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FACULTY OF BUSINESS ECONOMICS
Master of Management: Management Information Systems

Masterproef

Marketing Management Information Systems as part of an MIS: is integration being considered by companies?

Promotor :
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Supervisor :
De heer Wouter FAES

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*Master Thesis nominated to obtain the degree of Master of Management , specialization
Management Information Systems*

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Acknowledgments

On God we rely

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Executive summary

Problem is that MIS and MKIS are separate from another in a company but they should be integrated for better results.

We checked in four companies how this two departments work and those companies work in different work field to see if the work field effect in this two departments or not .

Actually it's not very far because all companies see the same things and they give the same answers.

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Chapter 1

Introduction

In this chapter we will try to situate this dissertation within the framework of an MIS system. After having defined MIS and IMS systems and the link between MIS-systems in companies and marketing, we will briefly describe the objectives of this dissertation, the major research question and the complications we have faced.

1.1 Definitions

A **management information system (MIS)** provides information that organizations require to manage themselves efficiently and effectively.^[1] Management information systems are typically computer systems used for managing five primary components: 1.) Hardware, 2.) Software, 3.) Data (information for decision making), 4.) Procedures (design, development and documentation), and 5.) People (individuals, groups, or organizations). Management information systems are distinct from other information systems, in that they are used to analyze and facilitate strategic and operational activities.

Academically, the term is commonly used to refer to the study of how individuals, groups, and organizations evaluate, design, implement, manage, and utilize systems to generate information to improve efficiency and effectiveness of decision making, including systems termed decision support systems, expert systems, and executive information systems. Most business schools (or colleges of business administration within universities) have an MIS department, alongside departments of accounting, finance, management, marketing, and sometimes others, and grant degrees (at undergrad, masters, and PhD levels) in MIS (www.wikipedia.com).

The following are some of the benefits that can be attained from management information systems (Pant and Hsu, 1995):

- Companies are able to highlight their strengths and weaknesses due to the presence of revenue reports, employees' performance record etc. The identification of these aspects can help the company improve their business processes and operations.

- Giving an overall picture of the company and acting as a communication and planning tool.
- The availability of the customer data and feedback can help the company to align their business processes according to the needs of the customers. The effective management of customer data can help the company to perform direct marketing and promotion activities.

The terms *Management Information System (MIS)*, *information system*, *Enterprise Resource Planning (ERP)*, and *information technology management* are often confused. Information systems and MIS are broader categories that include ERP. Information technology management concerns the operation and organization of information technology resources independent of their purpose.

Most management information systems specialize in particular commercial and industrial sectors, aspects of the enterprise, or management substructure (Laudon and Laudon, 2010, p. 23-32).

- *Management information systems (MIS)*, produce fixed, regularly scheduled reports based on data extracted and summarized from the firm's underlying transaction processing systems. They are destined to middle and operational level managers to identify and inform structured and semi-structured decision problems.
- *Decision Support Systems (DSS)* are computer program applications used by middle management to compile information from a wide range of sources to support problem solving and decision making.
- *Executive Information Systems (EIS)* is a reporting tool that provides quick access to summarized reports coming from all company levels and departments such as accounting, human resources and operations.
- ***Marketing Information Systems (MIS)*** are Management Information Systems designed specifically for managing the marketing aspects of the business.
- *Office Automation Systems (OAS)* support communication and productivity in the enterprise by automating work flow and eliminating bottlenecks. OAS may be implemented at any and all levels of management.
- *School Information Management Systems (SIMS)* cover school administration, and often including teaching and learning materials.

- *Enterprise Resource Planning (ERP)* facilitates the flow of information between all business functions inside the boundaries of the organization and manage the connections to outside stakeholders.

A **marketing information system** is a management information system designed to support marketing decision making.

Jobber (2007) defines it as a "system in which marketing data is formally gathered, stored, analyzed and distributed to managers in accordance with their informational needs on a regular basis."

Kotler, et al. (2006) defined it more broadly as "people, equipment, and procedures to gather, sort, analyze, evaluate, and distribute needed, timely, and accurate information to marketing decision makers."

A formal MIS can be of great benefit to any organization whether profit making or non-profit making, no matter what its size or the level of managerial finesse. It is true today that in many organizations an MIS is integrated as part of a computerized system. To manage a business well is to manage its future and this means the management of information, in the form of a company- wide "Management Information System" (MIS) of **which the MIS is an integral part, is an indispensable resource** to be carefully managed just like any other resource that the organization may have e.g. human resources, productive resources, transport resources and financial resources.

1.2The link between MIS and IMS

In the previous paragraph we indicated that IMS systems are part of the MIS system. But what is the link between them in more detail?

Many factors can have an effect on a company's MIS system and department. Whether this effect is positive or negative effect highly relies on the method in which a company or a business deals or responds to these factors. If such factors are dealt with efficiently they can have a positive effect on the MIS department and its functioning, which in return ensures

that a company has a well functioned well established MIS-system that will serve the objectives and purposes it was created for and that were stated in paragraph 1.1. However, if not dealt with accurately, those factors can cause harm to the company and subject it to risk. Thus, it becomes apparent that companies have to deal with such factors seriously and efficiently to minimize this risk.

An MIS department within a company has no external transactions: its main tasks are carried out internally. A company's MIS department thus plays a crucial role in processing of new information and in return filtering and forwarding the new information to various departments, in a way that ensures that each department has the relative and vital information needed to function in the most effective way and to carry out its operation at its best potential.

Marketing is one of the major factors for the continuation of a company and one of the major factors influencing the MIS department and benefiting at the same time from the dissipation of information by the MIS-system. MIs and IMS thus have a **double sided relationship**: the feed one another with information. (O'Brien, 1999).

There is relationship between MIS and Marketing. Marketing managers rely on the MIS department to get access in the marketing process to important information regarding customer's backgrounds and customer demands, as well as information relating to current market demands. Furthermore, the MIS-system can offer fast and convenient services that help to update or even make new marketing plans. Additionally, marketing managers rely on information forwarded by the MIS department to make an informed marketing decision.

Inversely, the IMS-system provides salient market data to the MIS department which can help other departments in better planning their activities, such as more effective production planning systems, more detailed cash flow plans and so on...(Pant and Hsu, 1995; Jobber, 2007).

This research is situated in the area of this double sided relationship.

1.3 Objectives of this research

This research will attempt to examine the double sided relationship between the MIS department and the marketing department. If integrated and executed effectively, this relationship can play a vital role in the success of a company and its ability or potential to take or maintain a good position in the market.

The MIS department is the center of information in companies and its function is to save and dissipate important information for everyone in the company provided another department needs it. On the other hand, the marketing department is important for companies because it develops marketing plans which the company will use for a certain time in guiding the marketing and sales efforts to customers. The IMS - information is also saved in the MIS department, because it can help other departments as well.

So when companies make develop good relationship between the MIS department and the marketing department, they can have a more effective market management and more related activities of other departments as well. Results will be positively influenced.

When those two departments integrate their activities successfully, the MIS department will be better equipped to grasp the marketing department's needs and save essentially important information that the latter needs to function appropriately with minimum error. Moreover, it will provide better data to other departments as well. In cases where an MIS department sends the wrong information to the marketing department or the right information but not in time, it puts the company in a more difficult situation, sometimes leading to the potential loss of customers and the paying of fines due to misunderstandings with customers and between those two departments.

This research will attempt to find out how companies **try to reduce such risks** by creating a better relationship between the MIS department and the marketing department and how this may be done, based on mutual understanding, leading to the provision of important information to one another in time. Thus starting the search for information on the major subjects that are important to both in time is essential.

1.4 Research questions and methodology

This dissertation wants to investigate the following main topic as **research question**:

How do the marketing department and the marketing information system can effectively build a relationship with the MIS department and in which way can marketing be one of the positive MIS contributors?

Due to the heavy impact that the MIS department and marketing department have on a company's success and their dual relationship, this research will look at both departments and the role they hold within companies. We also look at the problems that can be associated with the mutual provision of data by the two departments which can cause a company great loss.

