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Abstract

Title	Implementation of an IT based Marketing information system in a high tech company
Level	Master of Business Administration in Marketing Management
Author	Magnus Ahlstedt
Date	2007, November
Supervisor	Dr. Svante Brunaker
Aim	The aim of this thesis has been to try to answer the question of how an IT based marketing information system support the formation of business and product related strategies and when and how such a system should be integrated in a company
Method	Analytical meta-study of published literature condensed through a SWOT analysis and combined with a qualitative evaluation of questionnaires directed to companies with experience of developing and implementing marketing information systems.
Result & Conclusion	Company size and market volatility decides the time of implementation of a marketing information system. Implementation should be initiated top-down in order to secure full organisational inertia. The approach should be holistic and tailor-made for each specific organisation. Users should fully integrated in development and implementation.
Suggestions for future research	Supplementary work could be carried out in trying to quantify how a marketing information system affect the new product time to market and the strategic mismatch to real market development, hence the efficiency of such a system. Another question of interest is the organisational inbound resistance to change, how this resistance affect the implementation of a marketing information system and how to overcome the boundaries it poses.
Contribution of the thesis	This thesis contributes with a general framework that sustains the implementation of a marketing information system. It answers the initial questions that a manager has, standing before the possible implementation of such a tool.
Keywords	Marketing information system, MkIS, Implementation, Marketing communication, Strategy

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The work on this thesis has indeed proven to be a learning process which have personally helped me to profound my knowledge and insight of the strategy development process of a high tech company. I would like to acknowledge all the people mentioned in this thesis (with or without name) for sustaining the initial and concluding phases of emergence. A special thanks goes to Dr. Svante Brunaker for his guidance and constructive criticism through out the progression of this thesis.

1. Introduction

In any competitive environment the striving for survival and competitive advantage is the driving force behind development. This is as valid in nature as in any economic market. If the environment changes its actors have to change in order to adapt to the environmental change. If any actor changes, all other actors have to take measure in order not to lose their relative advantage. This is the fundamental rule that all players have to follow in order to stay in the game. In an ever faster changing world the ability to adapt and anticipate change is crucial in order to secure survival.

Companies active on any market face this challenge. They have to continuously anticipate change and gain competitive advantage relative to its competitors. A company can decide its coordinates, perceptually position itself, through external and internal assessment of the market environment, competition and company value chain respectively. The efficient collection, analysis and redistribution of information are hence extremely important for companies active in a fast changing environment (Yang 2005).

A management challenge is to condense and simplify this information to a surveyable decision base without oversimplifying, letting out important parameters of influence. This is the trade off that strategic management have to handle: Pragmatic enough to form an understandable decision base and act on the big picture without oversimplifying leaving out crucial information.

The faster change happens the more efficiently the actors have to update information about their changing environment and consequently the marketing information collection and dissemination process becomes more important the more turbulent and faster changing the market. This also implies that the time that management has to spend revising strategies augment drastically with the market turbulence. The effort also scales with the company size where information paths become more complex.

Most companies revise and form new strategies in a recursive process. That is, regularly a perceptual snapshot is taken in order to position the company, adjust strategies and peruse the mission and vision. However, where change happens quickly this process either give a

discontinuous picture about market change or/and boost the amount of work that have to be invested in strategy revision in to the skies. In its extension this implies an inferior accuracy in the formation of strategies and increases the risk of misleading or false decisions (Ashill 2001).

A holistic perspective of the company as a dynamic entity is becoming more and more important in an ever faster changing environment. The pragmatic definition of departmental interfaces where information have to flow according to well defined processes helping the planning, are still important but loses its efficiency when the company grows and goes global. The utopic ideal would supply a real time update of the environmental development, tools needed to efficiently evaluate the data and provide an intuitive picture of future development (Olszak 2006).

Any growing company active on a turbulent market should ask themselves: How can we raise the quality of the strategic decision, augment the perceptual positioning accuracy and update frequency in order to assure a continuous and correct mapping of the market while minimizing the implicated workload? (Frates 2005)

How can we sustain the process of collecting, analysing and disseminating intelligence that have such a crucial impact on the formation of business or product related strategy formation? What probably directly comes to mind is the formation of some kind of process for the collection and dissemination of market related intelligence. This is a fundamental issue for a company reaching a certain size. How can we assure that crucial information reaches the right department timely? Well, the last decades speedy development of IT applications have proposed some solutions for the value chain to gather and disperse internal business related information. We call it simply business intelligence applications. Each of these applications main task is to mine and distribute business internal data needed for the efficient internal planning in the organisation. We mine fundamental information from different parts of the value chain, the internal environment, we have a cross boundary information flow which helps us to form a picture of the current internal state and efficiently optimize it. Anybody would probably say that this is a great thing, right? Well it is! So why should we not be able to use a similar IT based system to mine and distribute information sustaining the cross boundary dissemination and planning of product, marketing and corporate strategies ? Well we could, couldn't we? (Li 1998)

1.1 Interviews with stakeholder

The idea to this master thesis was born in the interviews with my stakeholder, a European company active in the solid state lightning semiconductor industry. Solid state lightning is the efficient creation of light through the direct conversion of electron energy into photons (light) with efficiency close to 100%. Incandescent lightning such as a light bulb convert no more than 2% of the electrical energy into light. In the last decade solid state lightning have been developing with an ever escalating velocity and an increasing amount of applications emerge as the technology rapidly have entered the growth phase. Solid state lightning will replace the incandescent lightning. The question is not if, but rather when? According to recent analysis's this change will start today and gradually take place over the coming 10 years. (Sandia 2007) The world market is divided between about 10 larger players but the technology landscape changes rapidly and allows small players to enter the market with break-through process inventions. This high tech market finds itself in the volatile growth stage where the right strategy is key to future success.

The manager of the recently founded strategic marketing department was addressing some interesting issues that came to colour our discussions. Due to the company's rapid growth and organisation change in the last decade the dissemination of marketing intelligence had become an ever increasing problem. Information quantity was simply too large and information dissemination ways was simply too inefficient. Additional to this, the volatile technology development, together with the fast pace market growth made it difficult to efficiently predict market development. He was bothered with this and had recently proposed the integration of a marketing information tool. However, this proposal had met internal resistance. The integration of a marketing information tool was by some departments seen as a violation of departmental integrity and by others as an utter waste of money. The direct motivation of the tool, according to him, had to be done with hard fact. Setting benefits against costs should underline the importance of such tool integration. He doubted the efficiencies of commercial marketing information system and was concerned about the cost and uncertain success combined with a tailor-made solution. I choose to take on this task and the following essays contain my attempt to propose an answer these questions.

1.2 Motivation – Research Question

The possibility of integrating an IT based marketing business intelligence system exists! There are numerous IT solutions on the market that proposes exactly this. However, many organisations like my stakeholder, ask the questions why, when, and how? Such a system should be integrated. By performing a beneficial analysis through theoretical and empirical research and critically discuss my findings I hope to clear these question for all organisation that are currently asking themselves if they need to sustain their strategy formation with an IT based system. The findings should finally propose an integration framework and hopefully show how cross boundary marketing intelligence dissemination could sustain the new product development process. This thesis will discuss the global advantages and disadvantages and not respond to question about specific IT solutions. This is a question that should be treated separately according to each organisations needs. In relation to the above discourse I have defined the following two research questions:

Research Questions:

1. How can an IT based marketing information system support the formation of business and product related strategies? (Beneficial analysis)
2. Why, when, how should such a system be integrated in a company?

1.3 Work Flow

I have decided to treat the research questions in the following way. Through a qualitative analysis based on theoretical research I will aim to perform a beneficial analysis in the form of a SWOT analysis (Kotler 2006, Grant 2005). The SWOT analysis should form the base for the critical discussion which in its turn should form the base for the empirical study. The combination of theory and empirical study should then try to answer the above mentioned research questions. The SWOT analysis should form the base for the continuation of this thesis work and define the border conditions for the empirical evaluation according to Figure 1.

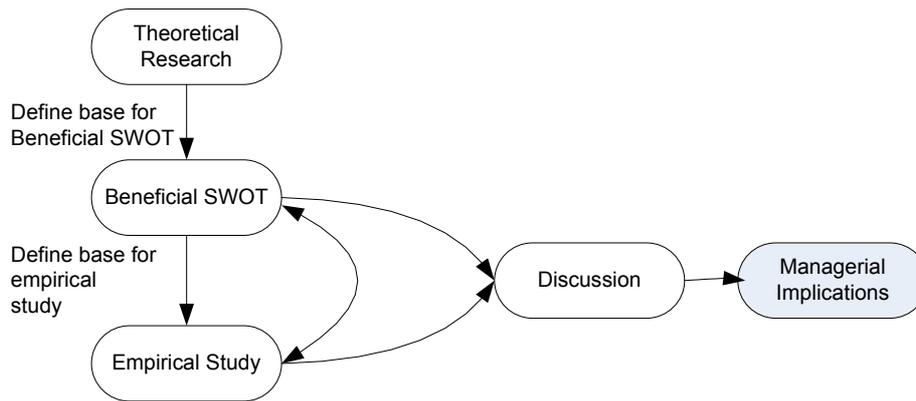


Figure 1 Work flow for Master Thesis (Own)

2. Theoretical Framework

In this part of the thesis I want to make an attempt to present theoretical findings that will form the base for the beneficial SWOT analysis. I will try to confirm the relation between high volatility markets and strategy- reality mismatch. Continuing I will cover how the internal communication in general and on forth the communication and interpretation of so called marketing intelligence can influence the new product development strategy and its correlation to the marketing success of these products. Finally, I will cover the theory of marketing information system, how they address the issue of sustaining marketing information communication and how they pretend to affect the marketing process. By doing this I want to present a foundation for a critical discussion presented in the form of a SWOT analysis. The theoretical framework is based on article research and does not refer to any core publication. However, as an indication for the curious I can recommend the following general articles which give a general perspective of dissemination of marketing related information and its effect on business. They could be said to have coloured the theoretical approach of this thesis, (Talvinen 1994); (Curtis 2000); (Yang 2005); (Colgate 1998); (Slater 1995) and finally (Cornish 1997) referred to as in the bibliography.

2.1 Product Life cycle

High tech environments are characterized by an ever escalating product development speed. This is a self induced characteristic of the high tech environment since new development acquires all actors on the market to respond with fast development in order to secure their competitive advantage. The product life cycle (PLC) theory is based on the biological lifecycle and describes the rise and fall of a product according to Figure 2. Most products have

been shown to follow this life cycle pattern although the exact form of the curve, or the fact of going through all stages, is related to the specific product and managerial decision affecting the entrance of a new stage of life. Most new products fail in the introduction phase. A product failure during this stage implies losses for the company and any company would logically strive to minimize this potential loss.

