Effective knowledge transfer to SMEs

Lessons from marketing and knowledge management

Richard Kerste
Arnoud Muizer
Zoetermeer, August 2002
## Contents

1  **Introduction**  5  
   1.1  Background  5  
   1.2  Focus of the study  5  
   1.3  Problem definition  6  
   1.4  Limitations  6  
   1.5  Approach  6  
   1.6  Structure of this study  7  

2  **Knowledge: importance, types and absorption**  9  
   2.1  Introduction  9  
   2.2  The strategic importance of knowledge  9  
   2.3  Types of knowledge  10  
   2.4  Knowledge absorption  11  
   2.5  Conclusions  13  

3  **Knowledge-absorption process**  15  
   3.1  Introduction  15  
   3.2  The absorption process  15  
   3.3  Influencing the knowledge-absorption process  19  
   3.4  The SME dimension in the knowledge-absorption process  21  
   3.5  Conclusions  22  

4  **Stimuli from marketing and knowledge management**  23  
   4.1  Introduction  23  
   4.2  Stimuli from internal marketing  23  
   4.3  Stimuli from social marketing  25  
   4.4  Stimuli from personal marketing  28  
   4.5  Stimuli from knowledge management  29  
   4.6  Conclusions  33  

5  **Empirical findings**  35  
   5.1  Introduction  35  
   5.2  Case study: Internal marketing  35  
   5.3  Case study: Social marketing  40  
   5.4  Case study: Personal marketing  45  
   5.5  Case study: Knowledge management  50  

6  **Some ideas for actions**  57  
   6.1  Introduction  57  
   6.2  First approach: Stimulating judgement  58  
   6.3  Second approach: Reversing the steps of the decision-making process  60  
   6.4  Conclusions  64  

   **Literature**  67
1 Introduction

1.1 Background
National and regional governments, trade organizations and other institutions are increasingly concerned and active with respect to the creation and transfer of knowledge to small and medium-sized enterprises (SMEs) and the effectiveness of this knowledge transfer.

The Dutch Ministry of Economic Affairs attaches great importance to innovative activities of all SMEs that can at least partially be realised by the absorption of new knowledge by these companies. At the same time, the Ministry realises that many knowledge transfer and diffusion projects exist. One of the major conclusions, however, is that these projects can only be successful if and only if companies are willing and able to absorb the knowledge supplied.

With respect to the behaviour of many SMEs, the willingness and ability to look for knowledge seems to be negatively correlated with bottlenecks such as time and costs. The so-called low-involved SMEs are not completely convinced of the advantages of absorbing new knowledge for innovative purposes. For them the absorption of new knowledge is only interesting if this knowledge can be easily obtained and will lead to more efficiency, a higher turnover or to competitive advantages. These advantages should be clear and easy to attain, otherwise these SMEs are likely to focus on their traditional way of working.

In order to enhance the innovativeness of Dutch SMEs and stimulate knowledge absorption, policy makers should therefore focus on the bottlenecks and resistance perceived and demonstrated by low-involved SMEs.

1.2 Focus of the study
In this study we shall therefore focus on the behavioural aspects of SMEs and on the question how to stimulate successful knowledge transfer including the absorption of knowledge by SMEs, which are low involved. The objective is to learn from experiences concerning products, services and/or social issues with a low recognized need and low involvement amongst the people or firms in the targeted group. These experiences that are not necessarily limited to innovative areas can be found within companies and in B2B-relationships and they may also exist with respect to social issues. In addition, experiences can be used which stem from the enormous information overload in the new economy.

Insights from internal marketing, social marketing, from personal marketing and knowledge management are applied to stimulate the recognition of needs and a higher involvement with respect to the purchase of products and services, the absorption of knowledge, and to behavioural changes. These insights from marketing and knowledge management will be used in the study in order to come to some ideas for stimulating the absorption of knowledge by (one or more persons within) SMEs.
1.3 Problem definition

The subject of this position paper can be defined as follows:

*How can knowledge be marketed more effectively, so that also low-involved SMEs recognize the need for the absorption of knowledge, which may be technologically and commercially attractive for them?*

The following research questions result from this problem definition:

1. What is known about knowledge and knowledge absorption?
2. What can be learned from the available literature about the relationship between internal, social marketing, personal marketing, knowledge management and the recognition of needs for and a higher involvement in products, services, social issues and/or knowledge?
3. Which elements can be supported by empirical results from case studies?
4. Which actions can be formulated to stimulate the need for knowledge absorption by low-involved SMEs?

1.4 Limitations

The study will mainly focus on the stimulation of the recognition of the need to absorb new knowledge within SMEs that may enhance their innovativeness. We do not focus on the further stages in the decision-making process. The successful absorption of knowledge depends on many more factors and goes far beyond the scope of this study. The further stages of the decision-making process, however, will be used to formulate actions in the last chapter of this study.

The focus in the study is mainly on influencing the first step of the decision-making process. Supply and demand side factors of knowledge are therefore only briefly described. Knowledge transfer is an interactive process in which also a good articulation of knowledge demands is an important step to come to an effective knowledge transfer. The focus of the study on influencing the first step of the decision-making process implies that the structuring of knowledge by research and educational institutes and the articulation of knowledge demands by SMEs are not described extensively. The structuring of knowledge and the articulation of knowledge demands, however, are considered very important elements for ‘pushing’ new knowledge effectively. For this purpose, both elements will be taken into account in the study.

1.5 Approach

The following steps are taken to answer the research questions.

*Basic desk research*

In the first step desk research is carried out to describe some characteristics of knowledge and knowledge absorption. This first step is necessary for a first understanding of what knowledge is and does. In this respect the following questions are answered: what is the strategic importance of knowledge? Which types of knowledge can be distinguished? What is known about knowledge absorption?
Theoretical framework
The second step consists of further desk research of international literature that is relevant with respect to the process of knowledge absorption by companies. The following questions are important in this respect: how can the process of knowledge absorption be described and how can this process be influenced? Based on insights from the international marketing and consumer behavioural literature these questions will be translated into a theoretical framework. The theoretical insights will be used for describing the theoretical relationships between the various elements of the framework. These elements will result in various theoretical propositions that deal with the way in which knowledge absorption by companies can be stimulated.

Empirical support
In a third step empirical data will be collected and analysed, which will support or reject the theoretical findings. The empirical data will result from 4 case studies in the related fields. The following cases are presented and analysed:
- A large organization that used internal marketing to successfully implement a knowledge management system.
- A public campaign for stimulating environmental awareness by companies and/or consumers.
- An intermediary organization or company which is successful in personal marketing.
- A company that uses knowledge management in order to present new knowledge in such a way that it can influence the absorption of the knowledge.

Each case study includes two in-depth interviews in total: one with a key person who is or has been responsible for the programmes and policies and one interview with receiving organizations or persons. A further deepening of the cases will take place by analysing available documentation. In this step, empirical support for the theoretical framework will be gathered and described.

Ideas for actions
The combination of theoretical findings and the empirical support of these findings will pave the way for the formulation of some ideas for actions.

1.6 Structure of this study
In chapter 2 the subject of this study, knowledge and knowledge absorption, is further introduced. In this chapter the characteristics and the importance of knowledge are discussed, as well as the way companies can absorb knowledge. Chapter 3 elaborates on the process of knowledge absorption in firms, by presenting a theoretical framework that deals with the way in which knowledge absorption can be stimulated. In this chapter special attention will be paid to differences in knowledge absorption between SMEs and large firms. The different ways of stimulating knowledge absorption are further analysed in chapter 4. This will result in 4 propositions for the stimulation of knowledge absorption in firms. In chapter 5, 4 case studies are analysed with the aim to provide empirical support for the propositions that resulted from chapter 4. The report ends in chapter 6 with some ideas for actions.
2 Knowledge: importance, types and absorption

2.1 Introduction
In this chapter the characteristics and the strategic importance of knowledge are described as well as the way companies can absorb new knowledge. Much has been written about these and related topics. The aim of this chapter is not to come to an extensive desk research, but to present a brief overview of the various definitions and insights with respect to knowledge and knowledge absorption. The chapter ends with some conclusions.

2.2 The strategic importance of knowledge
It is broadly agreed that nowadays knowledge is the most important factor in competition between firms. As a result of the importance of knowledge, demand for knowledge has grown tremendously. The Dutch Ministry of Economic Affairs (2000, pp. 49-52.) points out three trends that have created this situation. Firstly, as a result of internationalisation firms have to compete with a growing number of competitors in other countries. Given this growing competition they have to apply themselves on inventing new products, services and processes and they have to distinct themselves from their competitors by innovations. Secondly, consumers make higher demands on the products they buy. Products have to be introduced on the market faster and have to meet individual demands. This means that entrepreneurs have to know what the client’s wishes are. While these wishes change rapidly, entrepreneurs have to be keen on getting the most recent information about what the client’s wishes are. Thirdly, ICT developments make that knowledge is spread within the society faster and faster. Because of this it has become easier for firms to get knowledge from sources outside the firm. At the same time, however, these developments lead to a faster vanishing of the exclusivity of new knowledge.

Van Dijken (2001, pp. 13-17) stresses that increasing the knowledge intensity and innovations are of great importance for firms to utilize maximally the many - still unknown - possibilities of the ICT revolution. Innovation should not be restricted to developing totally new products, but one should also emphasize the continuous improvement of products and services and organizational and institutional innovations as well. Not only future developments force firms to innovate. Nowadays firms have to comply with many different market demands simultaneously and firms have to compete on many battlegrounds simultaneously as well. Besides price, product quality and customer service and delivery time and flexibility and time-to-market and innovativeness have to be good simultaneously.

According to Van Dijken (2001), especially for SMEs an extrovert attitude while acquiring knowledge is essential. This author distinguishes seven challenges for SMEs:
- Acquiring knowledge about many different aspects
- Professionalization of entrepreneurship
- Attention for combinations of technologies
- Innovation along many different lines
- Satisfying different performance demands simultaneously
- With a high speed
- Developing new forms of knowledge transfer.
2.3 Types of knowledge

Knowledge has some specific characteristics. Firstly, knowledge is hardly measurable. Secondly, knowledge can be transferred from one person to another person, but the original owner of the knowledge will not lose the knowledge. Because of this knowledge is called a non-rivalry good. Thirdly, knowledge is cumulative, i.e. if one wishes to absorb new knowledge one should at least have already an adequate base of knowledge.

Knowledge can be categorized in different ways. Depending on to what degree knowledge is documented a dichotomy can be made between explicit knowledge and implicit (or tacit) knowledge. Another dichotomy is based in the place where the knowledge is developed: internal and external knowledge. In the literature some more sophisticated categorizations of knowledge were found.

According to Jacobs (1999, p. 45) the following categorization may be called a classical categorization of knowledge:
- Know what, or knowledge about facts
- Know why, or knowledge of basic principles, rules and ideas
- Know how or knowledge about how things work
- Know who or knowledge about people and relations.

Jacobs (1999, p. 87) himself introduced another categorization of knowledge, which also counts four categories:
- Technological knowledge, or knowledge about technical processes, about new materials, about how to organize product ideas and production processes technically efficient, etc.
- Market knowledge, or knowledge about developments within the market and within sub-markets and knowledge about how to organize the firm’s services in such a way that clients are linked up with the firm permanently
- Organizational knowledge or knowledge about how to get teams to cooperate, about how to cooperate with external parties, about how to mobilize knowledge and ideas within the firm, etc.
- Human and social skills, or personality, entrepreneurship and leadership and team skills.

Brouwer, Van Ophem and Zijderveld (2001, pp. 18-19) categorize knowledge into six categories, which are presented in three dichotomies:
- Fundamental or basic knowledge vs. knowledge that is directly aimed at application. These categories are based on the content of knowledge. The first sort of knowledge covers knowledge about fundamental laws of a specific discipline and the second sort covers knowledge that must be put into service of a specific product.
- Strategic knowledge vs. general facilitating knowledge. These categories are based on the aim of knowledge. The first sort of knowledge covers knowledge that is of great importance for the development of a specific product or line of products of which the firm is or will be dependent in the future. A distinction can be made in short-term and long-term strategic knowledge. The second sort of knowledge covers knowledge that is related with a specific product or a part of a product.
- Market or commercially oriented knowledge vs. technology oriented knowledge. These categories are based in the focus of knowledge. The first sort of knowledge covers knowledge that is necessary to adjust products to market circumstances. The second sort is knowledge that is aimed at solving technological problems or questions.
2.4 Knowledge absorption

As has been mentioned in the limitations of this study (see section 1.4) the focus of this study is mainly on influencing the first step of the decision-making process. Knowledge transfer, however, is an interactive process in which a good structuring and accessibility of knowledge on the supply side as well as a good articulation of knowledge demands on the demand side are important steps to come to an effective knowledge transfer. The focus of the study on influencing the first step of the decision-making process implies that the structuring of knowledge by research and educational institutes and the articulation of knowledge demands by SMEs are not described extensively. For a good understanding of the knowledge-absorption process, however, supply and demand side factors of knowledge absorption are briefly described in this section.

Recent research of EIM (Prince, 1999) shows that the greater part of the knowledge that SMEs acquire, is acquired from other firms: suppliers, colleagues and competitors, clients. Only to a minor degree SMEs utilize the knowledge infrastructure for acquiring knowledge. The research also shows that most entrepreneurs acquire knowledge within a restricted region around the firm.

Brouwer, Van Ophem and Zijderveld (2001, pp. 20-24) show that there is a relation between the need for different types of knowledge and the form of a knowledge relationship or knowledge transfer. They also stress that there is a relationship between the innovation process, the need of sorts of knowledge and knowledge relations. These authors distinguish five phases in the innovation process:

− The exploration phase. In this phase the central issue is setting up basic knowledge.
− The strategic phase. In this phase the acquiring of knowledge takes place that is necessary to get an advantage on the competitors or to ensure the existing position or to try to make up an arrear.
− The development phase. This phase is characterized by the specific problems in the process of product development and by marketing and competition considerations.
− The construction phase. In this phase knowledge relations can exist if there are co-engineers or co-makers engaged; otherwise there are no knowledge relations.
− The production phase. In this final stage of product development traditionally there is little chance on knowledge relations, but there are signals that the situation may change.

While developing a (totally) new product, the process of product development can be considered as a sequential process, i.e. that it starts with research and ends with production. In practice in many cases this will not happen and there will be incremental improvements and adaptations. In any case the model of these authors is based on the assumption that there is a certain kind of (internal) knowledge interaction between the different phases of development.