Several **subquestions** can be asked, such as:

- What is the best and most effective relationship is the relation between MIS and marketing?
- When does the marketing department best return information to MIS department?
- Which information should it be and what purpose should it serve?
- When is it better to integrate both departments altogether?
- When does the MIS Department best return information to the Marketing department?
- Which information should it be and what purpose should it serve?

These sub questions are inspired by the following thought.

Managers require information in their decision making process in order to reach an informed decision. The information that they rely on in this process is made available to them through the MIS department. That is not to say that the MIS department participates in the decision process. However, in order for the MIS department to function effectively and forward the necessary information that managers rely on, the MIS department needs to be familiar with the managerial decision process and what counts as necessary information for this process as well as how the managers apply this information in reaching their decision. Thus, the MIS department needs to become familiar with the challenges, obstacles and problems facing the decision makers in the departments and vice versa. This explains

the fact that the sub questions deal with the type of information needed and the purpose the information serves.

In order to achieve this, the dissertation will use the **following methodology**.

We will examine various case studies relating to this topic. Practically, speaking, questionnaires have been sent to various companies that will examine their opinion on these issues from a practical point of view. In order to increase the participation of companies, managers were first contacted personally and asked whether they wanted to cooperate. The purpose of the research was explained to them and the questions sometimes clarified. They were again contacted to stimulate the return of the questionnaires and their answers.

1.5 Complications faced when executing the research

We faced several complications in this research venture.

Many companies hesitated to give us access to the data which this research needed. Companies view the data as private and usually don't allow outsiders to view them because they contain information about the company's own marketing plan and MIS system. As such some of these companies did not answer the forwarded questionnaires or were only willing to answer parts of it, namely those they were comfortable with to answer. Fortunately some companies did answer the questionnaire.

Another complication was that the companies which did not want to answer at all on the basis that all data were considered as private data are mostly international companies. But the smaller companies are not very attractive for the purpose of this research because they don't usually invest heavily in a structured relationship between the MIS and marketing departments, if they possess these departments at all. Moreover, many of them they don't have the knowledge or experience to offer sufficient answers relating to our topic.

Chapter Two

Theoretical background

In this chapter we try to give a literature overview of what MIS systems and MKIS systems are and what their role is in a company's decision making process and which decision they might influence. Before discussing **Marketing Information Systems (MKIS)** we must also become familiar with the term "Management Information System" and the term of "Marketing" as well. We classify MKIS systems first.

2.1. Definition of Management Information System and its evolution.

A Management Information System can be defined in different ways.

- "The MIS is defined as a system that provides information support for decision making in the organization." (Waman S Jawadekar;2007).
- "The MIS is defined as an integrated system of man and machine for providing the information to support the operations, the management and the decision making function in the organization". (Waman S Jawadekar;2007).
- "The MIS is defines as the system based on the data base of the organization evolved for the purpose of providing information to the people in the organization." (Waman S Jawadekar;2007).

An MIS develops alongside a certain pattern over time. We do not refer here to the development of MIS systems according to the technological evolution of data processing systems..... Has described it as follows.

The first idea about MIS in a company was to process data from the organization so that they could be displayed in the form of reports at regular intervals. However later on this idea changed because information is an outcome of processed data, and data is a set of variables and their values under ceratin circumstances. Companies need MIS to keep all data together so that they can be accessed by anybody and processed according to the company's needs in different ways.

Over a span of time the idea about MIS changed into a decision-making system when the concept of end-user databases appeared, which made a fundamental shift in the construction of an MIS possible: the decentralization of the system.

Decision making itself is in this respect a "conscious and human process, involving both individual and social phenomenon based upon factual and value premises, which concludes with a choice of one behavioral activity from among one or more alternatives with the intention of moving toward some desired state of affairs". (Fremont, et, al,. 1970). As Ducker illustrates, the five criteria that decide which type of the decision is involved and what level of authority is needed are: future time involved or not; the qualitative factor; the free nature of a decision; whether it is rare or routine; and the impact of a decision. But independently of that and independent of whether the decision is strategic, organizational or tactical, an information based approach is the best one to achieve the best results. The difference between these levels of decision making is explained in the below inserted footnote¹

Figures 1 and 2 indicate how conceptually and physically an MIS looks like in it full development stage.

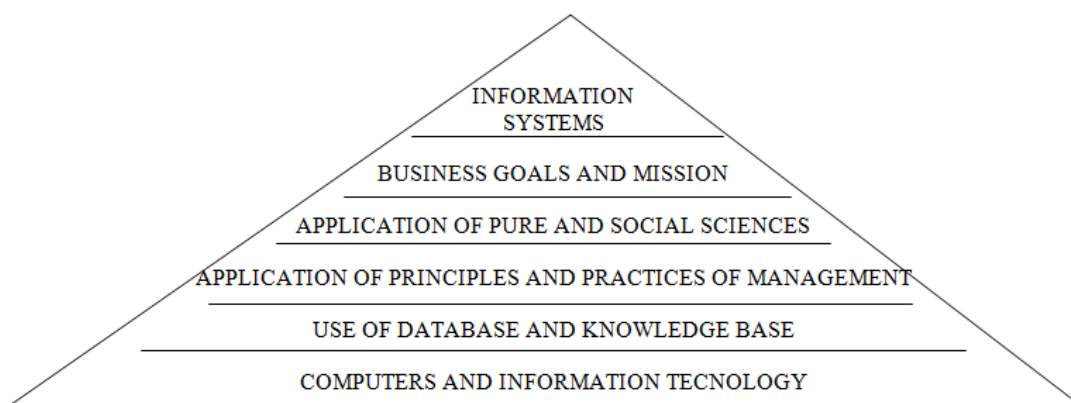


Figure 2.1 : CONCEPTUAL VIEW OF AN MIS. (Waman S Jawadekar;2007).

¹ **Strategic Decisions:** Strategic decisions are made during a current time but their primary effect will be felt at some moment in the future. (March, 1988).

Organizational Decisions: When a manager acts formally in his expected role in an organization, he makes an organizational decision, which may become the organization's official and formal decision if approved by senior management (March, 1988).

Tactical Decisions: Tactical decisions are tactical in nature and also called routine decisions. They are important but repetitive and need little thought and show only a few alternatives. The decisions are taken by middle and first line managers and do not involve any higher risk or uncertainty. (Prasad, 1997).

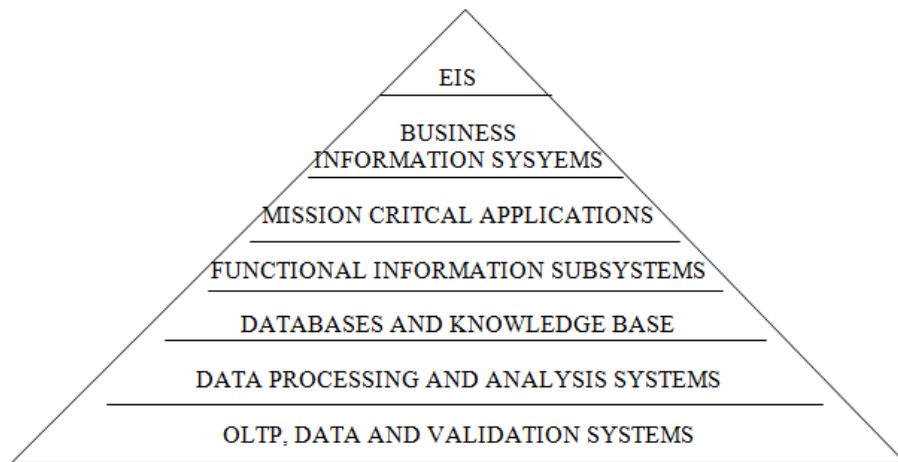


Figure 2.2 : PHYSICAL VIEW OF AN MIS.(Waman S Jawadekar;2007).

2.2 Definition of marketing

Without wanting to be exhaustive, it is for MIS readers of utmost importance to understand a number of marketing concepts before talking about a Marketing Information System (MKIS). They comprise the concepts of marketing, the marketing concept, marketing planning, marketing strategies and the marketing strategy process. For all those concepts many definitions exist in literature, but we prefer to stay with traditional textbook versions.

