appropriately for sharing their knowledge (Davenport and Prusak, 2000). According to Lane, Salk, Lyles, (2001, p. 2), "trust entails having confidence that the other firm will refrain from exploiting your vulnerabilities and will also contribute their valuable knowledge." The disposition to trust is learned and reinforced through on-going interactions (Powell, 1996, p. 54) from childhood to adulthood. It is an evolutionary process and the basis for trust in the relationship is continually in transition (Rousseau, Sitkin, Camera, 1998, p. 398).

An organization can have all the processes in the world in place; however, if it does not have the commitment of its employees the processes are useless and do not add value. An individual alone does not commit to a particular process on his / her own; it is the organizational culture including the on-going communication that leads to individual commitment. Keller (1999) states "motivation is one of three general influences on performance" (p. 374). They continue, "the amount and quality of a person's performance are determined by whether he or she has stimuli and support including: 1) internal motivation and motivational support from the environment; 2)

knowledge and skills to do the job; and 3) tools, resources, conducive working conditions, and other environmental factors that make it possible to do a job well" (p. 374).

The Individual Commitment composite variable includes a question about "the degree to which you were motivated to ensure that the company would benefit from a successful knowledge transfer". The overall mean score to this question was 8.0, and standard deviation was 1.8, which is a good indication that there was individual commitment. Johanesssen, Olaisen, Olsen (1999), say "if people are really committed to something, the commitment will spillover to others in the environment" (p. 41). The following commentary extracted from the qualitative data suggests that individual commitment and motivation is deemed critical.

> "It is sad to be on the losing side, but that would not prevent me from doing a great job until the end, and I guess that is the major challenge: keep those people motivated enough to keep things moving after Day 1 ... before we even start the knowledge transfer."

The next question in this composite measures the degree to which "you were committed to participate with your team to maximize knowledge transfer". The overall mean score for this question was 8.3, which indicates that the "twinning" concept (which includes building relationships with your counterpart) discussed in the previous section was perceived as effective. The last question in this composite measures the degree "to which you were able to participate successfully in the knowledge management / transfer process without being impeded by other commitments". This question received the lowest mean score 6.3 and standard deviation 2.1. A closer examination reveals that 16 of the 50 of the respondents (32%) scored this question at five or less. The open-ended questions provide insights into potential reasons for this result, suggesting that the tools

provided were too cumbersome, time pressures were too great, and increased workload contributed to the decreased effort. This knowledge nugget is a lesson that management should review carefully, particularly the increased workload issue. It is recommended that management be sensitive to the relative burden placed on employees as a result of the increased workload created by the merger. Fedor and Caldwell (2006) claim "having to shoulder a disproportionate amount of change can result in less desirable commitment-related outcomes ... this may represent a problem if the burden falls disproportionately upon those considered the most talented or critical employees" (p. 14).

The Consequences of Personal Attitudes

Bresman, Birkinshaw and Nobel (1999) note, "knowledge transfer in acquisitions in early stages is undertaken in a relatively hierarchical manner, but then this gives way to more reciprocal process" (p. 457). As noted by Rousseau (1978) organizational context is important in the determination of attitudes and behaviours. There was evidence of this evolution, as the longer employees at the dominated company remained employed by the dominating company, the more easily they participated in the knowledge transfer process and the company enabled knowledge transfer participants to accomplish their knowledge transfer objectives. Based on the discussions I had with employees at the acquired company, it was clear that as time elapses, employees are anxious to get on with their lives and are motivated to complete the knowledge transfer process so that they can be let go and receive the severance. This sentiment is reflective of Rousseau's (1995) exchange theory that assumes the basis of cooperation and commitment is an intellectual transaction that says, "you give me what I need, and I will fulfill my part of the bargain to you" (p. 116). This is a function of personal attitudes

that evolve over the merger time period. Employees become disenchanted, as they are either sitting idle waiting for direction from the new management team, or busy job hunting. Ensuring personal attitudes remain focused is important to knowledge transfer and the overall merger success.

The overall mean score for the Personal Attitude composite is 8.1. Means scores and standard deviations on the three questions that form the composite (7.9; 1.7 for question 13; 8.1; 1.2 for question 14; and 8.3; 1.7 for question 15) indicate that employees understood the importance of knowledge transfer and the company enabled knowledge transfer participants to accomplish their objectives. The degree to which they trusted that the company would treat them fairly (mean score 8.1 and standard deviation 1.2 on question 14) indicates that the organization had connected emotionally with the employees in its merger and knowledge transfer efforts. The twinning concept was well received as the overall mean score for the question - "to what degree do you feel that the interpersonal relationship with your counterpart was important in the successful transfer of knowledge" was 8.3 (question 15).

Qualitative Data Analysis and Results

The survey questionnaire included two open-ended questions. These questions were added to give respondents an opportunity to provide further insights into the perceived challenges and opportunities offered by knowledge transfer during Merger 2. The following two questions concluded the survey questionnaire.

Table 21: Survey Questionnaire Open-Ended Questions

Open-Ended Questions
1) Please describe some of the areas that you felt impeded your efforts in ensuring a successful knowledge management/transfer (i.e. time, availability, etc.)
2) Please describe how you would improve the knowledge management/transfer process.

Of the 50 respondents, 46 participants responded to both questions. (92% of n=50, and 72% of N=64). The data were reviewed using individual responses as the unit of analysis (see Appendix H). For each question, issues related to the five merger parameters emerged, as shown in Table 22 below.

Qualitative Analysis Validation Process

An objective third party researcher who has not been involved with the research reviewed the qualitative analysis. The mandate given to the researcher was to review the qualitative data analysis and provide feedback on the appropriateness of the categorization. The researcher confirmed the analysis was satisfactory.

Table 22 – Open-Ended Questions: Frequency of Responses

Theme / Merger Parameters	Question 1	Question 2	Total
Communication			
- Goals from Management	4	6	10
- Motivation from Management	1	3	4
- Organizational / Management Commitment	4	3	7
Total Communication	9	12	21
Process			
- Counterpart twinned	2	2	4
- Tools	12	12	24
- Training	1	1	2
Total Process	15	15	30
Culture			
- Communication between Companies	9	10	19
- Teamwork Collaboration / Twinned	6	4	10
- Communication within Company A1	9	17	26
Total Culture	24	31	55
Individual Commitment			
- Personal Motivation	0	4	4
- Team Motivation / Twinned	0	1	1
- Timeline	19	12	31
- Workload	16	4	20
Total Individual Commitment	35	21	56
Personal Attitude			
- Personal Benefit	1	8	9
- Trust within the Organization	0	0	0
- Counterpart	11	8	19
Total Personal Attitude	12	16	28

Results

Although the qualitative data identified opportunities for improvement in all the merger parameters, the most frequently cited area for improvement is Individual Commitment, cited 56 times; a close second is Culture at 55 times, followed by Process at 30, Personal Attitude at 28, and Communication cited 21 times.

While the quantitative results indicate that overall the knowledge transfer process was perceived as effective, the qualitative data analysis indicates there are numerous opportunities for improvement. In the following section, each of the merger parameters qualitative comments is discussed.

Communication

Improvements / impediments to the communication process were cited 21 times, with "goals from management" cited 10 times, and organizational/management commitment cited 7 times, followed by "motivation from management" 4 times. This result is somewhat surprising, given the results of the pulse surveys (discussed in Chapter 5, p. 123) conducted six times during Merger 2 confirming that communication was timely, effective, and frequent, and high mean scores in the quantitative results. I attribute this to two factors; 1) the nature of the questions lends itself to providing feedback on areas for improvement, and 2) as the organization in question is a high performing organization with a high level of employee engagement, employees are generally striving for excellence and have higher expectations for communication quality. Although the results are surprising they appear to be aligned with the regression analysis suggesting that communication is not a predictor of culture. Selected comments from the participants follow.

" More communication to the other company. Often I was asked questions which I did not have the answer to."

"Inadequate communication in the division made it difficult to act proactively with knowledge transfer colleagues from Company C."

"A stronger message from management to counterparts and maybe also designation by management of counterparts accountable by department / area. It is sad to be on the losing side, but that would not prevent me from doing a great job until the end, and I guess that is the major challenge: keep these people motivated enough to keep things moving after Day 1 ... before we even start the knowledge transfer."

"There was no formal communication as to what was required from my team."

The qualitative comments suggest that there is a need to improve the channels of communication within the acquired organization. It is important to note that prior to Day 1 (explained in Chapter 1), the dominating company is not in a legal position to communicate with the acquired companies' employees. Communication momentum is created upon receipt of merger approvals. However, a word of caution is in order. Given the employee emotional state of mind, it is advisable to work collaboratively with the acquired organization to determine the appropriate communication strategy and tactics. As each organization has its own culture, finding the right balance during such a contentious time is critical. During informal exchanges with employees from the dominating company it became evident that employees needed some guidance and answers to sensitive questions from the acquired company. They mentioned that they felt bad that many employees would be released and they didn't know how best to deal with the emotions that surfaced during meetings.

Process

The area for improvement most frequently cited at 24 times in the Process composite is Tools. This result is aligned and consistent with the quantitative data results for process, which received the lowest mean scores. The lessons from Merger 1 indicated that the lack of knowledge transfer tools created difficulties in ensuring that the knowledge transfer was completed. Based on the feedback from Merger 1, standardized tools were developed. The lessons from the feedback are that, perhaps, we went overboard during Merger 2 and simpler tools would have been more helpful. Selected comments below indicate that the tools were too cumbersome and require streamlining.

" Some tools were too cumbersome..."

" Tools developed scared people on the other side ..."

"The knowledge management tool should be more customized to the local Canadian needs and merger requirements by functional area."

"I think this is a very challenging process especially in a large and cross-matrix organization with a huge portfolio of products, and a dynamic environment and I believe that we would benefit from use of formal / validated tools."

Culture

Improvements in the overall Culture composite were cited 56 times with "communication within Company A[1]" at 26 times, "communication between companies" at 19 times, followed by "teamwork collaboration / twinned" at 10 times. Although this is somewhat surprising given the positive quantitative results, again, I attribute this to the

high level of engagement of the employees and strive for excellence. Selected comments follows.

> "I would be surprised to see that a lot of people used the tool for their knowledge transfer. Lack of support / training on the "human" aspect: that was a very hard task to accomplish when it becomes so emotional – I am no psychiatrist but I can imagine the immense impact on the morale of an entire group losing their jobs / identity within a few weeks. While I might be an expert in my area, getting valuable information in this environment was a lot more complex than expected."
>
> "The shifting plans regarding the start of some of the projects was a great challenge as multiple versions of the plan had to be produced. Finally, the confidentiality of certain information that could not be shared made it difficult to plan and act to the best interest of the knowledge transfer projects."

Individual Commitment

The individual commitment composite was identified as the area requiring the most attention as it had the highest frequency – 56 times; "timeline" was cited 31 times and "workload" cited 20 times. These results are not surprising as workload and by extension work / life balance continues to be an issue at Company A^2. These results are aligned with the findings in the global values survey conducted in 2004 by an external third party supplier on behalf of the company. Selected comments follow from the qualitative data follow.

> "Improve planning and incorporate a realistic timeline to obtain knowledge management and transfer within the deadlines that were placed on us."
>
> "Dedicated people to help us with our day-to-day responsibilities so that we could allocate more time to knowledge transfer."
>
> "The process is very time intensive and would likely work best if people could be dedicated to knowledge transfer and not have other competing responsibilities."

