Contingency Approach to Managing Knowledge in the Post-Merger Integration Process

produced to

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“The Empires of the Future are the Empires of the Mind”,
Winston Churchill
1. Introduction

1.1. Scenario

The strategic goal of most Mergers and Acquisitions (M&A) is the rapid access to new knowledge. This may sound surprising, because knowledge is rarely mentioned as a motivating factor for an acquisition. Usually, diversification, expansions into new markets or innovative technical solutions are considered to be the drivers for a combination of organizations. However, behind all these stands knowledge; knowledge about:

- Customers with their needs, their behavior and their buying motives
- Technical procedures with their problem-solving capability
- Products and their market potentials
- Suppliers with their capabilities and price structures
- Employees with their experience and expertise

“Knowledge has become the key economic resource, and perhaps the only source of competitive advantage” [Druc88, p. 45], and is therefore a logical focus in acquisitions. So it would follow that M&As seek to obtain missing or complementary knowledge.

Though knowledge may be a key factor in explaining firm performance [PraHam90, p. 79], it also poses serious management challenges. For example, since knowledge may be maintained at the group, organization, and network levels, it is often ‘bundled’ with other resources [Nona94, p. 14]. This bundling, along with tacitness, makes knowledge difficult to acquire in traditional factor markets or even through strategic alliances [KogZan92, p. 385]. It is therefore not surprising that knowledge-based assets are often the key motivation behind corporate acquisitions [HasJem91, p. 8].

According to Haspeslagh & Jemison (1991) mergers and acquisitions have a unique potential to transform firms and to contribute to corporate renewal. They can help a firm renew its market positions at a speed not achievable through internal development and they can provide an ability to gain all the benefits from combining
assets and sharing capabilities in a way that is not possible through, for instance, partnerships [HasJem91, pp. 8].

Today it is not uncommon to pay ten times the book value because of the premium the market places on the potential of a company’s knowledge assets. “Increasingly firms acquire other companies specifically for their knowledge. They are often willing to pay a premium over the market value of the company purchased because of the value expected to get from adding that new knowledge to their own knowledge stock.” [DavPru98, p. 53]. For an illustration see Figure 1-1:

Nowadays the evaluation of an enterprise regards not only its fixed assets (e.g. manufacturing plants, properties and real estate), but also the future potential yields. And this consists - abstractly spoken - of the future knowledge about customers, technical procedures, best practices, products, suppliers etc. In other words: Knowledge is the outstanding price regulation factor in M&As. Thus, someone who pays much money for something as ‘intangible’ as knowledge, has a

<table>
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<th>Company Market Value</th>
<th>Liquidation Value / Book Value of Company’s Fixed Assets</th>
<th>Expected Yields from Knowledge „Intangible Assets”</th>
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<tr>
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<td>Knowledge Components for Additional Value Creation</td>
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<td></td>
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<td>• Strategy Change (e.g. product portfolio, market position)</td>
</tr>
<tr>
<td></td>
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<td>• Operational Advantages/Synergies (e.g. process technologies, procurement sources)</td>
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Figure 1-1: Determining Factors for Evaluating Companies
large interest in converting this potentials immediately into business success within
the process of integration. A failure here, e.g. the draining away of knowledge by the
loss of know-how carriers, endangers the profitability of its investment. A structured
handling of knowledge – the so-called Knowledge Management (KM), enables the
effective use of newly acquired knowledge in the post-merger integration process
and the following operational business.

1.2. Structure of the Thesis

This work consists of three main parts. The first part lays the theoretical
basis and introduces basic terminology as well as it presents currently used concepts.
On the one hand it describes the interrelation between data, information and the
different types of knowledge. And on the other hand it covers the post-merger
integration theory.

The second part focuses on contingency factors that have a high impact on a
successful KM in the post-merger integration process. Culture, the human factor and
information technology represent the foundation for argumentation.

The third part is intended to suggest a framework for implementing a
promising KM in the post-merger integration process.
2. Theoretical Perspectives

This chapter aims to lay the theoretical basis by introducing basic terminology and presenting currently used concepts. It is divided into two parts: Knowledge Management and Post-Merger Integration Management.

2.1. The Spectrum of Knowledge Management

Dave Snowden, IBM’s CIO, writes that KM is the “(...) identification, optimization, and active management of intellectual assets, either in the form of explicit knowledge held in artifacts or as trait knowledge possessed by individuals or communities” [Snow99, p. 63]. Whereas other experts explain that knowledge is about harnessing the “(...) intellectual and social capital of individuals in order to improve organizational learning capabilities, recognizing that knowledge, and not simply information, is the primary source of an organization’s innovative potential” [SwNS+99, p. 264]. It is of importance to have a thorough understanding of all elements that make up KM.

2.1.1. The Nature of Data, Information and Knowledge

Data is the accumulation of raw facts or quantifiable entities out of context. Modern organizations usually collect data in some form of technology system. Seen from an information management perspective, data is relatively easy to capture, communicate and store [Dav97, p. 9].

Nevertheless, information managers have to consider the following: on the one hand, the storage of too much data can make it harder to identify and make sense of relevant data. On the other hand, and most fundamentally, data in itself is not directly meaningful to an individual or to an organization because it says nothing about its own importance or irrelevance until effort is expended to transform it into information [DavPru98, pp. 2].
Peter Drucker defines information as data endowed with relevance and purpose [Druc88, p. 42]. In other words, information results from placing data in some meaningful context, often in the form of a message. As Davenport points out, information can be described as a message usually in the form of a document or audible or visible communication. Furthermore, information has a sender and a receiver like any message. To be considered as information the message must make sense to the receiver. Therefore it is up to the receiver to decide whether the message he gets really has an impact on his judgment and behavior [Dav97, pp. 3]. Unlike data, information has a meaning, i.e. we transform data into information by adding value in various ways. In the last decades, more and more computer-based information systems have been used to add these values and transform data into information. But it is up to the humans to convert data, facts and figures without context and interpretation into a meaningful context and thus to acquire knowledge [Druc88, p. 42].

Knowledge: Since the ancient Greek times, the study of human knowledge has been seen as a process of searching for an answer to the question “What is knowledge?” [NoTa95, p. 21]. It seems obvious that knowledge is different from information. As Davenport once said, “knowledge is information with the most value (...) because somebody has given the information context, meaning, a particular interpretation (...)” through experience, communication, or inference [Dav97, p. 9].

Nonaka and Takeuchi classify human knowledge into two basic varieties: Explicit knowledge, also known as formal or codified knowledge, and tacit knowledge, also known as informal or uncodified knowledge. Explicit knowledge, for example, occurs in the form of books, documents, databases and manuals. It can be articulated in formal language and thus be transmitted across individuals formally and easily. Tacit knowledge, in contrast, is personal knowledge which exists symbolically in the human mind and is hard to articulate with formal language. It is embedded in individual experience and involves intangible factors such as personal belief, perspective and the value system. Therefore, tacit knowledge is difficult to be made explicit, even though the emergence of communication and information technologies has led many companies to imagine a new world of leveraging knowledge [NoTa95, pp. 60]. Nevertheless, both types of knowledge, tacit and
explicit, are important and knowledge-creating activities take place within and between humans.

2.1.2. Tacit and Explicit Knowledge

As already mentioned in the previous section, knowledge can be tacit and explicit. According to Nonaka and Takeuchi, tacit knowledge is personal, context-specific, and therefore hard to formulize and communicate, whereas explicit or codified knowledge is more precisely and formally articulated. Some distinctions between tacit and explicit knowledge are shown in table 2-1. Characteristics generally related to the more tacit features of knowledge are listed on the left, while corresponding qualities associated to explicit knowledge are named on the right. Knowledge of experience, for instance, tends to be tacit, physical and subjective, whereas knowledge of rationality tends to be explicit, metaphysical and objective. Tacit knowledge is created at the present moment in a specific practical context. Sharing tacit knowledge can be seen as an analog or nonverbal process. This analogy requires some kind of simultaneous knowledge to handle the complexity of issues shared by individuals. Explicit knowledge by contrast is about past events and objects, it can be viewed as a thing to be stored and manipulated, and it can be removed from the original context of creation or use. It is sequentially created by digital or verbal activities [NoTa95, pp. 60].

<table>
<thead>
<tr>
<th>Tacit Knowledge</th>
<th>Explicit Knowledge</th>
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<tr>
<td>(Subjective)</td>
<td>(Objective)</td>
</tr>
<tr>
<td>Knowledge of Experience</td>
<td>Knowledge of Rationality</td>
</tr>
<tr>
<td>(observation, inference)</td>
<td>(mind)</td>
</tr>
<tr>
<td>Simultaneous Knowledge</td>
<td>Sequential Knowledge</td>
</tr>
<tr>
<td>(at the present moment)</td>
<td>(past events or objects)</td>
</tr>
<tr>
<td>Analog Knowledge</td>
<td>Digital Knowledge</td>
</tr>
<tr>
<td>(practice)</td>
<td>(theory)</td>
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Table 2-1: Two Types of Knowledge

Source: I. Nonaka, H. Takeuchi; The knowledge-creating company, 1995
Nevertheless, according to Nonaka and Takeuchi’s opinion, tacit and explicit knowledge are not totally separate, and the above table just reflects the extremes of both forms. In reality, tacit and explicit knowledge are mutually complementary entities which interact with and interchange into each other in the creative activities of humans [NoTa95, pp. 61]. Information technology has a significant position in the recent emergence of the KM concept, but it is also important to realize that KM, besides technology, is a business process [Sar99, p. 95].