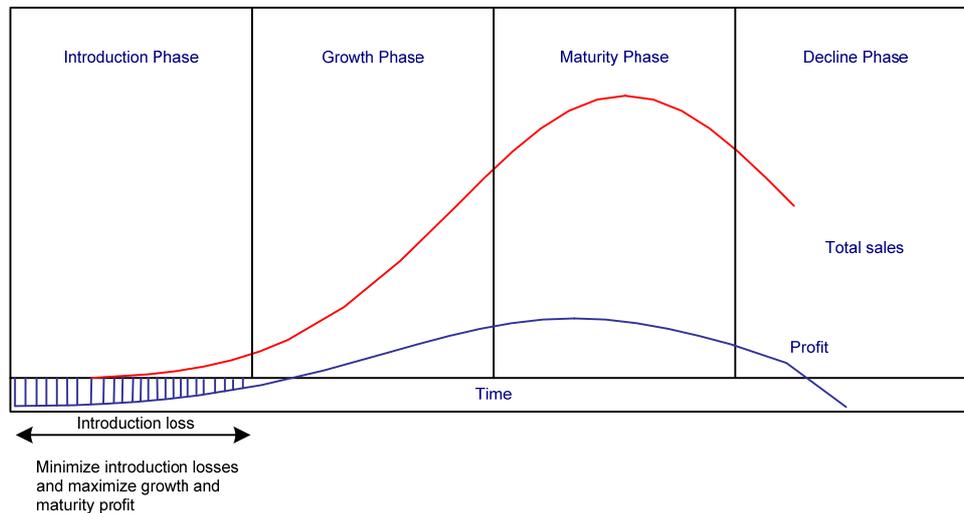


Figure 2 Product life cycle theory (Own, Grant 2005, pp. 142)

In the high tech industry the high development investment in the introduction/growth phase is associated with continuously shorter pay-back cycles. Technological turbulence or instability creates unstable customer demand patterns which consequently lead the company to present a differentiated technology portfolio where technological leadership is difficult to achieve. This raises the development investment and together with the shortened pay back cycle it reduced the profit and augment the development related risk, see Figure 3. Short product cycles in which product offering becomes rapidly obsolete encourage a restrictive consumer mentality where ever improved generation of technology is waiting. In such an environment the main issue for strategic management will be to deduce the relationship between technological priorities and both internal and external time horizons (Benkenstein 1994). Firms are said to be acquiring ever increasing amounts of all types of information due to greater turbulence in the business environment, the need to bring products to market more quickly, the increasing complexity of technology, and the volatility of consumer demand (Cornish 1997) The most successful high-tech companies are those that concentrate their efforts in no more than one or two technologies (Maidique 1984). This means that only a lean and focused strategy can lead to technology leadership. Only technology leadership can lead to market domination.

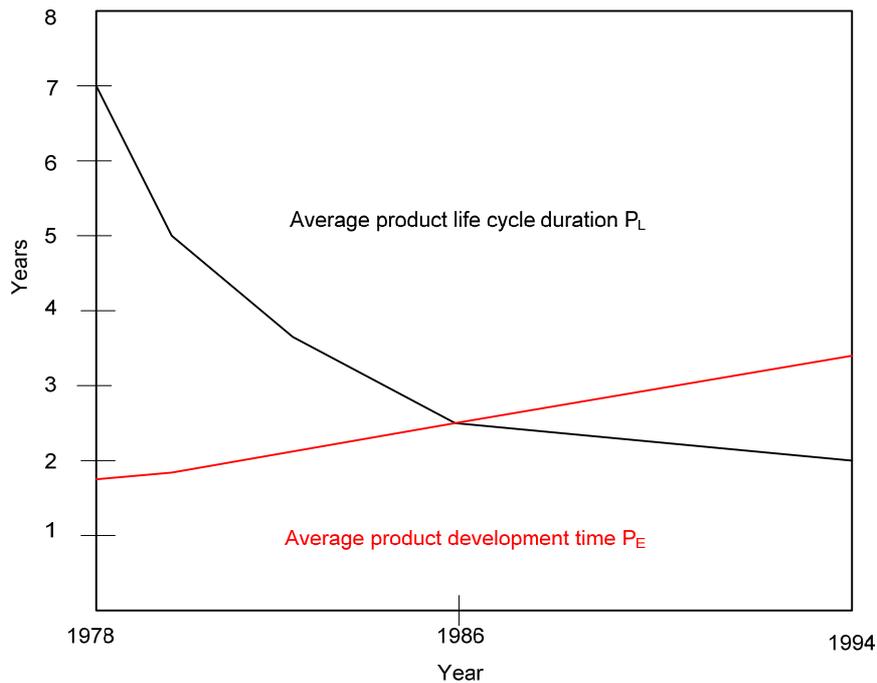


Figure 3 Changes in product and development life cycles (Benkenstein 1994, pp.15)

High tech markets are generally very young which implies that market boundaries are hard to distinct from each other since new applications and markets arise constantly and markets grows simultaneously. In the early growth phase the threat of market entries is high, new actors emerge on the market and market share shift constantly between different actors. Successful marketing on turbulent high tech markets presume the strong positioning in certain segments and defending them, i.e. present stability in chaos. “The right” strategy plays a vital role at this moment of industry development and the industry is very sensitive to strategic mistakes.

Why do products fail on the market? There’s no real easy answer to that question. However, pragmatically seen, a product failure during any stage of the product life cycle could only be blamed on a mismatch in the company’s perception of the market, their strategies of how to address the market and the real market development. Hence, we would like to decrease the number of product introduction failures and maximize the successes. If we continue our pragmatic reasoning any company would like to minimize the mismatch between product or business strategy and the actual development of the market. The success is directly connected to the ability of anticipating market change, form business and product strategies that account to possible/probable future environment and market development and finally the consequent implementation of these strategies. Curtis indicates that many products fail since they are either product or market driven and that a holistic view of market integration must be taken.

He stresses that the common analysis of product and market attributes leads to successful management of new product development. A cross functional dissemination system could sustain the new product development (Curtis 2000). The market is a dynamic entity, changing continuously; the strategy to navigate the market however is a discontinuous process. This means, especially on versatile high tech markets, that the risk for a mismatch between strategy and the actual market development is higher which increasing the chance for strategic failure.

2.2 Strategic Management – Formation of Strategies

Dissecting the strategy formation process we see, as described in Figure 4, that it is made of four major steps: 1. Anticipating market/environmental change scanning the environment, 2. forming strategies based on anticipations and internal boundary conditions in account, 3. implementing the strategies formed, 4. Controlling/Measuring the outcome of the implemented strategies. (Kotler 2007)

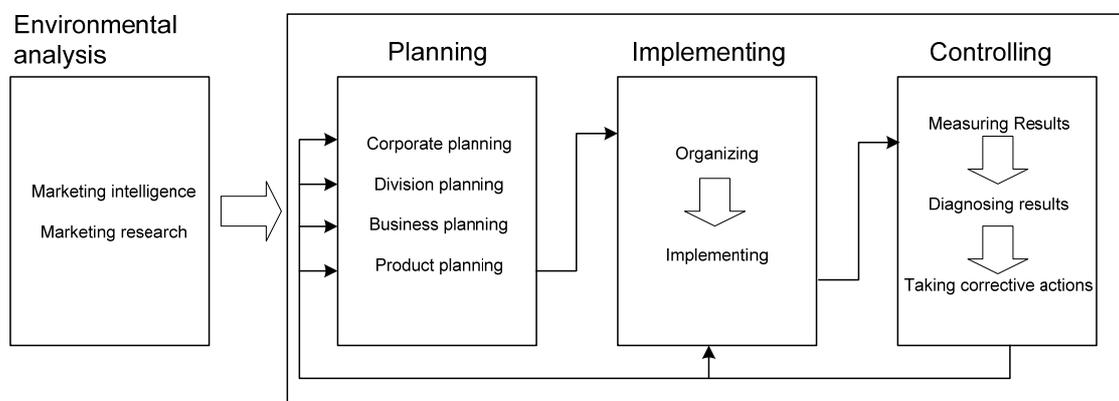


Figure 4 Strategic planning process (Kotler 2007, Own)

Porter's five forces of competition model (according to Figure 5) explain the relations of all actors on a market place. Through the environmental scanning process we deduce the current relation between porters five forces, the degree of rivalry, anticipate possible change and the implication it will have for our own company. This information, market intelligence, comes into the company through different formal and informal channels. The resolution, quality, of the environmental scanning is dependent on how the information is gathered and evaluated. Which information is taken into account, who supplies, who receives the information, and finally how is it redistributed and analysed within in the organisation.

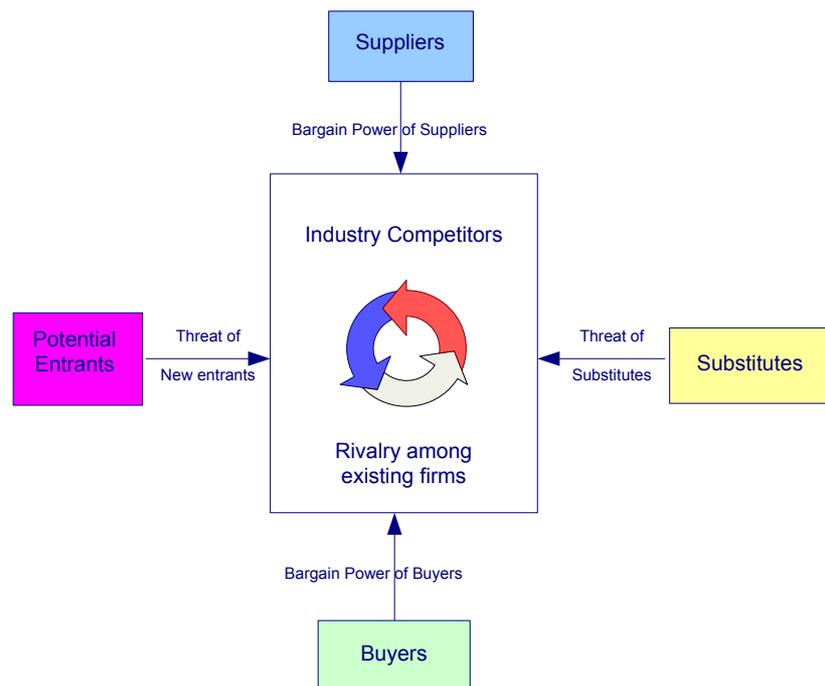


Figure 5 Porter's five forces of competition model (Grant 2005, pp74)

The process of gathering, redistributing and subsequently analysing the market intelligence constitutes an integral part of the strategy formation process. This implies that the quality of strategies is directly dependent on the quality of the internal information dissemination process. This is an outcome of the strategy formation process since the weakest link of the chain will decide the outgoing quality.