"The biggest one was time. I was in a new position at the crunch time of the knowledge transfer and was short staffed. We also had to manage many business issues at the same time without the allocated staff."

"The main issue was balancing current responsibilities with knowledge transfer related to the merger."

"Biggest challenge was managing the ongoing business and finding sufficient time to monitor progress on the transition."

"Time management, i.e. transition project was added to existing workload."

"We had to ensure business continuity while ensuring knowledge transfer."

"Adding this task to the already heavy workload of my department required stretching resources to the limit. The mandate grew as the project evolved with not enough resources to handle the project."

This is borne by the low mean score (6.3) and standard deviation 2.1 for question 12 (Individual Commitment) – "to what degree were you able to participate successfully in the knowledge management / transfer process without being impeded by other commitments (i.e. time and work issues)".

Personal Attitude

Overall the personal attitude composite was cited 28 times as an area for improvement with "personal benefit" at 9 times, "counterpart" at 19 times and "trust within the organization" at 0 – this "trust within the organization" result is not surprising as much effort was put in place to ensure a trusting environment was developed at both companies. This was achieved by the numerous and diverse types of communications and frequent interactions with employees at both companies.

As tremendous efforts were made to ensure that employees were twinned with the right counterpart it is surprising to see that it is identified as an area for improvement.

Lucas (2005) notes "trust and reputation are two issues that affect individual willingness to change the way they do their job." He continues "trust and reputation are the basis of both cooperation between individuals and the willingness of individuals to experiment with new and unfamiliar ways of doing their job" (p. 88). The following comments provide good insights for future consideration.

> "Lack of availability from our counterpart at critical moment in the knowledge transfer process."
>
> "Make sure that all the people on the counterpart who have the knowledge of the business can stay until the end of the knowledge process and not only a representative that might not have all the knowledge."
>
> "I think that this is a very challenging process especially in a large and cross-matrix organization with a huge portfolio of products, diverse areas and dynamic environment (internal and external) and I believe that we would benefit from use of fomal / validated tools. This requires a committed, conscious and consistent effort by all parties. In respect to the integration experience, joint participation at selected points of intervention on a given product / initiaitve / strategy were key."

Conclusion

This chapter evaluated the results of the knowledge transfer process during Merger 2. The quantitative data suggests that the various company divisions are homogenous in the way they responded and there is no significant difference between them. Although the quantitative results are of no statistical significance, the survey results are of practical significance for practitioners embarking in a merger and/or implementing a knowledge transfer strategy. The results offer a glimpse into the world of mergers and illustrate the complexities of knowledge transfer in a tenuous environment. The literature on mergers is rampant with assumptions and discussions on the negative effects of mergers on employees. Add to the mix the need to secure

knowledge from the acquired company to ensure business continuity and the complexities continue and are exacerbated.

The merger literature suggests that the merger failure rate varies at 50% - 80% and knowledge management failure rates lie between 50% and 70%. The implication of such failure rates is that designing and executing a knowledge transfer / management strategy that is mutually beneficial to both sets of employees is a critical success factor.

The lessons from Merger 1 (discussed in Chapter 3) together with the survey results from Merger 2 provided a solid ground to develop a knowledge management / transfer framework based on the five parameters: *communication, process, culture, individual commitment,* and *personal attitude.* The open-ended responses complement and support the need to have a framework and encourage the development of an infrastructure that is conducive to ensuring appropriate additional resources are available to cope with the increasing workload and are available to complete the knowledge transfer process. Furthermore, the data suggests the need for development of tools that are simple and easy to use and are validated by those who are impacted.

In summary, a merger provides a context of change that creates the opportunity for accelerated organizational learning and sustained business performance. This is achieved through the identification and capture of critical business knowledge and personal experience which is transferred and managed, thus ensuring protection of intellectual capital, business continuity, and the creation of innovation.

The following chapter presents a general discussion on the lessons from Merger 1 and the survey results from Merger 2 and concludes with implications for merger managers and for future research.

CHAPTER 6

Discussion and Conclusion

Introduction

The knowledge management literature has evolved over the past 20 years. In the beginning it focused on confirming that the capability to preserve knowledge enhances competitive advantage. This notion made way for knowledge engineers to start building knowledge repositories used to store and easily facilitate knowledge retrieval. The next generation focused on the organization's social capital. For example, knowledge management meant that developing a sharing culture and ensuring employees were appropriately trained on the benefits of the knowledge repositories was more important than the establishment of mere databases. Renko, Autio and Sapienza argue that "social capital facilitates learning in interorganizational exchange relationships, and that the greater the learning, the greater should be the competitive advantage achieved by a firm" www.babson.edu/entrep/fer/papers99, (p. 7).

Mergers present the challenge of integrating two organizations with a critical goal being the transfer / management of knowledge. As the literature confirms, mergers bring to bear their own particular set of challenges and the task of adding knowledge transfer to the process seems daunting, perhaps even impossible. Although a prescription for success is nowhere to be found, this exploratory research offers a knowledge transfer model / framework (KTM), culminating from the implementation of two knowledge transfer processes in two merger environments (2000 - 2004).

The Research Study

Merger 1

This research spans a four-year period (2000-2004) and involves two mergers in the hi-tech industry. The qualitative lessons garnered from Merger 1 of Company A with Company B influenced the development of the knowledge transfer and management process during Merger 2, between Company A[1] and Company C. The knowledge transfer process during Merger 1 was developed one-sidedly to the extent that the acquired company did not participate in its discussions and development. It was designed as a decentralized process. This meant that individuals had choices as to which tools and processes they selected from the basket of knowledge transfer options to ensure knowledge transfer. The results confirmed that the decentralized process had a number of gaps. Managers mentioned in the one-on-one meetings that they did not know "how to do it", they did not know what questions to ask; and they were somewhat hesitant to engage and/or continue the conversation, as the departing employees were not forthcoming with sharing their knowledge. They repeatedly mentioned the need for tools, supported by training and communication. The lack of a supportive infrastructure was identified as a gap that required attention.

The transition team (put in place during Merger 2) concluded through Merger 1 lessons that the manner in which a knowledge management initiative is designed and implemented can make a difference in its success. The lessons taught us that contributions to knowledge transfer success include a multi-disciplinary approach to knowledge management that integrates cultural awareness, trust, career security, availability of tools and processes, and appropriate communication and training. These findings are consistent with much of the literature including among others Ferrari and de

Toledo (2004), who propose a holistic vision of knowledge management. The model they introduced is composed of four elements: 1) principles, 2) contents, 3) processes, and 4) infrastructure (p. 118). Thomas, Kellogg, and Erickson (2001) note, "knowledge management is not simply a matter of managing information; [it is] essentially a deep social process which must take into account human and social factors" (p. 881).

Based on the literature and lessons from Merger 1, it appears that interventions such as ensuring on-going communication, ensuring a culture of sharing and collaboration and providing tools and training facilitate knowledge transfer processes. In the context of mergers, it was found that these interventions must be "mirrored" at each organization. According to Davenport and Prusak (2000), "factors that lead to successful knowledge management initiatives are: a knowledge oriented culture, human infrastructure and senior management support" (p. 160). During the mergers, the initiating company invested considerable time and energy in ensuring timely and on-going communication. A culture of sharing and collaboration is the foundation in which the company operates under normal business circumstances and this philosophy was adopted for the mergers. A merger environment presents a challenge, as the new leaders preside over an organization that is destined to become extinct, at least in part, it typically includes a group of disillusioned employees who contributed their time and passion to developing the business and will more than likely become redundant.

In summary, lessons from Merger 1 include the following:

1) Mergers require an integrated change management and communication plan;
2) The plan must recognize that within an organization there is cultural diversity; for example each division upholds their own internal set of principles;
3) The plan must include tools and processes to identify knowledge and codify it together with the appropriate training;
4) Employees are required to exhibit personal commitment to the merged firm in the face of a lack of reward and incentives.

Merger 2 provided Company A[1] an opportunity to study, analyze, and interpret the lessons from Merger 1. This process evolved into the development of an infrastructure with tools and processes to support the knowledge transfer strategy. This concluded with the identification of specific organizational and individual obligations coupled with specific knowledge transfer parameters that contributed to the eventual development of a knowledge management / transfer framework.

As the initiating company's goal was to continue to grow the business while introducing new products and services, it was imperative to secure knowledge from the target company. Therefore, ensuring that a solid, pragmatic knowledge transfer approach was in place supported the achievement of the company's vision.

Merger 2

As discussed in Chapter 4, the transition team that was put in place during Merger 2 reviewed the knowledge transfer gaps identified during Merger 1. A knowledge transfer plan of action, incorporating lessons from Merger 1 was developed and implemented. Implementation of the knowledge transfer process began in earnest in April 2003 and was completed the following year. Throughout the process, designated members from the transition team followed up with various managers engaged in the process at both companies to answer questions, redirect energy, and congratulate teams for their contributions. Informal feedback from the departing employees from Company C suggested that the transfer process was respectful and the managers were very understanding during the process; "they listened and asked good questions", said a departing manager. By calendar year-end 2004, the knowledge transfer process was complete. Although the company ceased to exist following legal and regulatory approvals, the office of Company C remained operational with employees engaged in day-to-day business, including looking for new employment while completing the knowledge transfer process until the final day arrived and there was nobody to be seen. Company C was closed for business!

The merger literature is replete with studies on the impact of a merger on employees. We can deduce that employee emotions range over a continuum depending on the day, the phase of the merger, and future employment prospects. These emotions usually dictate the manner in which employees react to imposed merger processes including knowledge transfer. As the number of remaining employees decreases, and departments cease to exist, employee emotions and attitudes are impacted. Hence it is important for the knowledge recipient in the merged company to remain engaged and

motivate the departing employee to transfer knowledge. It is critical for the knowledge recipient and knowledge donor to develop and maintain a trusting relationship to ensure an effective transfer process. As I interacted regularly with the employees at the target company, I observed that as more and more employees completed the knowledge transfer and were severed, the more difficult it became for the remaining employees to remain focussed and complete the tasks at hand. "It is very devastating to continue to come to work everyday and see many of my friends and colleagues pack their office and say goodbye while I wait to hear for my departure date, we all have the same fate", said a departing manager. Other comments from managers who responded to the survey's open-ended questions (discussed in previous chapter) suggested that engaging employees presented an issue:

> "being on the Company C side, it was extremely challenging at times to obtain information from colleagues, as many people were resigned to the fact that they were losing their jobs and were not overlly motivated to provide information in a timely manner."

Merger 2 Survey Results

A survey questionnaire (discussed in Chapter V) was developed to assess the perceived effectiveness of knowledge transfer and management process during Merger 2. It was based on five merger parameters: communication, culture, process, individual commitment and personal attitude. Each parameter attempted to explore key points identified in Table 24 (below). Three questions to collect responses for each parameter were developed. The total number of survey participants equalled 50 representing five divisions of the newly formed Company A^2. Eight or more participants from each division completed the survey.

Table 23: Merger Parameters that Formed the Knowledge Transfer Model / Framework

Area of Focus	Key Points
Communication	Does the organization ensure that the means of communication and the messages communicated lead to understanding the importance of knowledge transfer within a merger?
Process	Has the organization selected the best tools to assist participants effectively in the knowledge transfer process?
Culture	Does the organization foster a culture that facilitates knowledge transfer?
Individual Commitment	Does the organization foster an environment that stimulates individuals to participate wholly in the process of knowledge transfer?
Personal Attitudes	Has the organization communicated to all employees the importance of a successful knowledge transfer to the future of the company and enabled knowledge transfer participants to accomplish their knowledge transfer objectives?