With respect to the aspect of internal knowledge interaction it is interesting to mention that Van de Bosch, Volberda and De Bo (M&O, 2000, pp. 27-47) prove that not only the actual knowledge base of a firm but also the organization structure and the connection skills influence knowledge absorption. These determinants can change over time and managers can deliberately influence both these determinants if they want to increase the absorption capacity of a firm. The absorption capacity of a firm has an important influence on the degree to which new knowledge from the environment is absorbed and used for successful innovations. External sources of knowledge are of utmost importance for the innovation process in general and especially in a context of a changing knowledge environment. Such a context forces firms to concentrate on the
reconfiguration of all their present knowledge components. The reconfiguration of the present knowledge components leads - at least for the firm that is concerned - to a new knowledge configuration that can serve as a platform for adapted and new product-market combinations as well. The knowledge components can be found either within the firm or in or outside the traditional knowledge environment.

Van de Bosch, Volberda and De Bo (M&O, 2000) distinguish three dimensions on absorption capacity:

- **Efficiency.** This dimension refers to how firms absorb and use knowledge in the perspective of cost and scale advantages.
- **Scope.** This dimension refers to the diversity or width of the different absorbed knowledge components.
- **Flexibility.** This dimension refers to the degree to which a firm can put in additional knowledge components and to the degree to which existing components can be combined again.

In the context of this study, the problem of good articulation of knowledge demands should also be mentioned. SMEs often do not demonstrate explicit search behaviour for knowledge (Technopolis, 2000.). Knowledge demands are more implicitly enclosed in the problems and challenges an entrepreneur is confronted with. The inability of some SMEs to come to a good articulation of demands hinders effective knowledge transfer to these SMEs. From the study of Technopolis (2000) it appears that trust, warm contacts and speaking the same language are important factors for external consultants for helping SMEs to articulate demands and translate these demands to knowledge available at institutions.

With respect to innovation adoption models Frambach et al. (Journal of Business Research, 1998, pp. 161-174) argue that also supply-side variables are important in the adoption process. The ‘traditional’ adopter-side variables that they have derived from the existing innovation adoption models include:

- Perceived innovation characteristics
- Adopter characteristics
- Network participation
- Competitive environment
- Information.

In their model these authors include supply-side variables as well:

- The marketing strategy pursued by the supplier of an innovation
  - Marketing efforts can be concentrated on positioning the innovation in the marketplace
  - Marketing strategy can be directed at reducing the risks associated with early adoption of the innovation on a larger scale
  - Winning market support for the innovation may stimulate diffusion of an innovation.
- The innovation development activities pursued by the supplier of an innovation.
  The probability of adoption of an innovation in the marketplace will depend on the degree to which the supplier has succeeded in developing an innovation that is unique and satisfies specific (latent) needs of potential adopters.

In an empirical study on the supply-side variables of the adoption of a service innovation by organizations, Frambach et al. found that the probability of adoption was positively influenced by the degree to which the supplier of the innovation pursued a mar-
keting strategy aimed at positioning the product in the marketplace by explicitly communicating the innovation's distinctive properties or focused on reducing the risk of adoption for potential adopters by offering a low introduction price or a free trial period. Also adoption appeared to be positively influenced by the perceived relative advantage of the innovation, whereas its perceived complexity showed a negative effect on adoption.

2.5 Conclusions

In this chapter some insights with respect to knowledge and knowledge absorption have been briefly described. Two elements are relevant for our study. Following the typification of Jacobs (1999, p. 45) in section 2.2, in this report and especially for the definition of possible actions the accent will be on the absorption of technological knowledge, which is new for the company. This knowledge may - when successfully applied in the organization - improve the competitiveness of the companies either by a more efficient production process or by product development.

Furthermore, Frambach et al. argue that the supply-side variables are important in the adoption process of innovations. He emphasizes the importance of marketing efforts to be pursued by the supplier of an innovation and supported this with empirical results. These results raise the question whether marketing efforts can also be applied to stimulate the absorption of new technological knowledge by companies.
3 Knowledge-absorption process

3.1 Introduction

The different arguments on absorptive capacity that were presented in the previous chapter show that both marketing and knowledge management can have an important influence on the absorption of new knowledge. The use of marketing strategies by the supplier of new knowledge can stimulate the potential adopter to become aware of the need for new knowledge.

From a knowledge management point of view, factors such as the current knowledge base of a potential adopter and the way in which new knowledge is presented to that adopter play an important role in the absorption of new knowledge. Because of these important influences on knowledge absorption, further insights on this topic can be applied to stimulate knowledge absorption by companies that have a low recognized need for new knowledge.

In this chapter the stimulation of knowledge absorption will therefore be approached from a marketing point of view (including the consumer behaviour theory) and from a knowledge management point of view. In the next section a theoretical framework is presented and described based on these insights. Section 3.3 deals with the question how the knowledge-absorption process can be influenced, both by internal and external influences. The chapter ends with a section in which special attention is paid to the elements in the model and in knowledge absorption, which are particularly relevant for SMEs.

3.2 The absorption process

In figure 1 a framework is presented that deals with the purchasing process of companies. In this framework different theoretical insights from marketing and the consumer behaviour theory have been combined. In the following part, the various elements of the framework are described extensively.
The decision-making unit

The purchase of products, such as raw materials, components and end products, and services is not a case of one person in an organisation making the buying decisions. Multiple persons are involved in the purchasing process. The decision-making process in companies is usually done by a decision-making unit (DMU) within an organisation. This DMU consists of all individuals or groups that take part in the decision-making process concerning the purchase of goods, services or knowledge (Kotler and Armstrong, 1993). The individuals or groups within the DMU can be the eventual users of the obtained goods or services, the decision makers, the people who have a relevant influence on the decision makers, the persons who will place the order and buy the wanted goods or services and the persons who control the buying information. In figure 2 the possible members of a DMU are presented.
The DMU is usually not a permanent and formal unit within the organisation. The composition and size of the DMU can vary with the sort and size of the organisation and with different buying tasks. Large enterprises usually are more bureaucratic. These firms have to deal with many buying decisions and have therefore a larger, more permanent and structural DMU. In SMEs the DMU is usually smaller and the entrepreneur is often an important member of the DMU. He or she is involved in almost all the buying decisions. In very small companies the entrepreneur can even be the only decision maker. In this case the DMU may consist of the entrepreneur, together with one or more relevant employees. The size and composition of the DMU also differs regarding the sort of product or service that has to be purchased and the particular buying situation. In the case of routine-buying situations or small purchases, the DMU can be small. When a company has to purchase important, strategic products (such as a complete new production process) or when the buying decision is very complex, the DMU often consists of many people from different parts of the organisation.

The participants of a DMU that are involved in the purchasing process have an important influence on the buying policy of a company. The DMU determines the need for products and service and they make the decisions on the sorts of objects that will be purchased and from which source they will be obtained. The function of a DMU is the same when a firm purchases and absorbs knowledge. The DMU decides if, how and where new knowledge is retrieved from the external environment.

The decision-making process
When a firm buys a certain product or service the DMU of that firm goes through a decision-making process. This process starts before the actual purchase takes place. The decision-making process can be divided into five stages (Leeflang, 1994a; Kotler and Armstrong, 1993):

- **Need recognition**: The purchasing-decision process is initiated when the DMU recognizes a problem, need or potential opportunity to improve the company’s efficiency. This awareness of a problem or a need arises because of a mismatch be-
between the existing and the desired situation. The need recognition within the DMU may originate from internal stimuli, such as outdated equipment, breakdowns in the production process, unsatisfactory in quality or availability or new managers insist on change. External stimuli outside the buying organisation may also initiate the need recognition. The need recognition originates then, for instance, from a supplier who convinces the DMU from the buying organisation that they can improve the company’s operating performance by acquiring certain products, service or knowledge.

− **Information search**: When the DMU is aware of a certain need and that need cannot be satisfied immediately, the DMU tends to search for information in order to satisfy the need. As a result of the information search, the DMU increases its knowledge about the different ways to satisfy the need.

− **Evaluation of alternatives**: When enough information is available on the different alternatives a choice has to be made between these alternative sources. The question is which knowledge has to be obtained and from which source. Important criteria for the evaluation process are the characteristics of the necessary knowledge, the importance of the different characteristics for the DMU, the accessibility of the knowledge, the origin of the knowledge and the value of the knowledge for the DMU.

− **Choice**: After the evaluation of the alternatives the DMU makes a choice. The acquisition decision is based on available budget, distribution channels, etc.

− **Evaluation of results of the choice**: After the acquisition of knowledge, the DMU evaluates the choice that has been made. In this stage it is determined whether the buyer’s expectations of the knowledge have been met and whether the buyer’s needs have been satisfied.

The decision-making process regarding the purchase of products and services can also be applied to the transfer of knowledge. Also in this case a DMU has to decide that some knowledge is wanted, what knowledge has to be obtained and where it has to be obtained.

**The characteristics of the purchasing process**
The way in which the different stages of the decision-making process are actually taking place in the purchase of products, services or knowledge depends strongly on the characteristics of the buying situation. There are three different kinds of situations (Kotler and Armstrong, 1993; Brierty, Eckles and Reeder, 1998).

− **Straight rebuy**: The purchase of the desired products or knowledge can be a routine-buy or straight rebuy. In this case the DMU orders without any changes in the purchasing specifications with respect to earlier purchases. Based on the experience from the past the DMU chooses a supplier and places an order. This may be (a partially) automatic process, whereby alternative solutions seldom are evaluated. The relationships between buyers and sellers will exist as long as delivery is prompt, quality is consistent and price is reasonably competitive.

− **Modified rebuy**: The purchasing process can be characterised as a modified rebuy, when the buyer wants to change the specifications, prices, conditions or suppliers of the desired product or knowledge. The routine-buying situation is not continued, because of possible quality improvements or cost reductions can be derived from re-evaluating workable alternatives. In this case, the DMU is familiar with the buying process, but some of the characteristics of the purchase may change.

− **New task**: When the buying process consists of the purchase of products or knowledge that is completely new to the company the DMU faces a new task. In this situation the buyer must obtain the greatest variety of information to explore alter-
native solutions to the purchase problem, because of the lack of experience. The higher the costs or risk involved with the purchase, the more people are part of the DMU. In this case, the decision-making process is relatively complex.

Need recognition for new knowledge
In our study, the acquisition of knowledge is assumed to be a new task for the DMU in SMEs. In this case, the SMEs have a low recognized need and a low involvement concerning the absorption of new knowledge. In order to make companies absorb new knowledge it is important to influence the need recognition. Van Raaij and Antonides (1994) present a model of the need-recognition process of buyers. This model can also be applied to the absorption of new knowledge by companies. The need for a new product, service or for knowledge may increase when the dissatisfaction with the current situation becomes too large. This situation will occur when (based on Van Raaij and Antonides, 1994):

- **Current knowledge**: The current state of the knowledge that is used in the company is not sufficient enough (technical disfunctioning). It is possible that the functional properties of the knowledge become no longer appropriate for the intended use in the organisation. This can, for instance, lead to ineffective working processes. It is also possible that the current knowledge is still functional but outdated. Knowledge on software no longer in use isn’t effective. It needs an update.

- **New knowledge**: There is new knowledge available in a particular field or about a certain technology, which can lead to higher efficiency within the firm (economic disfunctioning). In this case the development of new knowledge can lead to the desire to obtain that knowledge. Although the current knowledge is still useful, the properties of the new knowledge are attractive enough to stimulate the need for the knowledge.

- **Goals of the firm**: The aspirations and goals from a strategic point of view are very important for judging the question if new knowledge is required to fulfil these goals or not. New knowledge could be necessary in order to meet the requirements following from strategic decisions. The strategic importance attached to innovation by the firm plays also an important role in this respect. A firm that is very innovative will be more willing and also able to obtain new knowledge then a firm that does not innovate.

3.3 Influencing the knowledge-absorption process

*Internal influences*

The decision-making process is influenced by different intra-firm elements. The decision-making process is directly influenced by individual characteristics of the people within the DMU. Every participant in the decision-making process has its own personal motives, perception and preferences. These personal factors are related to age, income, education, function, commitment to the job and the company, personality and the attitude towards risk. The effectiveness of the DMU partly depends on the persuasive power of the people in the DMU in relation with other people in the organization. Authority, status, emotional intelligence and persuasive power determine these interhuman elements. Also organizational factors may have influence on the decision-making process. The decisions have to meet the objectives, policy, procedures, structure, culture and systems of the company in which the DMU is vested.
**External influences**

Besides the internal factors also external factors may influence the decisions regarding the purchase of new knowledge. Examples of such external influences in the company environment are the current state of technology, the economic climate, the political and cultural situation and also the competitive behaviour.

**The influence from marketing**

In the theoretical framework it is assumed that insights from the marketing literature may result in elements which have a stimulating effect on the decision-making process of companies concerning the transfer and absorption of new knowledge. These marketing stimuli may influence the low recognized need for new knowledge and accordingly stimulate the transfer and absorption of new knowledge. The most common marketing stimuli can be found in the marketing mix (Kotler and Armstrong, 1993). The marketing mix represents the different variables, which a supplier can control and apply in the most optimal way in order to obtain a desired response from the target group. The basic elements of the marketing mix are product, price, place and promotion. Product stands for the content of the knowledge in combination with the services surrounding it. The price represents the amount of money or time, which is invested for obtaining the knowledge. The element ‘place’ deals with the availability and accessibility of the knowledge. Promotion includes the activities which are carried out to stress the advantages of the knowledge by the supplier or a third party in order to persuade the buyer to purchase the knowledge.

**Alternative marketing stimuli**

Regarding the transfer and absorption of new knowledge other specific marketing stimuli, besides those from common marketing, may be more interesting. Alternative insight can be derived from internal marketing, social marketing and personal marketing. Internal marketing deals with the stimulation of exchange processes within the organization. This is particularly interesting with respect to the stimulation of actual use of new knowledge by individuals within an organization. From social marketing much can be learned about the marketing of issues, which have a low recognized social need by and a low involvement within the target group. In this way, insights from social marketing may be used to stimulate the recognized need of new knowledge. An interesting element from the personal marketing point of view may be that within a company different key persons may exist, either within or outside the DMU, who are able and willing to influence the purchase of new knowledge, which is from their point of view important for the company.

**Knowledge management**

Insights from knowledge management can also be applied to influence the decision-making process regarding the purchase of new knowledge. Knowledge management deals with the structural supply of and demand for knowledge within the organization. In knowledge management the question is what knowledge is relevant for (the people in) the organization, in which form the knowledge has to be provided and how the knowledge can be disclosed and be made accessible for all relevant persons within the organization. This knowledge can be developed in the organization or obtained from external sources. The need recognition for a certain type of knowledge may result in the development of knowledge products, leading to the exploitation of internally or externally available knowledge. Important elements of the knowledge exploitation of a company are the purchase of new knowledge by the company and the absorption of that knowledge by the people within the company. The knowledge exploitation depends on
the scope and packing factors of the knowledge provided. Scope factors deal with the content of the knowledge and are related to the subject, the focus of the target group and to the structure of the knowledge. The packing factors are related to the form of the knowledge that is obtained, such as usage of language, electronic interface devices, consistence, usability and degree of interactivity. The application of these factors may stimulate the need recognition for new knowledge.

