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Creation of marketing information system in a company and the expected value of marketing information

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ABSTRACT

A key factor of an efficient working of all organizations are skilled managers. They have to have the necessary knowledge, experience and skills to be able to perform effectively managerial activities. Each company's ability to survive depends mainly on an ability to respond quickly to external influences, but also from art to adapt to new environmental conditions [Daneshjo, 2016; Štofková, 2013]. All this places extremely high demands on managers. There is no doubt that an effective use of information contributes significantly to performance of companies. The quality of decision-making depends primarily on quality of information and an ability to process them. Some external circumstances force businesses into new technologies to be more intelligent that the data and information in their daily activities is collected and processed, mined and certain strategic information important for their future decision-making. In terms of inner life of a company its purpose is to improve the dissemination and sharing of internal corporate information. In terms of connection with stakeholders, in turn, in order that the company present its products, services and possibly future plans. The paper deals systems which are used for the purpose of effective use of information in companies, that the task is to produce quality and relevant information necessary for managing process. Effective management is based on the use of information at all stages of the decision-making process (phase of obtaining the information, evaluation phase of gathered data and the implementation phase of the decision). Importance of information for a manager results from their needs during their decision-making and effective implementation of any management functions (planning, organization, leadership, control, etc.). The information must be objective on which management of company may know the state of the controlled object and to guide its development to the intended objective in due time.

Keywords: management, marketing information system, implementation, marketing research.

JEL codes: *A2, A11, C02.*

1. INTRODUCTION

With the growth of demands of customers and increasing competition among companies the importance of professional marketing strategies of companies that desire to maintain on the market and make a profit is increasing. If a marketing strategy is developed appropriately, it ensures that the prerequisites for achieving objectives by a company are met. Marketing information system is an organized way of gathering and analyzing necessary data to ensure information needed by managers for their decision making. It organizes incoming data so that they would be available. A marketing information system consists of people, equipment and procedures for the collection, analysis, evaluation and distribution of necessary, timely and accurate information to marketing decision making. Most of companies have data-processing experts who help managers get the standard reports and outputs from the database. Marketing information system begins and ends with marketing managers. Firstly, information needs of managers are defined in interaction with them. Then the necessary information is obtained from internal company records marketing intelligence and the process of marketing research. Finally, a marketing information system distributes information managers in the right form at the right time to assist them in marketing planning, implementation and control. An assumption of an effective working of companies is acquiring modern management. Companies prosper with a good management, especially the top and medium. A key factor of an efficient working of all organizations are skilled managers. They have to

have the necessary knowledge, experience and skills to be able to perform effectively managerial activities. Each company's ability to survive depends mainly on an ability to respond quickly to external influences, but also from art to adapt to new environmental conditions [Daneshjo 2016; Štofková, 2013].

All this places extremely high demands on managers. There is no doubt that an effective use of information contributes significantly to performance of companies. The quality of decision-making depends primarily on quality of information and an ability to process them. Some external circumstances force businesses into new technologies to be more intelligent that the data and information in their daily activities is collected and processed, mined and certain strategic information important for their future decision-making. In terms of inner life of a company its purpose is to improve the dissemination and sharing of internal corporate information. In terms of connection with stakeholders, in turn, in order that the company present its products, services and possibly future plans. Systems are used for the purpose of effective use of information in companies, that the task is to produce quality and relevant information necessary for managing process. Experts claim that it is necessary to have 95% of the information to take a decision and remaining 5% of not being informed is a risk in taking the decision. Managers have indeed often lack of necessary and quality information, but also often suffer from an excess of useless information that steal time and they do not contribute to the quality of management certainly. It is not enough that a manager has enough quality information. It is equally important having a good methods and efficient means for processing information for the preparation of the decision for quality management.

Effective management is based on the use of information at all stages of the decision-making process (phase of obtaining the information, evaluation phase of gathered data and the implementation phase of the decision). Importance of information for a manager results from their needs during their decision-making and effective implementation of any management functions (planning, organization, leadership, control, etc.). Information is becoming one of important requirements that managers can take optimal decisions in given circumstances. The information must be objective on which management of company may know the state of the controlled object and to guide its development to the intended objective in due time.

2. CREATION OF MARKETING INFORMATION SYSTEM IN A COMPANY

Marketing is an integral part of everyday economic and management practices in terms of the competitive environment. Effective application of principles of marketing in management work of companies is supported by an adequate set of relevant information, without which a successful manager cannot do without. A basic principle of marketing management is to manage and control of all marketing activities, in a permanent process of understanding and analyzing marketing problems at the end of which a rational decision should always stand based on a current set of information [Daneshjo 2016].