2.2.1. Marketing

According to the American Marketing Association, quoted by Kotler & Keller (2006, 6), marketing can be defined as “an organizational function and a set of processes for creating, communicating, and delivering value to customers and for managing customer relationships in ways that benefit the organization and its stakeholders”. In other words, marketing in a simplified meaning indicates that the product or service being marketed should meet the customers’ demands, needs and values. Another more simple definition is that marketing “includes anticipating demand, managing demand, and satisfying demand” (Evans & Berman

1997, 7). Marketing could also be defined in a few words with “mutually satisfying exchange relationships between companies and customers” (Baker 2006, 4-5).

2.2.2. Marketing Concept

The marketing concept includes the whole marketing process. “An organization focuses all of its efforts on making products or providing services that satisfy its customers at a profit” as defined by Lindgren and Shimp (1996, 23). At times it can be difficult to determine the actual difference between marketing and sales and between the marketing concept and the sales concept. Therefore Fifield (2006, 1) has defined the two as sales being “about ensuring the customer buys what the company makes” and marketing as being “about ensuring that the company makes what the customer wants to buy”. The sales concept thus precedes the marketing concept in the evolution of a company to become expert in serving customers’ needs.

2.2.3. Marketing Plan and Marketing Planning

A marketing plan contains numerous elements, such as the mission statement of the company, the definition of the business a company is in, the identification of the needs of the target customers or market segment and the needs of these customers the company wants to serve, the marketing objectives and strategies to achieve these goals and the assumptions under which the plan is made. The marketing plan can thus be defined as “a detailed scheme of marketing strategies and activities associated with each product’s marketing mix” (Lindgren & Shimp 1996, 623). The marketing mix is the set of variables marketers have to decide upon to best serve their market with a certain product. The whole marketing planning process thus involves “the process by which businesses analyze the environment and their capabilities, decide upon courses of marketing actions and implement those decisions” (Jobber & Fahy 2003, 330).

2.2.4. Marketing Strategy

A marketing strategy describes the basic method(s) of how the company wishes to reach its marketing objectives. The marketing objectives define “where the company intends to be at some time in the future with regard to its customers and the products or service by which to serve their needs” (Mercer 1999, 210). Marketing is affected by several factors which

companies have to consider when establishing their marketing strategies. Markets are very versatile and changes in technology, social organization of society and the economic environment have to be taken into account. Trends like globalization and customization are only a few of the factors that affect markets constantly.

The marketing strategy “outlines the way in which the marketing mix is used to attract and satisfy the target market and achieve an organization’s goals” (Evans & Berman 1997, 61). The marketing mix talks about the product and its forms (like brand name, design, added services and so on...), the price at which the product is offered, where it can be obtained (the distribution variable) and how its advantages and differences compared to competitive products are communicated to the target customers.

2.2.5. Marketing Strategy Process

The whole process of marketing strategy is defined as involving “the plans, budgets, and controls needed to direct a firm’s product, promotion, distribution, and pricing activities (marketing mix)” (Lindgren & Shimp 1996, 623). The process can be summarized in a few steps. First, the company has to analyze the market opportunities which refer to the prospect customers in a market whose needs and interests the company’s product could satisfy and hence gain market share. Secondly, the selection of target markets is a necessity. A target market is the market that the company decides to pursue business in, a smaller market segment for instance. A target market is defined as being the “group to which an organization appeals with its products” (Evans & Berman 1997, 31) or as “a segment that has been selected as a focus for the company’s offerings or communications” (Jobber & Fahy 2003, 333). Once the market is entered, it is referred to as a penetrated market which is the set of consumers that already are buying the product the company has to offer.

2.3. Marketing Information Systems (MKIS)

2.3.1. Definition of MKIS

Kotler (1966) points out the important role that computers play in marketing. "MKIS has an important role in management in that it helps marketing managers in reaching a decision."

The past decade has witnessed an increased reliance on the role MKIS play in the field of marketing management (Webster; 1992). Some researchers classify MKIS and its subsystems by the tasks that they can perform, for example Moriarty and Swartz came up with a system for marketing and sales productivity (MSP) that is made up of four subsystems, namely sales person productivity tools, direct mail, telemarketing and sales management" (Moriarty et al.; 1989).

Cox and Good originally defined MKIS as "a set of processes and techniques for the systematic scheduled analysis and demonstration of information in order to reach marketing decisions" (CX et al.; 1967). However later on this definition was further developed. While originally a marketing information system was designed as a mechanism to "gather, sort, analyze, evaluate" information, later the "distributing of pertinent and accurate information in a timely manner for the purpose of assisting marketing managers and decision makers to more effectively make accurate decisions, plans and establish effective control" was added to it (Buzzell et. al.; 1969). Uhl illustrated that any MKIS has to be "customized" to meet different organization demands and the different types of information it relies on in its operations". There is no standardized MKIS.

2.3.2. Classification of marketing information systems

The past thirty years have witnessed a vast expansion in the area of MKIS with many new models presented by numerous authors. The following Table 1 illustrates MKIS models focusing on their subsystems and general dimensions divided into six categories of data gathering and data analysis in addition to market planning, marketing decision making and marketing activities implementation focusing each categories main application. The category concerning control is divided into two subsections, external control and internal control. It presents an overview of many years of literature in Marketing Information Systems.

MKIS can be divided into two categories depending on the employer's organizational position and the type of use: some systems are managerial systems and others refer more to marketing activities and operational sales. Systems concerning marketing management and decision making are mainly used by people ranked high in the organization such as senior executives in addition to managers and marketing experts and analysts. Experts then turn the refined data into information that managers rely on. It should however be noted that MKIS is not limited to management but also takes part in operational, sales and marketing systems. These are invested in the everyday marketing and operational activities that is used by middle ranked managers as well as sales and marketing personnel.

The above mentioned MKIS systems are only one aspect of the use IS in marketing, namely the type of decision making influenced. In the following paragraphs we will examine other aspects of MKIS in relation to another field of marketing operations. We can talk of **Transaction processing systems (TPS)** in this respect.

Author	Subsystems	Subsystems use
<i>Management marketing information systems</i>		
Cox and (COX et. al.; 1969)	Support systems Operating systems	Data gathering Analysis, planning, control(internal)
Uhl (Uhl, K.P.; 1974)	Current awareness systems In-depth and crisis information systems Incidental information systems	Data gathering, control Analysis, decision making Analysis
Graf (Graf, F.; 1979)	Data storage and retrieval systems Monitoring systems Analytical information systems	Data gathering Control Analysis
Kotler (Kotler ,1981; Kotler ,1991)	Internal records systems Marketing intelligence systems Marketing research systems Marketing decision support systems Marketing productivity analysis systems	Control (internal) Analysis, control (external) Analysis Analysis, decision making Analysis, control (internal)

Piercy and Evans (Piercy et. al. ,1983)	Marketing intelligence systems	
	Marketing research systems	
	Market and marketing mode systems	
	Planning systems	Analysis, control (external)
Proctor(Proctor, 1991)	Control systems	Analysis
	Marketing research systems	Analysis, decision making
	Monitoring systems	
	Statistical models	Analysis, planning
Sisodia (Sisodia,1992)	Optimization models	Control
	Expert systems	Analysis
	Data aggregations	Control (external)
	Input subsystems:	Analysis, decision making
Li(Li et. al.; 1993)	data processing, marketing research and intelligence	Analysis, decision making
	Output subsystems:	Decision making
	product, price, place,	Analysis, control
	promotion and marketing-mix	Data gathering, analysis, control
<i>Operational marketing information systems</i>		
Moriarty and Swartz (Moriarty et. al.; 1989)	Salesperson productivity systems	Data gathering, implementation
	Direct mail and fulfillment systems	Data gathering, implementation
	Telemarketing systems	Data gathering, implementation
	Sales and marketing management systems	Analysis, control

Source: Jari M. Talvinen, European Journal of Marketing, Vol. 29 No. 1, 1995, pp. 8-26. © MCB University Press, 0309-0566

Table 2.1 Overview of MKIS systems and their use

TPS systems are a fundamental business application that is used on a daily basis in the field of marketing operations. It produces output on a periodic (daily) basis forwarded to management. The purpose is to allow minimizing costs while also allowing for more accuracy and faster access to data in every day functions. TPS have been described as "organizational message processing systems" (Huber,1982) due to the task they holds of providing managers with updated assessments relating to the organizational current as well as past performance records in addition to the part they play in keeping both customers and partners alike involved in the firms' warehouse, management and factory.