3.4 The SME dimension in the knowledge-absorption process

Some differences can be distinguished between SMEs and large firms, which may affect the absorption of knowledge. Vossen (1998) has come to several differences with respect to innovation. The following characteristics of SMEs can also be considered relevant for the absorption of new task knowledge:

− Rapid decision making
− Rapid and effective internal communication, short decision chains
− Fast reaction to changing market requirements
− High labour dynamics
− Capacity for customisation
− Capability of fast learning and adapting routines and strategy
− Appropriation of rewards for innovation through tacit knowledge.

In line with these insights, Rothwell (1995) concludes that advantages of SMEs are mainly behavioural (flexibility, dynamism and responsiveness). In addition, the most important disadvantages of SMEs (advantages of large firms) are predominantly material (economies of scale and scope, easier access to technology and knowledge, finance and other resources). The poor accessibility of knowledge institutions for SMEs has been one of the conclusions of a study carried out by Kemp and Borger (2000). With respect to knowledge it is therefore important to note that large firms seem to have the best access to technology. Knowledge should be made accessible for SMEs by offering customized knowledge and taking away as many hurdles as possible. The customized character of knowledge provision is perfectly in line with the customized manner in which SMEs operate. Customisation of output also requires customized input.

If the knowledge is accessible in a customized way, the knowledge-absorption process can best be influenced in smaller firms. Rapid decision making and short decision chains make it easier to influence the DMU, which will also be smaller in number of people. Furthermore, rewards for innovation through tacit knowledge are more popular in smaller firms. This will lead to a higher knowledge awareness amongst the employees, which forms the basis for the absorption of new knowledge.

This leads us to another characteristic of small firms following from the knowledge management literature (Beijerse, 1997). In SMEs knowledge creation and integration often take place at the same time and in random places in the organisation of an SME. Since SMEs also experience a higher dynamism in personnel than large firms, the need for knowledge assurance is high within SMEs. This means that if the knowledge is created and absorbed by a small number of employees, the risk of losing this tacit knowledge is considerable if the knowledge is not assured.

Knowledge absorption not only depends on the accessibility of external knowledge or on the extent to which innovation through tacit knowledge is rewarded. It also depends to a high extent on the organisational culture, the management style and willingness of the entrepreneur and DMU to absorb knowledge. Especially for those SMEs in which a
When looking at technological knowledge and low-involved SMEs, however, we can conclude that the 'new task' situation is relevant for our further study. We can further conclude that some specific characteristics of SMEs as opposed to large firms are relevant for the absorption of new task knowledge. These characteristics will be born in mind when defining ideas for specific actions addressed to SMEs in the final chapter of this report.
4 Stimuli from marketing and knowledge management

4.1 Introduction
Based on the theoretical framework that was introduced in the previous chapter, four propositions dealing with the stimulation of the transfer and absorption of new knowledge can be formulated. The propositions are related to insights from internal marketing, social marketing and personal marketing, and from knowledge management. In the following sections these propositions will be presented and argumented.

4.2 Stimuli from internal marketing
In contrast with external marketing that focuses on the relation and exchange processes of the consumer or distributive trade, internal marketing focuses on the exchange process and relationships within the organisation. Internal marketing is aimed at establishing and improving internal exchange processes. In this way, internal marketing can deal with exchange processes between departments, between the organisation and its current work force and between steering and implementing departments (Bekker and Haastrecht, 1993).

Strategic and tactical internal marketing
Grönroos (1983) distinguishes two levels within the internal marketing concept: the strategic level and the tactical level. At the strategic level the conditions for the implementation and execution of the concept for external marketing and the market orientation of the organisation are established (for instance planning, to make the organisation market-oriented). This is followed by a more precise filling in and fine-tuning of particular internal marketing activities at the tactical level. In other words, internal marketing can be used for developing and containing a market-oriented culture within a company. It deals with the acceptance of new ideas and plans by the members of the organisation, effective cooperation between individuals and departments by considering each other as internal client and for facilitating mutual communication. In most cases the internal marketing process has both a strategic and tactical dimension, the intensity of which may differ from each other.

The parties involved in the internal marketing process are divided in four groups, which represent four types of exchange processes (Kloosterboer, 1992):
5 The organisation and the individual employee: The goals are the recruitment of the most suitable employees and enabling the employee to contribute to the organisation’s goals as much as possible.
6 Top management and the departments: The goal is to create conditions for good management.
7 The individual departments: The goal is to achieve high efficiency and effectiveness.
8 The departments and their employees: The goal is to improve fine-tuning and cooperation within a department, and thereby coupled to improvement in effectiveness, efficiency and team spirit.

Similar to these exchange processes the internal marketing instruments can be divided in four groups as well (De Vries, Kasper en Van Helsdingen, 1994):
1 Personal management instruments
The personal management instruments go with the exchange processes between the organization and the employees. These instruments are built around three quantities: job and salary, the possibility to acquire knowledge and skills and the possibilities to make a career within the organization. The goal of these instruments is to acquire the right employees for the organization and motivating them.

2 Organizational instruments
The organizational instruments are those instruments going with the exchange processes between top management and the departments. These instruments create the boundary conditions for the company’s performance. Three instruments are concerned:
- The mission statement and the organizational goals (the base for policy and communication)
- The organizational culture (the way in which things are taken care of)
- The organizational structure (qualifying the organizational hierarchy and the consultative structure).

3 Internal market-processing instruments
The internal market-processing instruments are used to bring the department’s needs and desires into agreement.

4 Management instruments
The management instruments are mainly put on at the exchange processes between the departments and the employee, but also at exchange processes between the top management and the departments or the department’s management. Basically, it concerns communication instruments.

The connection between the exchange processes, the goals and the instruments is shown in the following table.

<table>
<thead>
<tr>
<th>Exchange process</th>
<th>Goal</th>
<th>Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization and employee</td>
<td>- Attracting the right employees</td>
<td>Motivation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Personal management instruments</td>
</tr>
<tr>
<td>Top management and department</td>
<td>- Setting up boundary conditions</td>
<td>Organizational instruments and management instruments</td>
</tr>
<tr>
<td>Inter-departments</td>
<td>- Tuning</td>
<td>Internal market-processing instruments</td>
</tr>
<tr>
<td></td>
<td>- Co-ordination</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Efficiency</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Effectiveness</td>
<td></td>
</tr>
<tr>
<td>Department and employees</td>
<td>- Tuning</td>
<td>Management instruments</td>
</tr>
<tr>
<td></td>
<td>- Co-operation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Efficiency</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Effectiveness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Team spirit</td>
<td></td>
</tr>
</tbody>
</table>


The strategic aspect of the exchange processes declines according to the represented sequence of the processes in the table while the tactical aspect inclines in this sequence.
Influencing absorptive behaviour

Internal marketing is used in order to influence the behaviour of individuals or departments in organizations; aligning staff by turning heads in the same direction. It can be used to propagate market orientation in an organization. Here, internal marketing can also serve as an instrument for stimulating the absorptive behaviour regarding new knowledge of individuals or departments in an organization. The absorption of new knowledge in an organization can be characterized as a process during which individuals or departments in an organization exchange and use new knowledge. Through the organization’s use of internal marketing individuals or departments can be stimulated to make more use of the new knowledge provided by the organization. But also new knowledge that has been acquired somewhere else can be implemented in an organization’s staff through the very same internal marketing methods. In this case the new knowledge is prepared and altered in such a way that absorption by the intra-organizational target group is stimulated.

Regarding this influence of internal marketing on the absorption of new knowledge the following proposition can be formulated:

The use of new knowledge by individuals within an organization can be stimulated through internal marketing.

4.3 Stimuli from social marketing

Social marketing is a strategy for changing behaviour. It combines the best elements of the traditional approaches to social change in an integrated planning and action framework and utilizes advances in communication technology and marketing skills (Kotler and Roberto (1989)).

The term social marketing was first introduced in 1971 to describe the use of marketing principles and techniques to advance social cause, idea, or behaviour. Since then the term has come to mean social-change management technology involving the design, implementation, and control of programmes aimed at increasing the acceptability of a social idea or practice in one or more groups of target adopters. It utilizes concepts of market segmentation, consumer research, product concept development and testing, direct communication, facilitation, incentives, and exchange theory to maximize the target adopters’ response.

Social marketing is used to improve social effects (for example, improvement of public health by campaigns against smoking) that are aimed at government and social services. The primary focus is on the consumer - on learning what people want and need rather than trying to persuade them to buy what happens to be produced.

Four elements are typical for social marketing:

1. Social goal
2. Nature of the product
3. Nature of social behaviour that the client must bring up
4. The price yield for the product by the client.

Social marketing represents an advance over traditional social-change strategies. Many of these traditional strategies employed advertising exclusively, rather than probing the needs of clients and consumers to design campaigns to fit them. Social marketing is built around the knowledge gained from business practices: the setting of measurable
objectives, research on human needs, targeting products to special groups of consumers, the technology of positioning products to fit human needs and wants and effectively communicating their benefit, the constant vigilance to changes in the environment, and the ability to adapt to change.

Social marketing is often used to create awareness in a target group in order to achieve a desired effect. This type of marketing is especially applied when there is low involvement and low recognized need in the target group, which is frequently the case with the absorption of new knowledge. Through social marketing the awareness of the need to absorb new knowledge can be stimulated. Social marketing can be used to make organizations aware of their need. SMEs have a low involvement and social marketing can anticipate on that.

Adoption
At the core of any social-marketing campaign are individuals, groups and populations who are intended to be the consumers of the campaign’s products. They are called adopters because they are the specific group whose acceptance and adoption of a social product will fulfil the objectives of the campaign. Social marketers have identified four different models of how target adopters can be moved to the final decision to adopt an idea or practice. These models are (Kotler and Roberto, 1989):

1. ‘Learn-feel-do’ adoption
   In this sequence of behaviours, adoption will not take place unless the target adopters first learn about and then develop an attitude toward the social product. This ‘learning model’ is the most widely used and researched model for influencing the behaviour of target adopters. Energy-conservation behaviour, for example, is viewed as proceeding in this way. This model gets the best results when two conditions are present: potential target adopters are highly involved in the adoption objective and they perceive clear differences between adoption and its alternative. Figure 3 links models to conditions for success.

2. ‘Do-feel-learn’ adoption
   In this process, target adopters proceed along the reverse of normal learning sequence. First, they adopt an idea or practice on a tentative basis; next, they change their attitudes as a result of a trial-adoption experience; and then, they push their attitude toward a final step of better learning. This theory has two theoretical bases: the cognitive dissonance theory and the attribution theory. According to the cognitive dissonance theory, when target adopters are in a situation of forced choice between closely similar alternatives, their choice will be followed by an improved attitude toward the practice. Thus, target adopters will gather information that is favourable to the choice they made and unfavourable to the choice they avoided. According to the attribution theory, however, target adopters behave like ‘self-perceiving’ actors. They attribute their attitude toward an idea or practice to their behaviour toward the idea or practice. Hence, if they have not adopted an idea or practice, they attribute this choice to the absence of a positive attitude. But if they have adopted it, they conclude that they must have had a positive attitude. Following the decision to adopt an idea or practice, target adopters then select information that reinforces their attitude. So again, the resulting sequence is do-feel-learn.

3. ‘Learn-do-feel’ adoption
   In the third type of process, target adopters select an idea or practice only on the basis of familiarity with it, usually from heavy repetitive media communications. They have not yet formed any attitude toward it. If they are in a situation in which they have to make a choice, they select the social product even when they have lit-
The 'do-feel-learn' adoption

2. The 'learn-feel-do' adoption process

The 'learn-do-feel' adoption

4. Not logically possible

Perceived differentiation among alternatives

Source: Kotler and Roberto, 1989.

In our study we focus on the group of SMEs having low involvement and a low perceived differentiation among the alternatives. Following from the insights of social marketing, this means that the 'learn-do-feel'-adoption process amongst these SMEs should be borne in mind for stimulating knowledge absorption. For our study, this would mean that high-involved or complex knowledge should be promoted heavily and in low-involvement terms, such as concrete benefits, cost savings or simplified cases.
Proposition

Social marketing can be used to stimulate the awareness within an organization for the need to absorb new knowledge.

4.4 Stimuli from personal marketing

Personal sale is one of the oldest marketing activities. According to Leeflang (1994) with non-personal marketing it’s possible to achieve a large group of persons concerned. However, it’s not possible to meet the need for information of every individual person or target group. With the help of personal marketing you achieve only one or at most some interested persons. On the other hand, every person can get the information desired. In this respect, personal marketing is superior to non-personal marketing but considerably more valuable per contact. Beside that, personal sales involve a high-risk perception and in most cases personal contact between the salesman and buyer. According to Floor and Van Raaij (1989) the following marks are important to make personal marketing a significant instrument:

**Limited amount of customers**

In this case the salesman knows exactly who the customers are. If, beside that, their needs are known, it’s easy to approach them with a made-to-measure product.

**Small market**

If the distance is small it’s possible to visit several customers in one day. In this way the costs per visit can strongly decline.

**High price**

If it’s about products with a high purchasing price, a company will have more financial headroom for personal sale.

**Long-lasting relationship**

Personal sale is important if the customer is entering into a long-lasting agreement. The customer will have himself informed extensively.

**Adaptation to individual needs**

Some suppliers can supply made-to-measure products. These salesmen are able to adapt to their product to the individual customer’s needs. To find out these individual needs, personal contact is necessary.

**Explanation desirable**

Some products require an extensive explanation about how to deal with the product. In this situation a personal contact between salesman and customer is indispensable.

**Negotiation necessary**

The final product price depends on the negotiations between salesman and customer.
**Strong bond with the existing supplier**

Customers may have a strong bond with the existing supplier. In this case all other marketing instruments are too weak to convince the customer. However, in this situation personal sale might actually be effective.

In these situations it may be wise to emphasize the personal sale. However, this does not mean that other marketing communication instruments don’t play any role anymore. Marketing instruments are only partly interchangeable. In most cases they are supplementary. Personal sale becomes more effective if there has been any contact with the (potential) consumer in other ways. In the mutual communication between salesman and customer it’s possible to focus immediately on questions, problems and obscurities, which are left after the one-sided, indirect communication. The effect of personal sale is largely dependant on the quality of the visit. Salesmen have to know their customers well and have to know what their problems are and what solutions are possible. Communication skills are therefore a prerequisite (Floor en Van Raaij, 1989).

