New Approach to Acquiring Knowledge in Marketing Planning with Application of New Technological Solutions

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Abstract:
In this paper we focus on new technological solutions based on the knowledge bases that can quickly provide the necessary knowledge in marketing planning to employed in marketing. Here we propose a new concept and present it only as an idea, and the knowledge base will be updated with some knowledge using Protégé editor, an open source platform, which can quickly and easily provide all the necessary knowledge updated in it. The proposed idea, can be a good basis for those involved in marketing to update all the necessary knowledge for effective planning of marketing activities in the business system.

Keywords: planning, marketing, knowledge bases, new solutions

1. INTRODUCTION

Some theorists believe that the marketing has emerged in the period when the offer has become bigger than the demand. Specialization of work and technological advances have led to an increase in offer, and to expansion of market as well as increased distance between the point of sales and the point of consumption. Marketing has emerged as a result of the need of manufacturers to find new areas of investment for their products or services that can provide them a safe profit.

Peter Drucker believes that the marketing emerged in Japan in the family Mitsui, and that there was created the first department store. Others argue that it emerged in the United States when the basic elements of modern marketing appeared: market research and analysis, the notion of a permanent market, pricing policies, and so on.

Every high-quality researcher who is engaged in marketing has its own definition of marketing. Neither of them is uniquely accepted. Individuals believe that marketing is business activity, while others believe that it is a phenomenon of trade, way of thinking, and also a process of quality products exchange.

However, a good number of authors make a distinction between macro and micro apprehension of marketing. According to one of macro apprehensions: marketing deals with the creation of an efficient and fair system that directs the flows in the sales of goods and services from manufacturers to consumers, and achieves the goals of the business system. Each one of them is right if their view can provide a better marketing plan and competitive advantage of their business system.

Some authors emphasize not only economic but also social character of marketing. Bartels believes that: "Marketing is rather social than economic institution ... and that marketing is means for achieving social objectives".

For the purpose of this article we will say that: Marketing is a business process in which the product is in conformity with the market and through which the transfer of ownership is performed.

To be able to observe different approach to monitoring and implementation of new ideas in faster obtaining of knowledge in marketing planning, we will introduce some additional concepts that are essential here. These are, first of all, the Semantic Web and Knowledge Bases.

The concept of the Semantic Web was introduced by Tim Berners-Lee (2001) as a clear structure of the content of Web page. Created as a need for more efficient obtaining of certain information and knowledge. It is based on the idea that information on the web should become machine readable. Instead of documents related through hyperlinks, it should use interconnected data (information) that have a specified structure and meaning.

In order for an idea of the Semantic Web to function, computers should have access to collections of information. It must provide rules for reasoning about data, and allow presentation of data and information (Haznadarević, L., Radivojevic, M., 2016).
Here we use Protégé editor, an open source platform for updating knowledge which allows: reading and storing of knowledge. Protégé Editor provides a rich set of structures for modeling and activities that support the creation, visualization and manipulation of data and information represented in different formats.

2. GOOD MARKETING AS A BASIS OF BUSINESS SYSTEM SURVIVAL

Marketing is primarily a process of good planning, pricing, promotion of ideas, products and services, and all this in order to enable the exchange which satisfies the goals of the business system, clients or service users.

"Some company may have a modern department for marketing, and yet not act as a modern marketing company. It primarily depends on how other directors in the company see the function of marketing. If they think that marketing is primarily a function of selling - they missed the point. They also missed the point if they point to the department of marketing and say - they deal with marketing. However, all departments must work for a client or service user and to get involved in marketing. Because marketing is not just a certain department but a complete philosophy of the company. This is the only way companies can transform into a modern marketing company" (Philip Kotler, 1997).

According to Ph. Kotler, marketing is a social and managerial process by which, through the creation of offers and exchange of valuable products with others, individuals and groups obtain what they need or what they want. Thus, marketing is aimed at meeting the needs of consumers, but also the businesses entities.

The concept of marketing has to go from an idea that the business system should:
• meet the needs of consumers,
• achieve the objectives of the business system.

Let us use Protégé editor, an open source platform to update the first necessary knowledge (Figure 1. Koncepcija marketinga (The concept of marketing)). Because of the reviewers here we quote the language of the authors to make it easier for them to track the content of the knowledge base: Koncepcija marketinga treba da: zadovolji potrebu potrošača, ostvari ciljeve poslovnog sistema. (The concept of marketing should: meet the need of a consumer, achieve the objectives of the business system.)