The statistical analyses show (Chapter V) there are no significant differences between the constituent groups. This can be attributed to the emphasis that Company A[1] made to implement a number of processes including training and communication to ensure consistency and alignment in the organization. Other factors may include the holistic approach adopted to knowledge transfer, including inviting the target company to participate in the development of the process; and the twinning concept implemented to facilitate the development of working relationships and trust.

The regression analysis found that the predictors of culture are: process, personal attitude and individual commitment. It is somewhat surprising to note that communication is not a contributor as a predictor of culture. This can be attributed to the orientation of the questions, particularly the questions that form the individual commitment and personal attitude composite. These questions were set up to assess

the communications specific to the merger environment rather than the strategic communication in the company. Additionally, questions were set up to evaluate management's ability to communicate the goals of the merger and assess the degree to which the communication motivated employees to ensure merger success and gain commitment for the knowledge transfer process.

The qualitative analysis drawn from the two open-ended questions suggest there are areas for improvement. The parameter with the largest gap is individual commitment, cited 56 times by the participants. The largest contributors to the gap were identified as "timeline" and "workload". These are not surprising results as the dominant company had very aggressive targets to complete the merger and achieve synergies with speed while ensuring business continuity. This is an important point for merger managers to take into account as they plan to execute the merger implementation plan. A recommendation is to ensure that those employees working on knowledge transfer and management during the merger get support for their regular workload, for example, hiring an employee on a short-term contract would provide the much needed reprieve for those executing the process.

The next largest gap was identified in the culture parameter. A merger environment creates turbulence in both organizations. The literature confirms mergers create uncertainties as employees question the rationale for the merger. Organizations are in a fragile zone during this time. This creates a need for both companies to strike a balance among addressing the needy employees, sustaining an organization in a state of flux, and ensuring business continuity. A supportive culture is essential to ensure a cooperative knowledge transfer process. In order to avoid "merger syndrome" (discussed in Chapter 1), Stahl recommended that organizations ensure the personal,

organizational, and cultural aspects of the business are managed. The following commentary from a manager who participated in the survey and responded to the open-ended questions presents an emotional plea that the personal level requires attention.

> "The one area of the whole transfer process would have been to somehow find a way to keep the morale of departing employees positive. It is a very difficult situation for both the employees who are departing and for those who need to obtain their knowledge to continue forward. In my opinion the key is always communication, communication, communication – perhaps a weekly newsletter with motivational tips and information on their departure processes (what they would be able to access – what the process would look like when it was their turn). Many employees heard other departing employees information or the "horror" – (usually minor instances) stories they shared and that demotivated them and made them angry and resentful to anyone who was associated with Company A[1] – not a very good environment for sharing knowledge. Others were feeling guilty for having stayed longer or joined Company A[1]."

> "There is a need to find a way to maintain a healthy, positive environment on both sides of the Merger. Respect, empathy, and the knowledge that any one of us could find ourselves in the same position should be in the forefront of everyone's mind as they manage their way through a Merger."

Research Limitations

The research is limited in scope as it is specific to a merger environment. Although the sample size is modest and the number of questions small, the mixed research methodology offers two types of data, quantitative and qualitative, collected during two mergers over a four year time frame. Given that the researcher was also involved in the planning and executing the merger, there may be biases in the interpretation of the findings. Furthermore, the findings may not appear to be comprehensive because proprietary knowledge prevented full disclosure of potentially relevant qualitative data, sample tacit knowledge tools, and information gathered through interventions such as Pulse Surveys, and Health Checks. Moreover, employees declared redundant during both mergers did not participate in the research, as the

author was not aware of their whereabouts. The results may be skewed positively as participants are current employees of the organization. And finally, inviting external customers to participate in the research might have provided a different perspective as the level of knowledge transferred may have directly or indirectly impacted them positively or negatively.

Discussion

This research focuses on knowledge transfer in a merger environment. Although exploratory in nature, it builds on theories proposed by Davenport and Prusak (2000), adds to the absorptive capacity literature originated by Cohen and Levinthal, and builds on the social aspect of knowledge transfer discussed by a number of authors including Thomas, Kellog, Erickson (2001). Additionally, the research confirms the benefits of implementing the human performance technology theories discussed by Sptizer (1999), Rummler (1999) and Stolovitch and Keeps (1999).

Although the literature proposes divergent perspectives on the nature of knowledge management, this research offers a knowledge transfer model / framework born out of my practical experience in implementing knowledge transfer and management processes in two mergers in the hi-tech industry, tested during Merger 1 and enhanced during Merger 2. The model / framework is composed of five merger parameters: communication, process, culture, individual commitment and personal attitude.

From a practical perspective, merger managers may find this research useful, as it will provide them with a framework to guide a knowledge management initiative during a merger. For knowledge management researchers, the framework provides them with

a structure to test in other industries and in other business environments, for example, hostile takeovers. Researchers may use the framework to better understand knowledge management practices and to build models that would further expand the knowledge management field. Finally, it is hoped this research will inspire others to continue to research knowledge management in a merger environment. The research findings are founded on qualitative and quantitative analyses; hence the author believes the findings are valid.

The Knowledge Transfer Model / Framework

Through the lessons from Merger 1 and the subsequent research following Merger 2, there, emerged the knowledge transfer model / framework. In reviewing the lessons and the Merger 2 feedback, a number of important themes emerged that are specific to a merger environment. One is the ability of the dominant company to have a communication strategy that is deployed according to the specific phase of the change initiative, (in this case the merger) (Goodman, Truss, 2004, p. 228) that develops a solid understanding and commitment from both companies on the importance of knowledge transfer during the merger. A second theme is the ability to "mirror" processes at both organizations. This is important as it allows for management to engage both organizations in the development and implementation of transfer processes. For example, during Merger 2, the same training was given to employees of both companies. Additionally, the dominant company engaged senior management at both companies in validating the process and tools designated to be used during the knowledge transfer process. A third theme was the ability of the dominant company to foster a culture that facilitates knowledge transfer. This is complicated and is feasible in a company where the leadership is specifically hired with a mandate to undertake

change. However, this is a challenge in a company that leaders inherit through a merger and are required to lead by default. Culture impinges on the multiple levels of the organization starting with the individual to business units, to divisions, to the entire organization. The fourth and fifth themes that emerged are ensuring employees are committed, and are engaged in the merger process. While commitment is up to the individual, it requires building a culture that can sustain and engage individual employee participation through the life of the merger. Note that it is important to have identified the key parameters, and to have the processes appropriate to the knowledge type, for example, tacit or explicit knowledge, in place prior to executing the knowledge transfer / management strategy.

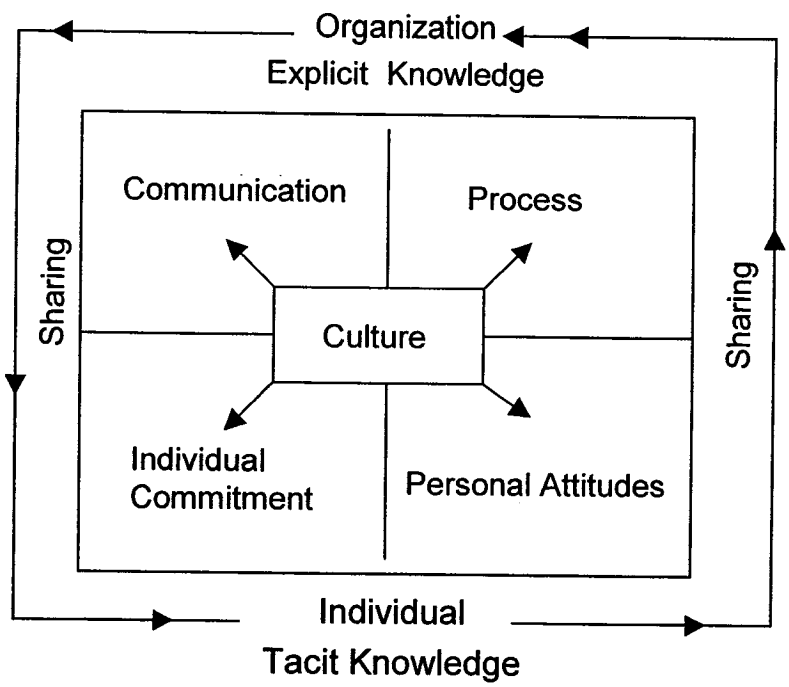

Figure 11 – Knowledge Transfer Model / Framework (seen in Chapters 1 and 5)

The KTM framework (Figure 11) shows the merger parameters and the interaction between the individual and the organization. It demonstrates that the flow of

knowledge is a continuous process of interaction between individuals and the organization. It is the on-going interaction between the two that shapes and transforms knowledge from tacit to explicit and explicit to tacit to ensure business objectives are reached – this builds on Nonaka's notion "spiral of knowledge" (1991, p. 4).

At the individual level, it is imperative to develop mutual trust and commitment between employees and the organization, to ensure that employees exude an attitude of commitment for the knowledge transfer process. This notion suggests knowledge transfer is a social construct and organizational process that is inter-related with and co-exists with regular organizational activities on an ongoing basis. As the literature states, an organization is a living organism composed of human beings, whose relationships create a knowledge transfer process that supports an organization in achieving its business goals, synergies, and objectives. According to Lau, Ning, Pun, Chin and Ip (2005), "knowledge management is a set of business processes that capture and deliver the collective experience" (p. 87). They continue to say, "there is no doubt that knowledge is one of the organization's most valuable resources, indeed there are companies that treat knowledge as an asset, just as real as any other assets that appear on the companies balance sheet" (p. 87).

In the article, "The Knowledge-Creating Company", Nonaka discusses the notion of "spiral of knowledge" (Nonaka 1991, p. 4), proposing that the tacit/explicit distinction creates four patterns for creating knowledge transfer in an organization: From tacit to tacit; from explicit to explicit; from tacit to explicit; and from explicit to tacit. "In the knowledge creating company all four of these patterns exist in dynamic interaction, a kind of spiral of knowledge" (p. 4). "The act of articulating tacit knowledge into explicit knowledge is the critical step in the spiral of knowledge. The reason is that both require

the active involvement of the self – that is, personal commitment" (p. 5). Knowledge flow, as illustrated in the outer boundaries of Figure 11, is a continuous renewal process. For example, the individual who explicitly shares knowledge with others externalizes tacit knowledge; this tacit knowledge is thus transformed into explicit knowledge. The flow depicts how connected the interactions are; "the knowledge originated through individual face-to-face contact, can be conceptualized through collective conversations or dialogues, then converted into explicit documents, then internalized once more as tacit knowledge" (Von Krogh, Ichijo, Nonaka, 2000, p. 181). This process is referred to as the "spiral of knowledge", coined by Nonaka, and elaborated on by Von Krogh, Ichijo, Nonaka (2000) where they say, "the whole process keeps spiralling onward – from originating to converging to documenting to internalized to originating – as the new knowledge created continues to evolve" (p. 181).

In Figure 11, the upper two quadrants (communication and process) and the central rectangle (culture) focus on the organization. It is the organization's responsibility to ensure there are appropriate structures in place that are conducive to knowledge transfer. The two lower quadrants focus on the individual and reflect the individual's commitment and personal attitudes. It is these merger parameters working in unison that contribute to successful knowledge transfer, regardless of the business environment. The model builds on the notion put forward by Nonaka and Takeuchi (1995) who note, "knowledge is related to human action; and individuals create knowledge, but organizations can create a context for individuals to create and amplify knowledge" (p. 58).