**Influencing absorptive behaviour**

In a company different key persons may exist who have an interest in the absorption of a certain type of knowledge by the company and can also influence the transfer and absorption of that (new) knowledge. In order to stimulate the absorption of new knowledge by a company it is then useful to influence these key persons. Through personal marketing the key persons in an organization can be reached and influenced in such a way that they will stimulate the need recognition of new knowledge by other individuals in that organization. Hereby it is possible to stimulate the absorption of new knowledge by using an influencer within a company. Personal contact and close relationships are important elements of personal marketing in order to influence key persons within organizations.

**Proposition**

*Personal marketing can be used to influence one or more key persons in an organization in order to stimulate the knowledge absorption in that organization.*

**4.5 Stimuli from knowledge management**

There is a spread of definitions for knowledge management, such as: *it can be seen as initiating and maintaining flows of knowledge within an organization resulting in improvement of the learning capacity*, Berenschot (1995). According to Weggeman (1997) *knowledge management is managing the production factor knowledge like mechanical engineering is the building of gear that work*. Because knowledge has to be managed the following is based on the theory of Weggeman.

The goal of knowledge management is to increase the rate of this production factor. Processes in the organization that become more knowledge intensive, to make it more effective and efficient, can do this. Professionals play a large role here and will come to good performance if they have fun to attribute in the output of the organization. Knowledge management makes information accessible, retrievable and digestible.

The sub goals of knowledge management are:
- Facilitating the effectiveness and efficiency of teaching professionals and promoting the development of relevant (group) competence.
Keeping, improving and if needed renewing the knowledge to make the organization operate market intelligent. This strategic knowledge must make it possible for an organization to increase at least the average market productivity.

- The well-founding of make-or-buy decisions, decisions to participate in organization networks, etc.
- Facilitating the realization of result-oriented synergies between knowledge workers.
- The improvement of internal communication and increasing the productivity of information exchange.

According to a recent research by the Technical University Eindhoven, among Dutch multinational organizations and R&D managers, control and steering of the production factor knowledge was after technology strategy development and programme management the most important attention point which they find important for the exercise of their function. ‘Because of the dynamic staff change knowledge management increases. Besides education and forming of R&D staff, the establishment of constructed knowledge becomes important. In view of the emphasis of core competence is expected that the hiring of experts shall expand. The increasing competition makes the organization of the worldwide scouting function outside the present knowledge and information of the organization about companies and technology wanted’ (Holman, 1995).

Knowledge fields can be compared with shelf rows in a library. There are no standard procedures to subdivide the knowledge in an organization. Especially the division according to the source of the knowledge is important for an organization. The following division is a practical starting point for organizations:

- Practical knowledge (basis of a particular discipline)
- Operational knowledge (based on trade)
- Contextual knowledge (knowledge in a specific market).

Knowledge can also be obtained through:

- Outsourcing
- Purchase of patents and licenses
- Taking over and hiring of staff
- Acquisitions.

However, an organization will only absorb new knowledge when it becomes aware of the insufficiency of the current knowledge in the organization or the availability of new, better knowledge. In this case the need of recognition for new knowledge will be created. Knowledge management can be used to improve the presentation of new knowledge to an organization in such a way that the insight for the usefulness of new knowledge is stimulated. For this the scope and packaging factors of the new knowledge become important. Table 1 shows some of these scope and packaging factors with some examples.
The substantive scope defines the degree of depth and other aspects of the contents. In fact this is a selection within all available and necessary knowledge. The package concerns the form aspects. When new knowledge is presented in the right way its absorption by an organization can be stimulated. Scope and package often go together. Think about the common knowledge products: magazines, books and reports. Even if the subject is the same, the depth and the compactness might differ. The same goes for the form. For good knowledge management the user must get what he needs. This means that the scope and package need to be optimised.

The most important knowledge carrier is the human being himself, as an individual or as a group, also known as human knowledge (Boersma, 1995). Besides that, knowledge can also be transferred by material carriers, namely:

- Hardware (machines, chips): mechanized knowledge
- Software programmes (programmes, information systems, expert systems): digitized knowledge
- Documents (hieroglyphs, books, magazines, videos, CD-ROMS, etc.): documentary knowledge.

Products can also be seen as knowledge carriers. By this a lot of companies distinguish their products from those of their competitors. A combination of both human and material knowledge is used in organizations.

Much knowledge is spread and managed by documents. More and more often these are digital documents, such as the intranet. According to Been (1999) there are two extremes in knowledge management: opening up the present documents and supplying the desired knowledge products. On the external market the first approach is already far overtaken by the demand-driven approach. On the internal market, however, a long evolution process still needs to be passed through. The second approach, supplying the

---

**Table 1** Scope and packaging factors

<table>
<thead>
<tr>
<th>Scope factors</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject</td>
<td>Knowledge domains, sub-domains</td>
</tr>
<tr>
<td>Target group</td>
<td>Entire organization or specific groups</td>
</tr>
<tr>
<td>Focus</td>
<td>Substantive selection</td>
</tr>
<tr>
<td>Structure</td>
<td>Hierarchical versus organically</td>
</tr>
<tr>
<td>Brevity</td>
<td>Practically, point-by-point summary, document</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Packaging factors</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usage</td>
<td>Easily manageable, appropriate formulations, wording</td>
</tr>
<tr>
<td>Interface</td>
<td>Surveyable and visually attractive</td>
</tr>
<tr>
<td>Consistence</td>
<td>Univocal connection between knowledge products</td>
</tr>
<tr>
<td>Convenience</td>
<td>Intuitive and simple</td>
</tr>
<tr>
<td>Action orientation</td>
<td>Must suit to the user’s process</td>
</tr>
<tr>
<td>Flexible</td>
<td>Multiple ways of knowledge acquisition</td>
</tr>
<tr>
<td>Interactivity</td>
<td>Demand and answer, receiving and supplying knowledge, transaction</td>
</tr>
</tbody>
</table>

Source: EIM, based on Been, 1999.
desired knowledge products, assumes that there is insight in the need for knowledge and that, beside that, energy is put in supplying the knowledge to measure. This is a big difference with the supply-driven approach.

The two most important parties in knowledge management are the ones sending a document to the organization (the source) and the ones being in need of knowledge (the user). In the supply-driven approach (opening up all there is) it is important to record and open up all that is produced internal and all that is entering the organization. This implies that a third party is necessary. In the demand-driven approach this link is of crucial importance (intermediary). The BIG model (Source - Intermediary - User) shows in simple terms the core of the knowledge management approach.

Figure 4  BIG model

In model 1 the intermediary role is limited to the registration, managing and opening up of present documents. In model 2 tailor-made knowledge products are supplied on the base of the user’s needs. These tailor-made products are partly focused on specific target groups and partly concern generic knowledge products. This implies that the intermediary makes his own products on the base of the source’s input. This input is not waited for but specifically looked for. In this model there is a clear role for the intermediary. Model 3, the mixed form, is more realistic. The intermediary is partly the middleman and partly the supplier of tailor-made products. The intermediary role depends on the product’s importance to the organization.

The mixed form is also the most realistic form with respect to the distribution of knowledge itself. By a social-marketing push the attitude of companies towards the absorption of new knowledge can be stimulated. Knowledge itself, however, is difficult to push by suppliers (supplier-driven). As stated in chapter 2, good demand articulation is very important for an effective knowledge transfer. Helping companies with demand articulation, however, would enable a shift on the mixed balance towards more supply-driven knowledge transfer.
Proposition

Through knowledge management new knowledge can be presented in such a way that the need recognition for the knowledge by a potential user can be stimulated.

4.6 Conclusions

In this chapter, four propositions have been launched which will be tested empirically in the following chapter. It is stated that insights from internal marketing, social marketing, from personal marketing and from knowledge management will help to stimulate new knowledge absorption.

In this respect, insights from internal marketing will mainly serve for stimulating absorptive behaviour by individuals, departments within organisations. Insights from personal marketing learn to address stimuli to the key persons within the organisation. Insights from social marketing demonstrate that the ‘learn-do-feel’ adoption process amongst these SMEs should be borne in mind for stimulating knowledge absorption. For our study, this would mean that high-involved or complex knowledge should be promoted heavily and in low-involvement terms, such as concrete benefits, cost savings or simplified cases. Finally, insights from knowledge management show that a good ‘scope and package’ balance should be found between good articulation of knowledge demand and tailor-made knowledge supply.
5 Empirical findings

5.1 Introduction

In this chapter empirical material will be presented in order to support the theoretical findings from the previous chapters. The empirical material comes from four different case studies. These case studies are based on the propositions that are presented in chapter four. With each proposition a case is presented and analysed in order to illustrate the proposition. This is done by applying the case studies to the theoretical framework that forms the basis of the propositions.

Case studies as a research method

According to Yin (1994) a case study is an empirical inquiry that:
− Investigates a contemporary phenomenon within its real-life context, especially when
− The boundaries between phenomenon and context are not clearly evident.

Here, four case studies can be used when one deliberately wants to cover contextual conditions, because they might be highly pertinent to the subject of study. The consequence of context and phenomenon not always be distinguishable in real-life situations is that case studies have to meet the following conditions (Yin, 1994). Case study inquiry:
− Copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result
− Relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result
− Benefits from prior development of theoretical propositions to guide data collection and analysis.

In the design of the case studies that are presented and analysed in this section these conditions are satisfied.

Case study design

The propositions outlined in chapter 4 focus on the stimulation of knowledge absorption from the differing angles of marketing and knowledge management. The case studies that support these propositions focus on various situations entailing the stimulation of knowledge absorption in practice. For each case study, two interviews were conducted, while additional documentation was analysed.

5.2 Case study: Internal marketing

In order to support the proposition on internal marketing the following case study is used.

The stimulation of the use of (new) knowledge in a large organisation

It deals with an organization that is actively concerned with the use of (new) knowledge by the employees of that organisation. For this purpose, the organisation has a certain knowledge infrastructure and stimulates the use of that infrastructure. The purpose of
the case study is to identify the aspects of internal marketing in the organisational stimulation of knowledge absorption.

The organisation that is the subject of the case study is Unilever. Unilever is a very large company that develops, produces and sells a wide variety of consumer goods. Because of the great importance of the innovative capacity of the company, knowledge management plays an important role for Unilever.

The data collection for the case study exists of a face-to-face interview with a member of the knowledge management section of Unilever Research in Vlaardingen. Also supplementary documentation has been analysed. In the case study the following aspects are reviewed:
- Knowledge infrastructure of the organisation
- Stimulation from the organisation of the use of (new) knowledge, on the field of:
  - Management
  - Organisation structure
  - (Internal) Communication
  - Motivation of employees.

5.2.1 Introduction

Unilever Research Vlaardingen (URV) is one of Unilever's six central research laboratories\(^1\). The other five research laboratories operate in the United Kingdom (England) (2), the United States of America, China and India. In Vlaardingen, approximately 1,300 employees work on research projects for Unilever Best foods as well as Huishoudelijke en Persoonlijke Verzorging. Scientific research, focusing on supplying innovative products and processes, may be differentiated by two clusters:
- Applied research, cooperating with innovation centres worldwide
- Fundamental research, covering all food categories and textile detergents. Fundamental research is often carried out in collaboration with universities and scientific institutions.

5.2.2 Knowledge infrastructure of Unilever

Unilever maintains several large research divisions, employing a total of 4,000 R&D staff (out of a staff total of 250,000). Unilever consists of a conglomerate of small businesses dispersed throughout the world. Enterprises owned by Unilever enjoy access to Unilever’s knowledge and facilities; i.e., knowledge on products, processes, ingredients, etc., and facilities such as supply chains, marketing, R&D, access to websites and operating systems such as Lotus Notes.

Knowledge transfer is effected via training programmes; i.e., Unilever staff transfers knowledge and experience to colleagues. At Unilever, acquiring practice-oriented knowledge and experience is of crucial importance. Managers, for instance, are expected to have visited the various factories. Within Unilever, knowledge transfer is to a high degree effected via network structures, facilitating a.o. the two major core competencies of Unilever (Weggeman, 2001):
- Ability to learn from local best practices worldwide
- Ability to effect rapid implementation of new knowledge worldwide.

\(^{1}\) http://www.unilever.nl/Unilever/werkmijen/URV/body_urv.html.
Since knowledge flows are strictly organized around various product categories, it proves difficult to arrange for knowledge sharing between the various categories. Therefore, as yet, there is a low degree of synergy based on the creation of cross-links.

Within the research divisions, a transition was affected from technology push to market pull. Simultaneous development is of importance here, as staff operates in various teams and on various projects simultaneously to develop new products, processes or ingredients, thereby advancing knowledge sharing among employees.

5.2.3 Stimulation of knowledge-infrastructure utilization

Management
Within knowledge management, employees are spurred not to harbour all knowledge gained. Knowledge sharing and the utilization of new knowledge or of third-party knowledge are rewarded. Management stimulates knowledge utilization and knowledge transfer by staff on the basis of a human resources approach:

- Challenge staff to identify themselves with workplace and tasks to a larger extent, thereby enhancing worker commitment, while employees will use available and new knowledge more intensively (WHY).
- Stimulate knowledge demand and knowledge transfer by managing staff competencies, entailing social and communicative skills, entrepreneurial skills, networks, and thus enabling employees to share knowledge to a higher degree (HOW).
- Promote knowledge transfer and knowledge sharing by creating corporate awareness; i.e., who is positioned where, and what can I gain? (WHERE).

The strong quality of this person-focused approach may also entail one weakness; i.e., staff may have their own agenda, too. Owing to personal ambitions, staff may be less inclined to share knowledge, or to source and use knowledge within an organization. Personal ambitions of individual employees may occasionally differ from team ambitions. Owing to these tensions, the risk emerges that less use is made of new knowledge.

Corporate structure

- Community of practice; i.e., teams comprising workers from the same echelon/topic/product category who define their knowledge, allowing for the identification of knowledge gaps that might justify research. Based on this, a community of people is created who adopt a common language in a specific knowledge domain.
- Knowledge utilization is stimulated by setting up self-enterprising teams, allowing employees to enjoy some leeway with a specific framework. These teams are not directly addressed as to their mistakes, as the latter are regarded as learning effects.

Internal communication

Unilever adopts a soft, rather personal approach so as to advance knowledge utilization; i.e., they grant a high extent of staff communication and discussion as regards specific topics and knowledge domains, thereby also stimulating transfer of tacit knowledge.

Internal communication tools so as to advance knowledge utilization:

- Internet portal ‘food4life’: Via this site, knowledge sharing is stimulated. The site is an umbrella covering all food categories. Staff dealing with food in various ways gain access via this site to identical knowledge and hands-on information. Unilever
launched and implemented an internal marketing campaign so as to provide publicity to the site and to promote use of the site within Unilever. Besides, the campaign, Unilever does not enforce active stimulation to use the site.