There is some powerful synergistic relationship between KM and information technology. On the one hand, information technology has reduced the cost and accelerated the process of transferring best practices and knowledge, but on the other hand it has caused a flood of information that has seriously exceeded the capacity of professionals to make sense to their environment. Technology has made it realistic to globally share knowledge, but the problem still remains getting the right information to the right people at the right time [DeGr98, p. 87]. The birth of modern KM can be contributed to two important areas: to the communication or network technologies and the relational database [Sar99, p. 97]. As we have learned before, tacit knowledge is best shared through people, while explicit knowledge can be shared through machines.

The continuum between tacit and explicit knowledge, from totally tacit, poorly organized, somewhat documented, to highly documented and organized explicit knowledge, shows the more explicit the knowledge, the more high-tech solutions are required, whereas tacit knowledge is best transferred by human interaction. The implication of information technology and KM systems will be that knowledge types and needs have to be connected with the right IT applications [DeGr98, p. 89].

2.1.3. Defining Core Competencies

In the business world competencies are important elements of successful strategies and for decades have been a subject of discussion of new theoretical
constructs. In the classical Harvard approach to strategy, for instance, competencies are treated as given and essentially static. In recent years competencies have been treated as resource-based, a corporate characteristic, spanning a number of business units. Garry Hamel (1994) defines competence as “(...) a bundle of constituent skills and technologies, (…)”. Additionally, he defines a core competence as “(...) the integration of a variety of individual skills (...) in a single individual or small team. (...) A core competence comprises both tacit and explicit knowledge.” [Ham94, p. 12].

Generally, competence can be defined as possessing the ability to constantly perform a required task at an acceptable standard. Knowledge, as we have learned from the previous section of this chapter, can be shortly defined as experience gained through practice. Competence is a level of expertise where knowledge and the ability to perform the necessary actions are ingrained. Experience usually leads to competence. When the actions are performed routinely without the intention of accumulating what is being learned, experience may result in mastery of skill. Thus, competence is the ability to use and develop the acquired knowledge and not only to possess the knowledge as the latter just results in experience.

2.1.4. The Process of Schema Theory

Schema theory is very useful in describing the concept of learning. Schemata refers to a person’s knowledge structure for a specific class of concepts. It is defined as a “(...) data structure for representing the generic concepts stored in memory” [RumNor83, p. 42]. Schemata can also be viewed as packets of knowledge, and schema theory is a theory of how these packets are represented and how that representation facilitates the use of the knowledge in particular ways [Dris94, pp. 144]. Thus, there are schemata “representing our knowledge about all concepts: those underlying objects, situations, events, sequences of events, actions, and sequences of actions” [Rum80, p.34]. Schemata work as building blocks of cognition. They are the fundamental elements on which all information processing depends.
Gagné. (1985) states that schemata have both static qualities, such as their structures, and active qualities, such as leading us to expect certain information. Schemata sometimes are used consciously, for example, in guiding retrieval, and sometimes they operate automatically, for example, in recognition of a new instance of a concept or in drawing an obvious inference [Gag85, p. 56].

There are two types of schemata: one for objects and another for events representing the existing knowledge structure. Schemata function in four dimensions in our mind. First, they categorize our experiences. If information is categorized, it can be searched more quickly and efficiently for relevant information. Second, they function to remember. When a scheme for certain object or event is created, and attached to a label, it can be retrieved and remembered through the very cuing label. Third, schemata help comprehension. Comprehension indicates that what is going on is understood including what to expect next. Finally, schemata function to help problem-solving ability. They help to make decisions and know what to do when a specific problem are encountered [Byr96, pp. 114].

2.1.5. Organizational Learning

The concept of organizational learning refers to the development of skills, knowledge, and associations between past actions, the effectiveness of those actions, and future actions [FiLy85, p. 803]. The development of firm skills through a learning process involves the interpretation of past experiences and strategy choices as a basis for present and future actions [Por91, p. 95]. The knowledge generated through learning supports a firm’s ability to understand the consequences of past actions and to respond to environmental stimuli. Thus, effective learning results in an enhancement of an organization’s skills and capabilities [Lev91, p. 95]. As an organization learns, it strengthens and possibly renews its core competence. In turn, core competencies can be seen to represent the collective learning in the organization [PraHam90 p. 133].
2.1.6. Modes of Knowledge Conversion

As explained previously, explicit knowledge can be shared through communication and media, but that is difficult in the case of tacit knowledge. Nevertheless, tacit knowledge can sometimes be communicated through shared understanding between individuals. In other cases tacit knowledge must be converted into explicit knowledge before it can be shared. In fact, Nonaka (1994) proposes that there are four modes of knowledge conversion:

- From tacit knowledge to tacit knowledge – “Socialization”
- From explicit knowledge to explicit knowledge – “Combination”
- From tacit knowledge to explicit knowledge – “Externalization”
- From explicit knowledge to tacit knowledge – “Internalization”

Socialization comprises the exchange of tacit knowledge between individuals in order to convey personal knowledge and experience. Joint experience results in newly-shared implicit knowledge, such as common values or technical skills. In practice this could mean, for instance, gaining intuitive and personal knowledge through physical proximity and attaining direct communication with customers or a supplier.

Combination is the transformation of explicit knowledge into more complex and more systemized explicit knowledge. It is necessary to combine different fields of explicit knowledge with each other and make new knowledge available on an organization-wide basis. The systematization and refinement increases the practical value of existing knowledge and increases its transferability to all organizational units.

Externalization describes transformation processes. On the one hand, this means the conversion of tacit into explicit knowledge and, on the other hand, the exchange of knowledge between individuals and a group. Since implicit knowledge is difficult to express, the conversion process is often supported by metaphors, analogies, language rich in imagery, or stories, as well as visualization aids, like models, diagrams or prototypes.
Internalization comprises the conversion of organization-wide, explicit knowledge into the tacit knowledge of the individual. This requires from the individual to recognize personally relevant knowledge within the organization. Continuous learning and the gathering of one’s own experience through “learning-by-doing” may support employees in these internalization processes. Nonaka refers to this as the SECI process, or Socialization, Externalization, Combination, Internalization process, which is illustrated in Figure 2-1 [Non94, pp. 14].

2.1.7. Knowledge Spiral and Organizational Knowledge Creation

According to Nonaka and Takeuchi, individual tacit knowledge is the basis for organizational knowledge creation. They represent two dimensions of organizational knowledge creation: epistemological and ontological. Nonaka and Takeuchi propose that the four modes of knowledge conversion they present form the epistemological ‘engine’ of the knowledge creation process. To reach the ontological dimension, knowledge has to be mobilized and this is achieved through a knowledge creation spiral.
In Nonaka and Takeuchi’s model, the main role of organization is to amplify the knowledge conversion from individual tacit knowledge to organizational knowledge through four modes of knowledge conversion. The knowledge conversion is conceptualized in the shape of a spiral, proceeding at the epistemological dimension from one knowledge conversion mode to another and at the ontological dimension from one knowledge creating organizational level to another. The process can be more easily visualized by first omitting the ontological dimension. The epistemological ‘engine’ of the knowledge creation process is presented in Figure 2-1 above.

The epistemological knowledge spiral presents the four modes of knowledge conversion and demonstrates how different contents of knowledge interact with each other. As shown in Figure 2-1, the starting point, according to Nonaka (1998), is usually the socialization phase, though the spiral may also start from any other mode [NoUmSa98, p. 20]. As Figure 2-1 also shows, internalized operational knowledge often prompts the start of new cycle of knowledge creation.

In addition to the epistemological dimension, there is also the ontological dimension of organizational knowledge creation in the Nonaka-Takeuchi model. If compared with real life phenomena, the significance of this dimension is rather straightforward. If an engineer, for example, working on customer projects shares his or her experience with individuals working in product development, communication between two organizational groups takes place. According to the Nonaka and Takeuchi model, a new organizational level is then added to the knowledge creation process. This expansion may continue, for example, by adding people of another organizational unit, as in a merger or acquisition to the process. The spiral of organizational knowledge creation, including epistemological and ontological dimensions, is presented in Figure 2-2.
Here the knowledge creation process according to Nonaka and Takeuchi is a continuous interaction between tacit and explicit knowledge. The scale of interaction between tacit and explicit knowledge level towards the knowledge level of process is amplified through organizational interaction, crossing individual, group, departmental and organizational boundaries.

2.2 The Post-Merger Integration Management

Hasteghal and Jemison (1991) quote that in post-merger integration “some managers had a starkly simple view of integration. For some, integration meant ‘making them like us’; others managed as if ‘nothing should change’ in either firm. Other managers saw integration as a ‘black box’ in which things just seemed to happen after the acquisition, but most of those we studied realized they were immersed in a complex process, full of subtleties and pitfalls”[HaJe91, p. 105].
The terms ‘post-acquisition’ or ‘post-merger integration’ refer primarily to the art of combining two or more companies – not just on paper, but in reality – after they have come under one common ownership. Integration refers to a combination of elements that results in wholeness. Moreover, integration occurs at several levels, e.g. by combining the accounting systems of the two firms or by creating a single legal entity. Other important issues may be the integration of physical assets, product lines, production systems, technologies, or the cultural integration. The necessary degree and fields of integration are determined by a variety of contingencies which will be discussed at a later point of this thesis.

According to Haspeslagh and Jemison (1991), one of the key challenges in managing acquisitions is to ensure that acquisitions support the firm’s overall corporate renewal strategy, because in most cases acquisitions are strategic decisions that can both reinforce and change a firm’s direction. Hence, acquisition decisions must be consistent with the firm’s strategy (see Figure 2-3).
2.2.1. Task Integration and Human Integration Process

Birkinshaw, Bresman and Hakanson developed a framework focusing on the task integration and the human integration process and their effect on the success of acquisitions. In their views the task integration process deals with the identification and realization of operational synergies, whereas the human integration process focuses on the creation of positive attitudes towards the integration among employees on both sides. Hence, the task integration process views value creation as the objective of the acquisition, measured in terms of transfers of capabilities and resource sharing. The human integration process, however, is concerned with generating satisfaction and a shared identity among the employees from both companies. They argue that the processes of ‘task integration’ and ‘human integration’ are conceptually distinct, but, of course, not independent from one another and that the overall acquisition success is contingent on the effective management of both sub-processes:

“The sub-processes of task integration and human integration are separated out and it is shown that effective integration ... was achieved through a two phase process. In phase one, task integration led to a satisfying solution that limited the interaction between acquired and acquiring units, while human integration proceeded smoothly and led to cultural convergence and mutual respect. In task two, there was renewed task integration built on the success of the human integration that had been achieved, which led to much greater interdependencies between acquired and acquiring units” [BiBH2000, p. 395].