Figure 1. The concept of marketing
Marketing activities should start even before the design of the product, and not from the time of production.

Marketing as a process consists of:
1. analysis of market opportunities,
2. research and selection of the target market,
3. creation of marketing strategy,
4. marketing program planning – creation of marketing mix,
5. organization, implementation and control of marketing efforts.
Using Protégé editor in the knowledge base, let us enter the processes that make up the marketing (Figure 2. Marketing kao proces (Marketing as a process)).

![Figure 2. Marketing as a process](http://www.semanticweb.org/dvr/ontologies/201)

Marketing planning is a series of activities that must follow:

- Environment  ➤  Objectives  ➤  Strategy  ➤  Structure  ➤  System

The very concept of marketing should be understood as a specific way of thinking upon which should be built the business policy of the business system. It subordinates the entire production activity to consumer and demands from the production to, taking all necessary measures in engineering and technology, produce what consumers are looking for (Rocco, F., 2000).

The marketing plan should be brief but precise plan, in writing, that determines what steps are to be done in order to achieve marketing and sales objectives (Bangs, D., 1994).

Good marketing requires a professional and consistent execution of a large number of small tasks, and successful marketing also demands a good products and good services. It requires that current and potential new customers are better known than by the competition. If one is very familiar with own products, services and its customers, then it may well do the strategy which will provide a competitive advantage of the business system.

In order to achieve the goals and success, in addition to work, it is necessary to make plans. Working without a plan can sometimes accidentally result in success, while good planning always results in the fruit. It is marketing planning that may separate business system from the competition.

The aim of marketing is only effective continuation of the goals of the business system, which seeks to achieve and provide something in the market.

3. WHAT IS MARKETING PLAN

The task of marketing is to provide customers for products and services. If one does not have enough customers, all other quality of the products and services, even the technological perfection, will not bring profit to the business system.
Marketing planning must be based on knowledge of the main characteristics of the economy and society development. A business system needs to improve its products and services if it is to provide appropriate growth and profit.

A marketing plan is the written document that helps the business system to manage a complex process of creating customers for its products and services. The plan should answer many questions. The process of writing the plan is easy; but the hardest part is the analysis of the business system, and it includes:

1. analysis of the products and services of the business system
2. analysis of the market and the position of the business system in it
3. analysis of strengths and weaknesses of the business system.

The plan should ensure that the product or service (the required quality and favorable prices) finds itself in the right place at the right time and in the necessary quantities, all in accordance with the relevant terms of demand, and consumers’ demands. It must be structured so as to be a guide for determining the market for products and services that meet market needs and desires, with the tendency to be better than competition.

Let us also enter knowledge about the marketing plan in the knowledge base using Protégé editor.

![Figure 3. Marketing Plan](image)

One must determine what steps are necessary to be taken in order to achieve marketing and sales objectives. Marketing is the process of customers acquisition for products and services in sufficient numbers and quickly enough to ensure the profitability of the business system (Kuvačić, N., 2002).

The key task is to find a sufficient number of customers who will pay enough so that one can make a profit from sales. By marketing plan, business system determines which features and actions need to be taken to achieve the desired goal.

We may again emphasize that the marketing plan is written document of one business system or of one part thereof, which summarizes all marketing strategies and tactics to achieve set goals. It also emphasizes who is responsible and for what, when certain activities should be performed and how much time and money can be spent on these activities. In practical terms and in application, marketing planning is a discipline that advocates for repeated, consistent, step by step decision-making and actions.

Marketing planning consists of the two major components:

The first component is a marketing background, which includes the review of market operations, situational analysis, and SWOT analysis.

The first part of the plan should include the following (Levine, R., 2003).
• mission, or parts with which one should align strategy for specific strategic unit
• set of corporate goals
• review of marketing
• portfolio
• SWOT analysis, conclusions and assumed solutions.

The second component of the marketing plan that builds on the performed analysis, and begins with goals and ends with budget and schedule. The content of that part is as follows:
• Marketing objectives and strategy
• The goals and strategy for the whole of "marketing mix"
• Budget
• Implementation program.

The plan must be brief, reviewed, clear, and without a lot of unnecessary words and sentences. It should not be written just for the sake of it, but it must be binding for all employees.

Using Protégé editor in the knowledge base, let us enter components of marketing plan.

