METHODOLOGY OF BUILDING RELATIONSHIPS WITH CUSTOMERS IN THE AREA OF TRANSPORT SERVICES

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Abstract

The current focusing of market on customer comfort demands that service providers orienconstantly modernize their structures and methods of operation. Due to the progressive digitization of various areas of business activity it is necessary to know and regularly implement up-to-date technological aids available to maintain competitiveness and build long-term relationships with the client. Delivering products to the point of consumption is an extremely important element in the supply chain and transport companies play the role of both intermediaries and service providers.

This article is a framework proposal of a methodological solution for entities dealing with transport services in terms of building long-term relationships with the client with the help of modern technologies and methodologies. The findings show strategies and systems with which transport companies can strive to build a competitive offer in the logistics chain. A process portal was proposed as the target solution as an internet base of the transport offer using big data as a means to optimize the service. The study was devoted to analysing multi-criteria decision-making methods with a view to using solutions in the process of developing methodologies for building customer relations in the field of transport services.

Keywords: SCM; TMS; CRM; process platform; logistics

1. Introduction

The growing significance of customer comfort in the process of market evolution from supplier-shaped to customer-driven, or even anticipating and initiating buyer preferences, resulted in the need for solutions focused on the greatest possible improvement of transport services whilst gaining and maintaining customer trust. As Wasi Bagasworo noticed, many companies are not able to keep the already

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acquired customers and the reason of this situation is the lack of strategic measures in relation to satisfied recipients of services. In order to ensure the continuity of orders for company it is necessary to care for a long-term relationship with the client, which in turn requires understanding for his satisfaction and how to ensure it on a permanent basis.

Ensuring a competitive offer and long-term cooperation with the recipient can be achieved through the implementation of appropriate solutions from the borderline of PR and agile management, which is provided by the SCM – Supply Chain Management – a concept providing methods of optimizing all stages of supply chain management, starting from supply and production, through transport right up to warehousing and distribution. In order to find an adequate concept of building relationships with customers in the area of transport services, the transport element should be separated from the SCM solutions without losing sight of all assumptions. The obtained methodology should be based on TMS – Transportation Management Systems – solutions, focused solely on the management of means of transport. The network of thus formed operational guidelines should be embedded in solutions provided by CRM – Customer Relationship Management – which is a software supporting the company's communication with customers.

2. Research on customer relationship building systems

The SCM concept provides solutions in the area of supply chain management, focusing on the circulation of goods and services in the field of movement and storage of raw materials, semi- and finished products in the cycle from their place of origin to the point of consumption [1]. The goal of SCM is to build a competitive infrastructure offer using global logistics by synchronizing supply with demand. Maximizing the company's efficiency is possible thanks to the strategic cooperation of units in the supply chain, linking production and service entities. SCM describes then the process of managing circulation between the links in the supply chain in order to maximize the global profitability of the supply chain.

Transport understood as an element responsible for the process of moving a product between different stages of the supply chain has a significant impact on its efficiency. Companies elect from among air, rail, car or sea transport, and in the case of information good – also online. Each of these forms has different characteristics and is designed to meet specific needs [5]. The role of transport providers is to ensure a service that is up-to-date with customer expectations, which requires constant modernization based on appropriate technologies. The aforementioned TMS is a system designed to manage a fleet of vehicles and human capital, organize a loading, delivery and unloading schedule and service settlements of services. Intelligent transport management enabling real-time information management is focused on optimizing operations and achieving the greatest possible efficiency of the company [6]. Using TMS software is a recognized way to improve the efficiency of the entire supply chain.

Building relationships with customers in the supply chain is described by the ECR concept, which Anna Bojanowska defines as a logistics strategy for the distribution of finished products based on close cooperation of all distribution links from the producer to the final recipient, whose primary task is to shorten the order fulfillment time by improving transport processes in all parts of supply chain cycle [10]. The second concept of building relationships with customers in the supply chain is CRM, which – like the one described above – is based on the analysis of customer data in the logistics process. This system met the marketing need to build long-term relationships with the client to strengthen his trust and loyalty to the company [1, 14]. CRM can therefore be defined as a customer information management process intended for optimize the terms of the contract witin the context of mutual interests and thus maximize the customer's loyalty to the supplier. This process involves the identification of the target group, classification of customers in terms of their needs and priorities, interaction with individual recipients and optimization of the service based on the criteria thus established.