The quotation reveals that their recommendation focuses on a smooth human integration process in a first step, which afterwards would make the task integration process easier. The result of their study and the underlying logic of their argumentation are depicted in the following Figure 2-4:
Following the logic and rationale of Birkenshaw, Bresman and Hakanson (2000) would imply that the two companies involved in the acquisition should keep their autonomy at the beginning with only a little amount of integration while concentrating on the human integration process. The ‘real’ integration – in the terminology of Birkenshaw, Bresman and Hakanson the task integration – in terms of combining different units and working together more closely should take place in a further step – after having successfully completed the human integration process [BiBH2000, pp. 395]

The weakness of this framework is the poor consideration of a high fluctuation directly after a merger or acquisition. Moreover, most of the top management leave the company after a takeover, due to the fact that they can no longer strive for the fulfillment of their entrepreneurial spirit and goals. Therefore, it is not really possible to realize a smooth human integration process lasting a few years, simply because too many people leave the company – irrespective of how ‘smooth’ this process might be.
2.2.2. Post-Merger Integration – The Source of Value Creation

The importance of post-merger integration becomes obvious in the following statement:

“Many acquisitions look great on paper. Yet, no matter how attractive the opportunity, value is not created until after the acquisition, when capabilities are transferred and people from both organizations collaborate to create the expected benefits or to discover others” [HaJe91, p. 11]

Haspeslagh and Jemison (1991) adopt a process perspective in analyzing that shifts the focus from an acquisition’s results to the drivers that cause the results. Value creation is considered as a long-term phenomenon that results from managerial action and interactions between the firms. From their point of view the transfer of capabilities will lead to competitive advantage or, in other words, value creation.

The overall perception of the value-creation process is to consider firms as a set of capabilities embodied in the organizational framework, which can create and sustain elements of competitive advantage for the company, when applied in the marketplace. From their capabilities-based perspective, Haspeslagh and Jemison suggest that a firm’s competitive advantage results from applying a wide range of capabilities and especially, a set of core competencies defined as being central to competitive advantage. As markets are sufficiently varied to provide room for different competitors with different capability profiles to exist, the only real distinctive competence is the ability to mobilize an organization to continually form new combinations of capabilities and to renew them. From their point of view, mergers and acquisitions are considered as part of a corporate strategy for renewing such capabilities. Thus, the heart of integration is the transfer and application of strategic capabilities.

Haspeslagh and Jemison distinguish between the transfer of general management skills, functional skill transfer and operational resource sharing and combination benefits. Each type involves different organizational challenges [HaJe91, p. 107]:

General management skills transfer creates value when one firm can make the other more competitive regarding general management skills and systems. Practically, this means capabilities in ranging from setting corporate direction to more analytical skills needed for setting up strategic planning, human resources, etc.

Functional skills transfer creates value by one firm taking in and learning functional skills from the other. This in turn is reflected in a sharper competitive advantage. A possible scenario would be two medical companies, one with outstanding R&D and the other with more normal R&D-results. Subsequently, the better firm teaches the less able one. The essence of this is that functional learning is involved between the two firms. Notably, the harder to replicate the skill, the more the transfer of functional skills is worth competitively. On the other hand, complex skills are more difficult to transfer since they are often integrated in the organizational practices.

Operational resource sharing entails the combination and rationalization of operating assets of the two firms. This can occur in one or more functions leading to both cost improvements and synergies creating additional revenues. These synergies stem from economies of scale and scope. An example of economies of scale would be that the combined operations could manufacture products at a lower unit price due to the larger volumes produced. An illustration of economies of scope would be to share and combine sales-forces or to cross sell each other’s products or services. Sometimes this means eliminating duplicated resources, e.g. a redundant sales-force. However, resource sharing between the two firms also causes a cost of compromise, i.e., there is a trade-off between the effectiveness of the asset with the economical benefits brought about by the combination of assets. For instance, two different sales-forces might be selling basically the same product but to completely different segments in the market, which require different skills. Furthermore, Haspeslagh and Jemison claim that in practice the benefits from resource sharing are often in opposition to the benefits of functional skills transfer [HaJe91, p. 30].

Combination benefits are synergies originating from the mere fact of combining two firms. Examples could be increased market power or bargaining power in relation to customers, suppliers etc. Another example could be lowering
financing costs due to the larger size and stronger bargaining power. It should be stressed that, these benefits are not the results of managerial action or of some sort of operational cooperation and, therefore, they do not require any capability transfer between the organizations. Normally, combination benefits are present in most mergers; however, they are in most cases not at the center of the intended value creation. Most of the value creation in strategic M&A can be classified in one of the three categories mentioned before.

In principle, all M&As involve all four types of the synergies described above. Which of these management chooses to focus on is brought about by the strategic logic of the M&A. In practice, one type normally dominates, and, consequently, the integration process should focus on this [HaJe91, p. 32].

### 2.2.3. Types of Integration Strategies

Haspeslagh and Jemison (1991) have developed a matrix with four different integration strategies. They vary in the amount of organizational autonomy and degree of strategic interdependency between the companies in a merger or acquisition. The success factor of knowledge transfer, mutual learning and adaptation necessary to accomplish the aim of the acquisition is reflected by the degree of strategic interdependence. However, in many cases the lack of time and hasty integration can destroy valuable capabilities. As these capabilities are embedded in the employees, it is important not to alienate the employees so that value may be threatened or destroyed. Moreover, to preserve valuable capabilities it is important not to rupture the organizational culture from where it was created. To achieve this a high degree of autonomy seems to be essential. As indicated in Figure 2-5, it is important to determine what kind of integration strategy should be used in the merger.
2.2.3.1. Holding

In a horizontal merger the technical competence in both firms is usually of a similar structure, which implies little or no technical integration and a few or no capability transfers. In order to minimize costly duplication of effort, the parent part may introduce tight controls of local technical activities. These tight controls affect the autonomy at the local subsidiaries; employees may feel that their independence is threatened, which will eventually result in motivation and commitment decline. This motivation and commitment decline will sooner or later affect the productivity; this on the other hand may be what was planned from the beginning, hence, the closing of the facility.

2.2.3.2. Absorption

When two firms merge some of the sites within the corporation may only provide a supplementary knowledge to existing R&D but not any unique technical know-how. The supplementary knowledge will be absorbed into the new organization at the expense of decreasing autonomy of the site that lost it. Loss of autonomy will undermine the identity and organizational culture.
An R&D function in a company might find that its prime objectives are changing and that its original tasks are shifting towards secular based on parent directories. This fundamental change will in most cases meet resistance and as a consequence key personal will seek more exiting and stable employment elsewhere. However, the employees of the absorbed firm perceive that the consequences of this are in many cases active hostility and mass resignation.

2.2.3.3. Preservation

Using preservation as a strategic choice is preferable to absorption because a high degree of autonomy is coupled with a low degree of interdependence. By granting the subsidiary autonomy, it helps to maintain its organizational culture. In this environment its technical capabilities may continue to prosper. Furthermore, this is preferable when the two organizations complement each other in the newly created organization. Unfortunately, technical collaboration and transfer is then usually limited.

2.2.3.4. Symbiosis

The fourth type of strategic integration approach is the most complex, but also the most rewarding. Because of the substantial amount of technical and capability transfers that must take place, a high degree of interdependence between the two firms has to exist. Moreover, since the two environments are dependant on their own organizational culture to enable them to maintain high technical capability, it is important that they keep their respective organizational culture.

By transferring technical capabilities while keeping the two organizational boundaries intact, a symbiotic environment is created. The first step is to coexist and the focus is placed on autonomy and preservation. When this is accomplished, the focus turns towards the actual transfer of capabilities.
3. **Contingencies of Knowledge Management**

KM cannot be realized by focusing on a single facet, since many aspects are involved in the creation of a strategy for building a KM system. To focus, for example, on technology (e.g., setting up a corporate Intranet) is insufficient, if coworkers are not willing to share their knowledge with each other. On the other hand, technology has the potential to enable effective KM. Thus, an effective KM strategy has to take a holistic view of the field. The model depicted in Figure 3-1 is often used to illustrate the different dimensions of KM [Albr93, p. 227]. Organization, People and Technology are at the center of all KM activities, supplemented by the Corporate Culture. If a KM strategy concentrates only on one aspect or pillar (e.g., just implementing an Intranet) this KM strategy is likely to fail. Since Organization is assumed to be covered by the remaining ‘contingencies’ of the model, the following sections focus on Culture, People and Technology.

*Figure 3-1: Three Pillars of Knowledge Management*

*Source: F. Albrecht „Strategisches Management der Unternehmensressource Wissen“, 1993*
3. Contingencies of Knowledge Management

3.1. The Cultural Dimension

Corporate culture is a domain that is only vaguely understood. There is no accepted taxonomy of corporate culture. In corporate daily life culture is omnipresent. In some companies cultures are cult-like; in others they are hardly visible. They appear like the genetic code of the organization. Corporate culture, hence, is the place of tacit organizational knowledge. It is strongly resistant to change.

