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Barbara KOS[1]

PREMISES FOR IMPLEMENTATION OF CUSTOMER RELATIONSHIP MANAGEMENT SYSTEMS (CRM) IN TRANSPORT AND FORWARDING COMPANIES

Because of great competitiveness among the companies present in the market, the huge number of service-recipients and the nature of the transportation activities, the sphere of transportation requires advanced systems of managing the contacts with the clients. Their implementation must be combined with reorganization of the company towards the model which is more client-oriented. The CRM Systems are a natural enhancement of the integrated information systems already present or implemented in the companies.

PRZESŁANKI WDRAŻANIA SYSTEMÓW ZARZĄDZANIA KONTAKTAMI Z KLIENTAMI (CRM) W PRZEDSIĘBIORSTWACH TRANSPORTOWYCH I SPEDYCYJNYCH

Sfera transportu, ze względu na dużą konkurencję pomiędzy podmiotami na rynku, znaczną liczbę korzystających z usług oraz usługowy charakter działalności transportowej wymaga zaawansowanych systemów zarządzania kontaktami z klientami. Ich wdrażanie musi łączyć się z reorganizacją podmiotu w kierunku potrzeb klienta. Systemy CRM są naturalnym rozszerzeniem zintegrowanych systemów informatycznych istniejących lub wdrażanych w podmiotach.

1. INTRODUCTION

Transport and forwarding companies offer their services to very large groups of individual clients and to very different business entities. Because of the specific characteristics of transport services, in which the parameters of the given service may be distorted or altered (for different reasons, most often independent of the carrier or forwarder himself), information about such alterations enables the service recipient to limit negative effects of such changes of the forwarding conditions. For example: information about the delay in delivery of a parcel which is necessary for realization of a given production process enables modification of the process. Facile contact between the service recipient and the carrier or forwarder enables also rendering additional services or lowering the costs of the given service, e.g. by grouping parcels. At the same time the carrier of forwarder may take

[1]Department of Transport, The Karol Adamiecki University of Economics, 1 Maja 47, 40-226 Katowice

into consideration the customers' expectations to a larger extent. That's why the possibility of easy access to necessary information is very important for the recipients of the services. When a company renders services to a great many recipients, it is necessary for the companies to prepare themselves and implement information technology solutions in the sphere of contacts with their clients.

2. CHARACTERISTICS OF THE CUSTOMER RELATIONSHIP MANAGEMENT SYSTEMS

Systems like MRP (Material Requirements Planning), MRP II (Manufacturing Resource Planning) and ERP (Enterprise Resource Planning) are solutions aiming at process management inside a company. CRM System is a natural complement of such systems and provides link between the inside and the outside of a company. The receipts of the companies allocated to the current functioning and development come form their business environment. That is why the companies have to act in a manner taking into account the needs of the customers and giving the possibility to acquire new customers. Recognizing the expectations of the customers, adjusting services to such requirements, assigning preferences and expectations to a given client and remembering them, verifying the stability of the customer relations and analysing the efficiency of particular products enable effective management of customers relations, and thus effective building of the company's position in the market. Recognizing the preferences of a particular customer enables adjusting the information addressed to such a customer, in particular the information containing the offered services and their parameters and, what is also important for the customers, shortening the time of servicing. As a result it gives more effective rendering of services, among other things by adjusting the parameters of the service and its price to a given customer. The company's image is also of great importance. The fact that the company is interested in the customers preferences has a very positive influence on the opinion about the management within the business entity.

Figure 1 presents the structure of the CRM system and its links to the internal systems of the business entity.

