THE USAGE OF INFORMATION BY MEANS OF INFORMATION SYSTEM IN CREATING COMPETITIVE VALUE FOR FOOD PRODUCTS MARKET

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Abstract

The development and the evolution of the information society create the conditions for consistent and complex functioning in food products markets. The creation of competitive value emerges as a priori factor which acts upon the accomplishment of the company’s goal. The task is not easy and the challenges are huge and imposed by the: novelty of products, novelty of business processes, globalization of all segments of business functioning and the appearance of rising competition. The aim of this work is to explore the key components which have the identity trait in the process of creation and determination of the: mission, vision and values, by means of the information system that exists in the foodstuff industry companies.

Since the goal of the paper is to determine what exists as information in mission, vision and values referring to the health in the food industry, therefore we use the descriptive research design. Also, in this paper is to discover which values are in the focus of the companies. This research refers to the top 100 food processing companies in Europe. The companies’ websites are the source of information in this research.

The companies which websites are in English language and that have clearly defined mission statement are used as a base for further analysis. It is determined that only 15 companies have clearly defined Mission statement. 53% of those companies have defined beside Mission also have Vision statements. 47% of the companies have defined Mission and Values. And only 33% of the Companies have defined all three - Mission, Vision and Values properly and clearly presented. Moreover, it is identified that 53% of the companies have their focus on Health importance described in their Mission or Vision statement, where 27% have stressed health importance in the Vision, 43% stressed health importance in the Mission statement. At the end finding shows that the 67% if the organizations have Customer oriented focus in their values, than with 47% the accent is given to the Innovations. Team work and Integrity have same frequency i.e. 20%.

The research shows that the focus is on healthy food. This conclusion is following the global trend of market expansion and penetration of organic, macrobiotic and high quality food. This conclusion is also supported with the findings that the companies want to satisfy customer needs and they focus on innovation as well. But, extensive directions which have quantitative features do not guarantee success. Therefore, acting directions move towards creating focused differentiation by means of: redefinition of the appearance of food product markets on the basis of information which is being stored in the companies’ information system data base, information is the root for product creation and the market desired services, products and processes are being transformed on the basis of information which is being transferred from the information system.

Key words: Knowledge, Information system, Decision making, Foodstuff industry, Mission, Vision, Values.

1. Introduction

The companies development, the complexity of their operation, the surrounding, the decrease of the products life cycle, the increase of the speed in making business decisions, and above all the increased development in IT underline the large influence that information systems have for the managers in the process of making decisions and presence on the food products markets.

The access to the information systems enables a wide area of activity and development in information management, review of the information technologies development and the significance of quality information when making a managerial decision in the company.
Information is firmly set in the context of managerial needs, the context of the sender and receiver of the information, as well as in the context observing information as a resource which is subject to management, as any other resource.

In order to enable undisturbed presence on the food products market there is a need of proper positioning of the information activity. Solving problems in the management of business activities in contemporary organisations, particularly in the organisations present on the food products market requires an adequate information system. Having in mind the temporal dimension, it is quite evident that the numerous and complex problems simply need processing and obtaining information in a unit of time, that is, when they are most needed to the managers.

The market information in the area of food products does not tolerate delay. The delay produces negative consequences on the entire process of functioning and operating. Therefore in this paper will be found in the food industry conditions, connection with strategic priorities and values, which can continue companies to use their depth analysis. This information is important since the strategic management consists of “the analysis, decisions, and actions an organization undertakes in order to create and sustain competitive advantages” [1]. For the purpose of better decision making, below are given approaches related with the usage of systematic approach, moreover is explained the need of information systems with the activities of information systems.

### 1.1 Using the System Approach

When defining the integrality and the adaptation according to the needs of the food products market the system approach is used with the aim of performing a complete application of the information system. Special accent is given on the goal of the information system for the production of quality information for satisfying the managerial needs with attention to the markets and market features food products.

Through the proper definition of the conception, the function and its presentation as a system, the information system is positioned within the business function through which all activities are covered, necessary in order to identify, anticipate and satisfy the food products demand, and at the same time to achieve the goals of the company.

The decision-making process consists of permanent perception of problems, gathering of the required data, their transformation into information, selecting alternatives and their analysing, passing decisions, implementing decisions and their controlling, with which total quality in decision-making is achieved.

#### 1.1.1 The Need for an Information System

In information society, the production and use of information are positioned as a main resource. New information and telecommunication technologies and techniques perform re-transformation of the basis in the development of society. The economic basis of the information society increases through technological convergence, increasing the rate of development. With their development, the organisations appear as worthy actors on the economic stage, increasing the competitiveness in various segments of the business activity.