“Cultural assumptions provide stability and meaning to our daily life. They structure our perceptions and thoughts, and they tell us how to evaluate and feel about things. It follows, therefore, that if some of those assumptions need to change (...) such change will be preceded by a period of anxiety, and that anxiety will produce denial and various other kinds of defensive resistance to change.”[Sch98, p. 3].

Corporate cultures embody a set of shared beliefs and assumptions that do not change even if individual members change. They manage to expose and expel non-compliant members sooner rather than later. There are subcultures within a culture that are broadly characterized as the ‘operator’ or line subculture, the ‘technocrat’ or ‘engineer’ subculture, and the ‘CEO’ or ‘finance’ subculture. The corporate culture plays the role of integrating these subcultures into the overall context [Sch98, pp. 4].

If KM is dependent on one thing, then it is the sharing of knowledge. In a command-and-control culture with its typical carrot-and-stick way of getting things done, knowledge sharing takes on a different flavor, and maybe degree of accomplishment, than in a free-wheeling entrepreneurial or family based culture. Here collaboration and sharing is the way it works anyway. The difficult part in KM from a cultural perspective is getting people to believe that sharing knowledge will be beneficial not only to the company but also to themselves.

The key to managing the integration process is to obtain the participation of the people and create an atmosphere that can support capability transfer. Cultural differences appear to be a critical factor for creating such an atmosphere and
3. Contingencies of Knowledge Management

obtaining people’s participation. Thus, the degree of cultural differences may
determine the effectiveness of the integration processes and eventually the KM of the
new entity [Dru92, pp. 153].

3.1.1. The Concept of Culture

Hofstede has defined culture as being "the collective programming of the
mind, which distinguishes the members of one group or category from another". Moreover, according to him culture is learned; it derives from one's social
environment; it is not inherited. Indeed, the sources of one's mental programs lie
within the social environments in which one grew up and collected one’s life experiences [Hof94, pp. 4].

Hofstede considers that culture is always a collective phenomenon, because it is at least partly shared with people who live or lived within the same social
environment, which is where it was learned. According to him, every person carries
within him or herself patterns of thinking, feeling and potential acting which were learned throughout their lifetime. Besides, much of it has been acquired in early
childhood, because at that time a person is more susceptible to learn and assimilate. Yet Hofstede believes that a person's behavior is only partially predetermined by her or his mental programs [Hof94, pp. 4]

As culture is learned and not inherited, and therefore it derives from one’s social environment and not from one’s genes. Hofstede distinguishes culture from human nature on one side, and from an individual’s personality on the other. However, the borders between these elements are rather difficult to set. Thus, Hofstede differentiates three levels in human mental programming as illustrated in Figure 3-2:
For Hofstede *human nature* is what all human beings have in common. It is inherited with one’s genes. The human ability to feel love, anger, fear, joy, sadness, the need to communicate with others and interact all belong to the level of mental programming. However, how one interprets these feelings, what one does with these feelings, how one shows or expresses them is influenced by culture. On the other hand, the *personality* of an individual is her/his unique personal set of mental programs. This is not shared. The personality is partly inherited while the rest is learned.

Cultural traits have often been attributed to heredity. Yet the impact of learning and teaching from and to other generations is highly important. Actually some traits are shared with some people but not with all of them. This can be the language, physical distance, the perception of the self and the other [Hof94, pp. 4].

### 3.1.2. Organizational Culture

Organizational culture can be divided into three levels. These levels are called: *artifacts, values* and *assumptions*. According to Nahavandi and Malekzadeh
(1993), the first level of culture is composed of the visible artifacts and behaviors within the organization. It includes the architecture and design of the building in which the organization is housed, the office layout, the art objects used, and the dress and behavior of managers and employees. The members of the organization carefully construct the various artifacts. They are all observable, although not always easily interpretable. They can only be fully understood when considered within the context of the organization’s values and basic assumptions. An example of cultural artifacts is office design. Layout design may reflect the industry or the culture of the organization, for example an open office may represent either an open participative culture or a need to monitor employees.

With reference to Nahavandi and Malekzadeh (1993), the second, deeper level of culture is composed of values held by members of an organization. These values indicate what ought to be and determine what is considered acceptable. For example, an organization may value training and development of employees, considering training to be essential to organizational effectiveness. Values that are based on common experiences within the organization and have been found to be useful will become an integral part of the organization.

Understanding organizational values, in addition to artifacts, provides a deeper and more thorough knowledge of the culture of an organization. A full understanding of the culture of an organization can only come about with knowledge of the basic underlying assumptions that guides both the development of values and the creation of artifacts. These assumptions make up the third level of culture.

The third level of culture is assumptions. In accordance with Nahavandi and Malekzadeh (1993), it is composed of the basic assumptions resulting from an organization’s success and failures in dealing with its environment. These assumptions make up the organization’s basic philosophy and worldview, and they shape the way the environment and all other events are perceived and interpreted. They are the paradigms that guide all decisions and behaviors[NaMa93, pp.54].

The basic assumptions that determine organizational culture can be related to the industry to which a firm belongs. For example, high-technology firms are more
similar to each other than they are to utilities. Furthermore, an organization’s basic assumptions are often derived from larger cultural and social assumptions. Basic assumptions can provide roadblocks when dealing with other cultures[NaMa93, pp. 54].

3.1.3. Corporate Culture

When companies from different countries are involved in an M&A, there is a great chance that they will experience cultural conflicts and clashes. Besides, culture can be defined not only at the national but also at the organizational level. This concept is known as corporate culture. Corporate culture is considered to be an integral part of organizational culture.

The culture of an organization defines appropriate behavior, bonds and motivates individuals and asserts solutions where there is ambiguity. It governs the way a company processes information, its internal relations and its values. It functions on all levels from subconscious to visible. In the world of increasingly ‘flat’ companies and sophisticated ‘knowledge-based’ products, the control and understanding of an organization’s corporate culture are a key responsibility of the leaders. Culture is thought to give unique competitive advantages and/or strong limitations. For example, could Westerners be like Japanese if they wished to be? Would it mean losing forever the distinctive aspects of Western culture [HaTu90, p. 11]?

Drucker considers corporate culture to be one of four elements in a paradigm of organizational change (the others being operations, time and strategy). He defines corporate culture as the system of values and beliefs practiced by a company. The most revealing element of corporate values is the existing reward-and-promotion pattern of an organization. It is seen to mirror the real value of the corporate culture. Changes in habits and behaviors are strongly correlated with recognition and beliefs [Druc92, pp. 153]
3.1.4. **Acculturation**

Acculturation is considered to be the development of a jointly shared meaning fostering co-operation between the joining firms. If there still exist lots of cultural clashes between the two combining firms, it means that acculturation has been poorly achieved. In fact acculturation diminishes collective resistance by creating a common language, mutual consideration, better understanding of the other, and so on. Actually reaching a high degree of acculturation is one of the main achievements in an M&A process. Without acculturation created between joining companies there are small chances for the M&A to be successful.

Sales and Mirvis have identify three main stages of the cultural integration the last of which is acculturation. The first stage, labeled ‘threat against the own culture’, is very important because it is during this phase that employees from the acquired firm perceive feelings such as fear, uncertainty and shock.

The second stage, *cultural confrontation*, occurs when people from different cultures meet and start working together. Individuals find it difficult to accept and listen to things that are different from their point of view and culture. In this stage feelings such as insecurity and anxiety can be found.

Finally, according to Sales and Mirvis, the last stage is "acculturation". This third stage is the stage that companies should strive to reach because by reaching this phase companies will decrease cultural clashes within the M&A and create joint values [SaMi84, p. 112].

Buono and Bowditch suggest that there are four generic types of cultural integration in organizational combinations: cultural pluralism, cultural blending, cultural take-over, and cultural resistance [BuBo89, p. 143]. Nahavandi and Malekzadeh take the concept further, and, therefore, their framework will be presented here, but essentially the two frameworks describe the same modes of acculturation. The four modes are *integration, assimilation, separation, and deculturation* [NaMa88, p. 82].
It should be noted that Nahavandi and Malekzadeh assume the acquired firm’s perspective as depicted in Figure 3-3:

<table>
<thead>
<tr>
<th>Perception of the attractiveness of the acquirer</th>
<th>How much do members of the acquired firm value preservation of their own culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very attractive</td>
<td>Very much</td>
</tr>
<tr>
<td></td>
<td>Symbiosis</td>
</tr>
<tr>
<td>Not at all attractive</td>
<td>Holding</td>
</tr>
<tr>
<td></td>
<td>Absorption</td>
</tr>
</tbody>
</table>

Figure 3-3: Modes of Cultural Integration
*Source: Nahavandi, A., Malakzadeh, A. R.; Acculturation in Mergers and Acquisitions, 1988*

In the *integration* mode, no culture dominates the other. The acquired company values and wants to preserve many of the basic assumptions, beliefs, practices of the original culture; however, it also views the acquiring company’s beliefs and culture as attractive. Consequently, integration involves a balanced and mutual learning and adaptation in which no firm dominates the other. It is important to note that this can only take place if the acquirer permits it happen [NaMa88, p. 82].

In the *assimilation* mode, the acquiring company’s culture is seen as more attractive. Consequently, the acquired firm adopts the culture of the acquirer in a one-sided process and will eventually be absorbed into that culture and come to an end as a cultural entity [NaMa88, p. 82]. According to Habeck et al. “*the most*
common way of dealing with cultural mismatches is for one culture to impose itself on another”, i.e., culture in position is the norm [Ha2000, p. 86].

Separation is based on the belief that the own culture is superior to that of the acquiring firm’s. Therefore, the target tries to stay as a separate entity and, subsequently, maintain its independence. In other words, separation minimizes the cultural exchange between the organizations and keeps the barriers between the organizations, so each will function almost separately. Another consequence is that the group will consist of sub-cultures and cultural diversity [NaMa88, p. 82].