A level of creating a marketing information system is different in individual companies. It is determined by size of a company, its structure of production, a degree of realization of products, hardware for management, as well as available sources. A rationally working marketing company's information system consists of essentially of four subsystems:

- ✓ Internal Information Subsystem
- ✓ Marketing Intelligence Subsystem
- ✓ Marketing Research
- ✓ Analytical marketing subsystem

The concept of marketing information system is a very rare term used in the economic environment, but an important aspect of crisis management of a company. In order to obtain a sufficient number of decisions of marketing information, which is necessary for strategic, tactical as well as operational management and decision making in the company, is a very important phenomenon to create an own marketing information system, which is an integral part of marketing research needed to obtain data on internal and external marketing of the company. Using such research, the company reaches sociological, economic, political as well as demographic information changes, which can greatly affect the overall management of the company [Daneshjo, 2016; Malindžáková, 2013].

A very important part of marketing information system is a market survey, which is often identified by professionals as marketing survey. But it should be noted a significant difference, because a research is a long-term systematic activity, where results are applied to the solution, and if we talk about a single collection of information and integrated into overall research, then we mean a marketing survey. There are several possible forms of marketing information system dependent on a nature of a company and financial resources. Possibilities of raising funds for a smooth working marketing information system can be either from internal sources or from a marketing company intelligence or using marketing research. Using internal resources, we

can obtain data on management of the company, customers, distribution, competitive environment as well as other data from company records, reports and other available resources.

Marketing intelligence brings mainly external sources, based on which we can monitor a volume of production, price movements, sales methods, or even ways to promote a company. Impact of data from objective facts about a market situation, a behavior of a client or potential hazards can be obtained from marketing research. This is a subsequent analysis and interpreting the data obtained enabling understanding of specific solutions.

**Figure 1.** Corporate Information System
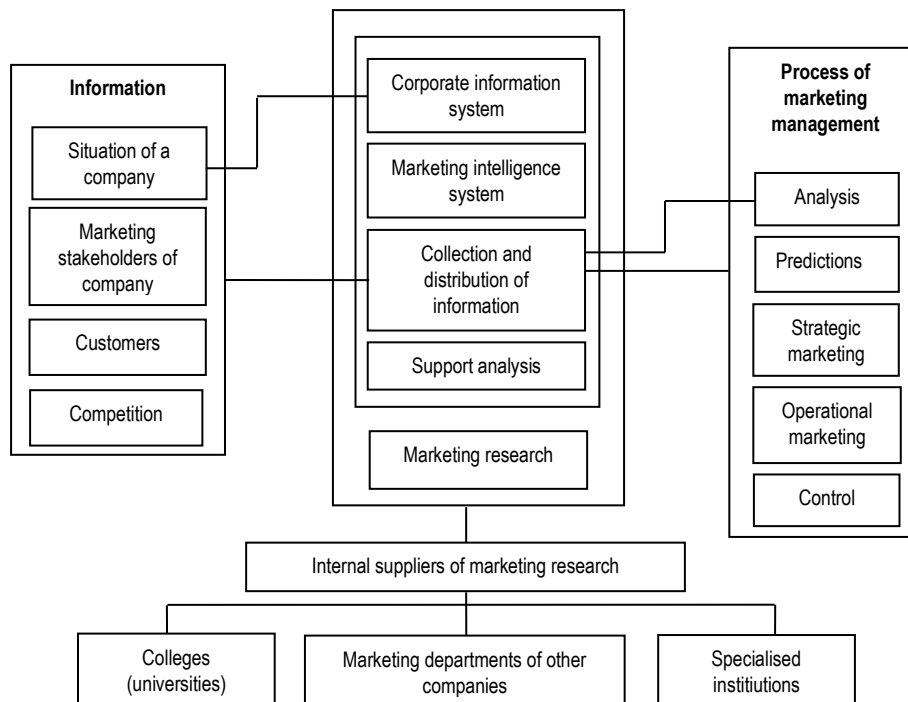
3. USE OF MARKETING INFORMATION SYSTEM IN THE COMPANY