The corporate, business or product specific strategic processes are very similar taking place on different levels in the organisation. There's a top down dependence to the corporate strategy in the formation of business and product specific strategies since they should be formed aligned with the corporate strategy in order to sustain a homogeneous and consequent corporate direction. In a very big corporate design ,pursuing a homogeneous vision/mission through out the organisation can be rather intricate. A dis-equilibrated strategy implementation in the organisation leads to suboptimal prosecution of vision and mission. The organisation tears in different direction losing strategic inertia. There could be multiple reasons for this such as: an unclear vision/ mission leading to the misinterpretation in the implementation down the organisation, but also incorrect implementations not visible due to bad bottom-up transparency in the organisation (Hrebiniak 2006). The transparency of strategic decisions and the possibility to backtracking them is of major importance in order to correct strategic anomalies.

Marketing intelligence enters the company on formal and informal paths. Formal paths like market surveys and goal oriented market research executed internally or externally. The formal explicit communication with customers and information exchange with competition forms an open source information base. The informal tacit knowledge that personnel throughout the organisation gather in informal communication with the external world are not automatically redistributed in the organisation. A market orientation focuses the organisation on continuously collecting information about target customers needs and competitors capabilities and using this information to continuously create superior customer value (Hanning 2002).

The redistribution of internal business information is easier since the information exchange within the value chain is more intuitive. Each actor within the organisation can define the internal key information that they need in order to perform their planning, taking into account all other internal actors (Hanning 2002). The communication within the organisation is, or at least should be, open facilitating the planning. The sustaining actors in the value chain with a connection to porters' five forces of competition (the external world) such as marketing, customer support, sales, supply chain etc are the major receivers/owners of tacit and explicit marketing intelligence. There no automatic redistribution of informal tacit knowledge. If there's no process for mining and chronologically order external events, explicit (and tacit) marketing intelligence, that have an impact on the business development, the strategic decision loose transparency and backtracking possibilities in bottom up direction. This in its turn, affect the strategic elasticity of the company and part of the total strategic inertia is lost.

Even redistribution of formal explicit marketing intelligence does not follow a defined process in many companies. Dispersion of information and their frequently tacit nature results in insufficiency in the models of information analysis used for decision making.

Contemporary organisations do not face problems resulting from lack of information. They are rather concerned of information overload and information dispersion. (Olszak 2006). The management on each strategic level is responsible for defining the internal/external information that they need in order to form strategies. The internal information (Business intelligence) is explicit and retraceable. This means that the decisions of the value creating actors in the value chain are retraceable and transparent. However, decisions concerning strategies formed by value chain sustaining actors are not always retraceable. If we could

retrace the strategic decision with ease it would be easier to find organisational strategic anomalies.

2.3 Communication process

The decision/ strategy quality is dependent on the quality of the information used. The decision maker will make a qualitative estimation of the information that he or she uses. It has been shown that the quality of explicit information often is considered to be higher than implicit (Hanning 2002). One reason for this is that explicit information often is of in-personal character, but if we impersonalize information we take away the value that the sender of the information imposes over the information. For example, communication of implicit information between two departments with a strained relationship will be considered of less value than between two departments with a good relationship. Figure 6 indicates that the information path and its related noise affect the receiving party's understanding of the original message and hence the reaction/feedback given by the receiver. This implies that the crucial implicit information of significance that should flow between two departments, in order to secure an optimal base for strategic decision, is directly dependent on the value that the corresponding departments are giving the information. The possibility of impersonalize information used for decision-making and optimize the information dissemination paths, making it value neutral and "easy access" would hence present significant advantages

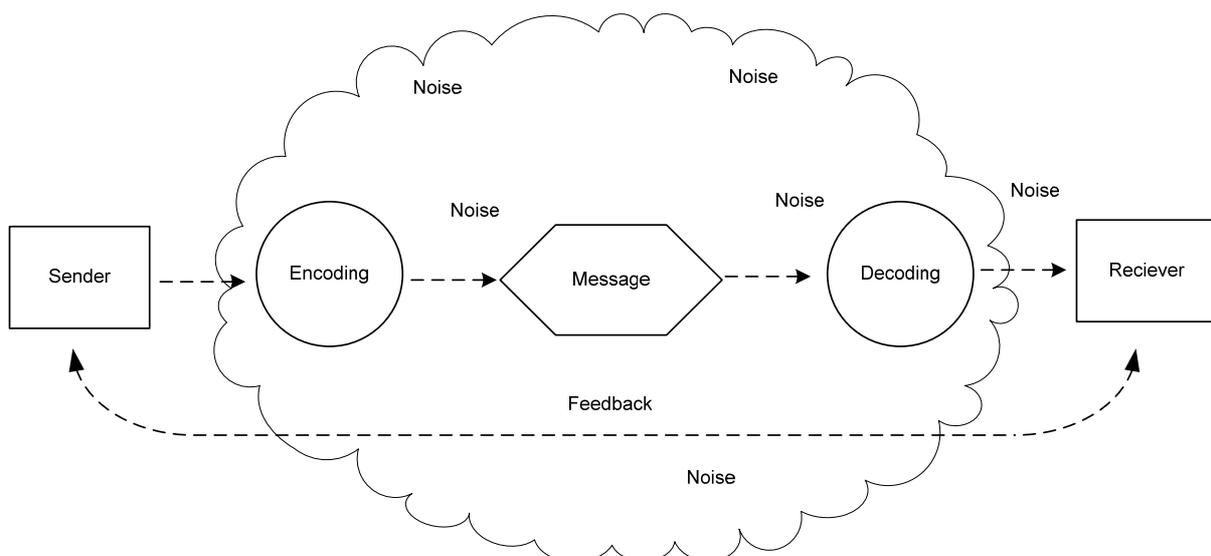


Figure 6 The communication process (Own, Grant 2005, pp.188)

Japanese companies are known for their successful implementation of market strategies. It is stressed that the success is to be found in the cohesion of numerous departments into one direction. I.e. their strength is to focus the strategic inertia and implement strategy. This is a culturally related advantage which is connected to the tradition of full organisation integration in the creation and implementation of strategies. It is a group approach with a group responsibility. The Japanese strength lays in the implementation of strategy through full organisational integration (Genestre 1995). Dynamics of communication between and within strategic business units must be managed to optimize implementation efforts. (Dobni 2003). It has been show that the cross functional integration within the company between R&D, manufacturing and marketing in new product development is of major importance. The effective establishment of good internal communication and effective cross-functional linkages has been noted as a significant driver and one of the most important success factors in new product development. The internal facilitating mechanisms are the primary determinants of cross functional cooperation (Song 1997; Song 1998). It is hence important that we sustain the communication process through the preparation of a suitable infrastructure permitting a value neutral dissemination process.

Market intelligence is needed to assess market size, location, growth and how to track and anticipate changing consumer behaviour. Turbulent environments raise the need for the industry to acquire market intelligence in order to sustain their decision. A correlation between quantity of marketing intelligence put into product development and enhanced competitive performance have been shown for companies in such environments (Cornish 1997). Cornish continues, all firms generate incidental marketing intelligence in the face to face contact with customers, but many do a poor job in retrieving it from employees and preparing it for analysis and the quality of the marketing intelligence is dependent of the proximity with the customer/actor (Cornish 1998). When a company decides to enter a foreign markets, cross cultural cooperation between marketing departments and a historical perspective, in form of a well communicated organisational memory, are needed in order to make correct marketing decisions (Yang 2005)

Organisation should not learn for the moment but keep an historical perspective while developing new strategies. This is only possible in organisations that are willing to learn from the past and adapt their future strategies to lessons learned, forcing these companies to think over how to mine and offer stored information. Learning organisations are organisations that

continuously acquire, process and disseminate knowledge about markets, product, technologies and business processes. Through complex coordination of communication, these organisations reach a common interpretation of this information. Learning organisations are exceptional in their ability to anticipate and act on opportunities in turbulent and fragmenting markets. The learning architecture in itself proposes a competitive advantage for the company implementing it. (Slater 1995).

The interdepartmental relationship affects the cross boundary information flow. The marketing/R&D interface is an example of how the interdepartmental relationship and the cross boundary information dissemination have a direct affect on the efficiency in new product development and market integration. The marketing department is responsible for the identification of new markets and isolate customer needs and the R&D department is responsible for supplying a solution satisfying these markets or the identified needs. This is the most crucial and important interface in any high tech company.

Gupta et al. studies (1985) propose that R&D managers in high tech companies do not believe that marketing provides sufficient customer related feedback such as: customer requirements for new products, product performance, competitive new product strategies and commercial applications of R&D's ideas, while marketing on the other hand believes that they are providing exactly this information. This implies a perceptual gap in the understanding of how the information really is communicated. The results of his findings also propose that a majority of R&D managers perceive that marketing information lacks credibility.

Interestingly enough the same studies show that marketing managers agree with the R&D managers' assessment in this question (Gupta 1985). Inter-functional rivalry has been shown to have an affect on the use of market information by R&D managers. The same study also implies that increasing rivalry between marketing and R&D indirectly inhibits the use of market information by R&D managers. That is the creation of conditions to support the sharing of information does not necessarily lead to the increased use of the same information in decision making. The most effective means of reducing perceptions of rivalry seems to be cross functional team building and co-location functions (Malz 1999,Ruekert 1987).

Information transfer between marketing and R&D personnel assumes a critical role within the process of innovation. The information dissemination sustains achievement of cross functional integration (Moenaert 1990).

The execution of strategic marketing is dependent on the fact that the whole organisation, even non-marketing managers, understand and accept the implication that strategic marketing has on the organisation. Information must be generally accessible and advertised in such a manner that managers are aware of the benefits it offer. It must also be delivered in such a form that it's understandable understood and demonstrates its relevance to business (Ritchie 2002)

The market intelligence use may be improved by designing appropriate dissemination processes'. It is suggested that the dissemination frequency have to pass a certain level in order affect the perceived intelligence quality positively which, if compared to the fact that the information sender consistently have to prove that they can provide good market intelligence, implies increasing trust in the receiver (Malz 1996).