The last mode of acculturation is deculturation. This implies that the acquired company views both its own as well as the acquiring firm’s culture as unattractive. This results in confusion, a sense of not belonging, and being an outcast. Nahavandi and Malekzadeh state that the acquired company is “likely to disintegrate as a cultural entity” [NaMa88, p. 83] and Berry continues on the same theme that “it [deculturation] is accompanied by a great deal of collective and individual confusion [...] and by feelings of alienation, loss of identity, and what has been termed acculturative stress” [Berry83, p. 69].

The actual mode of acculturation is dependent on both the acquired firm’s preferred mode of acculturation and how the acquirer intends to integrate the other firm. The favored acculturation mode of the acquired firm in turn depends on mainly two factors: how much do members of the acquired culture value preservation of their own culture and the perception of the attractiveness of the acquirer [NaMa88, pp. 83].

Regarding the acquirer, Nahavandi and Malekzadeh consider the degree to which the firm is multicultural and to which degree the M&A is related or not to be the main factors deciding how it wants to acculturate the target [NaMa88, p. 84].

Nahavandi and Malekzadeh state that “given that the members of the two organizations may not have the same preferences regarding a mode of acculturation, the degree of agreement (congruence) regarding each one’s preference for a mode of acculturation will be a central factor in the successful implementation of the
merger." [NaMa88, p. 84]. Hence, the authors argue that if the two firms prefer two different acculturation modes, this incongruence will most probably trigger acculturative stress and disruption, which, in turn, will have the consequence that “key managers and other valued employees may leave, active resistance to adopting any of the acquirer’s systems may occur, and overall, the conflict will not be resolved in a way that would be beneficial to either of the organizations involved.” [NaMa88, pp. 85].

Morosini (1998) widens the framework of the acculturation process and its operational conditions. It is not only a management task, but the roots of national culture play an equally important role in the M&A process. The social environment in which the organization operates has a determinative influence on the methods-in-use. Therefore, beside the obvious internal and external factors, social embeddedness of the organization must be considered to thoroughly understand its behavior and the role of cultural values in the process. The organization’s social components include such aspects as:

- How the company executes complex coordination functions involving both internal and external resources
- How it develops critical networks and learns within its community
- How its people communicate and collectively foster a social sense of identity

The importance of these skills increases, when resources must be coordinated in M&As within diverse national cultural frameworks. This knowledge is almost impossible to copy by competitors; it can only be gained through experience. Its uniqueness derives from the coordination mechanisms, which operate in diverse cultural barriers and are only valid within a holistic perspective. This includes the knowledge itself and is surrounded by cultural symbols, metaphors and norms. [Mor98, pp. 27]
3.2. The Human Factor

Buono and Bowditch also focus on the process of merger integration based on the impact an acquisition might have on employees. They (1989) hypothesize that:

“Some mergers do fail because of financial and economic reasons. However, because of the myriad questions about merger and acquisition success, attention has begun to shift toward human resource concerns, the cultural ramifications of merger activity, management of the overall combination process, and specific efforts aimed at post-combination integration. In fact, most of the problems that adversely affect the performance of a merged firm are suggested to be internally generated by the acquirers and by dynamics in the new entity. The reality may be that many merger- and acquisition-related difficulties are simply self-inflicted” [BuBo89, p. 10].

Their focus is on the individual experience, and how the organization can either help or hinder that experience. Because mergers and acquisitions precipitate major life changes for organizational members, and because it is these same members that can harm or enhance the outcome of the merger, they argue that attention to the human side of mergers is imperative.

Basic human responses such as lowered commitment, drops in productivity, organizational power struggles, office politicking, and the loss of key organizational members, represent hidden costs to a merger. If managed well, i.e., in an open, honest and participative way, Buono and Bowditch (1989) argue that these costs, while not eliminated, can be minimized [BuBo89, pp. 11].

Haspeslagh and Jemison (1991) also focus on the employee side of the M&A integration process. They argue that an atmosphere that stimulates peoples’ willingness to work together, and as such to sharing knowledge, is critical, and that the barriers to cooperation in an M&A context that ought to be managed include fears about job security, a loss of power and resources, process changes, reward system changes, and fear of the unknown [HaJe91, p. 54].
3.2.1. Human Capital

Human capital often cannot be acquired in efficient labor markets due to poor information or firm-specific skills that develop over time. Since such knowledge may be critical to firms building a strategic capability, it is not surprising that many acquisitions occur in human capital-intensive industries.

“It has never been easier for talented people to walk away, leaving the acquired company an empty shell. And the cultural problems of blending personnel can be daunting. Yet, the reasons companies put up with the risks, uncertainties, and expense of buying companies for the human talent of the target point to powerful underlying forces. (...) Building work teams from scratch can be yesterday’s luxury.” [Wall Street Journal, October 6, 1997, A1]

Knowledge is one of the most promising sources of a sustainable advantage and is therefore a logical focus in acquisitions [PraHam90, p. 79]. Human capital, in turn, is critical since knowledge is created by transforming human capital into group- or firm-level knowledge [Non94, p. 15]. Accordingly, buyers may choose acquisitions because they seek complementary assets such as intact teams [Chi94, p. 271]. Thus, it is not surprising that many acquisitions take place in human capital-intensive industries such as business services, real estate brokerage, software, and health services. However, human capital poses serious hazards in corporate acquisitions.

3.2.2. Managing Informal Networks – A Knowledge Management View

Informal Networks can be a powerful tool to get the necessary knowledge in order to complete a task. Cross and Prusak identify four role-players whose performance is decisive for the distribution of knowledge of any organization:

First, there are central connectors, who link most people in an informal network with one another. Central connectors are the first persons you notice when you look at the network map and they are the persons everyone talks to the most. They are not usually the formal leaders within a unit or department, but they know
who can provide critical information or expertise that the entire network draws on to get work done [CroPru02, pp. 106].

Then there are *boundary spanners*, who connect an informal network with other parts of the company or with similar networks in other units or organizations. They take time to consult with and advise individuals from many different departments – marketing, production, or R&D, for instance – regardless of their own affiliations. Boundary spanners play an important role in those situations where people need to share different kinds of expertise. They are a rare breed, however a few networks have many of them. That is primarily because most people do not have the breadth of intellectual expertise, the wealth of social contacts, and the personality traits necessary to be accepted by vastly different groups [CroPru02, pp. 109].

*Information brokers* keep the different subgroups in an informal network together. If they do not communicate across the subgroups, the network as a whole will splinter into smaller, less-effective segments. They are extraordinarily important for the informal network’s effectiveness because they wield the power of a central connector without necessarily possessing the number of direct links that connectors have. In fact, they are characterized by a wealth of indirect connections. Information brokers play such a critical role that organizations often try to manage large informal networks through them [CroPru02, pp. 110].

Finally, there are *peripheral specialists*, who anyone in an informal network can turn to for specialized expertise. Although they operate on the periphery, these people play a vital role in the network by serving as experts. They possess specific kinds of information or technical knowledge – for instance, research data, software skills, or customer preferences – that they pass on to the other members of the group whenever it is needed [CroPru02, pp. 111].

These role-players are often invisible to senior management, though they exercise an enormous influence within the organization. Because executives rely on gut feeling, gossip, or formal reporting structures for their information about their managers and employees, they often misunderstand the links between people, especially in large and globally distributed corporations. And because there are so
many informal networks in an organization, the problem is aggravated. So the first step in managing informal networks is to bring them into the open. That can be done through social network analysis, a graphical tool for mapping and analyzing relationships among people or departments within an organization. It offers a structural means to understand how knowledge creation and sharing occurs within networks [WaFa94, p. 6].

Through social network analysis, people can identify where they need to build more or better relationships. In a merger it can be a very effective means to find those strategically valuable people, to keep existing knowledge within the new entity. Management should focus on their retention and act extremely sensitive to demands placed on them. It is particularly fruitful to map collaborative relationships that cross boundaries of some form. Such boundaries might be hierarchical, functional, geographical or even organizational as in merger and acquisition scenarios [CroPru2000, p. 19]. Understanding how knowledge flows across these various boundaries within an organization can yield critical insight into where management should target efforts to promote collaboration that has a pay-off in knowledge sharing for the organization.

3.2.3. Communities of Practice

The traditional notion of a community of practice is that it emerges from a work-related or interest-related field and that its members volunteer to join [BroDug91, pp. 40]. Communities also appear to be an effective way for organizations to handle unstructured problems and to share knowledge outside of the traditional structural boundaries. In addition, the community concept is acknowledged to be a means of developing and maintaining long-term organizational memory. These outcomes are an important, yet often unrecognized, supplement to the value that individual members of a community obtain in the form of enriched learning and higher motivation to apply what they learn. Playing in that field of regularly sharing and learning, based on their common interests, provides members with a sense of identity – both in the individual sense and in a contextual sense, that is, how the individual relates to the community as a whole [Weng99, pp. 69]. A sense
of identity is important because it determines how an individual directs his or her attention. What one pay attention to is, in turn, a primary factor in learning. Therefore, identity shapes the learning process [LavWen91, p. 143].

A problem in this field can be, that one may be thinking about communities of practice as large, unstructured teams. The distinction between communities and teams leads to confusion. Storck and Hill (2000) suggest that the differences between the two constructs can be characterized as follows [StoHil2000, pp. 63]: Team relationships are established when the organization assigns people to be team members. Community relationships are formed around practice.

Similarly, authority relationships within the team are organizationally determined. Authority relationships in a community of practice emerge through interaction around expertise. Teams have goals, which are often established by people not on the team. Communities are only responsible to their members. Teams rely on work and reporting processes that are organizationally defined. Communities develop their own processes.