The company must determine an extent of implementation in establishing or upgrading systems used in the company at the beginning. Sometimes large and very complex implementation is not the best choice in the market environment, and therefore care should be taken to factors affecting the decision making. One factor is an existence of, or a lack of use of marketing information systems or modules and their degree of interconnection. A starting position is easier if the company does not use an integrated complex application, hence there is no need to decide on how it will affect a new system to existing systems and their degree of substitution, or subsequent elimination. A common problem can be duplicated data, however, due to simple positions, this problem is eliminated. If the company starts from the beginning, the overall final decision of implementation is within the scope of management and subsequent budget and it is largely influenced by a purposefulness and flexibility. The company may be opinion, when it considers replacing the used computer system when limitations and complications at the time which provides data transfer between the two systems. Most often a company encounters situations where more or less sophisticated partial systems are used for individual activities. There tabular data are used, real database application using database applications, or on-line database systems. Importance should be given here to in-depth audit of systems used and the assessment of extent of their contribution to an overall positive effect of marketing in the company [Daneshjo, 2016].

Another factor influencing the decision-making on implementation issues which plays an important role in a selection of modules for a new system and a complexity of a decision of package of selected marketing information system, is the complexity of implemented marketing and sales activities. Companies that apply this marketing-oriented management principle oriented not only inside the corporate communications but also external communications, usually prefer a comprehensive solution. Advantages of complex solutions are such as data consistency and clear data model of solution, complete linkage within the subsystems, centrally dealt application of availability for users, unified updates, and so on. Marketing information system has its four major subsystems:

✓ Subsystem: decision on substitution marketing system says a cancellation, the data connection is not necessary to be solved.
✓ Subsystem: says letting decisions regarding the subsystem in a modified form, to innovate selected data structures, it is necessary to establish a link in other subsystems.
✓ Subsystem: is necessary and effective for the company, it addresses a retention of system in its original state. To support the marketing subsystem is designed an export of subsystem that addresses data presentation.
✓ Subsystem: says an old system cancellation and new system functions transpose, taking to implement data backup and transforming them into the new data structure.

Figure 2. Structure of the marketing information system
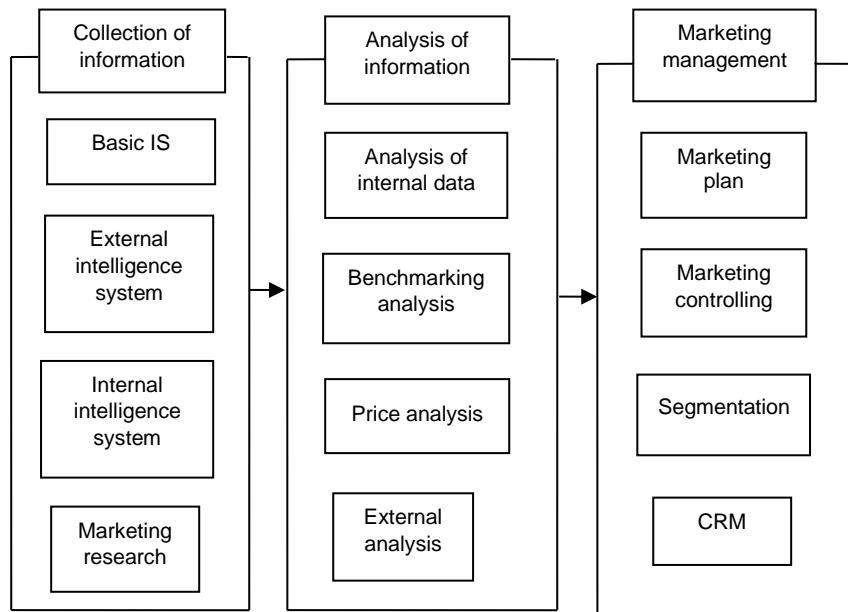
Most needed subsystem of marketing information system to identify market opportunities and their decision on typically most needed marketing information system describes preferably an implemented model of MkIS that consists of people, equipment, procedures, collection, sorting, analysis, interpretation and distribution of timely and accurate information for marketing decisions, which activity is described in the Tab. 1.

Table 1. Module of marketing information system under a scope of a sector and its use in practice

Type of company (MkIS module is implemented as a priority)	Company´s activities description	A main use
Wholesale computers	It distributes computer components and full range of computing from a level of retail customers	Integration of suppliers of products, mainly manufacturers of finished devices and components in order to optimize the delivery time for its customers, minimize costs to purchase products, minimize conflicts for realized purchases, evaluating the reliability of suppliers and deepening customer-supplier relationships.
Real estate agency	Active acquiring new customers, building a database of contacts, reaching out through active telephone and via electronic communications	Capturing all contacts and monitoring phases of development of business relationship before, during and after conclusion of the negotiations cycle, further addressing existing customers, avoids duplication of addressing, increases effectiveness and targeting of communication.
Manufacturer of electronic components	Manufacture of electronic components supplied to car manufacturers, service stations and other customers primarily distribution link at wholesale level	Production planning, new product development, monitoring a status and position in the market for existing product portfolio, acquiring new incentives for future development, process optimization when placing products on the market.