Inter-organizational relationships as well as inter-organizational information system (IOS) are widely concerned to be part of TPS. A common IOS is an IS that connects firms with their customers and suppliers as well as overlooking the transfer of services and products. (Cash et. al., 1985; Bakos, 1991) According to Bakes, IOS are categorized in two groups: information links and electronic marketplaces. The key distinction is that while information links occur in bilateral settings after the relationship between a buyer and a seller has been launched, electronic marketplaces on the other hand only emerge in multilateral settings aiming at creating several bilateral buyer-seller relationships.

2.3.3. The interdependence of MIS, DSS and MKIS

MIS assist managers through the reports they make available to them and by providing them online access to an organizations' historical records and its present-day performance. Generally they are created to expedite various sets of data. Normally they summarize the information gathered from TPS and forward it to management through its routine and exception reports (Alter; 1991). On the other hand, DSS have a broader analytical capabilities compared to MIS. They are mutually collaborating computerized systems created to assist in the decision making process by employing data to resolve hitches (Sprague et. al.; 1982). The purpose of DSS is to accelerate the process in which managers reach a decision and rise both individual and organizational efficiency.

However it is complicated to determine where MIS and DSS systems finish and where MKIS start. According to Piercy and Evans, the following points illustrate the main differences between MKIS and both MIS and DSS:

- Whereas the MIS or DSS handle marketing strategies partially, MKIS will also include marketing operations. The interests of MKIS are more focused than those of both MIS or DSS.
- MKIS serve the whole company as opposed to just serving one department in that they make the marketing focused information available to senior management. In MIS or DSS these managers can more easily rely on information from other departments and functions as well.

From the above it is clear that any MKIS is an MIS or DSS that concerns with marketing activities and information. Marketing DSS (MDSS) can be implemented in numerous fields such as product related or promotions related systems also it can be used in the operational management of sales for the purpose of enhancing sales force productivity.

Outside MIS or DSS there are other systems referred to as executive information systems (EIS) which operate to facilitate and assist senior management in their decision making processes. EIS count on numerous sources for data and are less demanding than previously mentioned MIS or DSS systems.

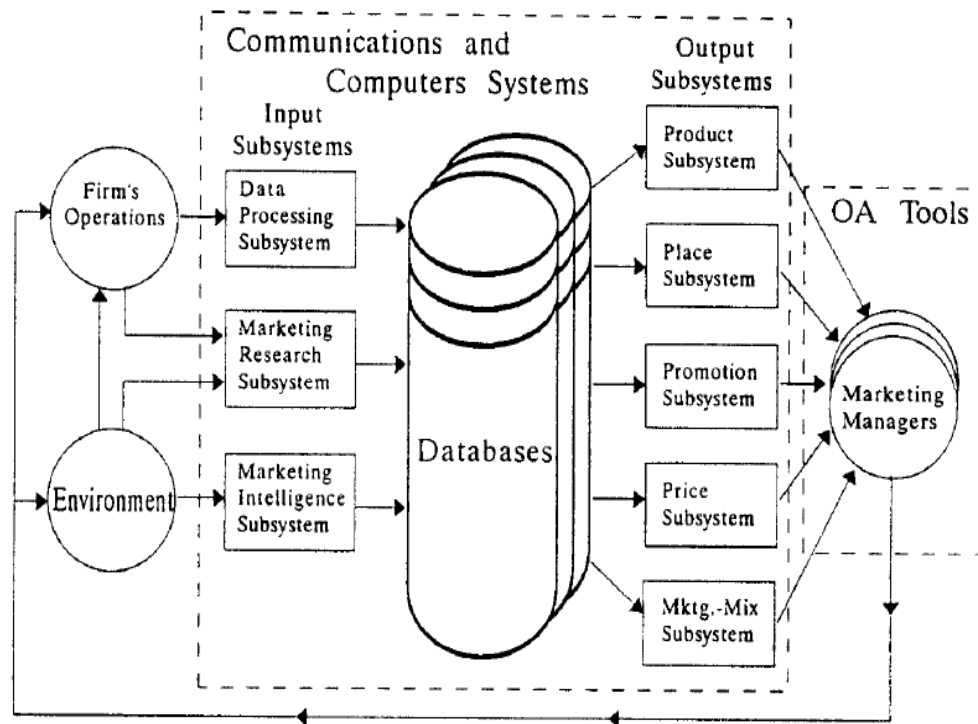
2.4. The new MKIS framework

MKIS basically is a method of reasoning or thinking about the type of information marketing managers must have in order to reach a solution while identifying that they have distinctive needs. As such it becomes clear that MKIS is a theoretical concept with different applications. For example Montgomery and Urban acknowledge its decision support competencies (McLeod ET. Al; 1982), while on the other hand King and Cleland view it as a method of involving strategic planning (King et. al.; 1974). Be that as it may, MKIS is envisioned as an information processor that gathers marketing data and provides the results to the marketing managers after processing the data they rely on to reach and execute decisions (McLeod ET. Al; 1992).

The following figure 3 illustrates this framework. Input systems collect the data from the environment and the firm's operations and then insert it into the databases while an output system processes the collected data and transfers it into the needed information that the marketing managers seek. Whereas four of those subsystems produce data concerning the four marketing mix components: product, place, price and promotion, marketing mix

subsystems allow the marketing managers to come up with tactics that contemplate the collective effect of these four ingredients. The whole MKIS is supported by different kinds of hardware and software for calculating and communications purposes. (McLeod ET. Al; 1982)

Ems/



Source: ELDON y Et.al, Journals of Management Information Systems/Summer 1993

Figure 2.3 Framework of a Marketing Information System

Unfortunately, companies have traditionally relied on formal and informal marketing data whether gathered from internal or external sources which managers then apply as a marketing tool. This held the development of MKIS systems back as it relies on traditional bureaucratic or hierarchical processes. The goal having always been to install an MKIS that covers all managerial activities in the area of sales and marketing only and make sound information available to marketing decision makers. The consequence has been that little variety has been added for long to MKIS systems, functions and tasks.

Moreover, this MIS and MKIS approach that gained favor since the seventies can be deceptive 85 because developers might overlook some important issues. Business consists of a group of logically focused tasks that are carried out in order to accomplish a specific

outcome (Davenport et. al.; 1990). Marketing management processes on the other hand are processes that “consist of analyzing market opportunities, reaching and selecting target markets, developing marketing strategies, planning marketing tactics, and implementing and controlling the marketing effort” (Kotler ;1991). This is very “tayloristic” in nature. Due to this conventional organizational and functional hierarchic view, a specialist islands of marketing activities has been established (Kotler ;1991). In such a system every single administrative subunit within the process improved its own applications individually, but no existing single subunit examines the process as a whole (Davenport et. al.; 1990). Everyone believed that in order to achieve the determined level of competence of the entire process, each single activity had to apply its own applications in an individual way. This might indeed increase the efficiency of a specific task or function, but the effectiveness of the process as a whole might suffer (Wilkinson; 1991).

Thus the need for a new and improved framework for the information systems in marketing relying on interdependence of different functional subunits is very large. All the activities influencing the marketing process and vice versa need to be accounted for. Company strategy and management processes as well as marketing management processes need to become the basis for any MKIS and management related IS development.

An MKIS does not longer function independently, on the contrary it needs to combine its data with other data from various areas and vice versa. Even marketers do prefer such an approach as their operations will not be practical unless they take the synergetic nature of both the data flows and practices of the firm's functional areas into account.

It makes the MKIS even more necessary and will employ scientific decision making techniques and a more systematic approach to problem solving. Habitual standard operating techniques and intuitive judgment of data gathered by traditional MIS and MKIS systems will become less interesting and effective. The characteristics of the new framework are depicted in Figure 4 in contrast to the ones of the old one. The consequences of the new MKIS framework are that the outcome of the process is a cross-functional optimization in the company as a whole.