- Web forum
- News bulletins, set up while focusing on a specific product category or brand.

Staff motivation
- Team awards: Once a year, five to six teams present their activities unfolded in the previous year. Via a poll, the best team is selected. The approach stimulates teamwork and knowledge sharing between and among teams.
- ‘Science is fun’ meetings: Presentations by research-division staff focusing on topics or activities.
- Awards and rewards for patents, scientific publications and sourcing of subsidies.

Employees have the attitude to generate knowledge themselves initially, instead of sourcing incumbent knowledge sources and combining knowledge already developed. Particularly in an R&D environment, staff often tend to develop and experiment themselves. Here, a higher extent of incumbent-knowledge utilization should transpire, which, however, necessitates a system facilitating knowledge within Unilever in an accessible way.

5.2.4 Conclusions

Experience gained by the case
As for Unilever, knowledge management emphasizing on a staff-focused approach proves successful to advance (new-)knowledge utilization. Therefore, the informal corporate structure is of substantial significance within Unilever. Knowledge systems are governed by that corporate structure. Internal marketing so as to advance knowledge utilization by staff should thus harbour a vital human-resources element, while it is vital to consider rewarding good behaviour, structure and ambitions.

Application to theoretical framework
So as to define the learning effects of the case study, it will have to be applied in a theoretical framework. In this way, one can define as to what degree knowledge absorption may be stimulated by internal marketing support. This is also illustrated by figure 1 (see chapter 3) outlining the theoretical framework. Figure 5 comprises the internal-marketing elements of the case study affecting the various aspects of the knowledge-absorption process.
**Individual elements**

Individual employees assume a major role as regards knowledge absorption. Individual commitment, training and knowledge level are of significance in this respect. Unilever spurs individual employees to absorb knowledge by enhancing staff commitment via focused competencies management. Owing to higher commitment at the workplace, the demand to utilize new knowledge will increase. Besides, deliberately acquiring skills as regards social contacts, knowledge sharing and entrepreneurship exert positive influence on knowledge absorption. Unilever deliberately promotes and communicates these issues.

**Interhuman elements**

Mutual relations between and relationships among the various employees in an organization affect knowledge absorption. Unilever deliberately adopts the policy of enhancing corporate awareness among staff. Particularly as regards a large global player as Unilever, it is of importance that employees know where relevant colleagues are, and what type of knowledge these colleagues command.

**Organizational influences**

Owing to its specific structure and corporate culture, Unilever exerts considerable influence on knowledge absorption by staff. Unilever adopts various internal marketing tools so as to stimulate knowledge absorption via the corporate structure. As regards major knowledge domains and topics, Unilever launches communities of practice to generate, combine and disperse knowledge throughout the organization. Besides, Unilever sets up self-enterprising teams, thereby stimulating teamwork and knowledge sharing, with a positive effect on knowledge absorption by staff. Furthermore, various tools are adopted to reward behaviour (in terms of knowledge absorption). Rewards do not exclusively pertain to financial appraisals; appreciation and recognition of successful utilization and application of new knowledge and innovative products, processes and services are rated as significant.
Need to absorb new knowledge
Promoting staff demand to absorb (new) knowledge necessitates intra-organizational communication about (declined) practicability of incumbent knowledge, new knowledge available and corporate knowledge strategy. For this purpose, various tools are adopted to communicate throughout the organization about (new) knowledge, such as the ‘food4life’ Internet portal, a web forum and various news bulletins, while also stimulating employees to communicate about the utilization or the development of new knowledge.

5.3 Case study: Social marketing

Case: A public campaign for stimulating environmental awareness by enterprises and/or consumers.

The experience gained in such a campaign with influencing the environmental awareness of businesses or individuals can be used towards the creation of awareness for the absorption of new knowledge. In this case, the evaluation of the campaign is particularly interesting. What are the different ingredients of the campaign, and which elements had effect and which didn’t?

The subject of the case study is the public Sustainable DIY Campaign (Duurzaam klussen campagne). It is aimed at influencing environmental awareness and changing the behaviour of the target group. The target group are the consumers who buy construction materials for private use, and the sellers of those materials.

The following aspects are analysed in the case study:
- The wanted outcome of the campaign
- The effects of the campaign
- The methods used and tools employed to achieve the effects as desired by the target group in the fields of:
  - Management
  - Corporate structure
  - Communication
  - Target-group motivation.

Data collection
For the case study, different interviews were conducted with:
- Representatives of Intergamma (DIY construction store)
- Teachers from the programme.

Besides, the following supplementary material was examined:
- Hoevenagel, R., and R. de Vree (1999), Het stimuleren van de aankoop van isolatiemateriaal, EIM, Zoetermeer; commissioned by Novem.
- Various brochures and information leaflets on the campaign ‘Goed bezig met duurzaam klussen’.
5.3.1 Introduction

The Sustainable DIY Programme took off in October 1998. This project entailed a collective initiative by the Vereniging van winkelketens uit de DIY sector (VWDHZ), the Ministry of VROM, Novem and Stichting Consument & Veiligheid. The objective of Sustainable DIY embraced to raise environmental awareness among consumers practising DIY. Reformulated, Sustainable DIY had the objective to exert positive influence on consumer behaviour within the framework of environmental issues. A derived sub-objective entailed influencing entrepreneurial behaviour of those acting as sales channels of DIY materials; i.e., DIY stores, in their majority. This sub-objective is underpinned by several sub-goals in the fields of standard product-range composition, staff knowledge and staff attitude as regards environmentally sustainable alternatives in DIY stores, as well as upgrading sales of several concrete environmentally sustainable products.

Part of the programme entailed a campaign focussing on the use of DIY insulation material. This campaign was divided into several partial projects, the first one being insulation DIY. The campaign was terminated with another insulation project, the reason being that the first project was not really successful, since a.o. the degree of familiarity with the campaign during the first project was not that high, and because insulation entails a task that may be relatively easily carried out by consumers. Besides, consumers directly associate this type of DIY with the environment, while insulation-based energy efficiency can be measured instantly.

5.3.2 The outcome of the campaign

Value for the target group
For consumers as the target group, the policy product proved its value in various ways. Firstly, clients acquired product-related and installation-related information; besides, clients were able to profit from special offers by multiples during the National Insulation Weeks (Nationale Isolatieweken). Owing to the written information, clients were easily able to calculate their personal economic value of insulation DIY.

Effects on the target group of the campaign
The desired campaign results are two-folded.

On the one hand, the results had to bring about a change in consumer behaviour as regards environmentally sustainable DIY. Traditionally, DIY consumers are task-oriented rather than product-oriented. Therefore, the campaign focused on both products as well as DIY tasks. The campaign focused on environmentally sustainable DIY (insulation), while using suitable products as regards environmental pollution. The assessment reveals that the objective was achieved; i.e., environment-related consumer behaviour seemed to have been affected positively. Owing to the campaign, consumers gained more environment-related awareness. This not exclusively holds for those who purchased DIY insulation materials; the assessment reveals that also non-insulating DIY consumers showed more concern for the environment. However, this does not necessarily have to be related to the insulation campaign, since DIY insulation entailed but only one part of the Sustainable DIY Campaign. Moreover, there was already a trend in society to deal more carefully with the environment.

On the other hand, the change in environmentally sustainable DIY-related behaviour and attitude of sales channels of DIY products is a desired effect, the result being that the campaign brought about that staff of multiples was better able to adequately advise clients in this field. Besides, store shelves cater more often for environmentally sus-
tainable products than before, as these products were not always sold. The problem inherent to DIY insulation products is that they are considerably large-dimensioned and relatively low-priced; therefore, floor productivity of these products is low, while turnover is high.

Besides, employees’ ability to furnish focused advice to clients improved; albeit that they did not always furnish that advice, as illustrated by the project-assessment results. Experience gained by a lecturer supports this finding; he states that notwithstanding the motivation of many employees to gain knowledge about and expertise on environmentally sustainable products, they did not have much time in practice to render application-related information to clients due to staff shortages on the work floor. Hence, they would mostly just indicate the shelf location of products.

Another (intended or unintended) effect of the campaign entails that DIY stores currently put more emphasis on the environment. At present, DIY stores maintain small or large divisions that specifically deal with sustainability and the environment. Besides, sectoral vocational training is presently being designed on behalf of the sectoral association. Part of this vocational training entails sustainable DIY. The bureau designing the training course makes use of the course material as previously designed by the De Kleine Aarde lecturers.

5.3.3 Influencing the target group

Corporate structure and corporate management
The organization consisted of the afore-mentioned parties, VROM, Novem, VWDHZ, Consument en Veiligheid, and several secondary parties such as municipalities, sustainable-construction centres (dubo-centra), environmental bodies and utility companies that participated in the campaign on a voluntary basis. Besides, one organization was approached that rendered product-related knowledge to staff of multiples.

The Netherlands government assumed a primarily steering and facilitating role in this campaign; i.e., the government employed third parties, while factually not supervising the project. It was, however, ensured that Sustainable Insulation DIY coincided with the National Insulation Weeks. Besides, the Netherlands government issued the brochures that, according to a response by Intergamma, did not prove effective at all times. Therefore, the representative of Intergamma suggests to at least have more consultations about the materials, or to assign introduction and implementation of that part of the campaign to private enterprise.

Vocational-training representatives, too, are of the opinion that the quality of part of the brochures was not up to standard, and that, if applicable again, brochure composition should be left to experts.

Both the government as well as private enterprise managed money flows on behalf of the campaign. For this purpose, the government contracted the services of Novem. Course payments were effected via Intergamma and De Kleine Aarde.

As outlined above, the insulation campaign was launched twice. The unique aspect of Sustainable DIY entailed that a public-private campaign was launched for the very first time. Teething troubles did, however, materialize. The second insulation campaign focused on the impact and learning effects of the first campaign.
Communication

The insulation campaign of Sustainable DIY embraced several specific communication tools; i.e., a promotion campaign with the maxim ‘Environmentally Sustainable DIY = Perfect Ply’ (*Wie milieubewust klust, is goed bezig*). Besides brochures, the campaign consisted of a broad radio-cum-TV support base via public and commercial channels. Throughout the entire campaign, a learning effect was gained as regards communication. In contrast to the first insulation project, the information materials (i.e., brochures and radio-cum-TV commercials) required were available for the second insulation project in due time. Another means of communication during the campaign entailed making use of several selected indicator products; i.e., products with a symbolic value as regards environmentally sustainable DIY, such as Rockwool, insulation sheets and fibre-glass wool. These products were extensively promoted in the campaign. The campaign was marked by close cooperation with several DIY multiples, whose staff was enabled to acquire more knowledge about the indicator products via attending a course.

Target-group motivation

To a considerable part, staff motivation in DIY stores should be sourced from topic-related courses, thus enabling employees to render improved advice to consumers, and to convince consumers as regards the benefits of environmentally sustainable DIY products. Total success as desired did, however, not materialize. Therefore, the De kleine Aarde organization was contracted to furnish adequate product-related knowledge to staff of multiples. These courses were held at regional level. Although the De kleine Aarde had signed the contract, it seemed initially unable to supply sufficient numbers of lecturers. Next, contacts were established with several organizations, such as the VLOK and the Organisatie van Klussenbedrijven. Owing to this, delays materialized, as well as uncertainty. Response by lecturers entailed that the set-up was chaotic. Another problem entailed staff motivation to attend courses. Several employees stated to feel that they were sent to the courses, or that they did not get the time anyway to pass on the knowledge gained to clients. Another aspect entailed that there was absolutely no guideline as to what type of staff were sent to the course. Some DIY stores sent their youngest employee, while others sent the outlet manager who was absolutely unfamiliar with DIY as such. Ranging in-between was a broad range of employees.

To boost consumer motivation to purchase environmentally sustainable DIY products, use was made of the energy-efficiency bonus measure and the National Insulation Test (*Nationale Isolatietest*). Although the energy-efficiency bonus measure did prove its value here and here, the question remains whether this measure inspired many people to change behaviour, since in more than half of the cases, insulation DIY is carried out to upgrade comfort in private homes. Most people rated the National Insulation Test as too complicated.

5.3.4 Conclusions

Experiences gained by the case

Adopting social marketing via Sustainable DIY certainly allows for influencing target-group awareness and target-group behaviour. Presumably, Sustainable DIY managed to affect consumer behaviour in a positive way. DIY multiples, too, increasingly gained environmental awareness, as illustrated by the fact that several large multiples appointed specific staff members in that field. Besides, sectoral vocational training was set up that partly bases on the course material developed during the Sustainable DIY Campaign.
Application to theoretical framework
So as to advance new-knowledge absorption behaviour via social marketing, the following case study-based elements exert influence on the knowledge-absorption process (see figure 6).

Individual elements
To support Sustainable DIY, various communication tools were adopted to gain access to and influence individual DIY-materials users, thereby influencing target-group behaviour. Here, it is of importance to gear the Sustainable DIY Campaign to the specific target group. So as to boost environmentally sustainable DIY, rather than on environmentally sustainable products as such, and given that consumers covered by the target group focus on DIY as such rather than on the supply range of DIY products, Sustainable DIY was more focused on the various DIY tasks for which consumers would be able to use environmentally sustainable DIY materials.

Organizational influences
One major organizational aspect of social marketing so as to influence target-group behaviour entails making use of the distribution channel to final users. As regards stimulating the use of environmentally sustainable DIY materials, DIY stores are direct distribution channels. By employing these channels, final users may be influenced more directly. Adopting intermediaries who are able to furnish expert advice to the target group and to convince the target group via face-to-face contact is vital in this respect. Particularly as regards knowledge-absorption stimulation, this is of importance, considering the strong personal character of knowledge transfer.

So as to enable the distribution channel to influence the target group in an adequate way, use is, e.g., made of courses facilitated to staff in DIY stores, thereby upgrading employees’ knowledge on environmentally sustainable DIY products. In this way, they are able to point out the advantages of using those products to the target group. Obviously, this method may also be applied as regards knowledge-absorption behaviour. Staff who attended such a course on, e.g., the utilization of knowledge about a novel production process will thus be able to inform other employees, and to convince them as regards the corporate benefits of new knowledge.

Need to absorb new knowledge
One major tool of the campaign to promote demand for environmentally sustainable DIY entails the facilitation of information. Rendering information on the advantages and possibilities of new, environmentally sustainable ways of DIY serves to influence consumer attitudes in respect of environmentally sustainable DIY. To a certain extent, this also holds for the stimulation of knowledge-absorption behaviour. The target group should be informed extensively about new knowledge available to boost demand for the utilization of new knowledge. Of primary importance in this respect are concrete information on savings, value added, cost, yields, user possibilities, etc. Besides, information should not be too complex, particularly as regards information rendered to target groups (as yet) marked by undeveloped demand and low commitment. Information should match incumbent knowledge and experience of the target group.