Hrebiniak treats in his paper the obstacles to effective strategy implementation. The empirical data shows, among other, that the inability to manage change and poor or inadequate information sharing are critical roadblocks for the implementation of strategy (Hrebiniak 2005)

Departmentalism involves the tendency of organizations; parts of organizations to evolve to self containing department entities within the department, a phenomenon impede the effectiveness of collection, dissemination and effective organizational use of information. (Meldrum 1996)

2.4 Marketing Information Systems

The function of management is to plan, organise, coordinate, decide and control/ pursue the effect of their decisions, i.e. form, implement and measuring the effect of strategy implementation. The formation of strategies is based on information defining the environment for which they play a role. A system that sustains the information dissemination and analysis needed for the planning of strategies for a defined environment would in general term be defined as a marketing information system. The goal of a market information system, is to bring together parts/incoherent data to form a coherent picture of the market, propose a manner to interpret it and sustain the formation of strategies leading a company or a specific product to success. Kotler defines the market information system as “an interacting structure of people, equipment and procedures to gather sort, analyse, evaluate and distribute, timely

and accurate information for use by marketing decision makers to improve their marketing planning, implementation and control” (Kotler 2006). Kotlers model of a marketing information system is described in Figure 7.

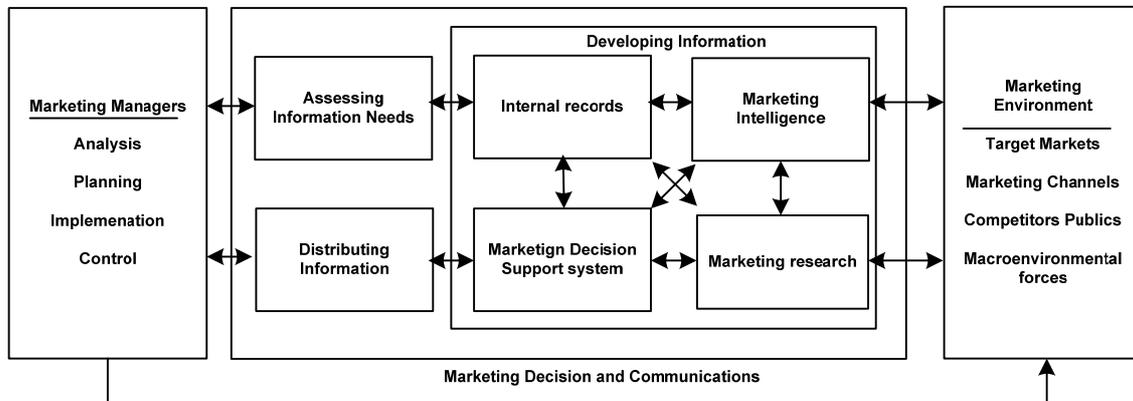


Figure 7 Kotlers model of a marketing information system (Kotler 2006)

A marketing information system could be described as a system designed to systematically collect, filter, decode and transmit parts of enterprise front end information through the company, connect the mined information and the ability to analyse it in correlation to back office information and supply chain with the aim to sustain the formation of strategy planning and implementation according to Figure 8.

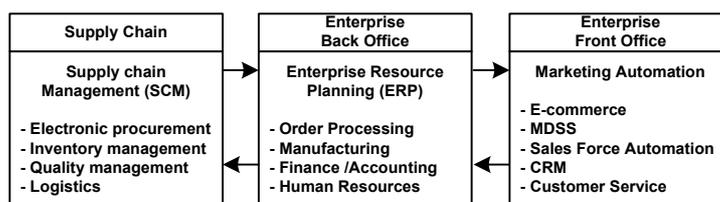


Figure 8 Enterprise information system (Harmon 2003, pp.4)

The basics of a marketing intelligence system are explained in Figure 9. The marketing information system is supposed to support managers in their decision making on each level of decision: strategic, operational, and control, dependent on the level of integration according to Figure 8. A marketing information system consists basically out of four parts: an internal reporting system, marketing intelligence system, marketing research system and marketing models. Let me however stress that there’s a multitude of different models addressing the internal design of marketing information’s system containing more or less subsystems than the four just mentioned.

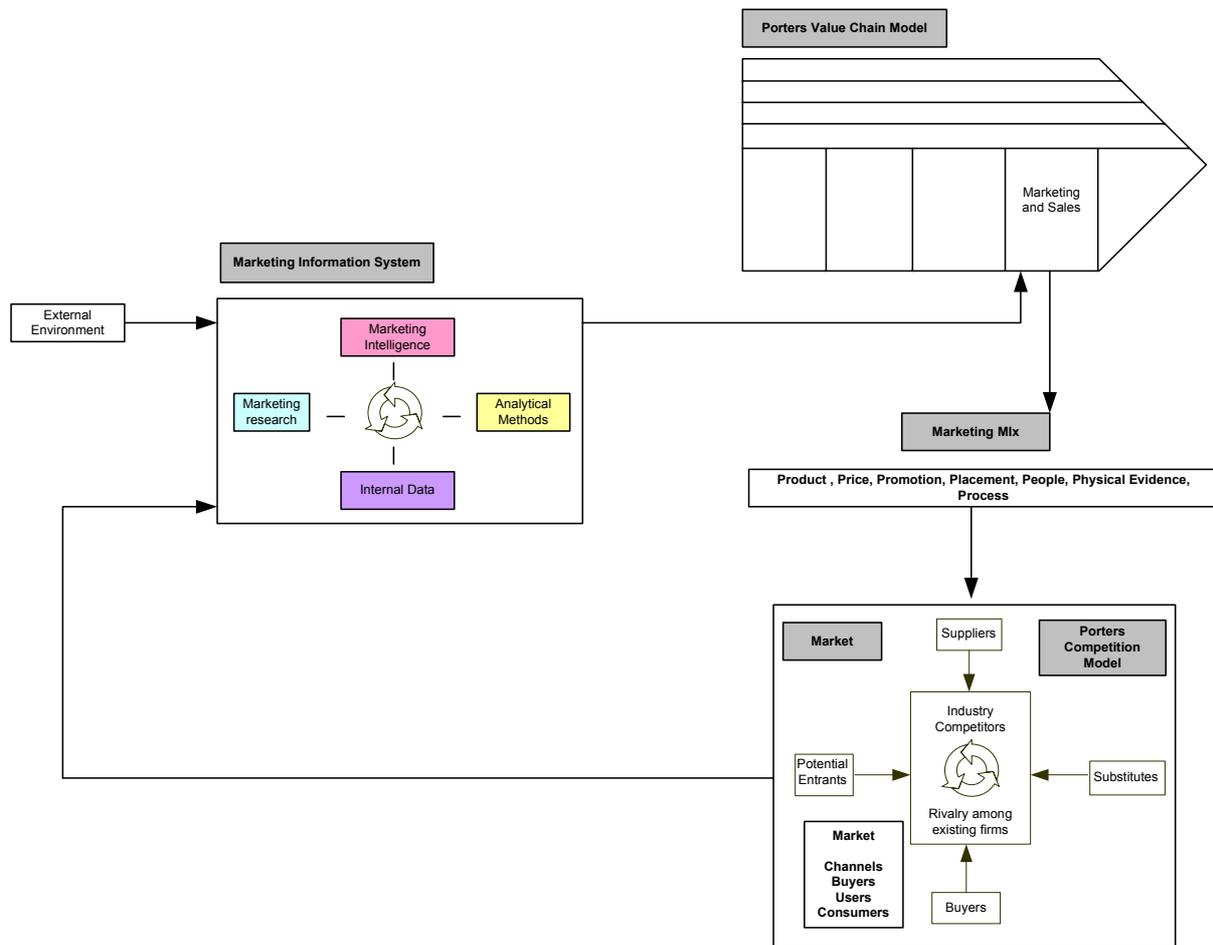


Figure 9 The role of the marketing information system (Curtis 2000, pp.199)

The internal reporting system provides the correlation of internal operational data giving access to information, such as: volume and product type in demographic dependence derived from sales invoices or deduction of the level of customer service by correlating received orders with actual invoices and stockholding in line with demand patterns. The marketing research is the proactive search for information. This means that the company deliberately goes into the hunt for information in order to solve a specific marketing problem or continuously follow the development of a specific market. The marketing intelligence system is rather the opposite of market research namely as system that should gather informal information from the business environment. This can be done in form of so called (Crawford 1997)

- Unfocused scanning of the market through what the managers or other key players in the company hear, reads etc.

- The semi-focused information scanning is the unfocused but intentional scanning of a specific area of interest.
- Informal search is the unstructured attempt of a manager to obtain information for a specific purpose. An unstructured search of ad-hoc contacts.
- Formal search describes the systematic search with a specific purpose.

Gathering marketing intelligence includes the informal scanning of different medias such as news papers, trade magazines, business journals, economic forecasts etc. A marketing intelligence system though, is the systematic chronological mining of all sort of marketing intelligence and implies the collaboration of all organisational key information owners. The idea of the marketing intelligence system is to disseminate this, many times tacit, informally collected information. This knowledge development process is a mechanism involving a variety of actors, who are more or less selected on the basis of their interest, their individual or institutional motivation to be involved. Additionally it is suggested that a company's market orientation /direction will be significantly improved through the integration of organisational learning systems. The design of a learning organisation and its participants is dependent on each specific organisation (Murray 2005). Statistical, mathematical and financial models help the user of the marketing information system to treat the collected information such as (Crawford 1997):

- Elasticity models
- Regression and correlation models
- Brand switching models
- Time series sales modes.
- Analysis of variance.
- "What if" models, etc, etc

The marketing intelligence system is responsible for the collection, analysis and dissemination of tacit and explicit market intelligence collected internally in the organisation and externally from the surrounding environment. The marketing intelligence system together with the market research system forms the base for the external analysis. Together, the analysis tools/models correlated with internal business intelligence sustain the anticipation of market change. Of all the four parts described the marketing intelligence part proposes the most delicate but perhaps also the most important part of the system. Of course we can

deliberately search explicit marketing intelligence that helps us support the anticipation of market development. However, the perhaps most important intelligence is the tacit information present through out management with no deliberate redistribution but a big impact on the strategic decisions. Who is the holder and user of specific information is an important question.

The marketing information systems can be classified in two groups dependent on the users and the type of use: The systems for managers and the system for operational sales and marketing activities. The users of marketing information systems are mainly senior executives, strategic business units, marketing managers and analysts (Talvinen 1994).