Bresman, Birkinshaw and Nobel (1999), note, "knowledge transfer in acquisitions in early stages is undertaken in a relatively hierarchical manner, but then this gives way

to more reciprocal process" (p. 457). There was evidence of this during Merger 2, as the longer employees at the acquired company remained employed, the more they demonstrated acceptance of the knowledge transfer process. We learned that as time elapsed, employees from the acquired company become anxious to get on with their lives, anxious to complete the knowledge transfer process so that they could collect their severance. This is reflective of Rousseau's exchange theory that assumes the basis of cooperation and commitment is an intellectual transaction that says, "you give me what I need, and I will fulfill my part of the bargain to you" (p. 116).

We can attribute initial resistance to the notion that "knowledge is power". Davenport (2000) discussed the political aspects of knowledge: "it is no secret that "knowledge is power," and thus it should not surprise anyone that knowledge management is a highly political undertaking. If knowledge is associated with power, money, and success, then it is also associated with lobbying, intrigue, and back-room deals. If no political intrigue surrounds the knowledge management initiative, it is a good indication that the organization perceives that nothing valuable is taking place" (p. 9). For example, during a training session an employee from the acquired company made the following comment, "if I have valuable knowledge and I am perceived as a critical employee will you retain me because I am a valuable resource?" Over time, the employees accepted the merger and relinquished their knowledge.

Although knowledge management repositories may play a role in the knowledge transfer process, knowledge transfer is not only about individual commitment, but also about developing a culture that supports sharing, ensures transparent communication to employees on an going basis, develops appropriate tools and processes and makes them available so that employees continue to share knowledge as part of their everyday routine.

As Thomas, Kellogg, and Erickson (2001) suggest, "knowledge management is essentially a deeply social process, which must take into account human and social processes" (p. 881). Knowledge transfer is not a one-time event, it's not an isolated process, but rather a systemic business process that involves people and allows an organization to continue to grow and gain competitive advantage.

The development and implementation of a knowledge transfer process in a merger environment is a complex project and requires attention from senior management. The complexity of this project is exacerbated by the fact that those very employees most implicated in knowledge transfer will become redundant. Although in this case the initiating company had a culture of collaboration and sharing, transferring this philosophy to the donor organization required tremendous efforts. This is understandable as the majority of the latter's employees were destined to be released. Developing trust among the employees at the donor company is important during this turbulent time. Tools and processes (for example, the twinned concept, the availability of tacit knowledge tools conducive to sharing) that are supportive of sharing are elements that drive the knowledge transfer process.

Creating a culture committed to communication is also a critical element as it encourages employees to become individually committed and have personal attitudes that are conducive to collaboration. Although the regression analysis indicates that corporate communication is not a predictor of culture, the author strongly believes that this is attributed to the design of the questionnaire. The literature on communication states that in order to build trust, regular, repeated communications is important – "the quality and quantity of information provided by top management has been proposed to

be a key factor in the post combination integration process" (Stahl 2004, p. 7). Schweiger and DeNisi (1991) suggest that "providing employees with credible and relevant information has been shown to mitigate the traumatic effect that mergers and acquisitions have on employee well being, satisfaction, and trust in top management" (cited in Stahl, 2004, p. 7).

Technology Enabler

The knowledge transfer and management project during both Merger 1 and Merger 2 had a low budget for technology. For example, the use of knowledge management repositories with sophisticated search engines was limited. Rather, the technology of choice was the e-room (for Merger 2). An e-room is a virtual space, using a knowledge repository with limited access, limited functionality and limited interaction capability. It was set up as an interim solution forming the companies' temporary corporate memory, until the knowledge was transferred to the appropriate area of responsibility and / or reviewed by other employees to evaluate and transfer to their area of responsibility. In hindsight this approach allowed Company A^2 to apply the "double-loop" learning discussed by Argyris and Schon (1978) where practices in use are reassessed.

Employees were encouraged to place all the completed tools that captured and codified tacit knowledge into the e-room. Folders were set up by division, for example, Marketing had a folder and within that folder were other folders that pertained to marketing activities. The codified knowledge remained in the e-room for one year after which the knowledge was archived by business technology. Additionally, employees were encouraged to use e-mail and/or CDs to transfer explicit knowledge. Tsui (2005)

reports "a considerable proportion of knowledge management projects have failed. One of the lessons learnt from these failures is that technology alone should not be the primary driver for any knowledge management project and that an appropriate balance of technology, process, people and content is instrumental to the continued success of any knowledge management deployment" (p. 3). This sentiment is echoed by Wong and Aspinwall (2005) who wrote ".... Technology should not be seen as an absolute answer to knowledge management since it is only a tool" (p. 76). Rather, Company A^2 focused on fostering the culture of sharing and teamwork, which has been the cornerstone of their success, and extending those values to the acquired organization. Hall (2001) succinctly states "knowledge creates knowledge when it is shared" (p. 19); it was this sentiment that encouraged management to implement the knowledge transfer / management strategy that ensured sharing of knowledge.

As was discussed in previous chapters, the strategy was two-pronged, it encouraged sharing by twinning employees with similar prior knowledge to elicit and codify tacit knowledge. This activity was followed by placing the completed document / tacit knowledge tool in the e-room. I would modify Hall's statement to "knowledge creates knowledge when it is shared contributing to organizational learning". Davenport (1996) uses the term "hybrid solutions" to assert that effective management of knowledge environments require interactions between people and technology (p. 2). Ruddy (2000), argued that improving knowledge sharing in a meaningful way requires a "delicate marriage of technology with a keen sense of cultural or behavioral awareness" (p. 38).

Implications for Management

As consolidation in the market place continues, it is advisable that this research be replicated, regardless of the industrial sector, to determine its transferability to other environments. This is of particular interest as the knowledge management literature continues to stress that the creation and sharing of knowledge is a strategy for achieving competitive advantage.

Given that knowledge transfer and management is a complex process with implications for both the individual and the organization's business practices, it is recommended that management systematically evaluate the resources required to ensure success. The implications are three-fold: 1) management should not underestimate the amount of time and resources required to do it right; 2) management should dedicate resources to managing change, and 3) management should lead the change, lead by example, walk the talk.

Implications for Research

I believe this is the first case study examining knowledge transfer in the context of mergers with adequate depth. This research is limited in scope as it focuses on a particular industry with a limited number of participants in the research study. Nonetheless, there is value in the research as it provides practical insights into the world of mergers and knowledge transfer through a practitioner's lens.

The lessons are potentially transferable to any business context, as knowledge transfer implementation relies heavily on the principles of change management, which include the right people, the right processes, and the right culture.

This research helps advance a better understanding of the factors contributing to knowledge transfer during a merger, and hence is useful to academics building theory and to practitioners as well. It helps bridge the worlds of academia and corporations.

The figure on the following page illustrates that knowledge transfer is applicable in any context, but the degree of difficulty to implement increases marginally, for example, from a normal business environment, to international joint ventures, to mergers and acquisitions. I hypothesize that implementing knowledge transfer in a hostile takeover environment becomes even more challenging, because the turmoil employees experience in the course of a merger I assume to be greater during a hostile takeover.

"As more than 70 percent of leading companies are worried about becoming the target of a hostile takeover and 15 percent saying they would resort to the so-called poison pill defense to deter a takeover bid" (Knight Ridder Tribune Business News. Washington, March 6, 2005, p. 1), it is recommended that this study be replicated in other industries, other business environments including hostile takeovers and include a larger sample size.

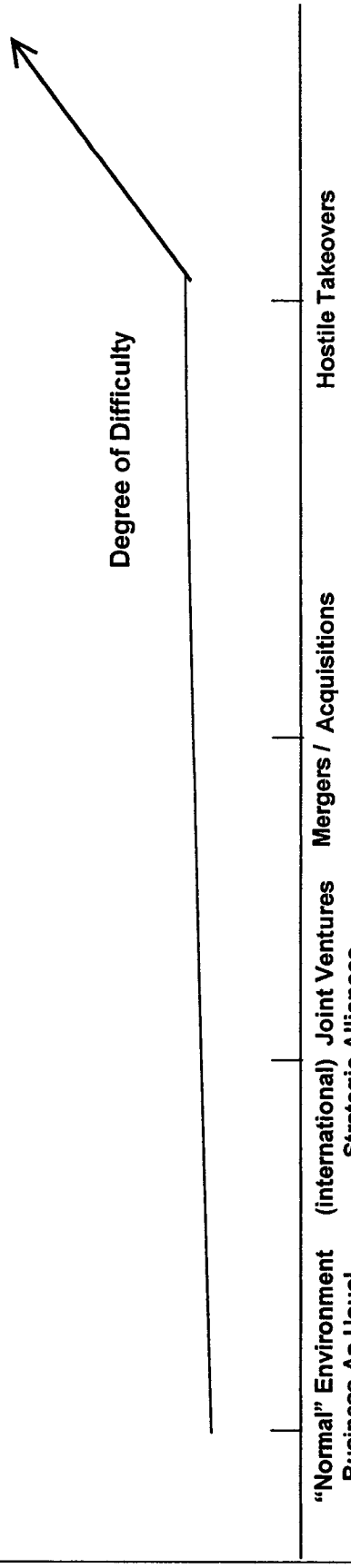

Figure 12 – Levels of Difficulty of Knowledge Transfer in Different Business Environments

Conclusion

More than three years following the acquisition announcement in 2002, the newly merged Company A^2 continues to prosper and employees continue to be motivated. An employee survey conducted in 2004 by an independent consultant reported that the level of employee engagement is at 86% and overall the organization placed slightly below the first quartile of the top 50 fifty employers in Canada. These are impressive results as the organization has undergone two major mergers in four years, and more than doubled in size and scope. In addition since the merger, Company A^2's market share continues to increase, the market share of products acquired from Company C continue to increase or remain stable, and employee turnover continues to remain at less than 5%.

We can deduce that a contributor to the continued good business results is the level of trust employees have in the newly formed Company A^2. The descriptive statistics extracted from the survey conducted during Merger 2 reveal that the overall mean score for the survey question 14: "to what degree did you trust the company to deal with you fairly at the conclusion of the merger" was 8.1/10 with a standard deviation of 1.2. From the solid company performance to date, it appears Company A^2 has continued to build the organization on these sentiments.

These good performance indicators suggest that the knowledge transfer was successful. It is only possible for the new company to continue to perform through an effective knowledge transfer process, personal commitment, and employee engagement. With synergies achieved and knowledge transfer completed, the newly formed Company A^2 is poised for the challenges of the future.

This research has captured the critical role senior management and the program management office / integration team (Merger 1) and transition team (Merger 2) played during the process of integrating two companies. The integration / transition team provided the acquiring company the integrated merger plan in which knowledge transfer and management was included, regarding how the two companies combined into one, on time, on budget, and on strategy, while continuing to achieve business objectives. This positive outcome provides evidence that there is value in implementing a temporary parallel organizational structure, such as an integration / transition team and referred to by Nonaka and Takeuchi (1997) as the hypertext organization during organization transformations such as a merger. The hypertext organizational structure provided the much-needed flexibility to easily shift from one context into another. This temporary structure created the platform that ensured the integrations were achieved with speed while minimizing business disruptions.