Classification of Decision	Decision-Making	
	Old Framework	New framework
Programmed Repetitive and Routine	Habitual standard operating procedures (Organization, Structure, Policy, Control, Etc....	Management Information System (Including Management Scientific Techniques and computers)
Non-Programmed One-shot, ill-structured	Judgment, intuition, Insight Experience Training and Learning	Systematic approach to Problem solving & Decision-making
Consequences	Optimization of subunits Functional outcome	Company optimization Cross-functional outcome

Source: Dr. Shaker Turki Ismail, Head of Marketing Department, Philadelphia University P.O. Box (1) , Code: 19392- Amman- Jordan - adapted

Table 2.2 The new versus the old MKIS framework

This framework will allow for all decisions to be made more effectively and let the company be run more smoothly as it will be based on high quality information.

Chapter Three

Methodology and Sample

In this chapter we describe the research objectives and methodology in detail. We try to indicate why some options were chosen and how we tried to gather data and analyze them.

3.1 Objectives of this research

This research will attempt to examine the double sided relationship between the MIS department and the marketing department. If both departments work in an integrated way and the coordinated activities are executed effectively, this relationship can play a vital role in the success of a company and its capability and ability to acquire and maintain a viable competitive position in the market.

Both these departments play indeed an essential role in the company, the MIS department providing people with the salient information to act on and the marketing department developing and executing the marketing strategies to create and maintain a long term relationship with customers. They provide one another with essential information in doing so. Companies have however never seriously integrated the marketing information in the MIS information system and vice versa integrated other department's information via the MIS system in marketing information systems, although they realized very well that that communication exchange between these two departments was directly related to better performance.

In chapter 2 we have stated that when companies develop a good relationship between the MIS department and the marketing department, they can have a more effective marketing management and more information generated that can help other related activities of other departments as well. Company results will be positively influenced.

The first main objective of this research is consequently to check if and how getting an effective and successful cooperation between the MIS department and the marketing department is created and in how far in these circumstances mutually helpful information is generated. The basis for this is that, as previously mentioned research and theory believe that understanding each other's information needs generates better results and can only be achieved if the relationship is intense and fruitful.

Indeed, when the two departments integrate their activities more intensely and successfully, the MIS department will be better equipped to grasp the marketing department's information needs and save and generate essentially important information the latter needs to function appropriately more readily and with a minimum number of errors. Moreover, it will provide better data to other departments as well. In cases where an MIS department sends the wrong information to the marketing department or the right information but not in time, it puts the company in a more difficult situation, sometimes leading to the potential loss of customers and the paying of fines due to misunderstandings with customers.

This research also wants to look into the problems which have an impact on a company as a result of misunderstandings between the MIS department and the marketing department. This is the second objective of this research. We want to know in that respect what companies do when these problems occur, what losses result from this misunderstanding (risk element involved) and how companies try to solve these misunderstandings and problems. Learning from the misunderstandings indeed makes people and companies stronger and better equipped to tackle competition.

This is exactly the problem we also faced when investigating this. Companies are well aware of the fact that this learning experience is positive, but they do not want to share the new ideas with anyone out of fear that other companies and particularly the competition would learn from it as well and eventually take advantage of it by luring customers away.

By benefiting from the experiences of companies in this field without mentioning the companies' names to competitors (in this sense this dissertation is confidential), we would

like to find out how companies **try to reduce such risks** by creating a better relationship between the MIS department and the marketing department. We also hope to get more insight into how this may be done.

Both stated objectives coincide with the two part we will mention in the next paragraph when presenting our interview guide in paragraph 3.2.2.

3.2 Research Methodology

3.2.1. Basic Research options taken

We wanted to investigate the extent to which companies integrate their MIS and MKIS systems. Thus our **unit of analysis** of our research is a company.

We did not want to investigate whether this integration leads to long term business success, since the quantitative measures to do so are quite complicated and include certain elements that are not marketing related, such as financial and logistic parameters and indices about the performance of the IT-systems as well. Moreover such an approach would also require a large data base, something not realistic within the time frame of this master dissertation. Our research is thus **qualitative in nature**.

We opted for a **case based research method**, using a **structured interview technique**. These case studies were taken from several sectors of industry. All cases were situated in the **Middle East** as the author of this dissertation is Jordanian and can thus better interpret some local situations than situations in Europe and will had less difficulty in contacting people. This approach also enabled us to avoid the problem of cultural differences influencing the results of our research. We were not fully successful in doing so as only larger companies have a structure that shows the presence of both departments, IT and

marketing, separately and in sufficient capacity. Many of **these larger companies belong to international MNC's** and thus the influence of the parent company and its mode operandi on the Jordanian subsidiary could not be excluded. Smaller companies mostly do not have an extensive MIS system, let alone an MKIS system.

As the author of the dissertation resided in Belgium during the research process, it was impossible to really verify the obtained data by comparing the answers of different people involved in the information management of the contacted companies and with documents present in the company. This would have only been possible if the author would have traveled back home, which would have been an expensive option and not helpful for the following of the courses and making of the exams in Belgium. We thus opted for an interview with the **general manager or CEO** of the companies involved. If this person considered someone else in his/her company to be more knowledgeable about the topics involved, we were prepared to have the interview with this person, sometimes in presence of the general manager.

We wanted to skype these interviews and record them because that would have had the advantage of getting the answer in easy way and to have if necessary repeat and feedback questions during the interview. Moreover we could have typed out the answers and analyzed them more deeply. Many companies however did not agree to the skyping of a personal interview however. They indicated that answering would take much time and that they had to see whether no company confidential information was leaking to the outside world. The interviewed people mostly asked to put the questions on paper in a word file world and send it via e-mail to them. We thus had to go for the **sending of the interview questionnaire** to the managers we had contacted after their agreement to fill them out. We know that this is a serious limitation of our study as the answers become less interpretable and shorter.

Finally, it was not always the CEO who answered the questionnaire. Companies willing to cooperate mostly send the questionnaire through to managers of the concerned departments to answer them. This again hampered the process further because of the fact that departmental managers were not always willing to cooperate as much as their CEO's.

We also discovered that CEO's later controlled the answers to be sure these were in line with company policy.

3.2.2. Interview guide

We said that we used a qualitative research methodology, namely a structured interview technique. This means that we had prepared a list containing all the different questions we wanted to be answered. However we also wanted to keep some flexibility in the sense that sometimes questions become obsolete during an interview or new questions pop up. We call this list of questions our interview guide.

We wanted to investigate how the respondent companies generate information in their MIS and MKIS systems and what the interrelationship between both is. Thus our interview guide fundamentally is composed of two parts.

The questionnaire first asked respondent companies about the information it needs in general (question 2) and about marketing (questions 3 and 4). These questions must give an idea about the importance of the importance generating system. Next our interview guide contains questions about the existence, scope and contents generated by both the MIS and the MKIS system. The questions for the MIS system are questions 1, 5 and 6 whereas the questions about the MKIS are questions 7 and 8. Question 11 completes this section by asking whether most of the information of the MIS system is generated internally or externally to the company, whether structurally speaking third parties are involved. The question is however very broad so that also the information generated by customers themselves could be part of the answer. We then ask which information is lacking and how the company thinks it is going to get the missing information (questions 9 and 10).

In the second part of the questionnaire we investigate the way in which there is an interrelation between the MIS and the MKIS system (questions 12,13 and 14) and information both systems generate for one another (questions 15 and 16). Question 17 has been added to see whether new technologies are used to modernize both the MIS and MKIS systems.

One might wonder why the build-up in the questionnaire does not go from 1 to 17 in terms of the sequence we put the questions in. This has been done deliberately to let people think about their questions more deeply and check partially whether the answers to previous and eventually following question match. This gives us extra confidence in the results.