Although, what the marketing information system proposes seems intuitive and logical in the light of the last decades IT development there is, even today, not many companies with fully integrated marketing intelligence systems. So the question that we want to answer is why? Talvinen delivers a critique to existing marketing information systems. He stresses that the focus have been to optimize the IT system for each organisational sub unit and try to achieve maximal efficiency for each and every system. However, nobody have looked at the entire efficiency of a marketing information system taking into account cross linkage between different sub systems. I think this is an extremely important issue. The cross functional design of a marketing information system and the interconnection of different subsystem implies that the all over efficiency of the system will be dependent on both subsystem's efficiency but also, and perhaps even more, the optimization of the cross functional integration.

Talvinen stresses that cross functional networks will replace functional hierarchies. The organisation will be designed around business processes rather than functional hierarchies. Talvinen questions if the fully integrated marketing information system really is needed by marketers or if it is only a theoretical ideal since the experience is that such systems are complicated to implement, difficult and costly to develop and maintain. Information systems are mainly considered as a link between separate user groups in hierarchical organizations and not a system to sustain a business process. Talvinen emphasize the importance of maintaining a view of the marketing information system as a system to sustain the development of the marketing process additionally to that of disseminates information across functional boundaries. The systems should reflect the three levels of strategy of marketing: Corporate, business and functional. He summarizes, the marketing information approach is suitable for

bureaucratic and hierarchical organisations which will be replaced by new flexible organisation forms such as strategic partnership and networks (Talvinen 1994)

So basically a marketing information system is made to sustain the Management/Marketing Management in external analysis and perceptual positioning of the company through the structured presentation and analysis of collected tacit and explicit marketing information correlated with objective market research, internal operational data and treated with specific models. It should differentiate and selectively identify the most influential environmental factors for scanning. A marketing information system should convert tacit vision and knowledge into explicit criteria to guide information scanning and sustain strategic marketing. A strategic oriented marketing information system should put emphasis on external environmental scanning, processing and strategic analysis, in order to enhance the organisations strategic sensibility and capability (Xu 1999) The mining of this information and the retracibility of the decision offers a chronological view of the development of events and the possibilities of correlating these with business development.

Li et al. shows in their survey of British companies with an employee level above 500 employees that the most needed computer based support needed by marketing managers includes (Li 1998):

- Appropriate computer based information systems
- The supply of relevant strategic information
- Marketing strategy analysis models and tools
- Strategic analysis knowledge and skills assistance

The same study also reveals the main principal factors of dissatisfaction with existing information systems:

- The individual system is limited in its support capabilities.
- The system can couple strategic analysis with manager judgement,
- The models used are limited in function and scope.
- The systems used do not match the managers' real needs.
- The system cannot deal with uncertainty

Further on it also reveals the main factors holding companies back from further use of computer based marketing information systems:

- lack of appropriate computer based systems
- a lack of required data and information to drive the systems
- lack of knowledge and skills in the use of computer based systems.

One have to note that a very large part (close to 50%) of the responding companies had a number of employees above 500 but below 1000. Only approximately 15 of the respondent companies had 3000 employees or more. It is plausible that the size of the companies will affect the need for a marketing information system and also the means of developing one.

2.5 Summary Theoretical Framework

We have covered the theory of strategy formation and pointed out that in a volatile environment the need for fresh and updated environmental related information and the ability to analyse it is crucial for the process of forming business and product related strategies. In Figure 3 we can see that the development time for new products in the high tech industry have surpassed the life time cycle of the products. This implies that the product development related risk is increasing since the payback periods become ever shorter and the development costs augmenting. One possible solution is that of development diversification; however the risk of diversifying the product portfolio becomes higher with shorter payback cycles vs. longer development cycles. Additionally, diversification and an unfocused product development is not the way to pursue technology leadership. If we add to this the fact that most products fails in the introduction phase it becomes clearer that companies have to focus their efforts on high quality environmental analysis and strategy formation in order to minimize risk and focus development through the diminution of strategy anticipation to real market development mismatch. This mismatch comes to stand either through the volatile fast changing environment or through the inefficient (in time or quality) analysis and anticipation of environmental (market related) change. It is therefore reasonable to believe that any company active in a high tech environment is addressing this very issue: How to minimize the anticipation error and focus development? It is also reasonable to believe that the strong volatility of these markets implies a higher correlation between company results and the efficient environmental scanning, analysis and company internal dissemination of this information.

As a consequence of this, any high tech company should address this issue and take measure in reducing the mismatch.

Business intelligence solutions have developed immensely during the last decades and have found their application in most companies sustaining and facilitating business internal data dissemination and analysis, through out the value chain (Biere 2003, Henning 2002).

As we have seen, the efficient cross-correlation of business internal data with external data have a greater importance the more volatile the market. We have presented and existing solution to serve this issue: The IT based Marketing information system. This system should serve as the link between company internal business intelligence and environmental market related information sustaining planning, implementation and control of corporate, business (See Figure 10)

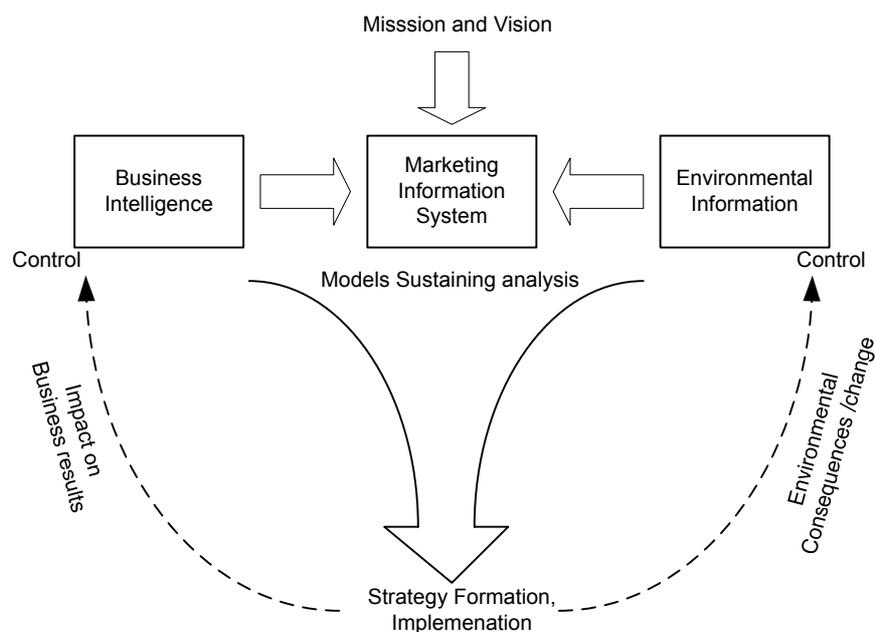


Figure 10 Marketing information system integration (Own)

and product related strategies. In order to sustain the managerial decision of why to integrate a marketing information system I have decided to treat the issue in form of a SWOT analysis to point out the implications of such integration. Finally, through the analysis of the SWOT we should shed light and deduce the managerial implications on how strengths can lead to opportunities and how we possibly could eliminate weaknesses and threats.

3. Beneficial SWOT

In this part of the thesis I will present the method of evaluation , SWOT , and critically discuss its advantages and disadvantages. Subsequently I will perform a beneficial SWOT based on the finding presented in chapter 2 which summarizes the theoretical framework.

3.1 SWOT analysis

What is a SWOT analysis? Well the name, equally an abbreviation, pretty well explains the frames of the analysis. The SWOT analysis helps us setting a framework for the formation of strategies by relating internal environment, Strengths and Weaknesses, of a specific system to the external environment, with a direct or indirect influence on the system, represented by Opportunities and Threats. All these parameters have an impact on the outcome of implementation of a certain strategy and its goal. In our case the internal environment is regarded as the marketing information system and the external environment the company, departments and stakeholders. By relating the strengths and weaknesses of a marketing information system with the opportunities and possible threats in the environment where its supposed to be implemented, we can weigh/consider their impact and form a strategy by using the internal strengths together with the external opportunities to reinforce the base of the strategy and try to eliminate/reduce weaknesses and threats (Grant 2005)

Internal analysis (Strengths and Weaknesses): The internal analysis should lead to an assessment of internal strengths/weaknesses that could be of competitive advantage/disadvantage. In this case the intrinsic advantages and disadvantages of marketing information tool.

External analysis (Opportunity and Threats): The external analysis focuses on environmental characteristics that could produce opportunities as well as threats relative to competitive solutions.

Key question: How do I use my strengths to support the creation of opportunities and how turn my weaknesses in to strengths and threats into opportunities?

→ **Strategic actions**

Using the SWOT analysis we pragmatically project the most important parameters of influence for a specific situation in order to visualize/define the road how to reach our goal, which in our case is the successful implementation of a marketing information system.

In a SWOT analysis we analyze the current situation and project it on the future. If the border conditions of the game change the strategy has to change as well. Unfortunately this feature is not intuitively taken into account in the SWOT analysis

Let us reason on this. As any conceptual model the SWOT analysis is a powerful tool if used correctly and with care. The question is not whether the SWOT analysis supplies an efficient framework for strategy analysis. I think it does. The key is to avoid underestimating important factors of influence and take into account how they change. This is, according to me, independent on the framework used for the analysis.

The SWOT analysis and any other analysis made for sustaining a strategy framework should naturally help the user to scale down complexity and still picture the most important factors. Downscaling complexity is a must in order to visualize a complete picture and focus on most important parameters. The danger in this is, as already mentioned, the underestimation of certain factors (May 2005). Grant underlines the importance of emphasizing on the in depth analysis of precisely picked internal and external factors rather than performing a superficial SWOT. Performing a SWOT or any other analysis as a strategic framework in a sloppy way will not really create the base for a solid strategy (Grant 2005)

The SWOT analysis fails to integrate the time factor, meaning the change of external factors with time. How the internal landscape will change is normally known by the implementer. The change of the external landscape though is not included in the SWOT analysis. We shall never forget that the SWOT is a fingerprint of the current internal and external situation. The base for the strategy must also take in account how the rules of the game can change with time.

I choose to use the SWOT analysis to carry out a beneficial analysis of a marketing information tool since I think that it is a pragmatic method for scaling down complexity and give a holistic overview.

