IT TECHNOLOGIES AS THE ELEMENT SUPPORTING CUSTOMER SERVICE IMPROVEMENT – EXAMPLE OF PRE-PAID CARDS

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Abstract*:* the article presents the issue of the modern IT technologies usage, in this case the Internet, to the improvement of the customer service at the company logistic system. By the e-commerce modern solutions implementation the researched company received better customer service and was able to apply Just-in-Time into the sale system.

Key words*:* customer service, e-commerce, Just-in-Time system

1. Introduction

In logistics processes placed in the logistic system, which the basic task is to ensure products availability on the market, all kinds of logistics infrastructure elements have significant importance. The logistics infrastructure means all material resources, the ways of their usage and useful systems, which serve for the realization of physical goods flow activities and also information flow. In the literature review [1,2,3,4,5] it is possible to notice the broad glance at the logistic infrastructure through the prism of its tasks. Mainly it is the result of the fact, that initially the co-ordination of processes within the materials economy, which had place in the pointed logistic infrastructure, was the beginning of logistics development as the science.

2. The essence of the communication and information infrastructure at the company

One of the logistics processes infrastructure significant elements is the communication and information infrastructure, fulfilling a number of important functions at the company. It makes possible to obtain default information about the state of the various kind logistics subsystems, as well as communication between each elements of the system, and also delivering the information to the various links of supply chain. The base of communication and information infrastructure are information systems used for managing goods and information flows at the company together with the equipment which serves for it (computer networks, scanners reading the bar codes etc.). Information systems used for logistics have to fulfill the determined requirements, which are [6]:

- functional complexity what means that the system should comprise all branches of technical and economical activities of economic object,
- functional and structural flexibility which is expressing dynamic adjustment of the system at variable requirements and needs generated by the environment,

- creating new connections with outside systems expressed by openness,
- content-related advancement, consisting on full computer support of information and decision processes and also the practical based of such a system on the logistic management concepts,
- technological advancement, consisting on intranet, Internet and multimedias usage,
- compatibility with Polish law regulations, e.g. the accountancy act.

Communication and information infrastructure comprises every activity of the company which are tied with logistics processes, so all processes of the raw materials, materials and products flows, as well as other elements resulting from these flows, like cash flows. So information systems used should comprise the broad spectrum of companies action and take into consideration the range of realizing functions. By this it is possible to distinguish occurring systems [5]:

- recording-settlementive,
- info- decisional
- of steering processes e.g. stocking,
- integrated, comprising all necessary functions realized in the sphere of logistics.

Most common systems are clearing systems because of their easy implementation, as well as of low equipment requirements, what is also causing low implementation expenses. However there are solutions searched referring to info- decisional and integrated information systems utilized at companies.

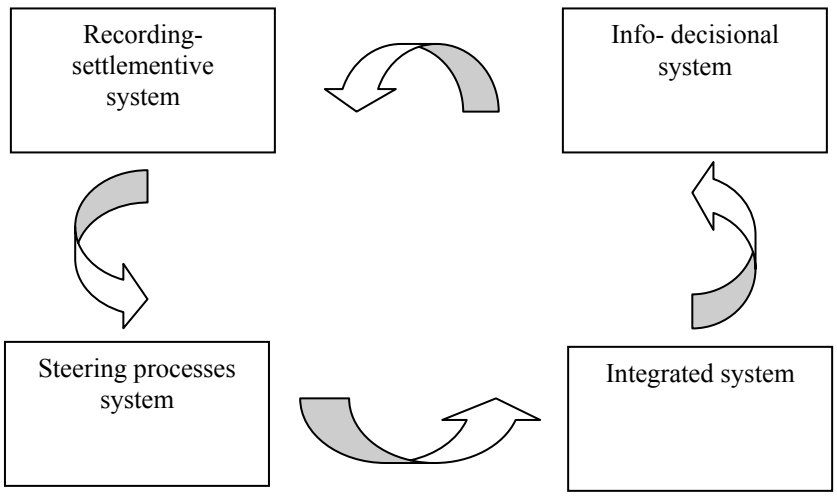

Figure 1 Kind of information systems (Source: Own study)

From the communication and information infrastructure point of view the very important is utilizing Internet at the company for the realization of flow processes and the access to information. The e-business technique became the tool of modern logistic management by the fact that companies have the possibility of efficient information gaining. The information are able then to process and be used in management systems. The researches show that applications of Internet in business, and also in logistics, are included in occurring areas [7]:

- shaping of interorganizational links,
- confirming presence on the market,

- exhibition of the ordinary activities,
- full or partial realization of business deals.

Through such chances of utilizing the Internet it is possible to develop the logistic activity in each, tied together links of logistic chains, and this is influencing in turn not on the competition between companies, but the competition between the whole chains. Internet is the universal tool which is linking various links performing on the market, and therefore it is not divided because of the servers occurring place, companies, either of customers, but because of it from whom and to whom services are directed [8]. Occurring application domains are distinguished from Internet (Figure 2):

- B2C - business to customer, which comprises relations of business with individual customers consisted on leading the retail trade, services sale and information for the consumer,
- B2B - business is business, which comprises companies market contacts in the economic turnover, what causes added value chains integration from raw materials providers to the terminal customer,
- C2B - customer to business, B2C opposite relation, where customer is the initiation by the purchase desire of the product or service and he is determining the parameters of this purchase and the price willing to pay,
- C2C - customer to customer, comprising sales and stock exchanges for individual customers (motor and stock exchanges, etc.).