The interview guide is presented in the following list:

1.
 - a. Does the company have an MIS system?
 - b. Does the company have a Marketing Information System?
 - c. Since how long?
 - d. Which of the two was first established?
 - e. Did the existence of the first established one influence or trigger the establishment of the second one?
 - f. How did they evolve over time?
 - g. How are they related to one another?
2. Which information does the company need in general?
3. Which information does the company need about the components of the environment influencing its marketing?
4. Which information does the company need about the performance of its marketing?
5.
 - a. What is the goal of the MIS system?
 - b. Which information should it generate?
6.
 - a. What kind of system does the company have?
 - b. How does the system work?
 - c. Which risk for nonperformance do exist with the actual system?
7.
 - a. What is the goal of the Marketing Information System?
 - b. Which information should it generate?
 - About the market?
 - About the customers?

- About the competitors?
- About the environment and the trends in it?

8. How are these elements of information generated? (Sources of information?)
9. Which information is still lacking?
10. How do you plan to get this missing information?
11. a. Is MIS for the company external or internal?
 - b. If it's external how the company change elements of the MIS?
 - c. What can be the reason for such a change?
 - d. What is the change precisely?
12. a. How does marketing let the company change their MIS?
 - b. What can be the reasons for this change?
13. a. How does the MIS change marketing information systems?
 - b. What can be the reasons for this change?
14. a. Are these changes good for the company? Why?
 - b. What problems do they cause?
 - c. How do you solve them?
15. a. Does MIS help marketing?
 - b. If yes what kind of help?
16. a. Does marketing help MIS?
 - b. If yes, what kind of help?
17. a. Does the marketing information system also use social media?
 - b. For which information? Why?
 - c. What are the dangers and advantages of the use of social media in the information system?

3.2.3. Sample

We intended to have a substantial number of companies to cooperate with us in this research. The objective was to get around ten good cases. So we contacted the double number of companies to achieve this objective, all situated in Jordan and the larger Middle East Region (Saudi Arabia and United Arab Emirates).

As previously mentioned, only a few companies really cooperated and answered the questionnaire. Different reasons can be given for that, some of which have already been indirectly indicated in paragraph 3.2.1. They are:

- Companies did not want to disclose absolutely confidential information, even about very small and general matters
- Companies considered the effort too time consuming
- Companies were not allowed by headquarters to answer (in as far as this is true)
- Managers were not interested as they did not see the direct benefit they could get out of answering the questionnaire (this was not meant to be a consulting effort)
- Companies and managers simply said the integration was not there in their companies and thus they could not give to-the-point answers. They stated it was not their business in fact (in as far as this is true)
- Companies and managers were not very focused on such activities as the interviews or questionnaire responses had to be taken just before or during the month of Ramadan.

Finally, the most appropriate way was to contact companies via people you personally know and who are willing to be a kind of middleman to motivate friends to be willing to cooperate.

The actual result is that **four cases** could be researched into.

These are:

Case 1. JValley Software Solutions

JValley committed to providing an innovative, positive, and collaborative experience regarding all of its client engagements. With a dedicated, professional, and expert staff, it is its goal to ensure their clients that IT- projects are successfully and profitably implemented. JValley has a partnership with Microsoft and other leading regional IT-service providers to offer their customers exceptional, leading solutions and products and services Since the establishment of JValley in 2007, they have become a proven partner to businesses in need of Information Technology solutions. The head office is in Amman, Jordan and they also have an office in Riyadh, Kingdom of Saudi Arabia.

Their alliances with big companies like Microsoft and their alliances with other players in their market necessitate them to have both marketing and MIS departments that closely cooperate. Finally their Engineering manager, Mr. Bashir Al Ghazawi answered the questionnaire. This is not surprising, engineering solutions often means possessing al the information. So the MIS and Engineering department are partially integrated at JValley.

Case 2. Nokia Siemens Networks

Nokia Siemens Networks is a global telecom company which provides a wide variety of product technologies. It has major contracts with the biggest service providers. This global company has both an MIS and marketing operation also in the region and is therefore an interesting case to observe. It states that close integration of all departments in any project is one of the reasons for its success on different websites.

Mr. Mohammad Odeh, who answered the questions is a area manager for their main customers in the GCC area. The company itself in the region is called Saudi Telecom

Company (STC) and provides a complete telecom network solution to customers, from defining and supplying the needed equipment to implementing the installation and the use of it and keeping it running.

Case 3. Siemens

M.r Zeyad Musleh , working in Siemens LLC IC BT FSS in Dubai UAE as a project manager . His department in Siemens is small one compare to Siemens global in power, water treatment, automation and other big divisions. They are providing physical integrated security solution wherever required (government sector, private sector, oil&Gas ...etc). The number of the employees in his department is more than 150 employees serving the lower gulf in the region and supporting other countries in special projects like (Australia, India and China). Nowadays, the main platform for any security solution should be based on the IT network which is improving every day and become as an open protocol for any system for integration.

Case 4. Ball Filtration

Pall Corporation has approximately 10.700 direct employees worldwide. In addition, we have factory-trained distributors strategically located throughout the world. Pall have more than 30 office in major cities worldwide, at 2006 Pall Corporation open a PALL Middle East office at UAE Dubai, this office will cover Middle east and Africa, for Energy and Life science.

Unique to Pall is their global Scientific and Laboratory Services Department (SLS) which has teams of highly specialized scientists and engineers who have developed expertise in contamination control in the chemical process and refinery industry, provides a vital service link between the customer and users of their products by offering worldwide technical scientific and laboratory assistance in evaluating and solving complex filtration problems.

Their organization has a steady stream of innovative products consistently produced to high manufacturing standards, available to customers worldwide when and where they need them, and backed with excellent support and service in the field.

Moreover, their distribution and service strategies are also unique corporate assets. PALL

has successfully developed to best serve the customers in all the markets and geographies in which they operate. Serving their global customers with their highly technical and specialized product lines requires many components, e.g. frequent contact to the customer and end user to assist in the selection of the right filtration solution, and the active involvement of scientists from their scientific and laboratory services group to improve the economy and the yield of processes, if desired.

With the acquisition of the Filtration and Separations Group (FSG) in April 2001, a collection of five well-established names in the filtration industry were added to the Pall company, Filtrate and Fluid Dynamics are U.S.-based suppliers of disposable and fiber metal elements. Exekia and Schumacher are French and German manufacturers, respectively, of ceramic filtration products. SeitzSchenk is a German-based manufacturer of filtration systems like plate & frame filters, filter presses and centrifugal discharge filters.

Technical Service and Support will further ensure successful installations and accompany the introduction on innovations.

3.3. Supplementary data research

The e-mail system, although a good solution for generating participation of the involved case companies, has some disadvantages as well. It took very long to get people to really answer, we regularly had to contact them several times. On average the throughput time from first contact to final reply was about three weeks. The fact that the contacts took place just before or during the month of Ramadan is one of the factors explaining this because the length of the Labor Day is shorter in this period in Islamic countries. But the fact that several people had to be involved before finally getting to the right person, even with the help of a befriended middleman and CEO prolonged the process considerably.

Moreover, even when companies answered, we did not always get a fully completed form. Questions for it was very difficult to get answers were:

1. Which risks for nonperformance do exist in the actual system MIS and MKIS systems?
2. If change happened recently in the MIS or MKIS system, what is the reason for such a change?
3. What is the change precisely?

We believe that company secrecy rules are to blame for it as well as the fact that some of the answers might be interpreted by people outside the company, such as me in a negative way and have negative consequences for the image of the company. Precisely the same reasons and questions were indeed cited by several contacted companies for not willing to cooperate with me.

For the respondents, I tried repeatedly over and over again to get the answers more complete by extra e-mail contact, with some success. Thanks to these extra efforts, we finally got four case studies with a relatively complete answer sheet. The short answers are presented in appendices.

Chapter 4

Findings

In this chapter we will briefly describe the answers of the different respondents to our questionnaire and compare them to draw some conclusions on our main theme.

4.1 Findings

This research enables us to make comparisons between our four companies. They have both an MIS department and a Marketing department and operate in different sectors of industry so that a comparison is interesting. They are as mentioned in the previous chapter, JValley (software solutions), Nokia Siemens Networks (communications company), Siemens (operating in a different fields of industry as project engineering company integrating different technologies, but it is the Siemens home security company that answered the questions which works in security access door systems for homes and companies in Dubai) and Pall oil and gas filtration (working in the oil and gas field). We want to see whether the MKIS system is similar in those companies and if the company work field has some impact on the MKIS and on the relationship with the MIS system.