Especially after a merger, when it comes to integrating two different internal network systems with their already existing communities, management needs to provide opportunities to make new connections. There are a number of ways that firms can enable community members to make connections with one another. One method is to sponsor face-to-face events, such as knowledge fairs, training sessions, and other activities designed to introduce individuals to each other and the work they are currently involved in. Another method is to provide communities with technologies that can support both collaboration and expertise location. By giving people the opportunity to find one another using individual profiles, or through discussion databases and/or other forms of managed repositories, individuals can make connections to others with similar interests beyond in-person meetings.

The introduction of information technology (IT) enlarges the scope of communities of practice, both temporal and spatial, which creates new and interesting possibilities. Brown (1998) warns that IT has a tendency to reinforce old, formal, hierarchical structures and suggests that care must be taken to utilize IT in
such a way that it supports informal networking [Brown97, p. 13]. With Intranet, Extranet and Internet and the applications acting up on these infrastructures, the social phenomenon of communities of practice exists in cyberspace as well, called virtual communities. The virtual community becomes a place, or what Nonaka and Konno (1997) refer to as ‘cyber-ba’, shared virtual spaces for emerging relationships between colleagues, in which one can meet, discuss, share knowledge, and learn as an individual, as a group, and as an organization. This makes it possible to develop ideas with people whom one may not yet have met in person, but with whom one shares the same interest [NoKo98, pp. 1].

### 3.3. The Technological Basis

In Chapter 2 we have already identified data as a starting point of KM. To this we can add applications such as email, GroupWare, and document control products [Dav93, p. 2]. Each of these applications can move and share information in and out of an organization. Many organizations will then introduce decision support systems that will facilitate the trends and operational patterns that are critical for the success of the organization. However, this does not address the issue of accessing direct information (knowledge) by individuals throughout the organization structure. This issue has been addressed by web-based technology. It has provided the means to deploy an organization intelligence system quickly and easily. This knowledge sharing can also be extended to an organization's partner.

While the applications discussed below contribute to knowledge of an organization, only the organizations’ KM strategy brings forward knowledge of information from the mass data.

#### 3.3.1. Intranet

An Intranet is a private computer network based on the communication standards of the Internet. It is a smaller version of the Internet that only the members of an organization can see. Companies can create, within their walls, a manageable, secure version of the World Wide Web. These internal webs are growing from an
explosion in the use and understanding of Internet technology. This technology has the following distinctive characteristics:

The Internet/Intranet is hyperlinked: The web was initially invented to allow scientists and researchers to communicate, collaborate, and exchange information in a transparent way. Much of this transparency is due to the hyperlink concept, which is partly responsible for the success of the web by providing easy access to documents [Baec93, p. 112]. The ability to create hyperlinks to other resources is perhaps the most significant feature of the web and something that allows it to transcend both printed media and other computer paradigms. The hyperlink feature provides the users with extremely easy access to a huge amount of information, available at their fingertips. Any object anywhere in the web may be easily addressed and thus likewise easily accessed. This ‘connectivity’ aspect enables single individuals as well as large organizations to distribute information equally easy [TuHi98, p. 116].

Unlike email, TV, or radio, the web does not push information to the passively receiving users. Instead, the web is pull-oriented and entirely user-driven [DamSch99, pp. 333]. Using the hyperlink feature, the user requests information from the server; the server never sends information pro-actively. The user may visit sites and pages in any desired order, and interact with scripts and forms as he or she chooses. The hyperlinks also allow individual users to create their own collections of useful resources and reorganize existing information by providing individual sets of links and texts.

The Internet/Intranet is networked: The web is obviously highly networked in the sense that it is distributed both physically and in authority. The client/server architecture and the Uniform Resource Locator (URL) allow information to be placed anywhere in the network, making the physical whereabouts of data transparent to the user. The web, being distributed and not relying on a single focal point, is thus always available though individual servers may be temporarily off-line. There is further no central management or predefined hierarchy structure, which means that anyone can publish anything. Web users are therefore not restricted to
being simply information consumers, but may almost as easily be information providers, publishing whatever they have to share [Scot98, pp. 3].

The Internet/Intranet is open: The web is a bottom-up technology based entirely on open and publicly accessible standards. The access mechanism of the HTTP allows even proprietary formats to be used without having to standardize. A web page does thus not restrict either the type or the amount of information presented, which helps guarantee information richness. The openness also enables others to develop add-ons, which in turn guarantees adaptiveness and access to formats and types not yet existing. To function as a multi-purpose tool the web is not restricted to text only, but is instead very media-rich, allowing a variety of forms and formats including images as well as video and audio. Unlike most other client/server models, the web does not require the installation of any proprietary products or protocols. A standard web browser and a TCP/IP connection are all that is needed. Information may then be displayed independently of network or server topology. The open standards, the in-place world-wide net, and the availability of free-to-use software for both servers and clients paired with the relatively low training requirements also makes a web server inexpensive to set up and an Intranet a low-cost implementation [Scot98, pp. 3].

However, there is one point to be mentioned in which Intranet differs from Internet. The Intranet is organizationally bounded: In a strict technical sense, an Intranet is a subset of the Internet, and therefore shares all of the above characteristics. In addition, Intranets contain only users from within the own organization or company. This is an important factor from a KM perspective since it enables the organization to share information more freely, which is not intended for competitors. Intranet users belonging to the same organization can further be presumed to share certain objectives and subscribe to the same set of values and beliefs. Intranet users differ in these aspects from Internet citizens, and the Intranet can be seen as providing a minimum level of coherence that is absent on the web as a whole.
3.3.2. **Knowledge Applications**

This section describes the main functions of IT with relevance to KM.

3.3.2.1. **Document Management**

Document Management can be a key element in using information to enhance KM. A considerable part of the raw material from which knowledge can be generated will be in the form of documents. Much of the output from the KM process will also be in some kind of documentary form. The ability to manage the creation or capture, storage, routing, searching, use and eventual destruction of documents of all kinds is vital to KM.

Over the years, the range of documents that Document Management Systems can handle has developed substantially, including images, web pages, forms for interaction with remote Web users, all kinds of digital documents that need not exist in hard copy, and complex structures of text for large scale publishing purposes, whether on paper or in the Web.

All Document Management Systems have to provide a core of standard functionality, including: Document storage with summary profiles relating to content in terms of words, author, dates, and any custom fields; version controls and audit trails for all objects; team-working facilities - likely to be useful where documents are complex or are created by complex processes; flexible and efficient search and viewing facilities; document security. In addition, Document Management System vendors are scaling up their products to serve the organization as a whole, rather than just a single department. They also give their products some elements of process management such as tracking the stages through which a document passes, the order in which tasks need to be completed, and by whom performed. All these features can add significantly to an organization's KM capability.
3.3.2.2. Data Warehousing

Data warehouses contain large volumes of historical transaction data, organized and manipulated to fulfill analytical and decision making processes. Data warehousing, as an activity, involves considerable effort including individuals, tools, processes and methodologies – in fact everything needed to retrieve, consolidate, clean, and summarize data. It also tends to involve hardware that is additional to the On Line Transaction Processing (OLTP) databases, from which a large amount of the data stored in a data warehouse is collected.

3.3.2.3. Data Mining

*Data mining* is the process of discovering interesting knowledge, such as patterns, associations, changes, anomalies and significant structures, form large amounts of data stored in databases, data warehouses, or other information repositories. Due to the wide availability of huge amounts of data in electronic forms, and the imminent need for turning such data into useful information and knowledge for broad applications including market analysis, business management, and decision support, data mining has attracted a great deal of attention in information industry.

In general, data mining tasks can be classified into two categories: *descriptive data mining* and *predictive data mining*. The former describes the data set in a concise and summary manner and presents interesting general properties of the data; whereas the latter constructs one or a set of models, performs inference on the available set of data, and attempts to predict the behavior of new data sets [Agr+96, pp. 244].

With the construction of large data warehouses, data mining in data warehouse is one step beyond On Line Analytical Processing (OLAP) of data warehouse data [ChaDay97, pp. 65].
3.3.2.4. Repositories

A repository is a store of information about application software that includes authorship, inputs, processes, outputs, and their inter-relationships. However, the widespread availability of the information repository is a comparatively modern development.

A repository not only stores metadata for data warehousing, but also stores metadata in view of distributed application objects or components. Extending the reuse of components would be impossible without some form of repository, where relevant component metadata can be stored and accessed.

3.3.2.5. Groupware

Groupware is the set of enabling technologies that allows the sharing of data and information within an organization. It also allows active participation in the sharing of information by seeing who modifies the data, often on a real time basis. Initially Lotus Notes was the primary Groupware product. This is one reason why Notes has become synonymous with the term Groupware itself. There are now many more products in the market place including Microsoft Exchange and Novell GroupWise.

Groupware electronically supports organizational information sharing activities and attempts to resolve and reduce time and effort spent searching for and exchanging paper and other documents to support activities of ‘knowledge workers’. Organizations still buy Groupware primarily for its mail features. Another concept embraced by Groupware is that of a task list. The task list can also generate and support a ‘discussion’ group. This enables real-time typed ‘conversations’ amongst the members of the group. Vendors of Groupware packages, who respond to competitive pressures, also increasingly incorporate advanced features such as workflow management. Groupware seems well placed to assume a leading role in the way many organizations develop their KM capabilities.
3. Contingencies of Knowledge Management

3.3.3. The Architecture of a Web-Based KM Platform

As we have learned from the previous section, knowledge can be either tacit or explicit. In general, tacit knowledge is subconsciously understood and applied, developed from direct experience, and usually shared through highly interactive conversation, while explicit knowledge is more precisely and formally articulated, although removed from the original context of creation and use [Zack99, p. 46].