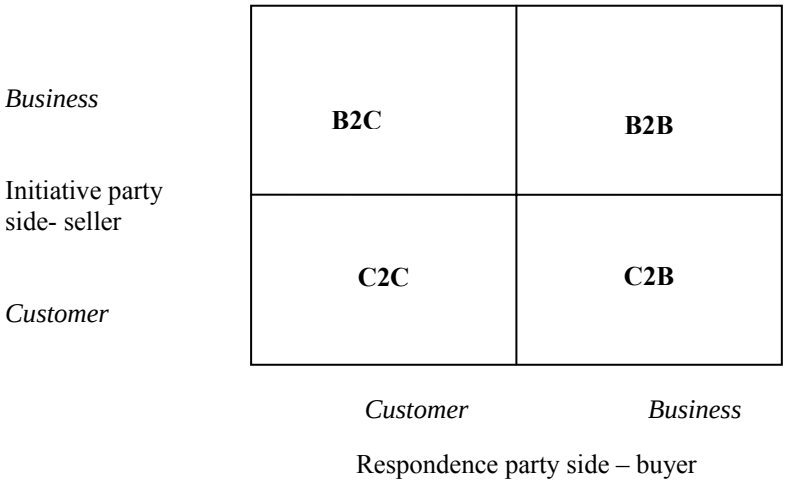

Figure 2. Models in e-business [9]

Internet is the very interesting tool because of the above mentioned combination for the communication and information infrastructure, and it is possible that its application will grow up during the next few years, what is already seen even in the examples of new-build virtual companies, in which information technologies are the grounds for their functioning on the market.

3. Electronic sale as one of the trade modern forms

The special type of possible and able to apply solutions with the Internet usage is the electronic sale. Electronic sale (e-commerce, B2B) is realizing transactions between the system owner and partners. Usually it means making available the tools for composing and

servicing the orders online, presentation of individual business conditions (personalized level of prices and discounts on dependence of the partner status), presentation of mutual settlement of bills, balancing and crediting ceilings, stock states and the time of the orders realization.
Electronic sale is offering a number of obvious benefits for users:

- makes it possible to obtain more profitable buying prices, by the easy comparison of various vendors offers,
- lets in easy way to evaluate advantages of offered products,
- gives the chance to reorder current available of products, knowledge about the time of their supply or the default state of the order realization,
- guarantees the access to current offers, because the vendor is bearing the regulation responsibility for their reliability and the service is updating them in the real time,
- gives the constant control of goods changes and the price level on the market,
- permits buyers for the immediate sending the order, directly to the vendor and is ensuring the friendly form of its realization,
- by the electronic data transfer it is limiting workers, necessary to realization of order, limiting the quantity of processed documents and also eliminating errors.

Within the confines of the electronic sale system vendors have law unaided with aid of the service operator to open the own electronic shop and to manage its offer. The service is offering full support for vendors in preparing the shop offer, opening and the promotion of the shop, placing and the modification of shop products and for carrying out the transaction. Defying economy virtualization and the more common access to Internet are causing that more companies is deciding for Internet sale. As the statistics elaborated by the American company Jupiter are pointing out, Internet sale brought in Europe, in 2004 year, profit of the row 28.3 billion Euro.

4. Strategies of the customer logistics service and utilizing the IT technology

Electronic sale is working out currently vis-a-vis for trends watched on the market in the range of the customer service. The majority of functioning companies usually determines the strategy of the customer service on the market, where IT technologies are helpful, also with electronic sale. The first stage of building the logistic service strategy should be the diagnosis of needs for destinations in the sphere provided by competitors to customers opinion about the service in each segment within the examination of service. Purposes of service and criteria resulting from them for the proper logistic system selection are determined then by the competing firms which are regarded as leaders in the given segment of the market.
It is necessary in the initial stage to make customers classification about close demands into segments marked by the big similarity of requirements in the field of service. It is necessary to diagnose the most important elements of the customer service according to the customers opinion, and than determining relative importance of each components of service for the destination. On the end buyers are grouping according to close preferences about the service sphere. Information necessary for building the service strategy at the company should be obtained from interested in, what means customers. The best way to gather them are group interviews, thematic and profound questionnaires which might be the basis of the objective specification for customer service elements. Through this type of research it is possible to determine the specification of service key elements which make the customer to choose the offer of this company rather than rivalry. The specification of the weight for each service element is necessary, than they are ranked from the most important to the last or there is the marking scheme preparing. Unfortunately these methods are not free from faults. The difficulty is appearing when too much elements are occurring and respondents are not in

condition to take a decision which elements are more important for them. The better method is relatively innovative solution for market examinations called interdependence concept (trade-offs). This method consists on the presentation for the inspected customer the probable combinations of service elements and the request is to label which are preferred from these combinations. After that there is the computer analysis estimations which gives the weight to each components of service assigned by the customer [10]. And finally the specification of the most important aspects of service for each customer groups is making possible to define the market again because of the customer service preferences. Through the determining key elements of service it is possible to compare the effects with the companies activity, which the customers regarded as the best in the first stage and determining the level of service at the inspected company [11].
D. Kempny is noticing that for elaboration of the effective customer service strategy considering the real market demands are necessary four stages of its implementation [12]:

- audit of service
- the formulation of purposes and determining standards of service
- institutionalizing of the suitable management system
- determining of the check-up and review procedures.