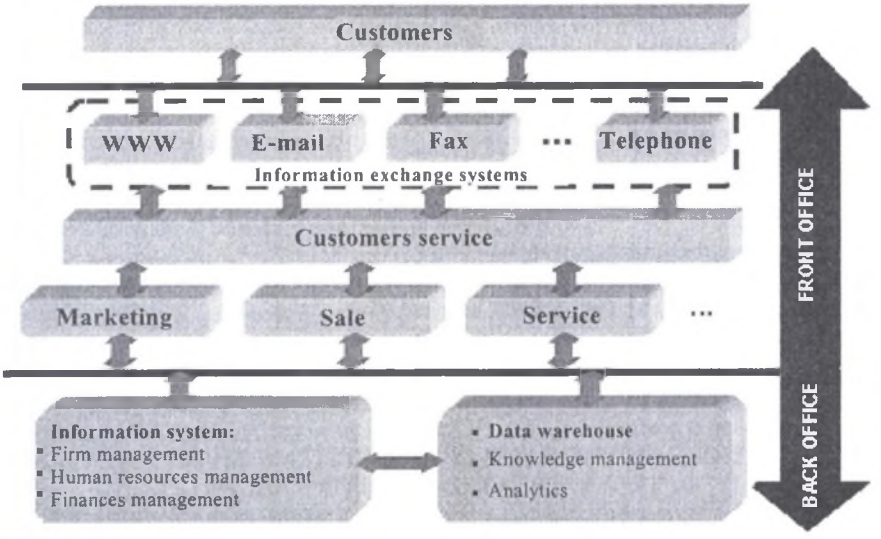

Fig.1. The structure of the CRM system
Source: Jacek Florek: Designing Integrated Information Systems
(Internet site: http://il1.ap.siedlce.pl/~florek/zsi/)

CRM Systems are systems including most of the following functions [1]:

1. Sale:
   - contact management (profiles, structure, history of the sale contacts),
   - account management (generating offers, orders, transactions),
   - analyses within the frames of the sale cycle,
   - monitoring of the client status and the potential trade contacts status.
2. Calendar management and correspondence management,
   - calendar and database of users (groups),
   - traditional and electronic mail management (fax, e-mail).
3. Marketing:
   - campaign management,
   - catalogue of products,
   - product configuration,
   - price lists and offers,
   - analysis of the campaign effectiveness,
   - distribution of information about the clients taking interest in the offer.
4. Telemarketing:
   - arranging telephone lists acc. to target groups,
   - automatic dialling,
   - generating lists of potential customers,
   - collecting orders.

5. Servicing and post-sale client support:
   - allocating, tracing and reporting tasks,
   - servicing problem management,
   - supervising orders,
   - warranty servicing and past-warranty servicing.
6. Integration with the ERP systems:
   - finance management,
   - accountancy,
   - manufacturing,
   - distribution,
   - human resources management.
7. Synchronizing data – refers to cooperation among equipment (e.g. laptops) and the central data base or other bases and application servers.
8. E-commerce – implementation of electronic commerce.
9. Call centre – supporting services for the client.

3. CONDITIONS AND BENEFITS OF CRM SYSTEMS IMPLEMENTATION IN TRANSPORTATION AND FORWARDING

CRM systems are helpful in changing the orientation of the company: from the company oriented to internal analysis, its material resources, finances, human factor, to the customer-oriented company. One of the ways to obtain that is through the change of structures, the scopes of the realized activities and through the use of information tools enabling comprehensive servicing of the customers as well as the possibility of rapid dissemination of information, answering to queries, orders and complaints. Yet the CRM system itself cannot solve all the problems. While implementing such a system, also the client-oriented strategy of the company must be implemented. Otherwise, the result will be configuration of the system for the hitherto existing processes and practices oriented to the inside of the company.

There are situations when implementation of the CRM systems is less effective. In particular it is the case when there is lack of competition and, as a result, limited choice possibilities for the service recipients or when there is a small number of customers, and, consequently, small number of transactions. Such situations to a limited extent are present in the transportation and forwarding market.