However, it seems to be difficult to explicate tacit knowledge to become explicit knowledge so that it can be efficiently and meaningfully shared and reapplied especially outside the originating source. Explicit knowledge was defined as an object and as such it contains two basic elements according to Zack: Structure and content. This means that the knowledge structure provides the context, or frame for specific topics to interpret the gathered content. Several repositories, each with a structure appropriate to a particular type of knowledge and content can be represented on a knowledge platform. The basic structural element is a knowledge unit, a formally defined packet of knowledge content that can be codified, stored, reused and manipulated. The format, size, and content of knowledge units may vary, depending on the type of explicit knowledge being stored and the context of its use. Furthermore, each repository additionally includes a system for linking and cross-referencing knowledge units [Zack99, p. 48]. These links may represent conceptual associations, best practice, specific literature, competitor intelligence for a particular market or other relationships depending on the content of knowledge being stored. Knowledge as an object will become knowledge as a process if people build on this explicit knowledge in combination with their own thinking and experience.

3.3.3.1. Information and Knowledge Refinery

Information refinement is the process of converting data into information so that it makes sense to a person while knowledge refinery is the process of creating and distributing the knowledge [Hack99, pp. 16; Zack 99, p. 49]. In this sense Hackathorn refers to web farming as a practical step towards KM for a company [Hack99, p. 17]. The process of knowledge refinery and information refinery takes place on a so-called knowledge platform. Following Hackathorn and Zack [Hack99,
p. 18; Zack99, p. 49] the process of information and knowledge refinery embraces five stages (see Figure 3-4)

The first stage is *discovery*: The process of the exploration of available data to find those sources that are related to a specific topic. A business analyst is the primary participant in this activity and requires intelligent tools.

The second stage is *acquisition*: The process of either collecting and maintaining identified source content, both from external and internal sources, or the creation of information and knowledge inside the environment.

The third stage is *refinement*: The process of value-adding activities before adding captured information and knowledge into the repository. Value-adding activities are analyses, validation and the transformation of data into refined information and knowledge by specialists.
The fourth stage comprises *structuring*: The process of codifying, indexing, storing and categorizing the dynamical flow of information and knowledge. This stage bridges upstream repository creation and downstream knowledge distribution.

The fifth stage comprises *dissemination*: This process contains the packaging and distribution of information and knowledge to a specific knowledge unit and making repository content accessible for users. The context in which information and knowledge are used on the knowledge platform may be interactive through Virtual Communities or unilateral which means that information and knowledge just flows in one direction.

Discovery, acquisition, refinement, and structuring create and update the knowledge platform, while dissemination derives various views of the information and knowledge available on this platform. The process of information and knowledge has a bi-directional flow. The left-to-right flow refines content of information and knowledge, making it more structured while the right-to-left flow refines the control of the process, which becomes more selective and valuable.

In summary, a very effective means for structuring the Net and providing a basic infrastructure is the creation of multimedia platforms. These platforms serve as a repository for explicit knowledge as well as a repository for virtual forums to share tacit knowledge interactively. Knowledge can be captured and stored in units or categories such as industry or service-related topics. In addition, each member belongs to one of the topic-related communities on such a knowledge platform. Each community member is able to dynamically modify and interactively combine the explicit knowledge with a new context and circumstances on his/her own thinking and experience. In addition, active community participants are able to create their own rules and net culture under the auspices of the coordinator or platform operator.

### 3.3.3.2. A Classification of Knowledge Management Applications

Based on this KM architecture, knowledge processing can be segmented into two broad classes: *integrative* and *interactive* (Figure 3-5.), each addressing
different KM objectives. Together, these approaches provide a broad set of knowledge processing capabilities. They support well-structured repositories for managing explicit knowledge while enabling interaction to integrate tacit knowledge.

Integrative applications show a dynamical flow of explicit knowledge into and out of the knowledge units on the platform. People interact with repositories on the platform rather than directly with one another [Zack99, p. 50]. The single knowledge units on the platform become the primary medium for knowledge exchange. Each repository provides a place, such as feedback or comments, so that interested users can contribute their opinion. However, the focus tends to be on the repository and the explicit knowledge it contains rather than on the tacit knowledge of users. A common example is the best-practice database. In the case of a best-practice database, participants are members of the same Knowledge Community within the organization. The single knowledge units provide a medium to integrate and build on the communities’ collective knowledge while still showing a dynamic flow of explicit knowledge. Different kinds of practices are gathered, interpreted, and shared among people belonging to the same community of interest and confronting
similar problems. The acquired result, the best practice, is then published on the company’s Intranet sites and available to users both inside and outside the organization.

The visitor or reader is neither directly involved in the same work nor does he belong to the same community of practice as the producer or author. Once published, the content is accepted by the reader as it is, and although active user feedback is allowed, it is not expected [Zack99, p. 51].

*Interactive applications* by contrast, focus primarily on supporting interaction among people sharing tacit knowledge. The repositories on the knowledge platform are by-products of interaction and collaboration. The content of such knowledge units is dynamic and developmental. Interactive applications vary according to the proficiency of participants and the degree of structure imposed on their interaction [Zack99, p. 51]. On the one hand, the objective is formal training or knowledge transfer. Interaction mainly tends to be between instructor and trainee and will be structured around a distinct problem or lesson plan. One common example is electronic-mediated distance learning which is currently offered by some universities and companies via Internet or Intranets.

On the other hand, interaction occurs also in a more *ad hoc* manner between people performing common practice or business. These people share their tacit knowledge by interacting in electronic forums. Such forums take the form of a knowledge brokerage, an electronic discussion space where people either search for knowledge or advertise their expertise. Highly interactive forums support continuous collaborative discussions among participants. They frequently respond to and build on each individual contribution to the discussion. The flow of knowledge loops back from presentation to acquisition. A knowledge repository emerges when the content of the discussion will be structured and indexed. Value added contributions can be added to a standard categorization system so that members of the community can re-apply the knowledge [Zack99, p. 51].

To manage an interactive application, an electronic forum needs recruiters encouraging participation in discussions. The participants in discussion groups then
refine, structure, and index the content themselves by using guidelines and categories built into the application [Zack99, p. 51].

According to Zack, the combination of integrative and interactive applications provides a broad set of knowledge-processing capabilities. While supporting well-structured repositories for managing explicit knowledge, they also enable interaction to integrate tacit knowledge. In this sense interactive applications play a major role in supporting integrative applications. An electronic forum, for instance, can be linked to an electronic-publishing application. People can discuss the quality of the contributions either directly via electronic mail to the author, or an electronic space is available so that readers can directly discuss the publication among themselves and ideally with the participation of the author [Zack99, p. 51]. Best-practice databases also require some degree of forum interaction. In moderated conferences, for instances, interested people trying to adopt a practice will have the opportunity to contact the creators directly.

To sum up, it seems that KM applications form a continuum from low to high interaction complexity. Electronic forums are, on the one side, the most interactive and complex applications because they tend to span the entire tacit/explicit knowledge-processing cycle. One key point to make an application successful is to establish a well-defined social community in which each individual is willing to share ideas and context. Electronic publishing, on the other hand, is just one way of distributing explicit knowledge to some kind of user community visiting the knowledge platform. So the tacit/explicit processing-cycle contains the integration of interactive electronic forums on a knowledge platform. In these forums tacit knowledge can be made explicit, and the content of the explicit knowledge can be structured and stored in specific repositories available for re-use in context. Then new tacit knowledge becomes available for sharing with others via the same cycle.

“Technology is not the complete answer to the difficulties of KM” [DavPrus98, p. 34]. The need to create the right organizational culture and infrastructure in which knowledge can be created and disseminated is important, too. However, few people will deny that technology is an important facilitator and can help in overcoming the problems of KM.
4. A Framework for Managing Knowledge in the Post-Merger Integration Process

This chapter is intended to make some suggestions about how KM could be implemented within the Post-Merger Integration context. The preceding chapters serve as the basis for the development of that framework. Due to the complexity of the subject, this approach is not meant to be all-embracing, though.
For mastering the numerous requirements on KM it calls for a comprehensive planning which fits in with the M&A process. For the delimitation of the individual phases of KM within the post-mergers integration management, one can refer to the structures of the general KM. Four stages, illustrated in Figure 4-1, will be described in the following.

Figure 4-1 also depicts the main aspects of the KM framework resulting from the examinations of the preceding chapters. As the variables involved are highly dynamic and volatile, this KM is per definition an iterative process that always restarts from the beginning.

In view of the organization of the integration process the question arises, which areas are to be assigned with the implementation and whether a separate knowledge integration manager is needed. Due to the complexity and the importance of the subject the appointment of a knowledge manager seems necessary. He/She should come from a central integration team and take over a coordinating and supporting task. The operational conversion, however, remains with the functional areas. Within the context of integration planning, these areas will deal with the identification of knowledge sources and carriers in order to secure a first structuring as well as a documentation and evaluation of knowledge.

### 4.1. Knowledge Creation

This comprises activities associated with entry of knowledge into the system, and includes defining and capturing knowledge.

#### 4.1.1. Defining Knowledge

The base for the complete KM process is put in the phase of defining knowledge. This covers basic decisions for the way of how knowledge will be recorded as well as the determination of important knowledge sources. Due to the complexity of knowledge it has to be determined from the start, which types of knowledge and sources are to be considered particularly important to the enterprise’s
success. The corporate strategy and the goals aimed for the acquisition form the framework conditions for the definition phase.

Every organization has its own language, but a prerequisite for a meaningful unification of data material is a common language. Especially, when it comes to frontier-crossing mergers, this aspect plays a significant role. Different accounting standards, different measures (currencies, weights, distances) have to be coped with. Thus, terminology needs to be analyzed, harmonized, and made compatible.

In cooperation with the respective people in charge it has to be determined which definitions best represent their business. Differing definitions, for example for ‘turnover’ or ‘customer’, frequently even differing within one enterprise, have to be made uniform or the deviations are to be documented. A result of this step is translation tables that take the different data to a common format. Only with this groundwork can, sales data, future potentials, product- and customer structures be represented integrally for the new enterprise.