Figure 4. Components of marketing plan

4. WHY THE BUSINESS SYSTEM NEEDS A MARKETING PLAN

Marketing plan is essential for the business system because through it one:
• establishes real opportunities, methods and goals, and how to actually achieve it,
• identifies opportunities and possibilities for development,
• achieves the coordination of all activities directed to achieving the objectives,
• realizes preparation for training of the business system,
• reduces unforeseen risks,
• reduces idling and unnecessary tasks,
• avoids conflicts because it improves communication,
• forces the management to think in advance and systematically,
• directs resources towards good opportunities.
In the business system, marketing planning holders are marketing managers, and there must be involved all those who can contribute. Employees who participate in the development of marketing plan, must be committed to this business, must possess certain qualities such as creativity, leadership skills, decision-making, persuasion and the like.

The first step in the business planning is the marketing plan. In the marketing plan one defines the target market and the strategy of product positioning, and also establishes the sales tasks and the necessary resources for the realization of these tasks. The process of marketing consists of:

• analysis of marketing opportunities,
• research and selection of target markets,
• creation of marketing strategy,
• planning the marketing program and
• organization, implementation and control of marketing efforts.

The planning process of marketing is one of the stages of the process of marketing management in which decisions are made about the objectives, policies, strategies, programs and plans of the marketing activities of the business system. Planning is a dynamic process by which marketing adapts to internal and external changes and deliberately creates the market in future. Marketing planning is the process of making planning decisions on the realization of marketing activities that oblige the business system to, by accepting one selected alternative, consciously relinquish others, and to bear the consequences of the taken decision.

The assumption of rationality in planning marketing activities is spotting the positions of consumers on the market and the fact that the successful satisfaction of their needs determines not only success but also survival of the business system.

Marketing planning should be integrated into the planning activity of the entire business system in order to meet the needs of the customer or service user. Innovation cannot be implemented without a planned approach, if we want the actions to have a chance to succeed. Good planning enables a successful introduction of new products or services to the market.

Marketing planning must be based on knowledge of the main characteristics of the economy and society development. Operating system needs to improve its products and services if it wants to ensure growth and development. Because of this, it must have information and knowledge about the expected changes.

5. KEY PARTS OF MARKETING PLAN

Here we will mention only some parts of the marketing plan:

Analysis of the current situation – implies the analysis that we face in marketing of particular product. It includes a detailed analysis of the environment in which the business system works. The analysis starts from the environment with all the factors that may affect the sales of products or services, and to all the internal factors. This is a process that can be compared to removing the leaves off lettuce: it starts from the outside, with external environmental factors and comes closer to the internal factors in the organization.

SWOT analysis - determines the internal quality of the business system (strengths and weaknesses) and external environment of the business system (good opportunities and threats in the market). It analyzes the environment in its dimension of technology, economy, political situation, legislation, society and culture (Marusic M., 2006). From performed analysis one can perceive the problem and risks, as well as good opportunities in the market to identify and exploit.

Analysis of consumers - is the main marketing task of any business system, and its task is to provide the information on how to meet the needs of the market and to make profit.

In focus of any marketing plan should be a customer. Questions that must be answered in the analysis of the consumers are:

• What are the markets of the business system
• Which of them currently buy goods or services
• What products / services they purchase
• Who are the people who buy

**Analysis of competition** - is the key element of good marketing planning. For the approach to the analysis of competition most frequently is used "benchmarking". According to Ferišak (1998), "Benchmarking means to measure own results compared to others and learn from others, usually from direct business competitors. It begins by comparing the strategies of competitors with own strategy, continues to comparing business processes, products, technical solutions and functions of competitors with own solutions and functions to identify certain disadvantages, and assess opportunities to become better than competitors."

Analysis of competition is performed order to better identify target market segments. In this paper, we consider the competition as business system that sells similar products in the target market of the economic system. If one wants to be a successful business system, it must be aware of its competition. The analysis is performed in order to see what others are doing effectively and efficiently, and direct its operations in that direction.

Competitive advantage should be achieved in relation to the product, price, advertising, distribution, human resources and so on.

6. CONCLUSION

Marketing planning is the phase in marketing management process in which decisions are made about the objectives, policies, strategies, programs and plans of marketing activities in the business systems. In order to effectively be able to carry out this process, we have proposed a different approach to obtaining the necessary knowledge using knowledge bases and Protégé editor, an open source platform. In the bases we updated only a small portion of the necessary knowledge just to be able to present a new concept.

Naredne aktivnosti bi se trebale odnosit na ažuriranje nedostajučih znanja i neophodna poboljšanja u bržem doživljaju do njih.

The following activities should relate to updating the missing knowledge and the necessary improvements in the faster obtaining.

**REFERENTES:**