3.2 Strengths

The dissemination process within a company is dependent on many parameters, as we have seen. Naturally the size, the pronounced hierarchy and the degree of globalisation are parameters that have a direct effect on the dissemination frequency and quality. The centralisation of market related information in the form of a marketing information system opens new possibility of channelling this information. It is also to suspect that through the unpersonal character and the reduction of noise in the dissemination process, the perceived quality of information will augment and subsequently the use of the disseminated information. The accessibility will sustain the corporate integration of all users and motivate them to supply more information. Through an the integrated planning and analysis, the transparency of the strategy formation process could allow the management, in a top down manner, to localize strategic anomalies and correct them. The open and continuous character of information dissemination also allow the user form a more complete and high resolution picture of the market/environment . This will allow the more precise anticipation of market change and hence positively affect the quality of strategic decision. The system will sustain market related knowledge management and a learning organisation, allowing the recursive evaluation of strategies correlating future with the past. The system would allow a down-up introduction of strategies and full organisational integration in the creation of new strategies with full top down transparency. This could be compared with the Japanese, culturally induced, method of creating marketing strategies, a method that has shown superior qualities as for the efficient formation and implementation of market strategies.

3.3 Opportunities

The strengths of the marketing information system could lead to enhanced environmental awareness among the users which together with the transparency, in terms of information and decision retraceability, could enhance the decision quality since reactivity, guaranteed through faster and direct dissemination of crucial information, allow the efficient detection of strategic anomalies and augment the organisational elasticity towards environmental change. This allows the company to focus product development and lower the risk for product failure.

3.4 Threats

Possible threats to the efficiency lay in the managerial trust in the system itself and the data and means of analysis proposed by the system. The managerial acceptance can also be linked to the transparency earlier denoted as strength. There can be a resistance among managers to use a system to sustain their, otherwise perhaps pragmatic, approach if there is a top down transparency where strategic anomalies can be retraced. As much as the system would allow managers to get precise and high resolution / frequency updated information to sustain their strategy formation, upper management can retrace and pursue managerial decisions and put them in question.

3.5 Weaknesses

A disadvantage with the integration of a marketing information system is relied to the cost of integration, continuous cost through maintenance and the cost implied through the managerial use of the system. The return of investment is hard to calculate but obviously we want the managerial use to be as efficient as possible. We would want the users to spend as little time as possible with the system maximizing their benefits. This is directly relied to design of the system. What kind of system should I use, who should use the system and what kind of information and analytical aid does this person need. Thereby the implementation strategy of the system becomes the most crucial point that could sustain or eliminate all the above mentioned strengths and opportunities.

3.6 Discussion SWOT

In the light of the performed literature review and SWOT we have seen that the product development time have surpassed the product life cycle time which implies that the product development related risk augments through development related investment and shortened pay back cycles. If we compare this to the volatile nature of high tech markets we understand the importance of high speed / high quality anticipation of market change in order to focus development and maximize customer benefits.

We have seen that the dissemination process of market related information have a direct impact on the product development process. We have seen that the perceived quality of disseminated information and hence indirectly the information use is related to inter

departmental/personal relations. The strained inter personal relationship have a negative on the total efficiency of the dissemination process. The often tacit information has a very limited internal distribution and the noise in the communication process have a negative effect on the perceived quality of intelligence. Any company active on a high tech market should take precautions to secure the efficient dissemination and analysis of market related information in order to realise more focused and lean product and business strategies.

The integration of a marketing information system will sustain this process and can therefore have many benefits for any big company active on a high tech market. The benefits of cross correlating continuously updated environmental market related information with internal business data have the advantage of adding substantial value to the planning, implementation and controlling of the strategy formation process. In order to enjoy the benefits it will be of crucial importance to have a well worked out implementation strategy since only a system that complies to the user wishes and rapidly and efficiently supply the user with the information and analysis capabilities that he or she needs, will be used (see Figure 11).

The efficiency of each subsystem naturally plays an important role.

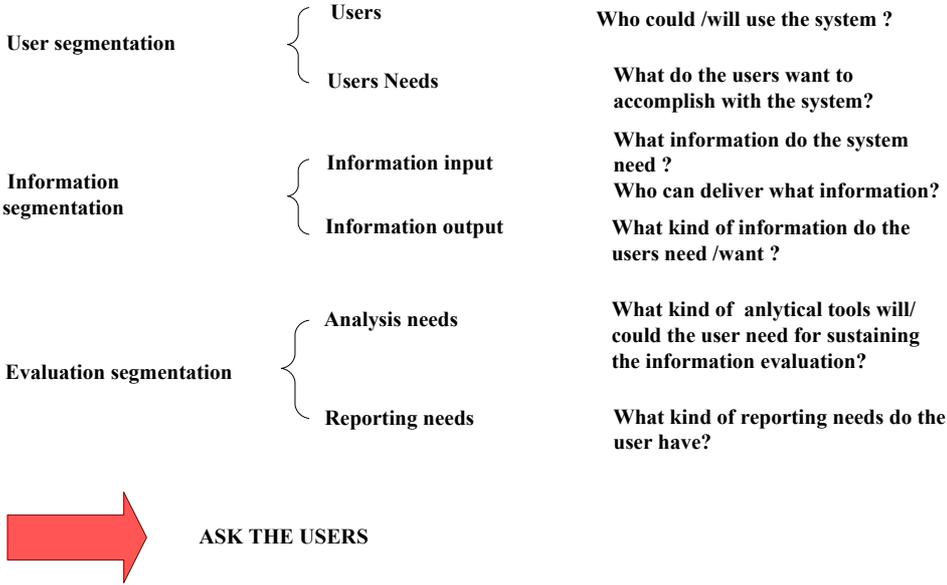


Figure 11 User segmentation (Own)

However to secure the efficiency of the total system we have to focus on the nodes connecting the different subsystems. The design of the tool and the nodes are defined by the existing IT infrastructure.

In order to supply such an efficient system as possible, a company have to evaluate what information the organisation needs to efficiently revise their planning and try to design the system in such a way that the information is frequently updated. This can only be done in corporation with the future users of the system. The users should partly supply the system with information but also use the information and analysis tools to evaluate information fed into the system by others. I.e. an integral part of the implementation strategy will be to find the possible future users of such a system and identify what information they will need, and additionally what information they can provide according to Figure 12.

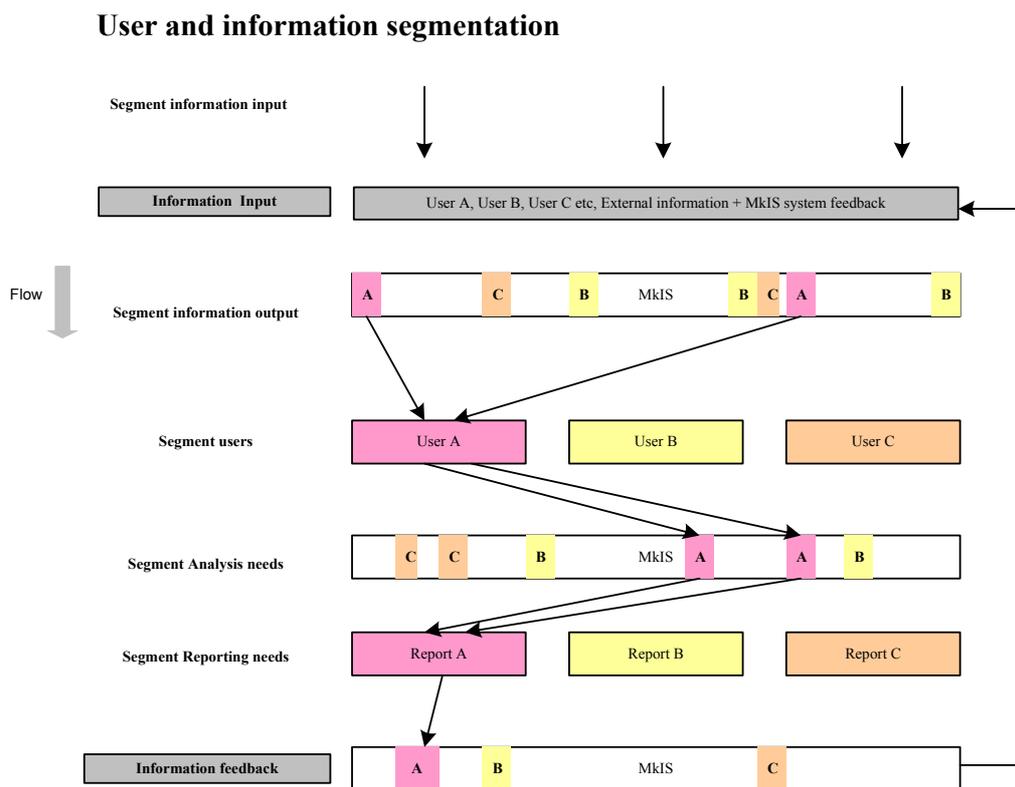


Figure 12 User and information segmentation (Own)

The question if a high-tech company need to sustain their strategy formation process with a marketing information system can easily be answered. With an ever accelerating development tempo the ability to survey environmental change becomes more and more important. At a point decided by company size and design the dissemination process or the ability to analyse the information becomes inefficient and product and business strategies loses focus and elasticity. Product strategies become unfocused which lead to higher percentage of product failure.

3.7 Key Conclusions - from literature review

- In order to reduce this risk coupled to new product development, the development have to be focused which in its turn implies that the anticipation of market change have to be complete and up to date. In a fast changing environment the speedy and efficient evaluation of market related information is the key to minimize strategy to real market development mismatch. This can be achieved with a marketing information system optimizing the dissemination process and the quality of data evaluation.
- Information of tacit and explicit nature has to change owner within the company. The dissemination quality is directly connected to the process of dissemination and the conversion of tacit knowledge in explicit knowledge and the distribution of the same. A company active in a fast changing environment should strive to convert tacit market related information in explicit distributable information that can sustain the formation of business and product related strategies.
- Marketing related information just as any information created within the company have to be categorized and mined in order to use this information for analysis.
- The efficiency of a marketing information system lies in the implementation strategy. The system is dependent on the efficiency of each sub-system, however the optimisation of the nodes connecting each subsystem and the efficient configuration of user-tool interface is key to a lean and efficient system. This implies the cross boundary implementation work including IT, strategic marketing and all future users of the system.