Through my role as participant observer, I saw that senior management's passion, an on-going commitment to the merger, including the knowledge transfer initiative, a multi-faceted communication approach coupled with their active and visible involvement in the merger process contributed significantly to building a culture of sharing. Additionally, this research has captured that employee relationships evolve as the integration of the two companies unfolded. This was confirmed by the employees' willingness to participate in the knowledge transfer process and build relationships through the twinned process. It has demonstrated that understanding the mechanisms of knowledge transfer and merger parameters contribute to enduring a successful business. And finally, the research has demonstrated the complexities of ensuring knowledge transfer during a merger and developed a model / framework to support the transfer process. This research also supports Dixon's (2000) claim that the marriage of

technology with face-to-face interactions creates the most effective process; "one does not replace the other, although clearly one can greatly enhance the other" (p. 5).

We can conclude that the collaboration and involvement of management from the acquired company in the development of the knowledge transfer process including the design of the tools complemented the efforts and was effective, as evidenced through the support received from management at the acquired company when the knowledge transfer project was presented. This high level of engagement was further advanced by the implementation of knowledge donors, knowledge recipients, and the twinned concept. This concept allowed employees to interact with their peers who had similar cognitive structures thus increasing the probability that knowledge was transferred, reused, and expanded upon by the organization to continue to grow the business. This allowed for employees to be engaged with the knowledge and the learning process supporting Nonaka's view (1991) that "people don't just passively receive new knowledge, they actively interpret it to fit their own situation and perspective" (p. 7). And finally the research taught us that it is essential that employees be given the necessary time and resources to complete the knowledge transfer process.

According to Davenport (1996) knowledge management never ends, very much like human resource management and financial management; as opportunities shift, strategies change and customer needs change, the need for knowledge continues. This requires developing an on-going culture of knowledge management including knowledge sharing (p. 6). Although the integration of the two companies is complete and the company continues to perform, the merger knowledge that was transferred formed the platform for the continued evolution of the products inherited through the acquisitions

and contributed to the continued development of product knowledge, and the creation of new business knowledge.

The title of the dissertation suggests that knowledge is not stagnant and its transfer involves many employees (actors). These actors interact with organizational processes in a cultural context that is attuned to knowledge sharing and where knowledge hoarding is not rewarded. To summarize, the research has shown that there are many elements that must work in harmony and each supports the other in order to achieve success.

This exploratory case study delineated a number of strategic interventions that the dominant firm deployed that provided the necessary supportive culture, essential to ensure a cooperative knowledge transfer process during Merger 2, but also identified a number of areas where practices could be improved.

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APPENDIX A

Discussion Document

Discussion Points

1. The process implemented to ensure the transfer of knowledge (hardcopy, electronic files, and brainpower).
2. Key issues, challenges and frustrations encountered in facilitating the knowledge transfer.
3. Estimate of how much of the knowledge transfer has been reviewed and assimilated into the department activities.
4. Key lessons learned.
5. Best practices.

APPENDIX B

Invitation to Participate

Dear _____,

I am writing to ask you to participate in a research project. Allow me to briefly explain. I am currently a Ph.D. candidate and look forward to completing my studies this year. I am at the stage where I am writing my thesis and conducting research on Knowledge Transfer in a merger environment. The President, Legal, and the leadership team support the research and are aware that I will be contacting you.

You have been selected because of your involvement in the knowledge transfer process during the merger either through your participation on transition projects, knowledge transfer - TAG (transfer activities guide) or through the document knowledge transfer process. During each of these phases, there were planned activities such as launch meetings, internal communications, training, project coordinators forum meetings, and one-on-one meetings that were organized and/or facilitated by the transition team. The survey questions are related to these activities.

Below is the guide and URL link to the site where you will access the survey. The survey shouldn't take longer than 10-15 minutes to complete. The results will be analyzed and presented anonymously.

Please note that although you are under no obligation to participate in this research, your participation will increase the statistical significance of the research and create a solid knowledge base for Company A^2. By completing the survey you are consenting to the use of your information with that of all other respondents in the furtherance of the research. If you have questions and/or concerns, don't hesitate to contact me at anytime.

I remain obliged to you for the academic opportunities that your participation will afford me!

Thank you,

Mary.

YOUR COOPERATION IN COMPLETING THIS SURVEY BY FRIDAY, OCTOBER 29, 2004 IS APPRECIATED

Instruction Guide

- Click on the following URL to access the site: www.capsnap.com/knowledge
- **User Name** is:xxxxxx
- **Password** is: xxxxxx
- Please be sure to answer ALL questions. Your impressions and/or opinions are what count. If any questions are left blank, the program will prompt you until all are answered.

Once you have completed and submitted your response, your confidential user name and password is automatically eliminated and cannot be re-used. Should you have any problems or questions regarding the survey, please do not hesitate to contact Dave Taylor at 1-800-933-7627 or dave@capsnap.com.

APPENDIX C

Knowledge Transfer Questionnaire

On a scale of 0-10, with 0 being the lowest score, and ten the highest, please rate the following questions. The questions are directly related to the knowledge management and transfer process implemented during the Company A[1]/Company C integration.

Definitions

- **Knowledge Management:** refers to the systematic management of knowledge transferred from Company C and ensure it is embedded in business processes
- **Knowledge Transfer:** refers to the ability to transfer knowledge to Company A[1] either by transferring documents, CD ROMs, e-mail, or through meetings and discussions

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Communication

1) To what degree did communications from senior management clearly set out the goals of the Company A[1] / Company C merger?

2) To what degree did communication from management motivate you to do your best in making the merger a success?

3) To what degree did management convince you that the transfer of knowledge from Company C to Company A[1] was of utmost importance?

Process

4) As part of the knowledge management / transfer process were you "twinned" with the right person(s) from the other company to facilitate the transfer of knowledge?

5) How effective were the tools that were made available in facilitating the transfer of knowledge? (If none score 0.)

6) How effective was the training you were given to use these tools properly? (If none score 0.)

Culture

7) To what degree did the culture of your organization emphasize openness and candidness as being important in the transfer of knowledge between employees of both companies?

8) To what degree did teams operate effectively to ensure a successful transfer of knowledge?

9) To what degree does Company A[1] culture encourage you to share organizational knowledge with others in the organization?

Individual Commitment

10) To what degree were you motivated to ensure that the company would benefit from a successful knowledge transfer?

11) To what degree were you committed to participate with your team to maximize knowledge transfer?

12) To what degree were you able to participate successfully in the knowledge management/transfer process without being impeded by other commitments (i.e. time and work issues)?

Personal Attitudes

13) To what degree did you believe that a successful knowledge transfer would help you personally in your on-going job?

14) To what degree did you trust the company to deal with you fairly at the conclusion of the merger?

15) To what degree do feel you that the interpersonal relationship with your counterpart was important in the successful transfer of knowledge?

Open-Ended Questions

16) Please describe some of the areas that you felt impeded your efforts in ensuring a successful knowledge management/transfer (i.e. time, availability, etc.)

_____

_____

_____

_____

_____

_____

17) Please describe how you would improve the knowledge management/transfer process.

_____

_____

_____

_____

_____

_____

APPENDIX D
Raw Data Indiviudal Responses

		Communication			Process			Culture			Indiviudal Commitment			Personal Attitudes		
Group ID	fid	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
1	4838	9	9	10	10	6	6	9	10	10	10	10	10	10	10	10
1	4839	7	7	8	9	5	6	8	6	8	7	7	5	8	8	8
1	4841	7	8	10	5	6	4	8	8	9	10	10	9	10	9	7
1	4842	7	5	7	8	3	6	7	7	7	9	9	8	9	9	9
1	4843	8	8	8	10	3	6	8	8	6	8	8	4	8	6	9
1	4846	8	8	7	2	3	7	8	7	9	8	8	5	6	10	8
1	4847	8	8	8	10	2	9	10	9	7	10	10	5	10	8	10
1	4848	4	4	8	8	8	0	5	6	6	9	9	7	9	6	9
1	4849	5	6	7	9	4	4	9	9	9	10	10	8	10	9	9
2	4850	8	8	9	10	7	7	10	9	9	9	7	9	7	7	10
2	4851	9	8	8	8	8	8	7	8	7	8	8	6	8	8	8
2	4853	8	7	8	9	7	9	9	7	9	9	8	7	9	8	9
2	4854	6	4	5	8	3	4	7	3	3	5	8	3	8	6	8
2	4855	8	8	9	4	5	5	6	3	4	7	9	7	9	6	4
2	4856	9	8	10	9	8	7	6	7	9	9	9	5	8	9	8
2	4857	7	8	9	9	6	6	7	5	7	9	9	6	8	8	9
2	4859	8	5	8	9	6	8	7	7	7	8	8	5	8	8	9
2	4861	8	8	9	7	5	0	7	8	7	9	9	10	9	9	9
2	4863	8	9	6	7	6	7	8	5	7	6	8	6	7	10	10
2	4864	7	9	7	5	3	3	3	5	3	6	8	8	6	6	9
2	4865	8	9	9	9	7	7	8	6	9	9	9	8	9	7	9
2	4866	9	9	6	8	5	6	7	5	8	6	6	8	7	8	9
2	4867	7	7	8	7	7	6	7	8	8	9	8	8	7	7	8
2	4868	9	10	10	7	10	10	10	7	7	10	10	6	10	10	10
2	4869	7	4	6	8	1	3	3	4	2	6	6	1	8	5	8
2	4871	5	5	6	6	4	0	5	5	5	5	6	4	3	7	6
3	4872	8	7	9	9	9	8	7	8	8	8	9	6	9	8	8
3	4873	8	8	7	7	6	7	8	8	9	10	8	7	8	9	9
3	4874	10	4	9	10	9	9	6	9	7	10	10	7	9	10	10
3	4875	5	7	8	5	0	0	3	2	8	8	8	6	8	8	2

APPENDIX D
Raw Data - Individual Responses

		Communication			Process			Culture			Indiviudal Commitment			Personal Attitudes		
3	4877	4	6	5	8	5	8	6	7	6	6	7	2	2	8	4
3	4878	9	7	9	3	8	5	8	8	6	8	10	5	8	8	9
3	4879	8	6	6	10	0	0	9	9	9	6	10	10	6	10	10
3	4880	9	8	9	10	7	7	9	8	9	9	9	6	7	8	9
4	4881	8	8	9	7	6	6	9	8	9	8	9	8	10	9	9
4	4882	7	8	8	8	9	7	9	8	9	6	8	7	7	9	9
4	4883	9	8	4	3	4	1	4	4	6	6	7	3	5	9	5
4	4884	8	9	9	10	5	5	7	8	8	10	10	8	10	9	10
4	4885	7	8	9	8	7	8	8	7	6	7	8	8	8	8	7
4	4889	5	5	6	6	6	2	8	5	6	7	6	2	8	8	8
4	4890	5	5	8	8	1	1	8	9	9	9	9	5	9	9	9
4	4891	8	8	8	10	6	6	9	10	8	10	10	7	10	8	8
5	4892	9	9	9	9	9	8	9	9	9	9	9	7	9	9	9
5	4893	4	4	5	6	3	4	6	5	5	6	4	3	6	6	9
5	4894	9	9	9	9	5	7	9	7	5	6	9	7	7	9	9
5	4896	8	8	8	7	4	6	7	7	7	7	7	8	7	9	9
5	4897	8	8	8	6	7	7	8	7	6	8	8	5	8	9	6
5	4898	8	7	6	8	0	0	7	7	7	9	9	6	10	7	9
5	4899	7	6	7	8	8	7	7	8	8	7	8	8	7	8	8
5	4900	8	8	9	9	5	3	7	8	9	7	7	6	5	8	9
Tot AVG		7.5	7.2	7.8	7.7	5.3	5.3	7.3	7.0	7.2	8.0	8.3	6.3	7.9	8.1	8.3