The table below gives us a short overview of the answers of the companies. The numbers of the questions refer to the interview guide mentioned in the previous chapter.

Question	JValley Software Solution	Siemens	Nokia Siemens Networks
1a.	Yes	Yes	Yes
1b.	Yes	No	Yes
1c.	3 years	Since the beginning	Since 2003
1d.	First one	N/A (*)	MIS
1e.	No	N/A	Yes
1f.	More features were added and more usage was made	Gradually with the development of the business and website	Competition increased and customer needs increased so a system has to be integrated to meet the marketing target

1g.	MKIS depends on the data that can be found in MIS	N/A	Customer data base and info is linked on the MIS system for quick search and report generating
2.	Personnel, clients and accounting information	NO ANSWER	All related info for the customers (Budget, decision makers, competitor's strength and weak points)
3.	Market needs and market size	Key clients, target market, market share and competition	Prices/Services for competitors. Complete analyses of the customer strategy in the market.
4.	Past performance, marketing campaign success rate and outcomes of campaigns	Changes in sales revenue, exposure and awareness	Sales Target accomplishment Customer satisfaction Solution awareness
5a.	We count on our MIS system and its gathered data, in deciding and knowing where our company is and where it should go.	NO ANSWER	Manage all SW modules of the system and help to increase the efficiency of our company by speeding up the process of reporting and gathering data.
5b.	Financial information, current and prospective clients' information.	NO ANSWER	All related issues to the customer and market analysis
6a.	Suite of smaller systems	NO ANSWER	SAP
6b.	It starts working by getting actual and forecasted information into it, and then reviewing its various analytical reports. NO ANSWER	NO ANSWER	Portal for each concerned employee and all linked together to complete the process. NO ANSWER
6c.		NO ANSWER	
7a.	Helping us to make marketing decisions	NO ANSWER	Strengthens the company situation in the market and provide all necessary info for targeted sales.
7b1.	Yes	Volume and market shares	Market capacity, and needs.
7b2.	Yes	Power, influences, loyalty and demographics	Requirements, budget, contacts, events Prices, strong and weak points, capabilities

7b3.	No	Shares and strategy	NO ANSWER
7b4.	Yes	Change year-on-year	
8.	History data, third party sources data, and public data.	Field market research	Our Sales and Marketing Dept.
9.	Customers information	NO ANSWER	Nothing
10.	By listening more to current clients and project accordingly. Moreover, exploring different aspects in the market.	We buy reports from market research companies	Regular visits of the marketing teams
11a.	Internal	Internal	Internal
11b.	NO ANSWER	N/A	NO ANSWER
11c.	NO ANSWER	N/A	NO ANSWER
11d.	NO ANSWER	N/A	NO ANSWER
12a.	Yes	Capital reinvestment	NO ANSWER
12b.	To support and integrate with their MKIS	Trends in the market	NO ANSWER
13a.	Yes	Budget, goals	Speeding up the retrieval of info and generate analytical reports.
13b.	To support and integrate with their MIS	Trends in the market	
14a.	It is relative	They reflect the size and success of the company	NO ANSWER
14b.	Complex systems	N/A	NO ANSWER
14c.	Decoupling as much as possible	N/A	NO ANSWER
15a.	Sure	Yes	NO ANSWER
15b.	Supports it with very good set of information.	Reflect in strategy and decision	NO ANSWER
16a.	Sure	Yes	NO ANSWER
16b.	It makes it clearer on which market or customers the company should focus and subsequently, the company becomes more effective.	Reflect in strategy and decision	NO ANSWER
17a.	Yes	N/A	NO ANSWER
17b.	For Advertisements, since social media have a very large and well segmented audience	N/A	NO ANSWER
17c.	The information at social	Positive are the large sample size and the	NO ANSWER

	media tends to be not fully accurate and it needs to be filtered out	easiness to track the demographics. Negative is the fact that there is no guarantee in correctness of the data.	
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(*) N/A = not applicable

Question	Pall Filtering
1a.	Yes.
1b.	They have a CRM system but it's not very preformat and adapted to the needs. No answer MIS.
1c.	The second phase after the MIS is naturally to expand to the MKIS.
1d.	No answer
1e.	Should be integrated. No answer.
1f.	Should be integrated.
1g.	
2.	1 st priority is the financial and sales information. 2 nd priority, starting January 2013, is the market intelligence.
3.	Countries, macro environment, markets, customers, competitors.
4.	Specific marketing KPIs, although the ultimate KPIs are the sales figures.
5a.	Centralize all company's information, easy extraction & reports for decision making. For all departments.
5b.	
6a.	SAP
6b.	www.sap.com
6c.	They are a global corporation, so the natural drawbacks are due to centralization.
7a.	Marketing intelligence info for business decision making. Size, growth trends.
7b1.	Contacts, needs.
7b2.	Offering, structure, strategies, figures.
7b3.	PESTEL.
7b4.	
8.	Multiple sources: websites, magazines, databases, exhibitions, sales feedback...
9.	No answer .
10.	Dedicated team, IT tools & internal cooperation

11a.	External, but adapted/customized to our needs.
11b.	Through the supplier SAP
11c.	Business growth, changes in market environment & customer needs, new laws & regulations & policies...
	No answer .
11d.	
12a.	Link between the company and the external environment (customers, competition...)
	No answer .
12b.	
13a.	No answer.
13b.	No answer.
14a.	Yes of course, because market intelligence is one of the key success factors in the increasingly competitive environment.
	Lot of effort and costs.
	Organization.
14b.	
14c.	
15a.	Yes.
15b.	Source of critical internal data (sales figures, margins, profits...)
16a.	Yes
16b.	complement internal data with external data & centralize everything
17a.	No answer.
17b.	No answer.
17c.	No answer.

Table 4.1 Companies' answer

It is upon this table, that we base ourselves for the comparisons below.

4.2. Comparison of the obtained answers

All the companies involved in our research seem to have an MIS department. Most of them however started this MIS system before they had already developed an MKIS system. Gradually and in a second phase, companies integrated their newly developed MKIS in their existing MIS system and the cooperation between the departments became more intense. The companies indicate different reasons for this. These are:

- More features were gradually added to the MKIS system as the business developed and the use of the social media and website increased the possibilities for doing so.
- Competition became more fierce and customers wanted to be served more specifically to have a differentiated image with them. Thus a system had to be developed to meet marketing targets better. Moreover this system needed more information about different company aspects, so that the integration in the MIS system was also mandatory. MKIS depends largely on data that can be found in the MIS.

Customer data base and information are in those companies linked to the MIS system for quick search and report generating purposes, although the starting date of the two departments and systems lies apart in time, with a minimum time lag of three years for the MKIS.

The information which these companies need is quite different. The answers on this part of the interview guide are clearly most influenced by the industry sector in which the companies are situated. There are similarities however as well: all these companies need information about customer. Even Siemens did not answer the question, but told us in our contacts that the reason for that is that they see this is a private thing and they do not want to share it with others as the information related to the MIS and Marketing departments is about market needs and market size, key clients, target markets, market shares and the competition, their prices and services. These data are clearly market and customer related. Other companies stated it somewhat differently, indicating that they also need complete analyses of the customer strategy in the market. Companies did not all explicitly (two out of four) state that also environmental factors influencing their marketing strategies is salient and must be obtained in their MKIS system with help of the MIS system.

About the performance parameters JValley added to the list that past performance, marketing campaign success rates and outcomes of campaigns are very important to complete the data. At Siemens changes in sales revenue, exposure and awareness is very important as well and Nokia Siemens said the sales targets, accomplishment of them, customer satisfaction, and awareness about solutions offered to customers was important.

The goals of the MIS and MKIS systems at JValley are to know more accurately the data needed to know where the company is and where it is going and to decide whether is the correct path or should be changed. Nokia Siemens wants to manage all the strengths and

weaknesses of its system in order to increase the efficiency of the company by speeding up the process of reporting and gathering data. For them, the information should also generate financial information, current and prospective clients' information, and market analysis data.