Marketing database contains a quantity of information that the company needs to work with every day and which meets in market environment daily. It is reported in literature as a so-called database. The best way to store information is to create own marketing information system. Database marketing of the company should have the most complete customer database to use it to able to better and more efficiently break down customers into groups according to various characteristics resulting from the behavior of the customers and offer them appropriate and desirable products, goods, or services that are for the given group of customers. A concept of cross-selling is bound in connection with this inclusion of customers into different groups, an essence of which is a maximum reaching clients products or services that are "tailored to the needs" of the customer.

4. IMPLEMENTATION OF MARKETING INFORMATION SYSTEM IN AN COMPANY

Implementation is usually understood as an introduction of a plan, program or strategy into practice. Implementing means a process by which marketing plans are converted to actionable tasks that are transferred via this process in order to meet planned objectives in Anglo-American managerial literature.

A concept of strategy implementation can be understood both procedurally, and as a sub-strategic project. Procedural aspects of the implementation include: formulating objectives of implementation and specification activities to enforcing, implementation and execution of implementation control. It is recommended to define implementation as a separate strategic project in the immediate implementation phase. Process of strategy creation can be divided into three partial task [Štofková, 2013]:

- ✓ To ensure the acceptance strategy for company workers = enforcement of implementation.
- ✓ To specify global strategic tasks.
- ✓ To customize the corporate structure, the business system and corporate culture strategy proposed.

The main objective of the implementation process is a successful implementation of created strategy. To achieve this, we need:

- ✓ To ensure knowledge and clarity of strategy content.
- ✓ To equip those who are concerned implementation of relevant competence.
- ✓ To achieve their willingness to carry out the given strategy.

Prerequisite for successful enforcement of strategy is that the content of the strategy is familiar to persons in the company. It is necessary to distinguish two groups of recipients:

- ✓ Top and middle management - should be informed of the reasons for strategic change, the content, the expectations of success and the expected effects of the strategic concept. The communication should be rather informal.
- ✓ The remaining workers – the content of strategic nature is reduced due to confidentiality reasons and limited workers' skills to understand strategic problems.

Decisive steps of implementation of the strategy include a development of programs, budgets and procedures. The task of programs is to specify which measures under various functional areas will be required in order to implement the formulated strategy. These are organizational, informational, and so-called functional programs built-in into planning system of the company. A task of budgets is to develop planning programs to value relationships. A task of procedures is to develop programs into system of a sequence of steps or techniques, describing in detail individual tasks and procedure for their implementation. Formulation and implementation of strategies include identifying opportunities and risks in corporate environment, assessment of strengths and weaknesses of the organization, creating organizational structures, acquiring adequate staff and a proposal of adequate remuneration of workers. A strategy is a response - continuous and adaptive opportunities and external risks and internal strengths and weaknesses that affect the organization [Štofková, 2015].

A general trend of current marketing is an increase in an intensity of an importance of an availability of precise and explicit and maximally formalizable tacit information that the company is able to respond to situations when operating target market more efficiently than its competitors. Within copy of this trend, companies are forced to work more closely with all the information that occur in the company. Their processing and way of subsequent presentation are necessary to be continuously improved. Regarding customer service and ensuring their satisfaction during and after the consumption of a product, company's marketing information system plays an important role. Companies that have not used marketing information system, proceed its introduction, companies that have already used some parts of the system, or separate units, make an effort to increase amount of its added value. This benefit indicates basic implementation processes and factors that determine these processes. The aim is to provide a useful template in decision-making on a introduction of marketing information system in the company with an emphasis on process efficiency [Žižka, 2004].

The process of implementation of the information system is a complex of undertaking activities leading to a full implementation of innovation with the desired effect of improving the competitiveness. The implementation is a complex process, which close cooperation of customer with the supplier plays in a vital role. It cannot be assumed that all of the work during implementation will be performed by the supplier. On one hand of the company, which the solution is implemented in, a number of important functions is also needed to be performed. The basis is a good definition of competence, motivation of the participating team and timely determination of processes to use new applications. The process of implementing of the new solution can be summarized by the following steps:

- ✓ A decision on the aims of the introduction of new solutions.
- ✓ A decision on the method of determination of the budget and a specific amount of the budget.
- ✓ A determination of supplier selection methods and solutions.
- ✓ A selection of the implementation team, the definition of competence.
- ✓ A preparation of documents for supplier selection.
- ✓ A performance of the selection procedure in all its phases.
- ✓ A process of technical implementation of the system.
- ✓ An implementation of staff training.
- ✓ A dual operation of existing systems and new systems (subsystems).
- ✓ Testing and debugging of errors and process optimization.
- ✓ Switch to the live operation of the new system.