The market conditions for business in the food products area sharpen the competition and increase the risk of operation and decision-making. The development of increasingly more complex systems poses larger requirements in relation to the information systems, contained in the answers to the following questions:

- How to process the increasingly larger number of data needed for efficient organisation management in the new, complicated and complex conditions?
- How to provide connection of the numerous organisational parts into one compact unit?
- How to provide fast and efficient development of all organisational parts of the organisation as a whole?
- How to create quality conditions in order to set a competitive advantage on the food products market?

The information system is a part of the business system with which it maintains a constant interaction. At every organisational and managerial level of the object system it is also necessary to provide adequate support from the information system. Usually, the organisational framework is represented through five key components [2], see figure below.

![Figure 1. Management processes and functions [3]](image)

The managers’ need of information can be categorised as internal and external. The internal information enables the circulation between all entities in the system-organisation at an internal level. The external information is aimed at the surrounding and they unfold...
in a relation established with the larger system within which the system-enterprise is located and functions as a sub-system.

From a business point of view, the information system is an organisational and managerial solution, based on information technologies.

In order to understand and use the information system, it is necessary for the manager to understand its managerial, organisational and technological dimension. The information system is located in the middle of events surrounded by the organisational dimensions, see figure below.

![Figure 2. Organisation dimensions of information system [3]](image)

In order to be able to respond to its function, the information system possesses a line of characteristics incorporated in the organisational and the informational dimension of the organisation. In their functionality, the characteristics have separate attributes depending on the company’s area of business. Some of the more significant characteristics of the companies present on the food products markets include:

- Integration.
- Dynamism.
- Interdisciplinarity and orientation towards decision-making.
- Openness and self-organisation.
- Human resources capacity operating in the information systems area, and
- Quality of the information equipment.

### 1.2 Activity of the Information System

In order to create a clearer idea of the information dimension in the organisation, the information systems in its structure, as well as their significance, functions and tasks, the basic activities of the information system need to be explained first.

Managers use information to make business decisions. Business decisions are based on an action which represents a choice between two or three alternatives in order to perform solving of problems in the business world. The fundamental basis of the whole process is founded on detecting the problems. If a problem exists, it is necessary to establish a goal which through the use of methodologies will lead to finding relevant alternatives for solving the problem, see figure below [3].

![Figure 3. Fundamental basic of the whole process [3]](image)

First of all, the problem is defined as a space extending between what is expected or was expected, and the existent, current state. The expectations are most commonly represented in the form of given tasks, results or certain standards. The existent state represents a value expressed through selected metrics which refers to different performances of the system. However, not all problems defined in this way deserve serious observation and evaluation.

The structure of the problem detection must obligatorily include a filter of tolerance which represents a determinant which defines the level of attention dedicated to the problem. The purpose of the filter of tolerance reflects in the support of the well-designed system, in order to discard those problems that do not deserve great attention.

The trend of projection represents the second part of the defined problem detection. The problem detection covers four elements [3]:

- Measurability of expectations expressed through the goals, results and standards.
- Mechanism for measuring the performances and the operation of the existing system.
- Filter of tolerance for grading and separating the significant from the insignificant problems.
- Prediction of future trends in operation.

Once the problem detection process is performed, the problem solving cycle begins. This cycle contains several components:

- Entry resources - money, materials, equipment, personnel structure or information. The scale of particular resources is included in the efficiency of the production process.
• Production process - the management combines the resources in order to obtain the best possible result.
• Exit product or service - assigned result of the production process.
• Goals or standards - each organisation has a previously goal or standard which needs to be fulfilled by the production process. In order to determine the deviation of the standards, that is the goal, problem detection is performed.
• Problem detection - if deviations are established, their analysis is performed in order to discover the deviant processes and to act upon them in timely manner.
• Creating alternative - after discovering the deviation, the basic task of the manager is to act in time in order to prevent future negativities upon the business activity.
• Decision making - a choice is made of an alternative which represents an implementing corrective action.
• Decision announcement - the manager announces his decision aimed at those entities that need to implement it at a production level.
• Decision implementation - the work structure acts in one of the three ways:
  • Changing the direction of the entry resources;
  • Changing the production process with a combination of resources;
  • Changing the established goals, i.e. values or standards so as to cause better compatibility with reality.

1.3 The Role of the Information System in the Process of Decision Making
The decision making represents a complex process whose realization requires a certain algorithm. Through an adequately made decision the goal is achieved and the planned results are accomplished. In order to make a timely and adequate decision, a system of informing is needed. The system of informing has to be compatible with the organisation's business policy.

The information system is the basic instigator in the decision-making process. Without its complete affirmation, organization, existence and production of information quality decisions cannot be made.