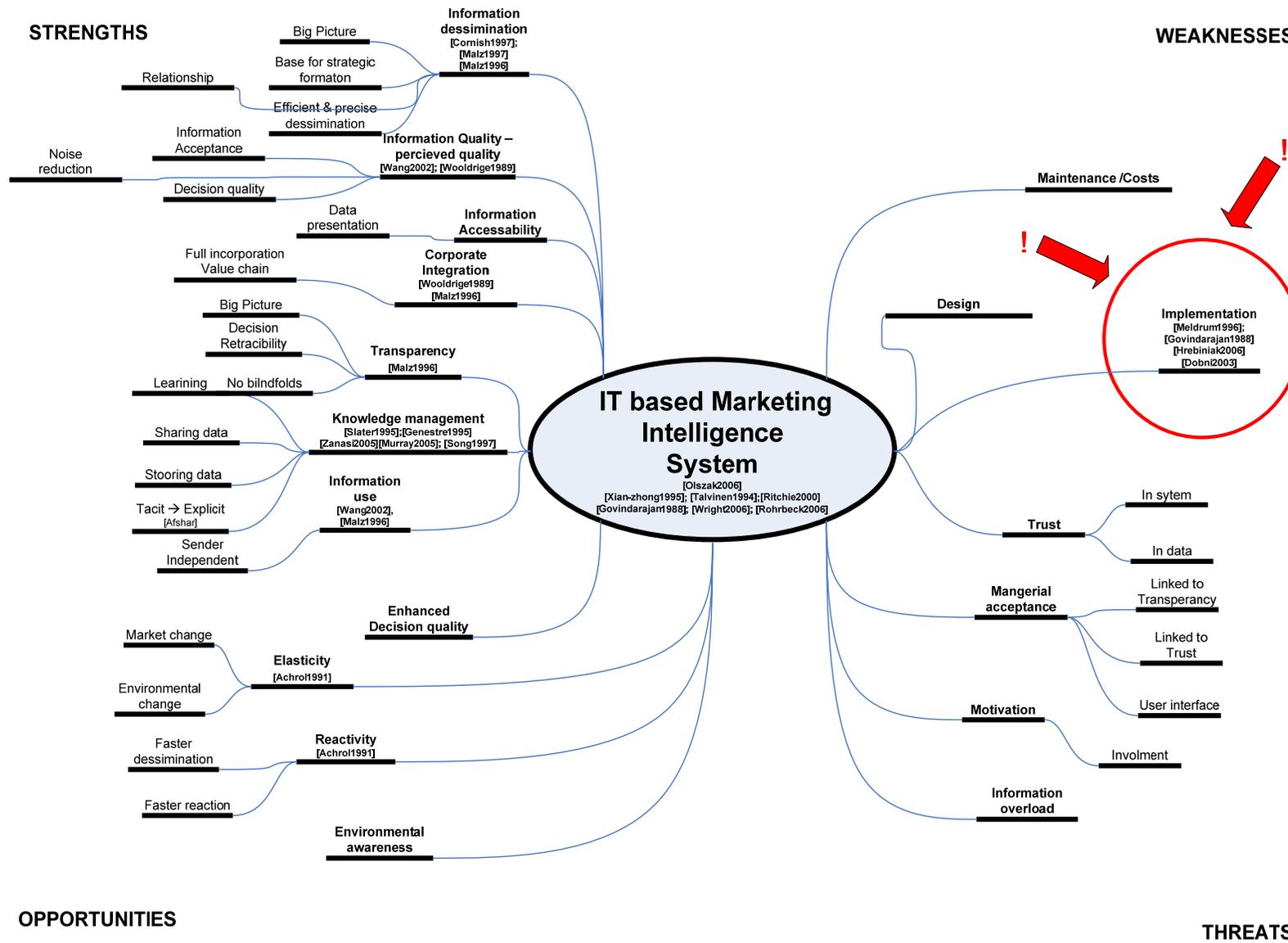


Figure 13. Beneficial SWOT analysis (Own

4. Empirical Method and Evaluation

In the following part of the thesis I will treat to critically question or possibly sustain the results of the SWOT analysis with empirically gathered data. The discussions with my stakeholder lead to defining the research questions. During the compilation of the theoretical part, ideas for how to empirically support the theoretical findings have gradually been emerging. The basic idea of this master thesis is to sustain the implementation of a marketing information system. In various interviews with my stakeholder, a high tech company active in the semi-conductor industry, I have had the possibility to make an idea about the doubts and question marks that they have regarding the implementation of a marketing information system. These doubts and question marks have finally been condensed in the form of the already mentioned research question.

4.1 Investigation idea

In order to support the findings presented in chapter 3. I have decided to perform interviews with two categories of companies namely

1. Companies possibly from the semi-conductor sector with an already implemented marketing information system, and
2. Companies developing IT based marketing information system (or sub-system) technology.

The hope is that the correlation between theory, users and tool developer answers will supply the base for a holistic evaluation.

4.2 Research Method and Data collection

I have chosen to address the companies personally and per email according to the questionnaire presented in the appendix.

	Interview type	Question type	Question Evaluation	Appendix
Stake holder	Personal	Open	Qualitative	
Company with MkIS	E-mail/ questionnaire	Open / Closed	Qualitative	Appendix #
MkIS developer	E-mail /questionnaire	Open / Closed	Qualitative/	Appendix #

Table 1 Framework for interviews (Own)

The questionnaire was directed to an extensive numbers of companies in two classes. Companies having implemented a marketing information system and companies that are responsible for these systems. The respondents was asked to write down their experiences in relation to openly asked questions. This approach goes under the definition of systematic sampling (Albers 2007). Myers writes “The ultimate aim of qualitative research is to offer a perspective of a situation and provide well-written research reports that reflect the researcher's ability to illustrate or describe the corresponding phenomenon. One of the greatest strengths of the qualitative approach is the richness and depth of explorations and descriptions “ (Myers 2000). The idea is to compare the feedback with the theoretical conclusions made in the SWOT analysis as indicated in Figure 1. The tool user companies were addressed without no prior knowledge of an actual marketing information tool integration or no. The idea was that in the case that a company would have had integrated such a tool, they simply would indicate this through their acknowledgement of participation. All additional follow up question was admitted directly to the person responsible for answering to the questionnaire.

4.3 Research deficiencies and evaluation

Through the attempts of completing this empirical study, deficiencies in my method have become clear to me. The idea of address tool users and tool developers is fundamentally a good idea, however it has been quite difficult to find companies at all having integrated a marketing information tool and being willing to speak about it. The reason for this could be multiple. I suppose that a major contribution to the weak response was the fact that any information commenting on a specific company's means of founding strategies in part also

gives away a part of their competitive advantage. Interesting enough, some companies even told me that a common approach among companies to gather competitive intelligence is giving themselves away as students. An extensive amount of companies simply don't answer any questions regarding the strategy formation process. Summarizing I think that the fact that no real counter offers was proposed and the non-confidentiality of the approach contributed to difficulty in finding a collaboration partner on this side.

Finding a tool developer ready to answer my questions was somewhat easier although not as easy as one might think. The struggle of penetrating a well formed wall of sales personnel was definitely a hard job. I finally found a company willing to work together with me, which also delivered high quality answers with a certain portion of self critique. I mention this while a number of companies choose to answer the questions out of pure commercial reasons, i.e. in order to bring up the superiority of their own tool without discussing the subject from a general and holistic perspective, offering an objective approach. However, I think that having performed thorough theoretical studies before attacking the empirical part indeed helped me to sort out the bad seeds.

Finally the empirical part of this essay will be based on the interviews made with three companies: One company active in the business of developing marketing information tools and sub applications, another company that actually have integrated such a tool and finally the stake holder themselves. The interview was carried out with the CTO, chief of global marketing processes and chief of strategic marketing respectively.

5. Empirical Results

This part of the thesis describes the interviews that have taken place in order to sustain the theoretical analysis. The interviews have been conducted according to the questionnaires presented in the appendix 1 and 2 respectively. Any additional follow up questions have been directed to the person in question directly per e-mail or directly in person. The questions are open and the persons that have been subjected to the questionnaire have been asked to answer the questions in such an explicative way as possible. I've chosen to present the condensed answers to the questions according to the questionnaire guideline.

5.2 Interviews with MkIS tool developer

The company in question, Virtual identity, is a provider of so called brand management systems and have provided holistic web based marketing information solutions for many bigger companies on the German market. More information about this company can be found on their homepage – www.identity.de. The questionnaire and follow up question was answered by the CTO, of the company.

5.2.1 Motivation

The company's customer's main reason for integration a marketing information system was to increase the transparency and efficiency of the marketing process. Searching the web it becomes clear that the IT solution often focus on one part of the marketing process such as for example the customer relations management. It is indeed very difficult to find software companies that offer a holistic approach to treat the whole marketing process and equally difficult to find companies that actually have integrated such a system in their company. The main reason for this according to VI the high complexity of such a system, the question is how to get hold of the necessary data and how to involve the stakeholders in the system. Every customer has its very own culture, organisation and market and therefore there are no main stream holistic solutions that can be offered to all customers. A holistic approach simply has to be tailor-made to fit each company's specific needs. According to VI the reason that not many companies goes this way depends on the stakeholder of the implementation project. On one side the company as a whole gain through enhanced transparency of all processes, so also the marketing process. The marketing managers, on the other side, fear the transparency about their decisions about how to spend their money. The holistic tailor made approach is also combined with a very diffuse risk taking that not many managers are not ready to take. The possibility of shoving blame on somebody else is in this case very limited.

5.2.2 Design

VI underlines that the marketing information system solutions, although based on standard technology, always are tailor-made to fit every customers needs. Full customer satisfaction can only be achieved through a design adapted to each company's special culture, organisation and situation. The idea is to develop a lean framework and let it grow modularly

with the demands of the stakeholders and its users. VI means that the technical connection to other databases and systems is easy stuff, the challenge lies rather in the meaningful interpretation of data into management dashboards. The main challenge lies in designing an integrated system lies in moderating the design and keeping the system lean while still realising full stakeholder satisfaction.

5.2.3 Implementation and challenges

VI recommends implementing the system in an iterative process, giving users and stakeholder's time to learn to work and live with the system. This also gives times for constructive feedback and system adaptation, should it be needed. The main reason for failure in the implementation of a marketing information system is simply not to satisfy all involved stakeholders, to deliver a black box after months of implementation work. This is the way to secure a sure failure. This is why it is so important to closely develop the applications together with the stakeholder. The best way of lowering the user entry barriers is to make the system as easy as possible to use. Nobody wants to work with a complicated interface.

The systems are implemented on all levels in an organisation, both on business and corporate level. Corporate and business managers can use the system for reports, planning, monitoring and controlling. Internal and external marketing staff and agencies tend to use the system for operative processes. The level of integration depends on each customer's special need.

5.2.4 Results

Each project implementation proves successful if every stakeholder involved can get the information that he or she need. Delivering a holistic and integrated process solution does indeed have an effect on creation of : Vision, strategy planning, production, publishing, monitoring, controlling, reporting and interpretation. VI secures that the system have a measurable effect on the planning, implementation and controlling of strategies but these effect are secrets of trade and are different for each customer. Since the systems offers realtime data and automated interpretation and recommendations it offers the base for reacting faster to environmental change. The tool offers and shares best practice processes and models.