4.1.2. Capturing Knowledge

The information necessary to create a KM for combining units, as in merger scenarios, is scattered throughout the organizations involved. The next step in implementing a common KM is to identify where this knowledge is kept and who the gatekeepers are. A strong support from Human Resources, training and senior management, as well as departmental leaders of the merged organizations is necessary, because each group contains part of the solution. The goal of KM is to create a comprehensive and congruent system through which these functional islands can cooperate and share critically important information. Appropriate methods for identifying relevant knowledge are essential for the ensuing transmission processes, as non-identified knowledge remains with its possessors and is thus unavailable for the community. The locations and vehicles of knowledge and knowledge fragments are numerous and so are their identification methods. The use of so-called knowledge maps offers its services here.
The storage media of tacit knowledge per se are human beings or groups of human beings, but it can also be incorporated in processes, licenses, reports, policies, databases or patents. This distinction shows that the identification of relevant tacit knowledge can either be targeted at it directly or at the results of its use.

From each of these groups one will need to gather the information to complete a knowledge map and yellow pages (for an example see Figure 4-2). Some of the information needed includes:

- A list of all knowledge workers
- All current job descriptions
- A detailed organizational chart
- An internal network map
- A list of workers’ training and testing histories
- Any metrics currently in use
- A list of all approved training being utilized
- Any KM initiative currently underway
- A list of current skill definitions
- Any databases or software systems used to track such information
- Worker evaluation forms
- Statistical information
- Any completed skills assessments
- Procedural manuals
- Company specific documented best practices
- Any data or knowledge repositories that may exist
- Any measurements used to assess productivity

Knowledge maps provide a graphical overview of the bearers, the assets, the structure and the application of knowledge within a group of individuals. They can increase the transparency of knowledge assets and facilitate finding experts, as they are used similarly to a common map. Due to a better overview, new knowledge can be integrated much easier into existing knowledge. Knowledge maps also connect tasks to knowledge assets and individuals, and can thus visualize the knowledge intensity and the knowledge flow of particular processes.
In order to fill in these knowledge maps, the cartographers have to decide whether they want to focus on the *individuals* holding the knowledge or on the *processes* in which it is used. One promising way to capture knowledge directly is to simply ask the presumed knower, as each employee already holds a small fragment of the map in mind. The combination of these partial maps can be done systematically by employing professional interviewers and storywriters to scrutinize, summarize and codify the experiences of the employees. Properly trained interviewing personnel has to ask the right questions at the right time and sometimes even push to get the most valuable information. It is also possible to use interviews for determining the type of knowledge involved. Well-targeted questions may reveal valuable insights about the role of explicit and implicit knowledge involved in the process. These include questions about the information required for a certain decision, about the information actually used for making the decision, about time and resource restrictions involved.
It is important to form a good relationship with each of the involved groups. In some organizations, differing units or groups may have adversarial relationships with one another and may not be open to sharing information, if they feel that somebody is working for or on behalf of other departments or groups. They may feel that management is collecting this information as a preamble to an attempt to take away some of their control or responsibilities. Thus, a clear and open communication practiced by top-management before collecting information and the assignment of a neutral project group can help to avoid these problems.

4.2. Knowledge Retention

This includes all activities that preserve knowledge and allow it to remain in the system.

The second step in the KM process is the retention of knowledge. The organization must recognize which knowledge is important for its success and where that knowledge resides within the organization. As far as possible, the organization must then codify this knowledge – transform tacit knowledge into explicit knowledge that can be ‘stored’ in documents and databases.

Employees’ uncertainties about their own future position in the enterprise or different business attitudes after a merger lead to an exceptional high employee fluctuation in the integration phase. Extensive knowledge drains away through the loss of these employees to competitors or to customers, which has an impact on the future business success in this phase.

Here, KM strives for identifying the most important know-how carriers and binding them to the enterprise as well as preventing a loss of knowledge in general.
4.3. **Knowledge Transfer**

This refers to activities associated with the flow of knowledge from one party to another. This includes communication, translation, conversion, filtering and rendering.

4.3.1. **Sharing Knowledge**

Based on integration decisions taken before it is now necessary to make the knowledge, which exists anyway, applicable or include it separately in the context of the integration. This is carried out in two steps:

On the one hand, the organizational bases have to be put down. This entails to assign and to define the tasks on the employee level, as well as to determine which information each employee needs for the execution of his/her tasks. The distribution of the information has to be organized also from an IT point of view.

Besides this rather formal step the readiness and motivation for sharing knowledge must be guaranteed. Especially in acquisition scenarios one will face various barriers to knowledge sharing and knowledge identification. Primarily cultural factors, leadership of the management and few incentives lead either to a bunkered or undocumented knowledge. This could refer to e.g. not-documented knowledge about the application of proceedings and/or deciding factors of the customer. What should be the motivation for sharing knowledge with new colleagues who will perhaps contest one’s workplace? There is, moreover, uncertainty whether the future corporate culture of the merged enterprise will reward knowledge sharing.

To counteract these effects it is required, from an enterprise’s point of view, to establish clear incentives for knowledge sharing. This could be, the anchorage of a KM-component in the agreement of objectives as well as in the salary payment systems (variable share).
4.4. Knowledge Utilization

This includes the activities and events connected with the application of knowledge to business processes. First priority in this phase is to guarantee knowledge exchange and transmission. This covers both the examination of agreed measures and the creation of further incentives.

One main purpose of the KM is placed here. The bare existence of knowledge is not enough. Many constraints restrict the use of knowledge in the daily routine. The first problem is the dislike of people to use outside knowledge, because it is seen as an unnatural act to do so. The next borderline is the keeping of well-tried experiences, regardless of their quality, as a kind of security mechanism to avoid foreign infiltration.

In the face of these problems, the enterprise must guarantee that expensive and strategically important knowledge will be used every day. All efforts are in vain if the potential users are not convinced of the system’s usefulness and, thus, do not use the system. So, one central question is whether the regarded approaches do support the motivation of people to use the offer of KM. Or, if the approaches do not provide this feature, it is interesting whether other, maybe additional, tools, which do this, can be integrated in the approach. The next point of interest in utilization is the basic ability of choosing the right knowledge with the system. This question is close to the above-discussed representation of knowledge. Could, for example, different knowledge items be merged to be used as an integrated whole? Another question depends on the ability to check out knowledge before it is used to avoid inconsistencies and conflicts with other potential users.
5. Conclusions

This thesis has addressed the issue of KM from a post-merger integration perspective. The fast access to new knowledge, as the strategic goal for a merger or acquisition, can be achieved successfully by carefully considering the contingencies described in Chapter 3.

We have learned that the key to managing the integration process is to obtain the participation of the employees and to create an atmosphere that can support knowledge transfer. Cultural differences appear to be a critical factor for creating such an atmosphere and obtaining people’s participation. An integrative people management is of essence to the merger’s success. KM has to find those strategically valuable people in order to keep crucial knowledge within the new entity. The flow of organizational knowledge naturally touches many individuals, teams and functions. The idea that knowledge sources within a merged firm can add significant value by being appropriately linked suggests the importance of cross-functional and boundary-spanning processes and roles.

Trusting in computer technology as the key factor in most recent integration projects, organizations have neglected human beings as the storage medium of tacit knowledge and the creators of knowledge. While computers and databases certainly play an important role for the exchange of explicit knowledge, the processes related to the use of tacit knowledge have to be focused on human beings. Thus, face-to-face interaction between knowledge carrier and knowledge seeker is not replaceable.

The KM-framework presented in Chapter 4 is a possible approach a merged company may use to manage to most important facets of KM in the integration process. A careful but still flexible implementation of this framework should allow for a successful post-acquisition phase.
6. **Outlook**

KM in the post-merger integration process requires a major shift in organizational culture and a commitment at all levels of a firm to make it work. Initiatives in most of the companies focus on people and methods to enhance learning and improve communication, both locally and globally. A strong technological infrastructure, customized for the needs of each merged firm, provides the tools necessary for ensuring the success of KM efforts. What emerges from the myriad of corporate experiences is that KM does not require more or better tools to gather more data and information, but rather does require a new perspective to link the pieces of information that promotes understanding and accelerates action - in other words, to create knowledge for the new entity. KM concerns itself not just with tapping into corporate memories but also with corporate skills and existing intellectual capital.

People and computers differ in their ability to make sense of incomplete information. People can make sense (construct and interpret meaning) of fragmentary and incomplete information. Computers cannot. We learn from people what they are doing and what they need. If we can effectively record and disseminate peoples’ knowledge, others can learn and use it. A supportive organizational climate, ideally through good KM, can bring entire organizational learning and knowledge to bear on any problem, anywhere in the world and at any time. A supportive organizational climate, ideally through good KM, can bring entire organizational learning and knowledge to respond to any problem, anywhere in the world and at any time. There is, however, a lot of skepticism about KM. There is an urgent need to develop measures for KM in the post-merger integration process to determine what value is being added to the firm’s processes and products, and to determine what implications there are for competition by enhanced sharing and collaboration. Intelligent organizations are recognizing that knowledge is an asset, perhaps the only one that grows with time, that harnessed properly, can provide them with the ability to continuously compete successfully and to innovate. That is why I would also like to end this thesis with the following thought: “*The Empires of the future are the Empires of the mind*”, *Winston Churchill*
Bibliography


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### Abbreviations

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<td>CEO</td>
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<td>HTTP</td>
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Statutory Declaration

I hereby declare that this masters thesis contains no material which has been accepted for the award of any other degree or diploma in any university or equivalent institution, and that, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

Paderborn, October 2002

Berry Demirov

Eidesstattliche Erklärung


Paderborn, October 2002

Berry Demirov