Selected steps are replaced by alternatives in a case of in-house solutions. For example, it may also be spoken about determination methods of preparation of competent technical team responsible for the development, or software implementation in the case of step Nr. 3. Each of the defined steps can be further broken down into a number of smaller, relatively independent parts. It is necessary to determine a timetable, the responsible team on both sides, specific tasks and measurable outcomes as well as positive or negative motivation in the case of not meeting the determined tasks on time and with the required quality and quantity for each of them. Implementation milestones of marketing information system in the company [Daneshjo, 2016; Skokan, 2013]:

- ✓ Creating a project implementation team.
- ✓ Project analysis of the existing state of business processes, needs and information system. The business processes, materials and communication flows, management structure, and so on are documented. Reserves will be indicated. A vision will be described how to improve the operation of the company after the introduction of eso / es into practice immediately, but also perspective.
- ✓ Development of the material Target concept, which contains the background and objectives of the project, indicators of project successfulness, project analysis of the company and its vision, anticipated implementation benefits for the company, the schedule, the scope and the method of the implementation, including data of conversion from the original software. The document is subject to approval.
- ✓ The implementation of the system of training, data conversion, through a trial operation to running different software areas to production operation.
- ✓ Launching into production operation, increased surveillance and support start-up system.
- ✓ A standard service mode.

Companies that want to be successful in the future, when the globalization of the economy will be in a world-wide dimension, must replace the old approach to the management of company by new one, which is based on a process model. In the field of work organization, that usually means a shift to flat organizational structures, which are based on horizontal ongoing processes.

If a company decides to accompany a restructuring and implementation of a new marketing information system, we recommend the following procedure:

- ✓ To perform an identification of its processes, to map and to describe all business processes, to make their categorization.
- ✓ We must take a decision which processes will be provided by the organization and that will be purchased as a service (outsourcing). It is necessary to have a description of the processes of a gross rate of specification here - level A.
- ✓ Then we analyze in detail only those processes that will remain in the organization and we shall design an optimal model of their operation. A next stage of their detailed description will be transfered - level B.
- ✓ The next step is to select the information system based on specified criteria (coverage of process model by standard processes, a way of processing - technology, price, references, ...).

- ✓ It is necessary to perform the last stage of specification of individual activities of business processes (in accordance with options of already selected system - level C) and ensure synchronization of their implementation in the corporate practice with implementation of the new information system. It is preferable to use the methodology of implementation, which recommends the implementation partner. Both parties (supplier and customer) must agree the so-called target concept implementation.
- ✓ After the approval of the target concept follows a completion of implementation, user training, ensuring routine operation and development of the system.

4. CONCLUSIONS

To work with information actively means first of all to be able to formulate requirements (objectives, purpose) for each type of information, be able to find the required information and be able to use it effective for management. To manage company right means to manage its future and to manage the future means to work with information. Decisions of any type cannot do without information. Information system is a set of people, processes, hardware and software ensuring the collection, transmission, storage and processing of data to analyze, interpret, distribute and present timely and accurate information to users operating in the management system for the needs of their decision-making. Information System in program-technical sense is used to describe a system of programs for managing data. In a wider sense, it is an information system for the provision of information needed for management.

Marketing research is an applied research in social sciences in particular. The aim is to obtain information for decision-making executives, managers, and owners of organizations in obtaining or selling raw materials, products or services in the marketplace. This is a set of activities related to the collection, analysis and evaluation of information relevant for solving a specific problem marketing company. They are used, for example, to identify needs and purchasing intentions of consumers, their attitudes to products, prices of products and advertising. The information obtained from these sources are implemented into the database and assessed through analysis. One of the main reasons to implement marketing research is an identification of market opportunities. The more prediction of the future sales will be differ from reality, the greater the loss of excess inventory, or in the case of underestimation will incur losses from lost profits. Qualitative marketing research is characterized by a scientific approach, creativity, multiple research methods, reliable analysis, healthy skepticism and ethical behavior.

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