The companies use different kind of systems. The system which JVally started to work was able to get actual and forecasted information. Later the development and review of various analytical reports was added. Nokia Siemens says they started with a portal accessible to each concerned employee that will link all together to complete the data gathering process. The third company uses a system that already integrates all data processing functions, namely an SAP system. So all companies, although not talking about the risk of nonperformance of the original system, are evolving to a situation where they tacitly recognize this risk and integrate their systems more actively or use even an integrated system in which the MIS and MKIS are more closely linked and even create better links between the employees involved.

This is probably due to the fact that the stated objectives for the MKIS system are identical in all companies, namely making better marketing decisions. To do so, they have to keep data about their market such as market shares, market capacity and needs, and data about customers like what is influencing them, their loyalty, their requirements, the budget they want to spend and can spend, the contact data. Data about competitors are also needed in all cases, but JVally. These data refer then to shares, strategy, prices, strong and weak points and capabilities of the competitors. All these data as well as the data about the environment are needed. Integration of those data is necessary.

We did not find any clue to why these answers were given to us on the answer sheets, but got to hear it in private. Privately, but of the record, companies say that the major objective is to make marketing plans over the middle and long term with the help of the integrated MIS and MKIS data. Therefore, the major consequence of the integration effort is getting better market research data, helping companies to target customers better and forecast sales and revenue more effectively. Thus market planning and research seem to go hand in hand. This is also probably the reason why the companies answering to the question about external partners in the data gathering process are saying they buy for instance market research report from other companies. This completes their own efforts in this area.

The companies have other different information sources as well. At JVally it is the history data and public data about the sales and marketing in other companies. But this seems to be a bottleneck. The company says it still lacks many information about customers as the markets and data change too rapidly and updating can often only be done by listening more to current clients and adapt project accordingly. This is very difficult however and although we did not get any reason for it, the manager in our private contacts told us that training of personnel to be more market and data ware is to blame often. Moreover, exploring different aspects of the market by regular visits of the marketing teams is expensive, but all companies indicate it is the best system to complete the market data for both the MIS and MKIS system.

Sometimes the MIS department makes the company change their MKIS for different reasons like supporting and integrating with their MKIS, the analysis needed for successful capital reinvestment, data about new and next trends in the market. All companies said change is good for them because they have to change as well and need to speed up the retrieval of info and generation of analytical reports, thus making integrating more necessary between the MIS and MKIS. The problem about change is however that systems become more complex and solving problems by decoupling as much as possible does not really help. MIS must help Marketing by supporting it with a very good set of information, reflected in better strategic decisions. Marketing must help MIS as it can make it clearer on which markets or on which customers the company should focus and subsequently to become more profitable.

In all, these answers prove that the new integrated model depicted in chapter 2 between the MIS and MKIS system is gradually evolving as market change more rapidly and competition gets more fierce. Companies realize that the power information can give them can only be used to the maximum when all relevant data about market research are transformed into valid middle and long term plans that also will be the input for the efficient functioning of other departments.

Finally, sometimes the MIS department uses the social media to search about some information mostly about advertisements and their effect. Since social media have a very large and well segmented audience and data about the personality of the users are easy to find this seems to be a very interesting element. The reliability of the data however is less sure. Also when hiring new personnel companies looking to profiles of potential new employees to see whether they fit the company profile or to search actively for people

without having to pay the fees of recruitment companies. One company mentioned that the use of social media costs the company extra time. They prefer to let recruitment firms do the hiring anyway and think that paying their fees is better than losing too much when doing it themselves. The data on recruitment however are not only related to MIS or MKIS, but to a different system of the MIS, the Personnel information system..

4.3. Major conclusion

Almost all answers of all companies are similar as such or complete each other very well. Thus a clear picture evolves, although generalization based on four answers would be futile. We can confidently say however that the market's rapid change and the fierceness of competition have influenced companies considerably, pushing them to a more, yet not fully integrated MIS and MKIS system. The major goal is to develop gradually a better strategic planning tool for marketing purposes so that the process of selecting customers, developing the right relations with them and offering the most viable and profitable solutions to them can be done more effectively. The theory indicating that a new framework for integration between MIS and MKIS is needed is in that sense proven.

We must however indicate that unfortunately we did not find any consumer product company ready to answer. In B2B markets company-customer relationships are evidently more developed and since a longer period a hot item. This might partially explain some results.

Chapter 5

Conclusion

5.1 Conclusion:

This research investigated the quality of the cooperation between the MIS department and Marketing department in large companies and how these two departments can help each other in supplying one another with the right quality of data and investigating how to link them better with other departments. The problem observed by this research is that the companies do not recognize the value of the data in those departments to each other and to the company at large not the impact of MIS and MKIS on the company.

This research also looked at the cooperation between the MIS department and the Marketing department and how companies can have a good MKIS that provides assistance in the decision-making process at large.

This research confirms that an MIS is the center of information in companies and MIS work can save and store the necessary data and provide them to those who need them in the company. The method used is using a platform linking departments like SAP or ERP. Integration of Marketing data in it is essential both for the development of a good marketing marketing plan for companies upon which further market research can be based leading to effective execution. The data of the MIS department have to be taken into account as well in this process.

5.2 Limitations of this study:

This study only comprises four case studies. Moreover, these case studies have been executed via mail for a number of reasons, mentioned in the previous chapters. They are that company managers did not want to grant a real interview because it would take too long nor answer all the questions openly for reasons of secrecy.

The fact that only written answers were obtained, in some cases complemented by written replies to supplementary questions asked separately by e-mail has as main consequence

that no really deep answers could be obtained or probed at, a thing that would have been possible with a real personal interview.

We also got the answer from one person in each of the case companies and cannot really verify whether the answers were prepared in collaboration with a colleague from the same or another department or the manager or CEO himself. Thus the normal measures that researchers use to make case based research more reliable could not be undertaken. We could not talk ourselves to more than one person in each company to get an insight into the view of the different departments involved in the integration of the MIS and marketing department, nor could we confront them with opposing views. We could not compare the data obtained with documents and records in the company to verify the exactness of the answers either.

For these reasons we have to be very careful when interpreting these data and may certainly not generalize them at all. The number of cases is too small and the verification of the data too limited.

At best we can say that this is a preliminary study into the topic of interrelationships between companies' MIS and MKIS systems and the departments involved and the risks companies hope to avoid when doing so. More, deeper and more pointed research is needed to develop a better understanding of this process of integration.

5.3 Implications for further research:

Further research should take these limitations at heart. This signifies that the best way to go forward is:

- To use real life interviews in only a few companies to develop hypotheses on the nature of the risk companies avoid when integrating MIS and MKIS, on the processes that take place in doing so, the infrastructure used in doing so, the people who are involved and the partners with which companies work.
- To execute a proper verification of the data obtained as such by looking into company documents and talking to several involved people.
- To go further on the conclusions of these cases to develop a more quantitative approach to verify the developed hypotheses in the two previous steps.

We would advise future researchers to try to keep cultural influences in the answers of the managers involved in this type of research to a minimum. This will not be easy as the most likely companies to cooperate are Multinational Corporation that might have multinational management as well. In that case only studies that take also the interrelated influence of mother and daughter companies into account will be fruitful. Another option could be that the research team itself becomes multinational and multicultural in nature. In that sense a research venture of researchers from different universities in a network like Erasmus or at least having some kind of intense cooperation seems to be a good way of doing so.

Another advice is that if such research is considered to be interesting, the specific research interests of the researchers involved should also be multi-disciplinary. At least someone interested in IT and MIS-related topics should be involved as well as someone interested in marketing as a research subject, more specifically marketing research and planning in this field.

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Interviews

- **JValley Software Solutions** Engineering manager, Mr. Bashir Al Ghazawi answered the questionnaire.
- **Nokia Siemens Networks** Mr. Mohammad Odeh, who answered the questions, is an area manager for their main customers in the GCC area.
- **Siemens** M.r Zeyad Musleh , working in Siemens LLC IC BT FSS in Dubai UAE as a project manager.
- **Ball Filtration** Engineer Mohammed Al Ghzawi ,Contry Manager , Middle East - Energy

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