CRM system is not a solution to every single problem, like for the lack of the company's strategy, ill management and other situations that can arise in practice. The benefits resulting from implementation of the CRM system in transportation and forwarding companies are, among other things, the possibility to have a closer look at the service before using it, getting acquainted with the regulations and conditions of rendering services, as well as their quality parameters. It is quite important because in the case of transport services their is co-incidence of the services' production and consumption. Precise information on transport and storage potential enables making the right choices. As a result, the service recipient has greater possibility of adjusting the service to his own needs, what reduces the number of complaints and conflict situations which often result from the lack of information.

The companies which have modern computer facilities are able to render services for much bigger group of customers. For example, the companies supported by modern computer facilities provide modern logistic services to about 16,000 customers (on average), whereas

the companies lacking such facilities can provide services only for about 250 customers [3].

Also, very important is the question of increasing the efficiency of promotional activities, lowering the costs of promotion and existing of coherent system of information flow between the company and its customers. The fact that an Internet page enables round-the-clock access and information transfer is very important for those using transport services.

Maintaining relations with regular customers is one of the most important marketing activities. It is so, because in practice, regardless of the character of the business activity, providing services for regular customers is much cheaper than servicing a one-time customer. Thus, having a group of regular customers is the fundamental aim of a business; such customers also make it possible to survive in crisis situations.

As it can be seen from the above, information should flow in two directions: from the service provider to the customer, but information that the service provider obtains about the customer is by no means less important.

4. INTERNET PAGES AS THE ELEMENT OF THE CRM SYSTEM IN THE TRANSPORT AND FORWARDING COMPANIES IN POLAND

Implementation of computer-supported management systems in the Polish transportation companies was effected in different ways. In many companies computerization dates back to the 70s. Most often only narrow spheres of the company's activities were computerised and the company used external data processing centres. Information was coded in the companies and then it was transferred to and processed in external data processing centres (ZETO, i.e. Centre for Electronic Computation Techniques). Only very few companies created their own data processing centres. The systems working in those times were a little more advanced, nevertheless, later there appeared the problem of implementing the modern computer equipment. Gradually, as hardware and software were developing, information solutions covered other spheres of activity, though very often they were more like separately working systems which were rather problematic as far as their integration was concerned. Successively, in transportation companies they covered the sphere of materials management, capital assets and overhauls, personnel and payment matters. Also, various special modules were implemented, typical for transport and forwarding.

Most often the systems were not implemented as integrated information systems by one provider (consolidator). Particular modules were developed or purchased independently, when the need for increase of efficiency in particular sphere of activity appeared. As a result, such modules are often independent systems and their functionality and integration is limited. In such system there are many problems with data and procedures integration, possibility of their development is very limited, and in such situation there are also problems with implementation of CRM systems.

Websites are a very attractive element of the system of communication between the service providers and service recipients. They include a lot of information, and the system of browsers and hyperlinks gives the possibility of finding necessary information easily. When we analyse their content, we can see that the rail transport companies have quite informative websites (e.g. PKP *Intercity* Sp. z o.o., PKP *Regional Transport* Sp. z o.o., PKP *cargo* S.A.). On their website the visitor can find the timetable, price lists, and special seasonal offers regarding both the timetable and price lists. There is also a form inviting the passengers to ask detailed questions concerning e.g. the prices, timetables, free seats in the trains with seat reservation, etc. The websites belonging to PKS (*Polish Automotive Transport)* are a bit less

elaborate. They contain the timetable, price lists and the offer from the scope of additional business activities carried out by PKS, e.g. servicing and repair, motorcars inspection before their registration, providing parking space as well as renting office space. Some of the PKS units do not hold websites at all; a few years ago only few were maintaining a website. The timetable and the map of the transport network become standard on the pages of local city transport, next to the price list and public order regulations. It should be noted that implementing and updating the timetables, in particular in big cities, either call for very advanced software or are very time-consuming. For example: in the Katowice agglomeration there are a few thousand bus stops and the systems must be configured in such a way that it can generate a timetable for every single one of them. Page views per month amount to 80 thousand and the number is still increasing.