Nevertheless there is a contrast between „the traditional approaches" and „social approaches" in the CRM concept, the latter of which is based on the use of online platforms to obtain information and shape customer relationships with suppliers. More and more suppliers decide to create their own website in order to support users and their needs, propose personalized solutions tailored merely to specific target groups and collect customer data centrally [2, 3]. On-line portals together with the assumptions of the CRM system constitute a conceptual base for process portals. The latter combine the contact with the customer with the marketing and sales processes and constitute an operational and economic concept focused on the process of implementing a personalized service through an on-line portal.

In the case of transport and logistics services it is important to indicate the operator of the process portal and in this matter two solutions are suggested. Considering the well-described case of railway undertakings the first alternative assumes that such operator should be a rail transport company that provides freight transport services. The second solution is to appoint a representative of the forwarding company as the operator, due to his competences. In both cases, it is crucial that the operator achieves "credible neutrality" in the eyes of the customer as not participating in the production of goods and services [12]. The importance of the brand of operator is also emphasized by schoolars indicating that portals operating under known names enjoy greater consumer confidence [4].

The creation of a process portal for transport suppliers would have to be carried put in two successive stages and start with compiling the offer information and contacts. The portal would concentrate users such as carriers - both transport operators and customers - international associations and organizations related to transport, government units and other entities related to transport in their activity. The second step would be to implement a process portal in the transport area itself, aimed at supporting the efficiency of the customer's supply chain.

Building the CRM software, in the area of creating partnerships with customers, it is necessary to develop links with the systems of individual partners. Every person making a decision should take many criteria into account. Also the system (SCM, TMS, CRM etc.) should take advantage of the possibilities it offers Multi Criteria Decision Making (MCDM). Multi Criteria Decision Making provides strong decision making in domains where selection of best alternative is highly complex. The main purpose is to identify various applications and the approaches, and to suggest approaches which are most robustly and effectively useable to identify best alternative. Important are the problem in fuzzy multi criteria decision making techniques, too. Multi criteria decision making have been applied in many domains, e.g. transport services, technology, Logistics, etc. Multi Criteria Decision Making Method (MCDM) method helps to choose the best alternatives where many criteria have come into existence, the best one can be obtained by analyzing the different scope for the criteria, weights for the criteria and the choose the optimum ones using any multi criteria decision making techniques. Decision-making is the art of making the right choices [1, 6]. No person can avoid making decisions, because everyday life constantly puts us in the face of facts and events that demand from us to take an attitude or make certain choices [7]. Decision-making in the strict sense is only when such decisions are made by a man in a conscious, purposely and voluntary manner. This means that before making a decision, he or she can see alternative variants for action at any given time, and that decision-making is guided by a clearly defined objective [13]. The majority of the population has been found to be accustomed to existing schemas of thinking and solving problems. If we learn other ways of thinking, we will be able to find new solutions and better prepare for the constant change of conditions around us.

The initiators of the decision, solving the identified problems, try to express with a single aggregate criterion all the relevant consequences of the problem [9, 17]. We are then dealing with a single-criteria analysis in which each potential variant is assessed against one selected a priori criterion, e.g. cost volume, profit, profitability, benefit. In solving this problem, we use various ways, methods, e.g. linear programming, parametric programming, targeted programming, marginal analysis, stochastic programming, nonlinear programming, econometric methods, game theory and others. This procedure is justified only in simple cases, as a single criterion is not fully reliable, acceptable and exhaustible, i.e. there is no property that a coherent family of criteria should have.

Multi-criteria decision-making is a development of single-criteria analysis. It allows for the formulation of a coherent family of criteria as an instrument for an understandable, acceptable and comprehensive set of arguments [15]. The approach expressed should ensure that preferences are developed, justified and transformed into guidelines for the decision-making proces. Supporting multi-criteria decisions requires the participation of a number of adjudicators in the decision-making process. The assumption is based on observations of the behaviour and position of the various participants, which result from a different perception of reality and the processes taking place there. They also result from the fact that each person represents a different world of values, and the positions of individual participants

are built on different, sometimes conflicting, evaluation systems. Consequently, a multi-criteria approach to decision-making is formulated [8].