APPENDIX E

Table 24 - Descriptive Statistics

		Communication			Process			Culture			Individual Commitment			Personal Attitude		
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
N	Valid	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean		7.46	7.20	7.80	7.70	5.34	5.32	7.34	6.96	7.22	7.96	8.32	6.30	7.88	8.14	8.32
Std error of mean		.204	.224	.204	.276	.348	.387	.237	.255	.251	.211	.185	.290	.242	.173	.232
Median		8.00	8.00	8.00	8.00	6.00	6.00	7.34	7.00	7.00	8.00	8.00	6.30	8.00	8.00	9.00
Mode		8	8	9	8	6	7	7	8	9	9	8	8	8	8	9
Std. Deviation		1.459	1.600	1.456	1.972	2.487	2.767	1.692	1.822	1.792	1.509	1.318	2.071	1.728	1.233	1.655
Variance		2128	2560	2.120	3.890	6.184	7.658	2.864	3.318	3.212	2.278	1.738	4.290	2.986	1.520	2.738
Skewness		-.984	-.738	-.647	-1.060	-.431	-.712	-.923	-.765	-.953	-.256	-.846	-.491	-1.211	-.545	-1.999
Std. Error of Skewness		.333	.333	.333	.333	.333	.333	.333	.333	.333	.333	.333	.333	.333	.333	.333
Kurtosis		.384	-.424	-.210	.830	-.264	-.438	.916	.221	.721	-1.112	1.033	.083	2.258	-.150	4.473
Std. Error of Kurtosis		.656	.656	.656	.656	.656	.656	.656	.656	.656	.656	.656	.656	.656	.656	.656
Range		6	6	6	8	10	10	7	8	8	5	6	9	8	5	8
Minimum		4	4	4	2	0	0	3	2	2	5	4	1	2	5	2
Maximum		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

APPENDIX F

Table 25: Group Descriptive Statistics for Mean Scores on Questionnaire Sections Groups of Respondents

Group		Comm Avg	Process Avg	Culture Avg	Ind Comm Avg	Attitude Avg	Twin Avg
Medical	N	9	9	9	9	9	9
	Mean	7.3704	5.8889	7.8889	8.2593	8.6667	8.4667
	Minimum	5.33	4.00	5.67	6.33	7.67	6.20
	Maximum	9.33	7.33	9.67	10.00	10.00	10.00
	Std. Deviation	1.26320	1.05409	1.20185	1.33102	.79931	1.18322
	Variance	1.596	1.111	1.444	1.772	.639	1.400
Sales & Marketing	N	17	17	17	17	17	17
	Mean	7.6471	6.3529	6.4706	7.3137	7.9020	7.5529
	Minimum	5.00	3.33	3.00	4.33	5.33	5.20
	Maximum	9.67	9.00	9.33	9.33	10.00	8.80
	Std. Deviation	1.27187	1.85768	1.77974	1.37169	1.10406	1.02355
	Variance	1.618	3.451	3.167	1.882	1.219	1.048
BT / Finance / SP&NPD	N	8	8	8	8	8	8
	Mean	7.3333	6.2500	7.3750	7.7083	7.7917	7.7500
	Minimum	5.00	1.67	4.33	5.00	4.67	5.00
	Maximum	8.67	9.33	9.00	9.00	9.67	9.60
	Std. Deviation	1.18187	2.65922	1.49536	1.22717	1.63239	1.63445
	Variance	1.397	7.071	2.236	1.506	2.665	2.671
Human Resources	N	8	8	8	8	8	8
	Mean	7.3750	5.8333	7.5833	7.4167	8.3750	7.9500
	Minimum	5.33	2.67	4.67	5.00	6.33	4.80
	Maximum	8.67	8.00	9.00	9.33	9.67	9.60
	Std. Deviation	1.17429	2.03150	1.50923	1.58114	1.06066	1.62393
	Variance	1.379	4.127	2.278	2.500	1.125	2.637
Gov't & Public Affairs	N	8	8	8	8	8	8
	Mean	7.5417	6.0417	7.2500	7.0833	8.0000	7.7000
	Minimum	4.33	2.67	5.33	4.33	7.00	6.00
	Maximum	9.00	8.67	9.00	8.33	9.00	9.00
	Std. Deviation	1.54239	1.90603	1.05032	1.23121	.69007	.94415
	Variance	2.379	3.633	1.103	1.516	.476	.891
Total	N	50	50	50	50	50	50
	Mean	7.4867	6.1200	7.1733	7.5267	8.1133	7.8360
	Minimum	4.33	1.67	3.00	4.33	4.67	4.80
	Maximum	9.67	9.33	9.67	10.00	10.00	10.00
	Std. Deviation	1.24214	1.86355	1.54044	1.35875	1.10166	1.25043
	Variance	1.543	3.473	2.373	1.846	1.214	1.564

APPENDIX G
Open-ended Responses by Question/Group

PEER OPINION MODULE Knowledge Management		
Gp 1 Q 1	Please describe some of the areas that you felt impeded your efforts in ensuring a successful knowledge management / transfer (i.e. time, availability, etc.)	
	Responses	**Coding Categories**
1	It was not necessarily clear as to whom was to be the best counterpart from Company C to interact with. Time was certainly an issue. However, lack of alignment through the corporation in terms expectations was a greater challenge	Process - counterpart (not twinned) Individual commitment - Timeline (insufficient time) Communication - goals from management (lack of, not aligned)
2	Non alignment between business units Some tools were too cumbersome and did not corresponded always to the reality. The actual speed of changes and change management was much faster than the tools allowed.	Communication - goals from management (lack of) Culture - communication between firms (lack of) Process - tools (difficult to use, not effective)
3	The timing of the discussion at Company A[1] only, was premature, too many uncertainties, many meetings took place only for some of us to share their concerns, and nothing could really be accomplished before finalization (signature) of the deal. Or may be because not all the info available by upper-management was communicated to all members of the transfer team.	Individual commitment - Timeline (timing premature) Communication - Goals from management (not always clear) Culture - Communication within Company A[1] (not always clear, gaps)
4	The difficulty was in respect to the fact that the legacy Company C Regulatory staff, with the exception of 2, was not going/able to join the new Company A[1] and as such dealing with highly confidential and IP related information/knowledge to ensure business continuity could be considered as an impeding factor although we were successful in ensuring business continuity. This is likely attributed to the high level of experience, regulatory knowledge and professionalism of the legacy Company A[1] colleagues.	Personal attitudes - counterparts (unavailable, unmotivated, let go too early) Culture - Teamwork collaboration (Good professional performance at Company A[1])

5	Organizational alignment - Different divisions were ready at different time for knowledge transfer. Too late in the game made it harder	Culture - Teamwork collaboration (lack of internal organizational alignment)
6	Business continuity, coupled with the additional functions related to knowledge transfer, as well as the distance between the two companies all played significant roles in adding further complexity and burden to the knowledge transfer.	Individual commitment - Workload increase - Timeline (not enough time) - Logistics (difficult)
7	1. Motivation of the counterpart: some were not well prepared and info transferred limited. 2. Tool developed scared people on the other side and was not filled completely use afterward was very limited. 3. Commitments ($ or projects) made to KOL, agencies etc. for work or payments to come were often not addressed at transfer and were identified much later,	Personal Attitudes - Counterpart (lack of motivation) Process - Tools (too complex, not effective) - Training (lack of) Communication - organizational /management commitment (financial payment delays)
8	Resources / Time-transferring large amounts of documents is a huge mandate which is very time consuming as precision is mandatory. We cannot misplace documents. Current work loads are not minimized, so the transferring of documents becomes a very large addition to normal workload. This makes for very long days. Extra resources should be added during mergers when needed.	Process - Tools (lack of resources, lack of time to transfer documents) Individual commitment - Workload increase - Timeline (not enough time)
9	The constraints were mostly related to other internal organizational changes that were occurring at about the same time. Significant pressure was put on a number of staff for an extended period of time (6 months)....more specifically after the Company C activities were transferred to the Company A[1] office	Culture - Teamwork collaboration (lack of internal organizational alignment) Individual commitment - Workload increase - Timeline (not enough time)

Open-ended Responses by Question/Group PEER OPINION MODULE Knowledge Management		
Gp 1 Q 2	Please describe how you would improve the knowledge management / transfer process.	
	Responses	**Coding Categories**
1	I strongly feel that we were extremely well-prepared and as efficient as could be having had the experience prior to the latest merger. One of the difficulties I felt was not necessarily the transferring of the knowledge, but the subsequent integration within an existing system proved to be challenging - the criteria did not always meet our existing infrastructure.	Personal attitudes - Personally beneficial (felt well prepared) Process - Tools (systems not combatable)
2	Clearer and more straightforward communications (shorter, factual, with no ambiguity). More simple tools, capturing just the essence.	Culture - Communications within Company A[1] (unclear) Process - Tools (not effective, too complex)
3	1. Knowledge transfer days were extremely useful: counterparts from other company come to Company A[1] to make general presentations on products, plans, key programs and issues. I would recommend to do follow up sessions targeting specifically brand plans, programs, issues to address, business plans as all info. can not be absorbed in one day. 2. Need to focus more on financial aspect. Need to know project total budget, payments to come etc.	Culture - Communications between companies (good especially KT days but need more follow up) - Communications within Company A[1] (not sufficient especially on financial issues)
4	No comment	N/A
5	refer above	N/A
6	I think that this is a very challenging process especially in a large and cross-matrix organization with a huge portfolio of products, diverse areas and dynamic environment (internal and external) and I believe that we would benefit from use of formal/validated tools. This requires a committed, conscious and consistent effort by all parties. In respect to the integration experience, joint participation at selected points of intervention on a given project/initiative/strategy were key.	Process - tools (could have been more effective) Communication - organizational / management commitment (not sufficient) Personal attitudes - personally beneficial (found experience challenging)

7	„«Before corporate decides on a plan for transferring documents, ask departments what they will need or if they will have any special needs. „«Devise a more step by step plan in transferring documents. In other words from the time a documents is on the shelf or in a file at one company to when it goes onto a shelf or file in another company. I always ensured that I communicated to everyone involved which could include not only my direct contact at the other company but people in the warehouse, loading docks, the transport company, Xerox who would be delivering the boxes upon arrival, my colleagues, etc. Many people are involved in a transfer. „«Archives should be looked into much more carefully as upon a merger we are legally responsible for all products. „«More communication to the other company. Often I was asked questions, which I did not have the answer to. „«Early assessment by BT of all the databases that each department uses. Training from BT if databases are to be transferred. Company C used a database called ¡§File Tracker¡¨ to catalogue all their document in archives. At my request BT did transfer a copy to me only when there was no one left at Company C. I had to learn how to use it myself as there was no one had any knowledge of it and there was no manual. This took a lot of time.	Culture - communication within Company A[1] (lack of in beginning) - communication between companies (lack of) Process - Tools (not effective plan for transferring info, lack of technology documentation) Individual commitment - Personal motivation (facilitated communication within Company A[1] & with counterpart)
8	Have a better sense from the get go of what would be valuable knowledge to be transferred and ensure successful business continuity.	Communication - goals from management (not directive) Culture - Communication within Company A[1] (lack of)
9	My area is a fast paced environment where day to day activities occupy the largest part of resources. The knowledge transfer is largely dependent on the ability of new staff to learn and take on workload resulting from the transition. Knowledge management and transfer could only be facilitated through earlier hiring of staff to allow sufficient time for learning and alleviate workload to be ready for the transfer.	Culture - Communication within Company A[1] (could have been facilitated better) Individual commitment - workload increase (understaffed, late hiring)