The environment changing at the quick pace of the company makes the accepted method resist to a considerable degree not on past processes dropping at the company, but on present changes dropping in the surrounding.
Analyses of existing service and possible changes are necessary in the first stage of the method realization after the confrontation with the competitive position and the general situation of the company. First the outside audit purposing identification of elements of service and the level of their relevance to the customer is carried out and then the estimation made by customers about the service offered on market by main competitors is analyzed. Then there is attaining the internal audit, which is analyzing the inconsistencies between company activities and customer demands in the service sphere. It often takes place, that instead of introducing at the service method changes in elements, which were pointed out by inspected customers as unsatisfactory, it is necessary to take up the activities with the purpose on the image improvement, explanation of the reasons for bad perceiving by customers the applied service method at the company. The method is characteristic for the good way of communication with the customer, what also makes possible the control of customer service realization. They are some analysis for the time of supply and settlement of accountses, accepting orders, supplies, outdated commodities, payments and delays in the payment [13]. During the audit it is also necessary to determine the kind of information for the customer, the way for customers to get to each department of the company, availability of information and the average time, in which the customer will obtain searched information.

5. Electronic sale in the pre-paid cards system - the chosen example

Reinspected company "X" since the spring 2003 is being occupied with pre-paid products wholesale and retail sale of all cellular operators HEYAH, POP, SIMPLUS, TAK TAK, Telepin products, Telegrosik and phone TP S.A cards. They are selling as the standard scratchcards, as well as retail sale of these products in the electronic form through GPRS terminals and the PC system. Devices utilized by them for electronic sale are terminals. Terminals "9000i analogue and ISDN" and "9400i GPRS" are small devices posing the advanced solution for making quick payments. They might exist in every point of sale.
Possibilities of these devices [14]:

- " Easy and quick service

- User-friendly interface
- The unlimited quantity and the kind of products
- The user's identification (the password and the code of the access)
- Outside keyboard to introducing the telephone number
- Payment functions (EC, cash and chip, credit cards)
- Possibilities for loyalty applications service, e.g. occasional vouchers

The common features of the mentioned systems are:

- The full check-up and managing from the computer centre
- Contact with the GSM/GPRS network
- Transferring of prepaid codes any time of the day
- Monitoring of available codes
- Defined temporarily settling accounts with the customer
- Control of services and safety

Figure 3 The example of terminal model used for electronic sale[16]

The Blue Line terminal is easy device in service, which is perfectly suitable for prepaid products sale because of the special software.
Small sizes of the terminal are permitting to locate it in every point of sale, both the classic place of the retail and in kiosks and shops near the petrol station. Desired products are chosen through the special keyboard, which allows for the transaction. Directly after realizing the transaction the customer is receiving the confirmation in the form of the receipt. At the inspected company was observed that the customer logistic service has bigger and bigger importance, what is connected with its high standards. Two the most important are: convenience and the time. So when the company needed to fulfill the customer high requirements, there was a decision to introduce the system of marketing through the terminals. Because it is the intermediary, it makes the contact between cellular networks and retail points possible, its tasks are: supplying with terminals the points of sale and also realizing the sale processes. In this system, instead of the standard usage products of "scratchcards" type, it appears the virtual product, because the customer is not buying the cards while he is paying, but he receives the code, which is introducing directly into the telephone. Customers obtained a number of the benefit in connection with such a solution of the system marketing [15]:

- They have almost the infinite access to the offer,
- They do not have to arrive to the wholesaler for the shopping,

- By the modern system of invoices printing they are able not to lose the time for the journey to the vendor,
- They do not have to store cards in the point of sale,
- They do not have problems with the assurance of the full product offer.

This system improved a lot the customer service, because of its usage customers can loading credits directly to the cell-phones in accordance to the Just-in-Time system.

6. Summary

Utilizing modern computer solutions by companies, which is certainly the electronic sale without a doubt, is not left without influence on the customer service. Applied by the inspected company system of electronic sale significantly improved logistics, but specifically distribution system and made in the effect of shortening the time service, as well as better circulation of documents, transferred at the moment with the electronic way between the company and its customers. The introduced system caused at the same time the exchange of the standard product offered by the company "X" to sale the virtual product, which the customer knows only about the code. Such a solution caused also changes in the field of service, as there is no need for storing, sort, the inspected company does not have to provide supplies for customers and completing the shipments. By this kind of system it is also possible to apply full rules of Just-in-Time system.

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