Classical multi-criteria methods are based on the assumption that the assessment of decision-making variants against criteria and the weighting of criteria are known precisely and expressed by real numbers. In practice, there are situations where it is difficult or even impossible to define precise assessments of decision-making variants. In such situations, the assessment of variants and/or the weighting of the criteria may be expressed by means of interval numbers, fuzzy numbers or ordered fuzzy numbers, among others [11].

The key elements of the practical application of MCDM methods are the determination of reliable weightings of the criteria as they have a key impact on the choice of the final variant. Many applications of MCDM methods use so-called subjective weights, defined by project promoters or experts, reflecting their subjective feelings and preferences. In situations where it is not possible to determine reliable weights, one can turn to objective balances, which are determined on the basis of a decision matrix. One method for determining objective weights is the entropy-based method. As the assessment of decision-making variants against criteria is a range, the weightings of the criteria should also be ranges. In the literature, methods can be found for determining the weighting of criteria using entropy, which is extended to compartmental entropy and to entropy based on ordered fuzzy numbers [5, 16].

In any decision-making problem, there is at least one optimal decision, for which it can be objectively determined that there is no other better decision while remaining neutral with regard to the decision-making process. The problem is to choose the alternative that best meets the complete set of goals. Making choices and decisions is one of the basic human activities. The decisions that a person makes affect the history of certain environments and communities.

Decision-making practice focuses on weighing alternatives that meet a set of desired goals. Each decision includes the element of discovery, randomness and economic, social, political, organizational, managerial and other effects. The decision is to choose one of them. It is the CRM system that is the right tool that will help every company in making key management decisions.

3. Conclusions

In the logistics chain, the forwarder is the link between the service provider and the customer while the carrier can act as the coordinator of the entire chain. Currently, however, the carrier is usually a passive member of the logistics chain and the role of the transport coordinator, just like the customer's representative, is performed by the forwarder. The carrier should focus on improving the efficiency of the transport itself, rather than thinking about other activities. However, the reorientation to activities whose priority is to meet the customer's expectations requires a thorough

understanding of his transport needs. As can be seen from the above, the element of an efficient supply chain in the enterprise directly corresponds to the level of customer satisfaction whilst building long-term relationships between carriers and customers requires a transparent offer. The process portal supported by the CRM software would allow the carrier to assist the transport process in the supply chain and present a personalized offer that – with the help of modern technologies - would keep the acquired customer for a longer period of cooperation.

The issues of conduct and analytical procedures are discussed. This article discuss use of multi-criteria methods to solve complex vehicle distribution tasks and aspects of vehicle use for local shipment distribution. The aim of the work was to combine the critical points of the solution in order to guarantee the stability and development of the processes resulting from the transport plan. This article shows the complexity of the issue of the productivisation of proceedings in complex transport systems. It was found that using the total cost model, simulations of different combinations of direct and indirect services could be carried out, the costs of different transport variants could be calculated and a solution which meets the criterion of e.g. minimum costs could be chosen. Price, time and reliability, punctuality and flexibility are currently not the only elements of competition from transport companies. In order to achieve a high position in the market, it is necessary to combine supply chain management, customer relations and transport process. Building the CRM software, in the area of creating partnerships with customers, it is necessary to develop links with the systems of individual partners. It would be appropriate for the methods to be adaptable, i.e. to support information distribution processes in areas such as co-operators, suppliers, producers, distributors and customers. It is necessary to adapt to the needs of the final customer, who in a highly competitive consumer goods market can make a fully informed choice of products and services according to individual needs. It serves this purpose concept of building relationships with customers by suppeort of CRM software, which is based on the analysis of customer data in the logistics process. This system met the marketing need to build long-term relationships with the client to strengthen his trust and loyalty to the company. In order to calculate the maximization of customer loyalty to the supplier and, consequently, the profit of the enterprise, these suppliers should use multi-criteria decision-making methods - included in their CRM systems.

4. Acknowledgemen

5. Nomenclature

CRM   Customer Relationship Management
MCDM Multi Criteria Decision Making
SCM   Supply Chain Management
TMS   Transportation Management Systems

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