Open-ended Responses by Question/Group PEER OPINION MODULE Knowledge Management		
Gp 2 Q1	Please describe some of the areas that you felt impeded your efforts in ensuring a successful knowledge management / transfer (i.e. time, availability, etc.)	
	Responses	**Coding Categories**
1	Lack of commitment from some 50% of senior management. Tool technology failure. Started process too late.	Communication - organizational management commitment (lack of) Process - Tools (not effective) Individual commitment - timeline (starting too late)
2	Lack of availability due to current job responsibilities.	Individual commitment - workload increase
3	Timing was a major constraint since we had to meet deadlines	Individual commitment - Timeline (not enough time)
4	Effort from counterparts to really participate in the process - I would be surprised to see that a lot of people used the web tool for their knowledge transfer. Lack of support/training on the "human" aspect: this was a very hard task to accomplish when it becomes so emotional - I am no psychiatrist but I can imagine the immense impact on the moral of an entire group loosing their jobs/identity within a few weeks. While I might be an expert in my area, getting valuable information in this environment was a lot more complex than expected.	Process - counterpart (twinned positive) - tools (web useful), - training (not effective on dealing with change) Culture - communication between companies, (difficult) - communication within Company A[1] (difficult)
5	I felt time and travel were a major issue.	Individual commitment - Timeline (not enough time), - logistics/travel (obstacles)
6	I was not twinned with the right colleague for much of the knowledge required. Those in my department who were assigned to obtain knowledge needed to complete the projects that I was assigned to, did not do so. Management did not monitor those department colleagues to ensure knowledge was properly transferred. As a result, my workload increased. In many cases, upper management was not available to make required decisions.	Process - counterpart (not twinned) Culture - Teamwork collaboration (lack of) - Communication within Company A[1] (Management not monitoring) Communication - organization /management commitment (lack of) Individual commitment - workload increase

7	Time: Was very busy doing our normal responsibilities, therefore didn't have as much time as I would have wanted for knowledge management / transfer.	Individual commitment - Timeline (not enough time) - Workload increase
8	- workload was extremely heavy and demanding - we should have done a better job of backfilling within our division	Individual commitment - Workload increase Process - tools (not effective plan for transferring info)
9	Projects were overlapping therefore it was not easy to identify the boundaries. There have been redundancies but also some holes in the transfer of knowledge.	Communication - Goals from management (not directive) Culture - communication within Company A[1] (unclear boundaries)
10	No Comment	N/A
11	NA	N/A
12	The overall coordination for transfer of electronic information was not well coordinated. Decisions regarding on-going business operations at the Company C location meant that data was kept there, often times long after the business owners were gone. This meant that when business groups in Company A[1] finally asked for data to be transferred, no-one at the other end knew where it was. Another issue was the shear volume and where to put it.	Process - Tools (not effective plan for transferring info) Personal attitudes - Counterparts (people let go too soon before KT completed)
13	The short time available for the Transition process was a limiting factor. The timelines were certainly very ambitious and not easy to adhere too. Also, the shifting plans regarding the start of some of the projects was a great challenge as multiple versions of the plan had to be produced. Finally, the confidentiality of certain information that could not be shared made it difficult to plan and act to the best interest of the knowledge transfer projects.	Individual commitment - Timeline (not enough time, ambitious) Culture - Communications within Company A[1] (plan dates shifting) - Communication between companies (issues of confidentiality need to be planned better)
14	No comment.	N/A
15	1) Inadequate communication in the division made it difficult to act pro-actively with knowledge transfer colleagues from Company C 2) Inadequate planning in the division made it extremely difficult as there was no resources available to offer help needed by managers	Culture – Communication within Company A[1], (inadequate) – Communication between companies (inadequate) Individual Commitment – Workload increase(understaffed)

16	Lack of availability from our counterpart at critical moment in the knowledge transfer process	Personal attitudes - Counterpart (unavailable)
17	Commitment from upper management in both companies, right contacts, clear requirements sent before meeting, established relationship from previous companies	Communication - organizational /management commitment (needed to more developed, established)

Open-ended Responses by Question/Group PEER OPINION MODULE Knowledge Management		
Gp 2 Q 2	Please describe how you would improve the knowledge management / transfer process.	
	Responses	**Coding Categories**
1	NA	N/A
2	The knowledge management tool should be more customized to the local Canadian needs and merger requirements by functional area. (ie be more functionally focused)	Process - tools (not effective, need to be customized)
3	By involving all divisions in the design of tech tools	Culture - Communication within Company A[1] (lack of) Process - tools (not effective, poor design)
4	During the transfer of product knowledge, previously established relationships were very useful in building trust therefore, it is important that we take advantage of these relationships if they are available.	Personal benefit - counterpart (positive relationship)
5	Although I found that the cross organization link between job functions for knowledge transfer were very good, internal coordination between business groups in Company A[1] could have been much better. Often people requesting data could not properly relate their requests. Although they knew what they wanted they did not know the correct questions to ask to ensure they got all the information.	Personal attitude - Counterpart (very positive) Culture - Team collaboration (needed to be facilitated better, communication poor)
6	Start sooner. Gain commitment from ALL senior managers through reporting system to President. Better technology user testing.	Individual commitment - timeline (not enough time, start sooner) Communication - organizational/ management commitment (lack of) Process - Tools (under performing)
7	No comments.	N/A
8	Better define roles and responsibilities	Culture - Team collaboration (roles/responsibilities not well defined)

9	The mapping of individuals in the KT process was set up for the most part as one on one, functional manager to functional manager. Some cross over opportunities were potentially missed (e.g.: functional manager with individual in legal at Company C to better understand specifics of a Company C contract). Such processes could be improved by anticipating (where possible) such crossovers. The mapping of the KT process was largely set up by a few individuals in each functional area (or one leadership team member)- improvements could be made by involving individuals in the mapping process (i.e.: as functional manager of X, with which manager(s) at Company C would you require KT?)	Culture - Communication between companies (Alignment generally good, but needed improvement in some areas) - Communications within Company A[1] (needed improvement as to dept needs)
10	Increase the amount of time for the transfer activities and wait for definite dates for proper project planning.	Individual commitment - Timeline (insufficient time)
11	I felt is was done in an excellent matter, however I needed more time to understand their supply base better.	Personal attitude - Personally beneficial (KT process positive) Individual commitment - timeline (not enough time)
12	Management should ensure that all individuals involved in the knowledge transfer process perform their task. This should be done through weekly status reports.	Culture - Teamwork collaboration (not aligned)
13	To make it more efficient Key Manager should be replaced while facing and or implementing knowledge transfer	Individual commitment - timeline (not enough time) - workload increase
14	A stronger message from management to counterparts ("obligation" to use the web tool) and maybe also designation by management of counterparts accountable by dept/area (as a guarantee to have the job done and well done). It is sad to be on the loosing side, but that would not prevent me from doing a great job until the end, and I guess that is the major challenge: keep these people motivated enough to keep things moving after DAY 1... before we even start the knowledge transfer. Some people simply stopped doing things that were "dog's breakfast", like I have been told.	Culture - Communication between companies (not sufficient) - Communication within Company A[1] (not sufficient) Process - Tools (Management needed to encourage use of web tool) Communication - Motivation from management (not sufficient)
15	Improve planning and incorporate a realistic timeline to obtain knowledge management and transfer within the deadlines that were placed upon us.	Individual commitment - timeline (not enough time, not realistic)
16	Dedicated people to help us with our day-to-day responsibilities so that we could allocate more time to knowledge transfer.	Individual commitment - timeline (not enough time) - workload increase

17	- Make sure that all the people on the counterpart who have the knowledge of the business can stay until the end of the knowledge transfer process and not only a representative that might not have all the knowledge	Personal Attitudes - Counterpart (people let go too soon before KT complete)

Open-ended Responses by Question/Group PEER OPINION MODULE Knowledge Management		
Gp 3 Q 1	Please describe some of the areas that you felt impeded your efforts in ensuring a successful knowledge management / transfer (i.e. time, availability, etc.).	
	Responses	**Coding Categories**
1	Time was an issue. A lot of urgent matters needed to be prioritized at the same time as the knowledge transfer was occurring	Individual commitment - timeline (not enough time) - workload increase
2	No comment.	N/A
3	1. Although files were sent through the owners of the files on the Company C side were not always clear. The Company C counterpart seemed to only answered questions that were asked but did not volunteer knowledge. Information had to be actively pulled and recorded. 2. The degree of cooperation was impacted by the passage of time and the degree of communication the Company C employees were receiving. Over time their feelings of de-motivation did have a negative affect on the knowledge transfer.	Culture - Communication between companies (lack of) Personal attitudes - Counterpart (not committed, unmotivated)
4	None. Given the large scope of the project (off-boarding)that I was responsible for leading, the organization made every effort to relieve me of my day-to day responsibilities in order for me to be able to focus all of my efforts into the project. As well, my counterparts at Company C always made themselves available to ensure effective and timely knowledge transfer. As such, I feel this knowledge management/transfer activity was extremely successful.	Culture - Team collaboration (effective) Process - counterpart (twinned & committed) Personal attitudes - personal benefit (KT process positive)
5	Availability of individuals - we had to search for mutually beneficial times in our agenda. Location (Toronto v Montreal) made the meetings more challenging.	Personal attitudes - counterpart (not always available) Individual commitment - logistics (difficult)
6	The third party that was hired to do our clean room had no knowledge of indexing and cataloging information. They did not do a thorough job of listing the information and tagging the current and relevant information. This caused problems for us on the Company A[1] end because we had to go through each box again and really examine the information, also, they were not knowledgeable enough about the Company C business records to know if the information was obsolete, or relevant. It caused problems for us because we had no resources to examine the information and prepare a better listing of what Company A[1] people we looking for on this end.	Culture - Team collaboration (lack of knowledge, poor planning) - Communication within Company A[1] (info needed unclear)

7	Availability of my counterparts at Company C made it difficult to exchange information. In addition due to workload it was difficult to make knowledge transfer a burning priority even though it was very important.	Personal attitudes - counterpart (unavailable) Individual commitment - workload increase
8	The process is very time intensive and would likely work best if people could be dedicated to knowledge transfer and not have other competing responsibilities.	Individual commitment - timeline (not enough time) - workload increase