Besides, financial incentives are vital so as to influence target-group behaviour in such a way that this group factually starts to use environmentally sustainable DIY materials, or - in the case of knowledge absorption - factually starts to make use of new knowledge.
5.4 Case study: Personal marketing

Case: An intermediary organization or enterprise successful in personal marketing.

An ICT supplier who uses personal marketing to influence ICT managers in enterprises in such a way that they purchase ICT products or services and stimulate the people in the organization to use these products or services. In this case, the ICT managers are the influencers who will stimulate the use of new ICT products and services within the enterprise.

The SPSS software house was adopted for this case study. The case examines the way in which SPSS attempt to promote procurement and utilization of SPSS products and SPSS services by clients via personal marketing.

The case study is based on the following variables:
- Use of personal marketing
- Methods and tools employed by the client influencer to achieve the desired effects in the fields of:
  - Management
  - Corporate structure
  - Communication
  - Staff motivation in the client business.

To serve case-related data collection, face-to-face interviews were conducted with:
- An account manager of SPSS
- A liaison (the ICT manager) within a client business.

Besides, the case study involved examination of alternative documentation.
5.4.1 Introduction
SPSS maintain five business units; four of them operate in the Netherlands. The unit SPSS MR focuses on the market-research sector, and develops and sells software to call centres, for web research, etc.

5.4.2 The use of personal marketing by SPSS

First contact
The marketing of SPSS MR is based on personal relationships with clients. Firstly, the account managers of SPSS MR attempt to establish a relationship with a person within a potential client business. Next, the account manager attempts to establish contacts with more people in the organization via the ‘first-contact’ person. These few people serve as the driving force for SPSS in the client business. The one or two persons who form the driving force are the advocates for SPSS; they are going to promote SPSS and its products and services in the client business. These influencers are very important for the account manager of SPSS.

Building a relationship
Influencers are termed ‘sponsors’ by SPSS. By constantly rendering feedback to sponsors in the fields of knowledge on and information material about SPSS products and SPSS services, sponsors will be spurred to promote SPSS within their organizations. This entails information material and knowledge on SPSS products and SPSS services of relevance to clients. Besides, use is made of seminars and regular face-to-face contact, as well as service-cum-demo material. It is vital for SPSS that customer-related feasibility and applicability of SPSS products and SPSS services are examined so as to convince sponsors and other relevant persons in the client business (management, for instance) in terms of the quality of SPSS products and SPSS services. For that purpose, an SPSS team will consult several persons in the client business. Therefore, SPSS would like to be involved if clients carry out a feasibility study.

Customer relations are intensified via the sponsor while establishing contacts with various horizontal as well as vertical echelons of the client business.

Depending on influencer
Several risks may emerge as regards dependence on the personal relationship with an influencer to promote SPSS products within her/his own organization; viz.:

− The influencer does not want to open up the organization to the SPSS account manager. De influencer wants to maintain contacts with SPSS himself by remaining the sole intermediary, particularly if the influencer in the client business gains status due to that role. SPSS thus face the risk that they cannot really establish good relations with other persons in the client business and are hampered as regards establishing a foothold in that organization. Owing to this, SPSS cannot influence the client business in the way originally envisaged.

− Contrary to reality, the influencer is of the opinion that s/he holds decision-making power. This may hamper procurement of SPSS products since persons who factually hold decision-making power cannot be influenced in an adequate way.

− The personal element of the relationship. Customer relations consist of the relationship between an SPSS account manager and a person in the client business. If one of these persons loses that role, the entire relationship with the client may fade. SPSS want to avoid this by maintaining relations with different persons at various levels of the client business.
The trust-related aspect of the relationship. Relations with the influencer are based on trust. If that trust is violated, relations with the influencer might be damaged, as will relations with the client. The influencer promotes SPSS within the client business. Since the influencer advocates SPSS products and SPSS services, the influencer sticks out his neck. If SPSS commit mistakes, or fail to comply with specific arrangements and pledges, credibility of the influencer with the client business may be affected. The risk of damaging customer relations emerges.

**Selling a product**

So as to contract concrete orders, another step will often have to be made. Mere contacts with the sponsor do not suffice here, particularly not if that sponsor does not hold the decision-making power required. Contacts with several persons in the client business are required so as to acquire concrete orders. Decision-makers are important actors in this respect. Besides, several persons of SPSS will be involved in these contacts. Upon purchasing an SPSS product, SPSS will launch an implementation-coaching team comprising:

- An account manager who supervises the implementation route
- A technical specialist who is in charge of the technical aspects of the implementation route
- An implementation manager, or training manager, who is in charge of the operational side of implementation, and will arrange for training, demonstrations, etc.

This team may also be active during the pre-sail phase.

**5.4.3 Personal marketing tools**

*Establishing initial contacts*

Maintaining personal relations with clients is one issue; it proves much more difficult to establish customer relations. SPSS attempt not to establish initial contacts with clients by means of such non-focused marketing tools as direct mailings, unsolicited acquisition, etc. Via connections, account managers attempt to establish initial contacts with a sponsor working for the client business. The reputation of SPSS serves to pull strings here, since SPSS traditionally have a reputation in the field of data-analysis software, while SPSS packages often serve as the standard software. Owing to this image aspect, sponsors themselves often initiate contacts with SPSS. Often, these initial client contacts are initiated by users within the client business, as they are familiar with SPSS’s reputation. Besides, the reputation of SPSS in the field of statistics-software packages serves easy expansion of client relations with SPSS data-collection software. Furthermore, partner businesses serve as connections. These partner businesses entail prominent ICT consultancy bureaus whose SPSS software is suitable for the entire ICT of client businesses. Besides, account managers frequent relevant international congresses so as to establish contacts. SPSS also present themselves at and invite (potential) clients to attend congresses and trade fairs.

*Maintaining the relationship*

Several tools are employed so as to maintain relations with the sponsor and other persons in the client business; viz.:

- Granting rewards to regular clients: PR gifts, arranging events (e.g., golf lessons), additional discount and add-ons
- Bi-annual arrangement of large user meeting while inviting regular clients
- Account managers arrange quarterly technical update meetings (TUMs) at clients’ businesses, during which meetings the sponsor and any other relations in the client
business are informed about new SPSS developments in more detail, as well as the possibilities thereof for the customer. Based on reply cards, sponsors themselves are able to indicate what type of information they need.

- Regular feedback to the sponsor in the client business as regards potentially useful information and material.

Owing to the approach adopted by SPSS, its products are often strongly integrated into the client business. This holds in particular when product users are satisfied with SPSS. Clients are, therefore, not likely to switch to other suppliers. The type of product is of major importance in this respect. Owing to product complexity, more intensive coaching by suppliers is often desired, while clients benefit from regular suppliers.

Management
The influencer does not necessarily have to assume the role of decision-maker as well. If there are more concrete sales routes, the relevant managers will always be involved. Contact with management is always established via the influencer, while direct contact with management is established as regards sales routes. In the pre-sail phase, the influencer will receive feedback on and support for activities to promote SPSS products with management.

Corporate structure
Often, the influencer is part of or the manager of the ICT division. In the sales-cum-implementation route, contacts are maintained with various persons throughout the client business, both at horizontal and vertical level. This would entail persons working in various divisions, persons engaged on the work floor and those at management level.

The type of client business is of importance as regards the personal-marketing approach. Making use of influencers in client businesses differs in differing organization types. Influencers in more complex organizations, such as government bodies, will have to be approached differently. Such organizations maintain longer and more complex decision-making lines. To a higher degree, they make use of reports and external advice. This should be considered when establishing relations with an influencer in such an organization. Since decision-making takes longer here, less intensive contacts with the influencer are required. An influencer working in a less complex organization with more informal and shorter communication lines is able to exert more direct influence on decision-making. The latter will often be effected more rapidly, thereby enabling more intensive contacts with the influencer.

(Internal) communication
Communication with the influencer is effected on a regular basis. During time-spans marked by non-concrete sales routes, contacts will be less intensive. The account manager will spur the influencer to communicate about SPSS products within the client business. For this purpose, and where required, account managers will also communicate directly with various persons in the client business. This might, e.g., entail the preparation of a presentation or demonstration to the management team or user team.

Staff motivation
The influencer is pushed to promote SPSS products among staff. Where desired, also the account manager may assume a role here in the framework of technical update meetings, for instance. By means of various marketing tools, the influencer is kept at the SPSS forefront.
Tendering the product
As part of the relationship with the influencer, information about the SPSS product range is rendered. TUMs are arranged with that objective in mind, too. The influencer is assisted by the SPSS account manager to ensure that the remainder staff in the organization learn about the SPSS product range.

5.4.4 Conclusions

Personal marketing to boost knowledge absorption
Various elements of personal marketing presented in the case study may be integrated into the theoretical framework to advance knowledge absorption. As also illustrated by figure 7, the following elements may be adopted so as to stimulate new-knowledge utilization.

Individual elements
As for boosting sponsor commitment in the client business as regards new products or new knowledge, it is of importance that this sponsor receives regular feedback. SPSS deliberately employs a sponsor in a client business so as to stimulate demand for SPSS products in that organization. SPSS account managers adopt various tools so as to enhance sponsor commitment.

If SPSS already maintain relations with a client and want to supply new products, it is vital to create a support base within the potential target group, which may consist of other persons than those with whom SPSS already maintain relations. For this purpose, the relationships with the influencer will have to be made use of. Here, it is also vital that SPSS continue to grant process support during additional new-product implementation.

Interhuman elements
Maintaining personal relationships with persons within a client business ensures a high degree of sustainable customer relations. Besides, the supplier of new knowledge is able to anticipate customer demand and customer needs in a better way. After all, owing to the close relations with the client, the supplier does get to know that client fairly well. Particularly in view of the personal character of knowledge transfer, close relations with persons working in the client business are of importance.

The difficulty in respect of the personal-marketing approach entails gaining access to clients; once there is a relationship, the approach works fairly well.

Organizational influences
So as to influence procurement and utilization of new knowledge in an organization via personal marketing, it is of importance to focus on suitable persons and/or divisions in that organization. Personal marketing does not only include building relations with a sponsor. It is vital to cooperate (via the sponsor) at several levels with persons at various (horizontal and vertical) levels of the client business, while definitely involving relevant decision-makers, too.

Need to absorb new knowledge
Influencing sponsor attitudes in a client business as regards utilization of new products or services requires regular facilitation of information by suppliers. Rendering information may easily be reinforced in view of the supplier-sponsor relationship. Besides, via the sponsor, more information over new products and services can be dispersed throughout the client business. SPSS arrange regular ‘Technical Update Meetings’
(TUMs) with individual clients, thereby keeping relevant persons in a client business up-to-date on new SPSS products.

So as to advance knowledge-absorption behaviour, the above types of personal marketing tools may be applied, too.

Besides, rewarding good behaviour entails a major personal-marketing tool. SPSS rewards regular clients by, e.g., granting discount for new products, by rendering additional service and by invitations to congresses and trade fairs, thereby reinforcing client relations as well as rewarding procurement behaviour of clients.

Lastly, upon introducing novel technology or new products, it is of utmost importance that clients gain direct insight into product-related solutions/upgrading. For clients, it is important that SPSS renders a solution, rather than hardware. By this, clients gain an improved insight into the potentialities of new products. The same holds for tendering new knowledge; i.e., the advantages should be clearly surveyable to users, since they would be unable to absorb new knowledge.

Figure 7 Stimulating knowledge absorption through personal marketing

5.5 Case study: Knowledge management

Case: A business that uses knowledge management in order to present new knowledge in such a way that it can influence the absorption of the knowledge.

In this case, knowledge-management tools such as an external community or a web community are used to present new knowledge to the members of that community. The objective of the case is to evaluate these aspects or tools of knowledge management that are used by the keeper of the community to improve knowledge transfer to the organizations that are part of the community.

The subject for this case study was the KIWA research organization, which had recently implemented a new knowledge-management tool so as to stimulate utilization and sharing of incumbent and new knowledge by staff and also by relevant external parties. The tool consists of an intra- and extra-organizational virtual community.

The case study is based on the following variables:
- Use of knowledge management
- Stimulation of the use of new knowledge via the knowledge-management system in the fields of:
  - Management
  - Corporate structure
  - Communication/presentation
  - User motivation.

For the data collection of the case study, face-to-face interviews were conducted with:
- A KIWA researcher who uses the virtual community
- A KIWA manager who is involved with the implementation of the virtual community and the stimulation of the use of the community.

Besides the interviews, supplementary documentation was analyzed for the case study.

5.5.1 Introduction

Established in 1948 by Dutch water-utility companies and their outlets VEWIN and VWN, KIWA have since expanded to an enterprise with more than 400 employees and maintaining outlets in the Netherlands, Belgium, Germany and Italy. KIWA’s core business comprises the divisions of Certificatie en Keuring, Onderzoek en Advies and Management Consultants. Although all divisions cooperate in many projects, they will depart from their specialist line of approach (Gransjean, KM, 2001).

5.5.2 The use of knowledge management

Owing to the knowledge-intensive nature of KIWA’s activities, knowledge management assumes a prominent role in the organization. Optimum utilization of incumbent, new-knowledge absorption and knowledge sharing by staff are of crucial importance for KIWA so as to be able to serve clients as adequately as possible. The key concept as regards KIWA’s operational knowledge management entails the knowledge cycle (KIWA, 2001), as illustrated in figure 8. The first step entails determining knowledge demand based on the collective corporate ambition and corporate strategy. Next, research will be carried out to generate the knowledge required. For this purpose, KIWA themselves create new knowledge or absorb incumbent knowledge of other think-tanks, thereby making that knowledge accessible for their own organization. The findings of research will be shared throughout and implemented within the organization. Besides of reports, increasing use is made of such tools as management summaries, workshops, courses and training. Next, the knowledge gained will be adopted in KIWA’s corporate environment (knowledge utilization), while periodically testing whether knowledge development produced the results desired, and whether the results sufficiently match corporate targets. This knowledge cycle is being exercised on a regular basis. One major prerequisite to ensure smooth knowledge-cycle flow entails the inclination of staff to share knowledge with colleagues, as well as their willingness to learn from that cycle. In this context, knowledge should not be regarded as the basis of personal power of employees (KIWA, 2001).
KIWA employ various tools to pass the knowledge cycle. Major tools to create and absorb knowledge and to implement steps 3 and 4 (as outlined in figure 8) entail KIWA’s intranet and KIWA’s extranet. The intranet, Kiwaweb, serves to disperse the entirety of knowledge within KIWA (Gransjean, KM, 2001). The extranet, Watnet, was set up as a portal serving external users in client businesses; water-utility companies, in their majority. Via Watnet, external parties may source information and keep informed about the latest state of (currently conducted) studies and projects. This primarily entails technical information of relevance for experts with external-party organizations. To an increasing degree, also managers in client organizations make use of Watnet. This information is made accessible via Kiwaweb. For this purpose, an expert editorial office was set up that determines which part of knowledge and information contained on Kiwaweb will be made accessible for external use via Watnet. The latter is an isolated part of Kiwaweb. Clients have access to that part of the web only. The intranet comprises that part of knowledge and information exclusively designed for KIWA staff. All KIWA employees involved in any specific research project may record and share relevant knowledge and information via Kiwaweb. Information of relevance to external partners or clients involved will be passed on to the Watnet.