The complexity of the real market is steadily increasing. VI continues, consumers are no longer passive target groups. They interact with brands. Hence, marketing is a living and continuously developing system. Close to defining a rule you can say that organisations don't want to undergo modifications, thus in order to close the mismatch between real market/environment development and anticipated environmental development you have to be very good at moderating the process and change management with the involved organisations and stakeholders. The holistic marketing information system approach definitely change the way of communicating marketing related information.

5.3 Interviews with Tool user

The company in question is a larger middle European company, leader in the development and manufacturing of construction and building material. The interviewed person in the company is the manager for global marketing processes. He personally supervised/coordinated the corporate integration of a marketing information tool in his organisation. The company have chose to remain anonymous.

5.3.1 Motivation

The motivation was mainly to improve the sales planning, help marketing people define marketing strategies, support high quality benchmarking, achieve a consistent pricing strategy and enhance data quality in the company.

5.3.2 Design

The main challenge in design the system was to reach an agreement on global definitions, e.g. what is the relevant target market. Additionally, there was a buy out between keeping the system as simple as possible but still providing enough information to cover the need of all involved users. The system was designed and tailor made specifically for this organisation. The implementation of a ready to use system was simply not possible to adjust to the organisation needs. The tool was developed company internal and integrated in the company internal business intelligence system with the direct contact to business internal data. The system was designed for marketing, product and strategic marketing managers as for

managers on corporate level with the focus on corporate development. This user base was based on historical experience and future strategic initiative of the company.

5.3.3 Implementation and challenges

Summarizing one can say that the main challenge in implementing the system was the change management and getting the resources for the implementations. Hence the most important issues to overcome in order to successfully integrate this management system was to convincingly promote and push the advantages of an implementation and additionally convince the stakeholders about the benefits/advantages of such an implementation in order to secure the procurement. The system was designed to be used on all levels in the organisation and the approach was holistic.

5.4.4 Results

The main benefits of the implemented system are the improved efficiency of the marketing benchmarking process as much as an increased overall process efficiency that comes from the improved information transparency and up to date information. The tool creates a sense of urgency among its users and mines information which makes the company less sensitive to personnel change. The global accessibility for all relevant users, all using the same up to date data, enhances the accuracy of strategic implementation. As the main disadvantage of the tool the limited information depth was recognized. Additional reports were needed for detailed information.

An advantageous cost/benefit relation was achieved for the tool. The system lead to insight about new markets and market sizes which triggered strategical restructuring of certain sales territories and organisations. The up to date information have shown to be very advantageous to react faster to market change. Although in process, the direct quantification of how the mismatch between real market/environment developments to anticipated development has changed has not yet been possible to quantify. The implementation of a marketing information system has lead to the use of a common language and global definitions within the whole organisation.

6. Discussion and Managerial implications

I think there is coherence between the theory and the experiences made by the interviewed companies. During the execution of the theoretical part and the additional empirical study the benefits and the implementation strategy of a marketing information tool has become gradually clearer.

It is interesting to see that “all” companies that are evaluating the implementation of marketing information are wrestling with the same big questions: How to motivate the benefits, manage the change involved with this implementation and convince stakeholders how a positive return of investment can be achieved? This also matches the doubts of my own stakeholder. The implementation risk taking is a diffuse risk that not many managers are willing to take. This is why the decision for change must come from top management. We see how both tool developer and user confirm the importance of creating an easy-to-use, lean and efficient system. The holistic approach demands a tailor-made solution why the integration of a ready to buy tool or the implementation of various subsystems is a suboptimal solution since each system has to be adapted to each company’s organization, market and cultural needs. The creation of a high efficiency, easy to use software demands a close and iterative bottom up - cross boundary development between Tool developer, strategic marketing and all future users of the system. This can be made in accordance with Figure 12. By segmenting the users by the information that they can supply to the system and the information and analysis means they need it will be easier to choose the user of the system and also collect and recursively evaluate the efficiency of the system.

We see how the implementation of a marketing information system seems to improve the marketing benchmark process, a statement that also is theoretically sustained. The use of up to date and correctly channeled marketing information reduces the risk coupled to new product development (Curtis2000, Benkenstein1994)

The mining of tacit and explicit information is important. This was confirmed by user and developer as a main advantage of the implementation. The gathering of information and the “common language” improve communication through out the organization on a global scale. In the theory we have seen how the dissemination quality is directly connected to the process

of dissemination and the conversion of tacit knowledge in explicit knowledge and its redistribution. The conversion from tacit in explicit information and its channeled distribution makes its easier to focus strategy and to communicate and control the execution of a common strategy. This is supported by Cornish (Cornish 1997).

The transparency of the internal and external data is seen as both a positive and negative feature. On one hand the transparency and retracibility of strategic decision and information in general sustain the process of cooperate control. However, on the other hand the top down transparency impedes full liberty for marketing managers of how to motivate and spend their budgets. This is why precisely these people also could come to push against the change implied through implementation. The system should hence on an early stage be pushed as a tool for improve the marketing process efficiency and not as one to enhance transparency although this of course is a nice side effect and a crucial part of maximizing strategy inertia and minimize the strategy implementation error.

I have theoretically covered the benefits of a marketing information system and motivated the minimization of strategy to real market development mismatch. Nor the tool user neither the tool developer could confirm this. The most probable reason for this is that its extremely difficult to quantify. We can however conclude that the benefits that they mentioned, better communication, higher transparency etc. match very well with theory and that it most reasonably would imply an improvement of the anticipation of change. The improvement of the marketing benchmark process would most reasonably lead to a decreasing strategy mismatch.

One issue that we haven't covered so far is the right timing for the implementation of a marketing information system. A small company with short and uncomplicated communication ways would have a hard time motivating such an implementation. It's rather a question about company size than market related timing. A specific company size cannot be mentioned since this is dependent on the market its active on and its volatility. However, one can assume that the larger the company and the more volatile the market the more beneficial the integration of a marketing information tool becomes. This should be regarded as an well supported assumption (theory sustaining it) but unfortunately the complexity of the timing issue is dependent on so many factors that nothing more than an intuitive assumption can be given.

Both tool developer and tool user underlines the importance of having a well thought through implementation strategy and that the close development with the tool users is very important to achieve a functioning and efficient system. This is in line with the theoretical key conclusion of trying to achieve a cross boundary implementation work including, information technology, strategic marketing departments and all future users of the systems.

6.1 Managerial implications

In order to conclude this thesis I would like to summarize the managerial implication to support a successful implementation of a marketing information tool.

- Implementation should be initiated by top management in order to secure full organizational cross boundary inertia implementing the system. Use benefits presented in this thesis for motivation.

- The size of the company and the volatility of the market decide the time for implementation. When structural complexity impedes transparency and efficient communication, actions should be taken to change this. One holistic approach is the integration of a marketing information system.

- The implementation can only be done in close corporation with the stakeholders and the future users. Avoid the production of a non user friendly black box. Change management is the key to a successful implementation.

- Keep in mind that a holistic approach can only be tailor made for your specific company's needs. No ready to buy system will be able to efficiently optimize the nodes between all subsystems in your company internal business intelligence system

7. Outlook

I would like to invite supplementary work to this essay. The question of how a marketing system indeed affects the new product time to market and the quantification of the strategic mismatch and hence the system efficiency is two fields that are extremely interesting issues. The work of predicting the economical benefits of a system in relation to its efficiency is complicated work but could help to augment the transparency for managers that are thinking of implementing a marketing information system to sustain their organisation. Additional to this one could imagine investigating the organisational inbound resistance to change and implementation of a marketing information system and how to overcome these boundaries. Why does an organisation fight against change although the most certain outcome of a successful implementation implies a more efficient organisation?

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Appendix

A I. Questionnaire – Tool Developer

Motivation

1. What's according to you your customer's main reason for integrating a Marketing information system?
2. There are not many software developer that offers a complete Marketing information system solution on all marketing levels. What do you think is the main reason for this?

Design

3. Do your company offer customer tailored solutions? If yes, what would you mark as the key issues to address in doing so?
4. What kind of different subsystem have you (can you integrate) integrated in your marketing information system?
5. How do you address the interconnectivity of your system with customer internal business data? Is this a complicated issue?
6. What is the main challenge designing an integrated system?
7. Are you products standard solutions or designed to fit every customer's special needs?

Implementation & Challenges

8. What are according to you the main challenges in successfully implementing a well functional marketing information tool?
9. What is according to you the main factors deciding between success and failure in the implementation of a well functional marketing information tool?
10. On what level(s) is your system normally used: corporate, business or product level?
11. How do you suggest lowering the entry barrier for new users (overfriendliness)?
12. Who are the customer internal main users of your system?

Result

13. What would you mention as the main benefits of your marketing information system solutions?
14. Do you think that the system improve the information dissemination process? If yes, in what way?
15. Does it have a direct effect on the strategy formation process? If yes, In what way?
16. Have the system had any measurable effect on the planning, implementation and control of strategies? Please explain.
17. Do you think that the system allow to react faster to environmental change? Please Explain.
18. Do you think that the mismatch/gap between real market/environment development and anticipated environmental development has changed? Please explain.

19. Do your system change the way of communicating marketing related information?
Please explain.

A II. Questionnaire – Tool user

Motivation

1. What's your companies reason behind the integration of a MkIS
2. Did you have any difficulties in motivating the implementation of a MkIS

Design

3. What kind of different subsystem have you integrated in your system.
4. What has been the main challenge designing the system
5. Did you buy a ready for use system?
6. Did your integration imply the company internal development of the tool or parts of the tool?
7. Who are the main users of your system.
8. How did you define the user base of the system.

Implementation

9. What has been the main challenge implementing a Marketing information tool
10. On what level do your company use the system. Product strategies? business Strategies?. Corporate strategies?
11. What were the main issues for successfully implementation according to you?
12. How did the users react to the implementation of the tool?

Challenges

13. What would you consider the main challenge of the implementation of a MkIS?

Result

14. What are your direct benefits of the system?
15. Did the system improve the information dissemination process? In what way?
16. Did the system affect the internal strategy formation process? In what way?
17. Have the system had any measurable effect on the planning, implementation and control of strategies?
18. Do you see any disadvantages of using such a system apart from the costs?
19. Do you think that the system allow you to react faster to environmental change? Please explain.
20. Do you think that the mismatch between real market/environment development and anticipated environmental development have changed ? Please explain.
21. What's the main advantage of the tool?
22. What's the main disadvantage of the tool?
23. Did your system change the way of communicating marketing related information?