Open-ended Responses by Question/Group PEER OPINION MODULE Knowledge Management		
Gp 3 Q 2	Please describe how you would improve the knowledge management / transfer process.	
	Responses	Coding Categories
1	More lead time.	Individual commitment - timeline (not enough time in beginning)
2	By simplifying as much as possible.	Communication - Goals from management (merger process too complex)
3	1. The instructions and expectations around knowledge transfer were not always passed down through the ranks at either Company A[1] or Company C. Although the key committees were very well organized for the Company C transfer as it became necessary to filter down the knowledge transfer files into the organization only pieces of the objectives and process were shared or they were shared word of mouth and were not always consistent. Close to the final weeks, boxes of files appeared and were distributed but by then the employees who could provide knowledge transfer had already left the company (this happened primarily in the non-strategic areas) but this information would have been useful to know. The one area of the whole transfer process would have been to some how find a way to keep the moral of the departing employees positive. It is a very difficult situation for both the employees who are departing and for those who need to obtain their knowledge to continue forward. In my opinion the Key is always communication, communication, communication - perhaps a weekly news letter with motivational tips and information on their departure processes (what they would be able to access - what the process would look like when it was their turn). Many employees heard other departing employees information or the "horror" - (usually minor instances) stories they shared and that de-motivated them and made them angry and resentful to anyone who was associated with Company A[1] - not a very good environment for sharing knowledge. Others were feeling guilty for having stayed longer or joined Company A[1]. There is a need to find a way to maintain a healthy, positive environment on both sides of the Merger. Respect, empathy, and the knowledge that any one of us could find ourselves in the same position should be in the forefront of everyone's mind as they manage their way through a merger.	Communication - goals from management (not always clear or shared) - motivation from management (not forthcoming) Culture - Communication between companies (not effective, misinformation) - Communication within Company A[1] (not effective, needs improvement, misinformation) Personal attitudes - counterparts (unavailable having left the firm)

4	It was very well done, however should we have to find something to improve on would be to give it more time, which often is impossible in a transition.	Personal attitudes - Personal benefit (KT positive process) Individual commitment - timeline (not enough time)
5	Some divisions' future success hinge on detailed knowledge transfer whereas other areas is more of a nice to know. It would be beneficial to provide the tools for all divisions to use but then allow them more freedom to adapt based on their individual needs. Some divisions where it is very complex and legal matters depend on it, it was important for the Transition team to provide detailed tools and support mechanisms. However other areas such as HR may not need as much because the knowledge transfer is predominantly for nice to know information.	Process - tools (not adaptable to individual dept needs) Culture - Teamwork collaboration (needed more info alignment) - Communication within Company A[1] (needed more info alignment)
6	The person I was teamed with was as helpful as she could be given the fact that she had on knowledge of the division she had been put in charge of. She was one of the last people to be let go and as people were leaving she became responsible for the information that was left behind. In my case, it turned out that my information was placed throughout the company, and was basically left at each station as people were being let go. A list of people from each Company C division should have been identified, that way we could contact the person responsible to pick up our information and make sure that it was properly indexed and catalogued so that we saved time on the Company A[1] end.	Personal attitudes - counterpart (positive, cooperative) Culture - Communication between companies (needed better info alignment)
7	More face to face time with counterparts and guided tours of boxes in archives or archiving process.	Personal attitudes - counterpart (needed more contact) Culture - Communication between companies (needed better info alignment)
8	My involvement in leading a knowledge management/transfer project began long after the knowledge management/transfer activities and process had begun, and as such I was not exposed to them. I would recommend ensuring that all those responsible for leading a knowledge management/transfer activity or project be exposed to the various tools or resources available to them (regardless of the timing of their involvement), as it may reduce the amount of time/effort required from the onset.	Process - Tools (need constant info on tools through out process)

Open-ended Responses by Question/Group PEER OPINION MODULE Knowledge Management		
Gp 4 Q 1	Please describe some of the areas that you felt impeded your efforts in ensuring a successful knowledge management / transfer (i.e. time, availability, etc.)	
	Responses	Coding Categories
1	One of the greatest challenges was the fact that my position at Company A[1] was not matched by an equivalent position at Company C. Therefore I had to coordinate knowledge transfer for several individuals and departments. This resulted in a "matrix" transfer that increased the likelihood for things falling through the cracks.	Process - counterpart (not twinned) Culture - communication between companies (not planned or facilitated well)
2	Time management.. IE. transition project was added to existing work-load	Individual commitment – timeline (not enough time) - workload increase
3	time was challenged, but more challenging was the lack of information, quality of the information we did have, and the barriers to more of what was needed. I am speaking of information related to personnel and their performance to make good decisions on hiring.	Individual commitment - timeline (not enough time) Culture - Communication between companies (lack of) - Communication within Company A[1] (lack of)
4	We had to ensure business continuity while ensuring knowledge transfer. Adding this task to the already heavy workload of my department required stretching resources to the limit. There was a definite lack of communication throughout this process. Trying to integrate activities prior to Day 1 also required intense consultation with our Legal Department which was not staffed appropriately to handle all the requests, therefore slowing down the integration process. There was not formal communication as to what was required from my team. The mandate grew as the project evolved with not enough resources to handle the project. Some of the knowledge transfer was unnecessary since the Company A[1] processes were to be adopted. Forms were added throughout the process which required extra work to fill in.	Individual Commitment - workload increase (recourses stretched) Culture - Communication within Company A[1] (lack of, not sufficient) - Team collaboration (understaffed effected communication) Communication - Goals from management (not always clear) Process - Tools (insufficient resources)
4	Openness of the Company C candidate who had no intention of staying with Company A[1]	Personal attitudes - counterpart (committed)
5	No Comment	N/A

6	- some of the paperwork was not really applicable - we got too many boxes of unnecessary material (the needed material almost got lost) - you are not asking what has helped: I was personally interested in the success of this transition therefore, I made sure to get the info I needed. As team leader for Product X, the success of the knowledge transfer was vital. Also I was matched with an exceptional person from Company C who wanted only good for the business.	Culture - Communication between companies (lack of info alignment between firms) Process - Counterpart (twinned & positive)

Open-ended Responses by Question/Group PEER OPINION MODULE Knowledge Management		
Gp 4 Q2	Please describe how you would improve the knowledge management / transfer process.	
	Responses	**Coding Categories**
1	I would prefer to do a mapping that would be more role specific and less focused on title and department. This way specific job responsibilities would be captured and routed to the appropriate individuals for "connecting and transferring" knowledge.	Process - Counterpart (need better means of connecting) Culture - Communications between companies (need better alignment)
2	The transfer process was adequate and thorough	Personal attitudes - Personal benefits (KT was positive)
3	Realistic timing for completion.	Individual commitment – timeline (insufficient time)
4	- Making sure that everyone involved has something to gain from a successful transition (I am not saying that some people did not) - Do a post-mortem with people involved. Review all documents with them so that input for the next merger is collected. (If there was a post mortem, I was not involved).	Individual commitment - Personal motivation (needed to instill motivation) Communication - Motivation from management (not sufficient) Culture - Communication within Company A[1] (needs to be promoted better)
5	More direct communication to those making critical decisions, more openness to sharing and being able to ask questions for clarification of limited data provided.	Communication - goals from management (not clear) Culture - Communication within Company A[1] (insufficient)

6	1) Prepare all activities and wait for Day 1 to implement, thereby limiting the need to submit all activities to Legal 2) Improve communication between the various groups involved so that there is no duplication of effort. 3) Staff Legal appropriately so that they can handle requests to ensure that we do not infringe any laws. 4) Have a dedicated project team who would handle all aspects of the integration and remove their usual tasks from them. They could also become experts in this field and be ready for the next integration, should there be one. 5)Communicate clearly the mandate to each group and have meetings on a regular basis with all project leads to ensure project is on track, handle issues and improve communication.	Culture - Communication between companies (insufficient) - Communication within Company A[1] (insufficient) - Team collaboration (lack of Alignment) Individual commitment - Workload increase (understaffed) Communication - goals from management (not clear, not promoted enough)
7	The process was optimal	Personal attitudes - Personal benefit (KT was positive)

Open-ended Responses by Question/Group PEER OPINION MODULE Knowledge Management		
Gp 5 Q 1	Please describe some of the areas that you felt impeded your efforts in ensuring a successful knowledge management / transfer (i.e. time, availability, etc.).	
	Responses	**Coding Categories**
1	The biggest one was time. I was in a new position at the crunch time of the knowledge transfer and was short staffed. We also had to manage many business issues at the same time without the allocated staff. I was also a relative late comer to the merger process (April 2003) so I did not benefit from being involved on all the pre-work to this point.	Individual commitment - timeline, (not enough time) - workload increase (understaffed) Culture - Communication within Company A[1] (not ongoing)
2	Lack of engagement from the Company C counterpart made the exchange more difficult.	Personal attitudes - counterpart (lack of commitment)
3	The main issue was balancing current responsibilities with knowledge transfer related to the merger.	Individual commitment - workload increase
4	antagonistic feelings within the acquired company, incomplete physical documentation delays between face to face transfer and delivery of files	Personal attitudes - Counterparts (unmotivated) Culture - Communication between companies (difficult)
5	Being on the Company C side it was extremely challenging at times to obtain information from colleagues, as many people were resigned to the fact that they were losing their jobs and were not overly motivated to provide information in a timely manner.	Culture - Communication between companies (difficult) Communication - Motivation from management (needed more promotion) Personal attitudes - Counterparts (unmotivated)
6	One main point was the willingness of some Company C colleagues to comply with the process.	Personal attitudes - counterpart (committed)
7	The process was long and at time I felt that I was completing template for the seek of doing something. The real value was good in-depth discussion with my counter-part. The other challenge was to motivate Company C people to document and transfer projects to us. We use so much template that we never really got the 'real' documents for a project.	Individual commitment - timeline (not enough time) Process - Counterpart (twinned positive) Culture - Communication between companies (difficult) Communication - Motivation from

		management (lack of)
8	Biggest challenge was managing the ongoing business and finding sufficient time to monitor progress on the transition.	Individual commitment - workload increase - timeline (not enough time)

Open-ended Responses by Question/Group PEER OPINION MODULE Knowledge Management		
Gp 5 Q 2	Please describe how you would improve the knowledge management / transfer process.	
	Responses	**Coding Categories**
1	This transition moved very efficiently in comparison with the first merger (in 2000). I think the biggest benefit was that we did it quickly, and made the decision to review/select best practices after the fact. This is easier on the individuals concerned, and minimizes risks to the ongoing business. Quick decision-making is key. I was impressed with how organized Company C's documentation and files were in preparation for document knowledge transfer. Had it been the reverse (ie. Company A[1] to Company C), I doubt it would have been so smooth.	Personal attitudes - Personal benefits (KT better than last merger) - Counterparts (well organized) Culture - Communication between companies (info transfer positive)
2	I would try to maximize electronic transfer. Many hard copy documents were provided. Perhaps scanning and transferring electronically would have been more effective.	Process - tools (under used)
3	Effective face-to-face meeting to transfer project knowledge with current documentation in a very short period of time. As we would do when an employee leave the company.	Culture - Communication between companies (needed more) Personal attitudes - Counterpart (need more contact) Individual commitment - Timeline (very short)
4	No Comment	N/A
5	Some of the tools were too complex.	Process - tools (too complex, not effective)
6	Overall it was quite good. One improvement would be to provide training in mid-stream for those who become involved in a late stage. I found my relatively small knowledge about Company C at the time of the knowledge transfer was a problem. This was due to my coming in late (April 2003) to the process.	Process - Training (more needed) Culture - Communication within Company A[1] (needed to be maintained through out project)
7	I would force very tight timelines for this process to take place and ensure this process becomes the top priority for the organization.	Individual commitment - timeline (should be tighter) - organizational/ management commitment (lack of)
8	No real feedback, given that motivation was the main challenge I faced and I don't know that there is anything that can be done to improve that in a situation such as the Company C acquisition.	Individual commitment - Personal motivation (low) - Team motivation (low)