5.5.3 Advancing new-knowledge utilization

Management
KIWA’s management are explicitly advocating the use of both intranet and extranet. For this purpose, a stimulation programme was set up with the aim to inform staff and clients about the advantages and potentialities of the net.

Corporate structure
No fundamental changes to the corporate structure were enforced so as to advance use of the net, as KIWA already maintained an ICT infrastructure.

Via Kiwaweb, staff may set up and maintain project-related digital specific-topic dossiers, thereby recording the entirety of knowledge on specific topics or projects in dossiers accessible to staff involved. This avoids maintenance of individual dossiers by every employee, while knowledge will not be segmented. For each digital dossier, a content
manager is appointed who may modify the content of that dossier. This approach ensures that Kiwanet contains all relevant knowledge processed, thereby advancing use of the net, as well as utilization of the knowledge contained therein.

One major method to ensure that employees utilize the knowledge contained on the net, is to ensure that staff cannot circumvent the net. Net and knowledge contained therein are integrated into operational processes and daily business management. By placing knowledge and information required by staff on a daily basis on the intranet, use thereof as well as utilization of information contained therein are advanced. Besides, in this way, knowledge is placed on the intranet that would otherwise be unavailable to staff, such as minutes of visits by management to client businesses.

**Communication/Presentation**

− **News of relevance** to staff or clients is rendered via the intranet or via the extranet, thereby enhancing commitment among web communities.

− **The presentation of knowledge and information** via both the intranet and the extranet is of a practical nature. There is little focus on the presentation of knowledge and on the lay-out of web communities; i.e., knowledge is presented on the basis of content. The location of knowledge on the net is less relevant.

− **The content of knowledge accessible via the net** will be administrated by content managers, who promote the supply of knowledge by staff via the net. New knowledge may be placed on the net by content managers only, thereby avoiding that the net turns into a reservoir of knowledge and information that will be unsurveyable to users. Via content managers, staff may, however, rapidly access (new) knowledge contained on the net.

− **As for the communities**, no target-group segmentation is adopted aside from that by internal and external users. Knowledge is uniformly approached and presented via the intranet. As for the extranet, explicit target-group segmentation is adopted. To external parties, access is granted to a specific part of the net only. Originally sourced from the intranet, knowledge accessible via the extranet is not adapted according to the various target groups.

**User motivation**

− One major application to advance system utilization by staff entails the possibility granted to users to subscribe to any changes effected in the realms of specific knowledge or information. By this, users are kept informed whenever there is any new knowledge or information available in one of the previously defined topics or items located on the community board. Users will be informed by an e-mail comprising a hyperlink to that specific knowledge or information item. By click-activating the hyperlink, users will automatically be guided to new knowledge contained in the intranet or the extranet. Users may subscribe to the various fora according to their personal preferences.

− **Via a powerful and effective search engine**, users may rapidly and easily trace required knowledge and information.

− Staff may process the same reports via intranet, thereby ensuring that the net comprises the most up-to-date knowledge at all times.

5.5.4 **Conclusions**

*Value added of KiWA’s knowledge-management tool*

By adopting various knowledge-management methodologies, KiWA is able to render (new) knowledge in such a way that staff and external parties may make more and bet-
ter use of that knowledge. One major tool in this respect entails the set-up of an intranet and an extranet. So as to be able to advance new-knowledge utilization, it is vital to ensure tool-related value added as well as the transparency thereof for users. Value added of both KIWA’s intranet and KIWA’s extranet entails the following:

− The system caters for the possibility that staff increasingly make use of shared knowledge.
− Knowledge previously unavailable to staff may be rendered via the system.
− Information may be more rapidly accessible, e.g. via the search engine.
− The system caters for the possibility to render custom-made knowledge and information.
− For KIWA staff, there is a higher degree of availability of relevant information on the internal organization, the external environment and clients.
− Knowledge is located at one site and available in one version only.

Application to theoretical framework
By integrating the findings of the case study into the theoretical framework delineated in chapter 3, various elements of KIWA’s knowledge-management tools emerge that might advance knowledge absorption. As illustrated by figure 9, these elements affect various knowledge-absorption process factors.

Individual elements
In the framework of knowledge management, KIWA adopt various tools to stimulate individual employees in terms of (new-)knowledge absorption. KIWA’s intranet is marked by a subscription structure, offering users the possibility to effect personal options, thereby ensuring that users only source that type of new knowledge they want to make use of. The likelihood that new knowledge will hence factually be used thus increases. Besides, the intranet does not contain any knowledge and information demanding high maintenance. If it is too time-consuming for staff to maintain updates of specific knowledge via the net, maintenance thereof will not be effected adequately, resulting in declining utilization of the net by staff and/or clients, and, besides, a lower degree of utilizing (new) knowledge on the intranet.

Interhuman elements
One strong element of KIWA’s knowledge-management approach entails that the mere utilization of an ICT system does not suffice in terms of adequate knowledge transfer. Face-to-face contact will remain to be of major significance here as regards advancing knowledge utilization by and knowledge sharing among employees and/or between staff and external parties. An ICT system cannot assume a substitute role in terms of face-to-face contact, as the system is supplementary and may in fact promote knowledge transfer via face-to-face contact.

Organizational influences
KIWA’s integrating knowledge-management tools as far as possible into the corporate structure and the corporate culture ensures advancing utilization of such tools as intranet. In this way, the stimulation of knowledge absorption is effected from within the organization. One major method to boost intranet utilization by staff entails to match the intranet to the highest degree possible to operational processes within the organization. In the KIWA organization, knowledge and information required by staff to carry out daily activities are placed on the intranet. Besides, documentation of research projects is exclusively effected via digital intranet dossiers.
So as to advance knowledge absorption by the organization as such, KIWA designed the generation, the transfer and the utilization of (new) knowledge as a structural corporate process. By using a knowledge cycle (see figure 8), staff are constantly involved in knowledge absorption by the organization.

One major prerequisite for KIWA as regards making use of the intranet and the extranet entails that the above are merely parts of KIWA’s entire knowledge-management methodology. As regards knowledge transfer to clients and staff, KIWA deliberately adopt a multi-channel approach. KIWA transfer knowledge on, e.g., IT research to staff and external parties via various channels, such as:
- Business-oriented workshops
- Knowledge-implementation plans
- Training sessions
- Personal customer relations.

**Need to absorb new knowledge**

So as to stimulate staff demand for intranet utilization, presentation of incumbent and new knowledge via KIWA’s intranet are of significance. Entirely new knowledge aside, incumbent knowledge is offered via the intranet while being presented in a new way. This entails knowledge already made use of by staff or clients to a high degree, which knowledge is presented in a new, accessible way. New knowledge dispersed via the net will thus always be part of KIWA’s incumbent knowledge structure. User commitment in respect of new knowledge will thus be higher, while maintenance cost (in terms of time consumed and capacity required) will be relatively low.

Users should be able to rapidly access knowledge and information required. For this purpose, besides its efficiency, the system will have to remain user-friendly and accessible. A surveyable home menu is indispensable in this respect. Besides, KIWA make use of content managers for the intranet. For various topics, these employees administrate content and presentation of knowledge and information via the intranet, thereby advancing sourcing and utilization of new knowledge.
Figure 9  Stimulating knowledge absorption through knowledge management

6 Some ideas for actions

6.1 Introduction

Based on the outcome of the desk research and the empirical findings, some ideas for actions will be described in this chapter for stimulating the need for knowledge absorption by low-involved SMEs. The description of the possible actions will be structured around the framework in figure 10, which is part of the theoretical framework as presented in chapter 3. The framework in figure 10 is developed to explain which stimuli from marketing and knowledge management can be applied to stimulate the need amongst the low-involved SMEs to absorb new knowledge. The ideas presented may form the basis for a more effective knowledge transfer to the low-involved SMEs. Where relevant, they focus on those aspects, which are typical for SMEs. The possible actions can be applied to several types of knowledge. The accent, however, will be on the absorption of new task-technological knowledge (see the typification by Jacobs (1999, p. 45) and section 2 of this report). This knowledge may - when successfully applied in the organization - improve the competitiveness of the companies either by a more efficient production process or by product development. Here lies the prime interest of policy makers, and this type of knowledge forms the basis for a higher innovativeness of the low-involved SMEs.

Figure 10 General framework for the formulation of ideas to come to a more effective knowledge transfer to SMEs


Combination of two approaches

In order to influence the need to absorb new knowledge two approaches can be followed. The first one is focused on the recognition of the need to absorb new knowledge. This is demonstrated by the upper part of the framework. For this, it is important for the companies to become aware of the current knowledge available in the company, the new knowledge available in its external environment, and of the own goals and objectives of the company. Often, these goals are not explicitly written down in a low-involved SME mission or strategy. In addition, the knowledge available in the or-
ganisation - either explicit or tacit - is often not known by low-involved SMEs. Making such companies aware of the available knowledge and forcing them to develop and formulate mission and strategies, they are better able to judge whether new knowledge, which is made accessible for them, is needed. Apart from a better judgement, the companies will also be better able to articulate their knowledge needs and demand once they have inventoried their current knowledge within the organisation and have formulated a mission and strategic objectives.

The second way to influence the recognition of the need for knowledge absorption is structured around the elements of the decision-making process with respect to the absorption of new knowledge. These elements are demonstrated in the theoretical framework in figure 1 and also in figure 10. For the formulation of ideas for actions, however, the various steps of the decision-making process are used in a reverse order. Each step following the first step (need recognition) is used to formulate stimuli, which may be applied to stimulate the need recognition. Applying a reversed order of the decision-making process to formulate these stimuli may lead to new ideas and insights. In the second approach each element of the process will be related to the first step of the decision-making process.

6.2 First approach: Stimulating judgement

The recognition of the need for new knowledge is very difficult as long as the members of the DMU are not aware of the current level of knowledge available in their organisation. This is the case when explicit information and knowledge are not stored and structured well enough and when tacit knowledge remains in the heads of the people involved. The first step in knowledge management is to make the available knowledge visible as is also demonstrated in the KIWA-case. This is a necessary step to enable the DMU to judge whether new knowledge is needed or not. A second step is to enable the DMU to articulate the demands for new knowledge. In order to do so, however, the purpose of new knowledge absorption should be clear. Is new knowledge necessary to

Principles from knowledge and strategic management form the basis for a sound judgement about the need to absorb new knowledge.

Figure 11 Stimulating judgement and articulation of demands

fulfil the company’s mission and strategic objectives? Those company goals should also be clear before a good and sound judgement can be made with respect to the absorption of new knowledge. In addition, a company should also possess information about or have easy access to new knowledge. It can be concluded that the principles from knowledge management and a strategic focus form the basis for a sound judgement about knowledge absorption and the ability to articulate knowledge demands.

*Actions should focus on providing solutions for problems and bottlenecks of low-involved SMEs*

Low-involved SMEs can also be expected to be low involved with respect to adopting the principles of knowledge and strategic management. It is therefore rather difficult to persuade them by pointing at the importance of knowledge and strategic management. A better way is to lay emphasis on their problems and bottlenecks in this respect.

Within SMEs, the creation and integration of knowledge often take place at the same time at random places in the organisation. SMEs are often confronted with high labour dynamics and high levels of tacit knowledge. Many process innovations take place at the work floor. The high labour dynamics are often responsible for the loss of a stable knowledge base that leads to new ideas. It is very hard to build up a strong knowledge base and a potential for new idea development when constantly new personnel need to be trained on-the-job from scratch. The assurance of knowledge is therefore very important in SMEs, since this will result in a stable knowledge base. Knowledge assurance also leads to a higher awareness of the current knowledge level. Knowledge assurance can be realised by digitising tacit knowledge, for example, about the working of certain production equipment. It can also be partly realised by installing content managers who are responsible for making tacit machinery knowledge explicit. These measures can also be seen in the KIWA-case and are some basic steps for the introduction of knowledge management. When communicating to low-involved SMEs it is not so much about selling advantages of knowledge management or strategic marketing, but essentially about providing solutions for their problems and bottlenecks. This is why it is extremely difficult for the Dutch innovation network Syntens to stimulate low-involved SMEs to formulate their company mission and strategic objectives. The Syntens advisors and also commercial banks, which provide loans to SMEs, are perhaps the only people able to convince the entrepreneurs of doing so. Syntens advisors may point at successful other SMEs with a strategic focus and other unsuccessful SMEs without such a focus, thereby stimulating strategic thinking. Commercial banks may be more demanding in this respect when requests for new loans are judged.

*Intranet can stimulate knowledge assurance and awareness*

Knowledge assurance may also be stimulated by ICT developments. To a growing extent also low-involved SMEs are automated and have access to the Internet. A widespread use of electronic communicating between and within low-involved SMEs make them ready for a following step towards knowledge assurance and awareness: intranet. Electronic communicating and intranet may not only lead to a better assurance of knowledge but also makes the knowledge available and accessible for more employees. This will result in a higher transparency of the current knowledge available and a higher knowledge awareness in the entire organisation. Intranet can be stimulated by two ways in the Netherlands. It can be one of the next steps in the national campaign ‘Nederland gaat digitaal’. Until now, the focus in the national campaign is especially on the use of Internet and on e-commerce for more developed companies. For low-involved SMEs internal communication and digital structuring and sharing of information may be the best next step after Internet access and networking facilities. For them it is more
important to become first aware of current knowledge available instead of surfing on the Internet and searching for new knowledge without being aware of the fact which knowledge is already available and which knowledge is needed to reach the goals of the company. A national campaign laying emphasis on knowledge assurance and awareness and stimulating electronic communicating and intranet in this respect would be an effective instrument to come to higher knowledge assurance and awareness. Such a campaign could be supported by a programme run by Syntens with the objective to stimulate intranet penetration and to help companies with the implementation of intranet. Therefore, Syntens could apply principles from personal marketing by directly approaching managers within the companies who are responsible for ICT as has been described in the SPSS case.