This ascertaining is not only simplification. It is based on sound grounds which imply a content according to which only adequately researched and prepared information can lead to progressive operation.

When observing the information system of companies present on the food products market, the following questions can be posed [4]:
• Which information can be used to make decisions?
• What is their contribution?
• Is a continued principle of informing provided?
• What is its authenticity?

Though it is hard to differentiate the information needed for making a decision, nevertheless, market information prevails in information systems. The market information refers to all those elements comprising the market segment. They are most often classified as:
• Information on the market potential.
• Information on the participation of the organisation on the market.
• Information on the sale of particular products.
• Information in the form of realization prognosis.
• Information on the consumers.
• Information on the product in the form of quality, quantity and design.
• Information on making decisions for advertising.
• Information on decision making for the manner of product or service distribution.
• Information on protection against competition.

In order to carry out the activity in the area of decision making, it is necessary to gather a certain quantity of data. This process of gathering is related to costs, i.e. expenditures. The size of the funds which need to be allocated depends on the size of the decision which needs to be made and the goal that has to be achieved according to the decision made. The value of the decision represents a product of the quantity of money necessary for making the decision and the probability that the decision will be carried out in the right way.

In order to make an adequate decision, a large quantity of information is needed. The information is presented on the basis of previously implemented market research. A team of competent people and sufficient financial means are needed for adequate performance of the research.

Since information is a priori factor in the process of decision, the proper modelling and implementing of the information system represents the basis for observing the past, making decisions in the present and accumulating the results from the decision-making in the future.

2. Materials and Methods
Since the goal of the paper is to determine what exists as information in mission, vision and values referring to the health in the food industry, therefore we use the descriptive research design. Also, in this paper is to discover which values are in the focus of the companies. This research refers to the top 100 food processing companies in Europe [5]. The companies' websites are the source of information in this research and the
Content Analysis Method is used to review all of the available data published in their websites. Data analysis is done through tabulations and then counting up the frequency of existence of information about mission and vision. The same analysis is done for characteristic - healthy food in mission and vision. And, at the end the same analysis of tabulation and counting up the frequency of the values of innovation, team work, customer focus and integrity is done.

3. Results and Discussion

3.1 Results

The companies which websites are in English language and that have clearly defined mission statement are used as a base for further analysis. It is determined that only 15 companies have clearly defined Mission statement. 53% of those companies have defined beside Mission also have Vision statements. 47% of the companies have defined Mission and Values. Only 33% of the Companies have defined all three - Mission, Vision and Values properly and clearly presented.

3.2 Discussion

From the 100 explored company websites, only 15 have clearly defined Mission, and 53% of those companies have their focus on Health importance described in their Mission or Vision statement. At the end finding shows that the 67% if the organizations have Customer oriented focus in their values, than with 47% the accent is given to the Innovations.

The lack of some of the companies that not have websites in English can be considered as a limitation of this study, thus we may assume that this in result may lead to different conclusion. Also it is still open the question about additional determination of the strategic focus via the analysis of the company goals which was not included in this study.

For the situation in Macedonia, on the question about following the world-class trends, focusing on healthy, dietary and food with higher nutritive values on the research conducted over 40 companies, 67% stated that not completely are focusing on that because of financial issues [6].

The contribution of this paper is in the determination of the situation in food processing industry in respect of strategic focus and values and second contribution is in that this research can support the companies in their review or redefinition and modification of the mission, vision, values and the strategic goals. The mission is considered as key, since the organization first off all should have defined its own Mission. The Mission usually gives the answer of the question of “Who we are?” or “Why we exist?” but “its prime audience is the leadership team and stockholders” [7]. The effective mission statement is one that is actively helping everyone to live up to the values it expresses [8]. Moreover, “a vision might provide a direction for the company for
the next five to 10 years, while also noting a commitment to integrity, transparency, openness and other such values” [9]. The Vision usually gives the answer of the question “What we have to do, to achieve and sustain the Mission?” The most distinguishing feature of the vision statement is that it is value based [10].

4 Conclusions

- The research shows that the food processing companies’ strategic focus is on healthy food. This conclusion is following the global trend of market expansion and penetration of organic, macrobiotic and high quality food. This conclusion is also supported with the findings that the companies want to satisfy customer needs and they focus on innovation as well. Since it is used only descriptive research design, we answered only the question of “what exists” in food processing industry in Europe in respect of mission, vision and values.

- Also, since some of the strategic priorities may not to be publicly available, and since we did not explore the companies’ goals, it is still open the question for further additional determination of strategic focus of food processing companies in the run for sustainability.

5 References