6.3 Second approach: Reversing the steps of the decision-making process

6.3.1 Linking information with the need to absorb new knowledge

Figure 12 Linking information and the need to absorb new knowledge

Tailor-made supply of new knowledge
SMEs are better than large firms capable of providing tailor-made solutions to their customers. SMEs, in turn, also want to be approached with tailor-made products, services and also with knowledge. This is caused by the fact that time and money are always considered bottlenecks by SMEs. Especially for low-involved SMEs search costs need to be as low as possible. In general, also quick and effective internal communication is a strong point of SMEs. The enormous overload of information, however, requires a good structuring of such information. Otherwise, the search costs for useful information and new knowledge will be too high. As a result, knowledge needs to be delivered in a well-structured and recognizable manner thereby offering customized knowledge and taking away as many hurdles as possible. The customized character of knowledge provision is perfectly in line with the customized manner in which SMEs operate. Customisation of output also requires customized input. A tailor-made approach implies that the knowledge is made accessible by taking account of some company characteristics such
as activities, size classes, etc. and characteristics of the function of the relevant employee. Most important, however, is to design a structure in new knowledge, which reflects specific knowledge demands of SMEs. In this respect, much can be learned from already articulated demands, which can be applied for designing a tailor-made and recognizable search structure for their low-involved colleagues.

**Internet as most important external distribution channel of knowledge**

It is not only a matter of tailor-made knowledge. The knowledge should also be accessible for all relevant people involved. Internet is the right medium for offering well-structured information and knowledge in an easy, accessible manner, for instance, free news services. The news services of KIWA are a good example of knowledge management. In this context also the development of virtual knowledge communities for specific target groups can be mentioned. Also low-involved companies or employees may be interested in such communities as long as they are easily able to recognize problems or areas they are dealing with. By using these web communities knowledge can be offered about relevant developments, an overview of literature, a question box and a discussion platform. Trade organisations are best able to design a good and easily accessible knowledge search structure based on well-articulated knowledge demands amongst their members. By offering tailor-made search structures, trade organisations can increase their added value for existing and potential members. These organisations are therefore best equipped and motivated to approach low-involved SMEs and encourage them to use the search structure and participate in one or more web communities.

**Intranet as most important internal distribution channel of new knowledge**

Despite activities of trade organisations or providers of news services, there is a certain risk that information does not reach the right persons in an organisation. Intranet could help to solve this problem. As indicated in section 6.1 the personal approach of SPSS can be applied. Intranet is an important scope factor with respect to the successful implementation of knowledge management. The use of intranet, however, will also have to be stimulated. This could be done by rewarding employees who are willing to share knowledge as has been done by Unilever. Employees can also be rewarded for participating in digital web communities. The use of intranet, however, can also be stimulated by making the relevant content easily accessible for the right persons. Well-articulated demands of employees also form the basis for a good and easily accessible structure of intranet.
6.3.2 Pointing at alternatives

Figure 13 Pointing at alternatives

Emphasizing benefits of learning
The link between the selection of alternatives and the need to absorb new knowledge is more difficult to describe. The central issue here is to point out low-involved SMEs at different scenarios, which will follow from the willingness to absorb or not absorb new knowledge or more generally formulated; to learn or not to learn. It is not a question of structuring information, but more a question how to make low-involved SMEs aware of the benefits of learning. Insights from social marketing may be applied to point out to low-involved SMEs the difference between a high-speed skater on a pair of very advanced skates and a skater with a pair of old-fashioned skates. For instance, by a national TV and/or radio campaign based on social marketing. In this way, high-involved or complex knowledge is promoted in low-involvement terms. Also experiences from the case ‘sustainable DIY activities’ can be used to make low-involved SMEs more aware of the benefits of learning. The use of distribution channels, which has been done in this case, however, is more difficult when it comes to commerce. In fact, innovative activities of low-involved SMEs are often pushed by other players in the value chain such as suppliers or clients. Through their push, ‘jobbers’ are stimulated to work with new materials or to invest in ICT applications. This is a process that should take place in the market. Clients cannot be used by external parties as a distribution channel for pushing innovative behaviour of their suppliers. However, there is a role for trade and intermediary organisations and governmental bodies to stimulate co-operation in the value chain, for instance for the development of new materials. In this way, early adopters of new technology or knowledge can stimulate laggards. The alternative scenario of not participating in such programmes is a drop-out in the long run.

Gap analysis to turn the clock forward
Perhaps in a reversed way, the distribution channel strategy can be used in a national campaign addressed to employees. When employees are pointed at the two alternative scenarios and become more aware of the benefits of learning, the DMU could be influenced within the own organisation. In this respect, it could be interesting to see the differences in innovation speed employees and the DMU wish or expect to develop. The
existence and description of gaps in the expectations of both parties will certainly lead to a higher awareness amongst all parties. Gaps are intended to be closed but mostly not by turning back the clock, but forward instead. Therefore, it could be interesting to make such gaps more visible and tangible. This can be done by measuring the innovativeness of the company according to the DMU and according to its employees, to measure and describe the gaps, and confront the DMU with these gaps.

6.3.3 **Linking choice criteria with the need to absorb new knowledge**

**Figure 14 Linking choice criteria to the need to absorb new knowledge**

Knowledge about choice criteria is crucial

The criteria for a choice by low-involved SMEs between the alternatives ‘learning’ or ‘not learning’ can be used to influence the need to absorb new knowledge. In order to do so, the relevant choice criteria should be clear. These criteria may include knowledge characteristics such as the content and newness, the costs and benefits of absorbing new knowledge and the accessibility of new knowledge (distribution channel). Knowing the choice criteria for low-involved SMEs forms the basis for an effective formulation of scope and packing factors of new knowledge. Following the case of ‘Sustainable DIY activities’ the argumentation for the ‘learning’-alternative can only partially be provided in a national TV or radio campaign. Full and tailor-made argumentation can best be provided in brochures or on a special website. Necessary condition for successful argumenting is that low-involved SMEs recognize their own choice criteria.

The DMU should be clear and persuaded

Also relevant is the question who is making choices within low-involved SMEs and how the DMU can be influenced. Knowledge creation and integration are often taking place at the same time within SMEs. As a result, knowledge remains concentrated at employees who may or may not be part of the DMU. This means that the costs and benefits and possibly also other choice criteria will need to be transferred to the DMU. Actions should be directed towards convincing the DMU. This means that the possible costs and benefits of the absorption and application of new knowledge should be transparent and clear and formulated in economic terms. Another possibility is to point at successful other companies that have adopted new knowledge. Persuasiveness can also be realised by making use of the services of Syntens or specialists. Through the presentation of the
net benefits, by pointing at success stories, or by carrying out a quick scan of knowledge demands or other services of Syntens, other members of the DMU could be convinced. Much will depend on the quality and persuasiveness of the Syntens advisor and the employees involved.

6.3.4 **Pointing at the results of the use of knowledge**

*Figure 15 Linking the results of the use of new knowledge to the need to absorb new knowledge*


**Stressing the net benefits of new knowledge**

Pointing at the results of the use of new knowledge or of ‘learning’ in more general terms, is perhaps the most effective way to stimulate the need to absorb new knowledge by low-involved SMEs. SMEs are often only interested in an answer to the question ‘what does it cost?’ and ‘what are the benefits?’. If studies can demonstrate net benefits of the use of new knowledge, for instance with respect to the use of a new material, the interest for this type of new knowledge will definitely increase amongst the members of the DMU. Studies or articles can be made accessible through Internet or intranet, for instance by trade organisations. Also Syntens could play an important role in convincing low-involved SMEs by using hard figures. Trade organisations which co-ordinate and facilitate co-operation projects in the innovative area within their industries can also keep low-involved members and potential members, who were not willing to participate, informed about the progress and results of the projects. As soon as these low-involved SMEs smell a certain degree of success their interest is evoked and their knowledge awareness is stimulated.

6.4 **Conclusions**

Following from the preceding sections the ideas for actions can be summarized in table 2. The first column of the table refers to the five elements, which can be used to stimulate the need to absorb new knowledge by low-involved SMEs. In the second column the objectives of the possible actions in each area are presented and in the right column the various instruments are given.
Table 2  

<table>
<thead>
<tr>
<th>Subject</th>
<th>Objective</th>
<th>Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>stimulating judgement</td>
<td>increase knowledge assurance and awareness</td>
<td>persuasion by Syntens or banks stimulation of intranet</td>
</tr>
<tr>
<td>information</td>
<td>well-structured and accessible knowledge</td>
<td>well-articulated knowledge demands</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Internet as external distribution channel</td>
</tr>
<tr>
<td></td>
<td></td>
<td>intranet as internal distribution channel</td>
</tr>
<tr>
<td>alternative scenarios</td>
<td>create awareness of alternatives 'learning' vs. 'not learning'</td>
<td>national TV/radio campaign analysis of gaps between DMU’s and employees' expectations of learning</td>
</tr>
<tr>
<td>choice criteria</td>
<td>describing and argumenting benefits of learning persuade the DMU</td>
<td>providing full and tailor-made argumentation on Internet or in brochures for 'learning' based on the choice criteria of the firms persuasion by Syntens, employees and other specialists</td>
</tr>
<tr>
<td>results of the use of knowledge</td>
<td>demonstrate net benefits of the use of new knowledge</td>
<td>calculate costs and benefits and present them on Internet, intranet or in publications</td>
</tr>
</tbody>
</table>


Towards a national marketing strategy

The various actions in the table could all be part of a national marketing strategy with the aim to increase the involvement of SMEs with respect to innovation and the absorption of new knowledge. Some actions have a general character such as the creation of awareness of the alternatives ‘learning’ and ‘not-learning’. For some other actions more specific information should be gathered and applied. In the campaign various parties would be involved, such as the government for the social marketing component (the national TV/radio campaign), trade organisations for the knowledge management component (structuring of knowledge and the articulation of demands) and Syntens for the internal and personal marketing component (stimulation of the use of intranet, persuasion).

A national and integrated marketing strategy for this purpose that makes use of the various instruments, channels and parties would be very helpful to enhance the overall innovativeness of Dutch SMEs. Much effort should be addressed to creating more awareness amongst low-involved SMEs of the importance of innovation and the absorption of new knowledge. For the creation of this awareness, things can be learned from the programme ‘Nederland gaat digitaal’. This programme, however, has a smaller focus than the underlying study. It is not only about advanced ICT applications, Internet penetration and e-commerce but also about behavioural aspects of and within SMEs, strategic issues and decision making. A more general campaign leaves room for insights
from knowledge management and from marketing and perhaps also for other issues outside the scope of this study, such as employability.

For a successful national marketing strategy, however, more knowledge is needed for a good articulation of knowledge demands amongst low-involved SMEs and about the gaps in the expectations about ‘learning’ between DMUs and other employees within SMEs. A successful national marketing strategy also requires a joining of forces, since actions are expected from a wide variety of parties.
Literature


Dekker, D.J., and J.M.D. Koster (1999), *Account Managers’ Internal Relationship Marketing*, RIBES (Rotterdam Institute for Business Economic Studies), Erasmus University, Rotterdam.


Haastrecht van, R., and M. Bekkers (1995), *Marketing of Change; The added value of internal marketing to change management*, RIBES (Rotterdam Institute for Business Economic Studies), Erasmus University, Rotterdam.


Vree, R. de (2000), Bijlage bij: *Evaluatie van het project 'Duurzaam Klussen'* , EIM, Zoetermeer, commissioned by Novem.


The results of EIM’s Research Programme on SMEs and Entrepreneurship are published in the following series: Research Reports, Strategic Studies and Publieksrapportages. The most recent publications of all three series may be downloaded at: www.eim.nl/smes-and-entrepreneurship.

### Recent Strategic Studies

<table>
<thead>
<tr>
<th>Code</th>
<th>Date</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>B200201</td>
<td>8-1-2002</td>
<td>Vrijheid, ongelijkheid en ondernemerschap</td>
</tr>
<tr>
<td>B200107</td>
<td>6-3-2002</td>
<td>‘Nieuw’ ondernemerschap in de kennis- en netwerkeconomie</td>
</tr>
<tr>
<td>B200106</td>
<td>5-30-2002</td>
<td>Spin-off start-ups in the Netherlands</td>
</tr>
<tr>
<td>B200105</td>
<td>5-15-2002</td>
<td>Organisatietypen in het MKB</td>
</tr>
<tr>
<td>B200104</td>
<td>5-7-2002</td>
<td>Een warmer vestigingsklimaat voor het MKB?</td>
</tr>
<tr>
<td>B200103</td>
<td>3-26-2002</td>
<td>Human Resource Management within small and medium-sized firms</td>
</tr>
<tr>
<td>B200102</td>
<td>3-18-2002</td>
<td>Oudere werknemers in het MKB</td>
</tr>
<tr>
<td>B200101</td>
<td>3-1-2002</td>
<td>Information obligations in the policy chains of the Dutch constitutional state</td>
</tr>
<tr>
<td>B200005</td>
<td>4-18-2001</td>
<td>MKB en krapte op de arbeidsmarkt</td>
</tr>
<tr>
<td>B200004</td>
<td>3-6-2001</td>
<td>Family business in the Dutch SME-sector</td>
</tr>
<tr>
<td>B200003</td>
<td>2-26-2001</td>
<td>Exits</td>
</tr>
<tr>
<td>B200002</td>
<td>1-17-2001</td>
<td>Changes in social security legislation: impact on SME behaviour</td>
</tr>
<tr>
<td>B200001</td>
<td>8-14-2000</td>
<td>Information obligations in the Dutch constitutional state</td>
</tr>
<tr>
<td>B199904</td>
<td>5-4-2000</td>
<td>SMEs in regional industry clusters</td>
</tr>
<tr>
<td>B199903</td>
<td>11-16-1999</td>
<td>Training, productivity and firm size</td>
</tr>
<tr>
<td>B199902</td>
<td>11-2-1999</td>
<td>Determinants of the innovative ability of SMEs</td>
</tr>
<tr>
<td>B199901</td>
<td>8-24-1999</td>
<td>Patronen in ketenintegratie</td>
</tr>
<tr>
<td>B199807</td>
<td>6-16-1999</td>
<td>Ontluiend ondernemerschap</td>
</tr>
<tr>
<td>B199806</td>
<td>4-19-1999</td>
<td>Industry clusters and SMEs</td>
</tr>
<tr>
<td>B199805</td>
<td>4-6-1999</td>
<td>Intelligent agents, markets and competition</td>
</tr>
<tr>
<td>B199804</td>
<td>4-1-1999</td>
<td>Location choice of SMEs</td>
</tr>
<tr>
<td>B199803</td>
<td>4-1-1999</td>
<td>New services: strategic exploratory survey of a dynamic phenomenon</td>
</tr>
<tr>
<td>B199706</td>
<td>1-25-1999</td>
<td>De betekenis van flexibilisering voor het MKB</td>
</tr>
</tbody>
</table>

69