Most often the Internet pages of the forwarders acting in Poland contain the following information about the company: names of the managers, the seat of the company, addresses of branches, telephone numbers and e-mail addresses, the certifications held by the company and the certificates stating quality standards compliance, the offer, i.e. quite detailed description of the services rendered by the company. An interesting example is the website of C. Hartwig in Gdynia (www.chartwig.com.pl) where the visitor can find the forms for placing order for export and import forwarding as well as forwarding in transit; it is also possible to download a liquidation of damage form. Often one can send comments on the services rendered. The results of the surveys on the service quality level are less frequently placed in the web page. A very useful possibility is the option that enables to identify the place where the forwarded parcel currently is. Regular option is also the choice of the language of the page presentation: apart from Polish usually there is also English and German option.

The exclusively informative character of websites can be considered as their drawback when there are no applications that enable dealing with current matters. Practically there is no possibility of ordering or purchasing a season ticket. Also, there are situations when information and comments collected via e-mail or via questionnaires on the websites, opinions an comments posted to discussion groups remain without any response or comment and are not taken into consideration in the current activities of the company. A group pl.misc.transport.miejski [4] is an example of a discussion group which may be a very useful source of information for transport services providers. Another problem is lack of current, updated information on the websites. Part of the information does not change too often. For example the services price list (excluding promotions) or public order regulations are usually modifies once a year. Also, reports on the company's activities, basic information about the company, localization of ticket sale outlets and ticket vending machines etc. do not require modifications on daily basis. Other information changes more dynamically. There are changes in timetable: although they are supposed to be changed only a few times in a year, the changes are sometimes more frequent. They usually result from the road repairs and holiday periods. When viewing various websites one can indicate a lot of examples of the lack of their updating. But the opposite situation is also possible: the websites are updated regularly, even providing the work-plan for each management member for the current week, what facilitates contact with them. Sometimes there are no procedures of replying to the queries sent via e-mail; although there are procedures of paper-correspondence circulation, the e-mail correspondence is treated rather reservedly. It is to some extent justified, as sometimes there is no possibility to identify the sender, sometimes senders do not sign with their own name and surname, do not use procedures provided for electronic signature, and thus there is no possibility of replying in a proper way. Telephone replies, long time of waiting for information, lack of suitable facilities for the persons giving information, redirecting to other

persons, departments, often even giving other telephone numbers instead of putting the customer through by the operator. It also happens that one can leave one's e-mail address on the website in order to be notified via e-mail about web page updates and changes; unfortunately, sometimes no information arrives.

There is a possibility to place on the web sites free simple applications which provide statistics of visits on this page. Among the information that such applications gather there is date and time of visiting the company's web page, the name of the computer form which the page was accessed or its IP address if there is no name. This enables generation of statistics of page views. The statistics are displayed for the selected periods (year, month, week, day, hour), and they include: the number of page views, names of computers from which the page was accessed, domains like *.pl, *.com, *.org, etc, analogically – sub-domains within *.pl, e.g. *.com.pl, *.webmedia.pl, etc.; this provides information about their localization, web browsers, operation systems, etc.

Spreading of the GSM technology ensures new tools which will give opportunity to deal with many time-consuming and tedious matters in a simple and facile way. One of such activities is using the SMS system as a form of payment, omitting cash transactions. Currently, a lot of companies develop and introduce payment systems via cellular phones. It is also the subject of the TELEPAY project financed from the European Union funds. The aim of the project, commenced in July 2001, is development, implementation and evaluation of the innovative system of payment for transportation services through a cellular phone, and in particular the system of ticket sale in public transport and the system of collecting fares for passage through paid roads. The system is being tested in Berlin, Turk (Finland) and in the region of Paris. It can be expected that in the nearest future the system shall be implemented to a larger scale because - as compared to other systems of collecting fares for transportation services – this system do not require going to ticket sale outlets. The consecutive generations of cellular telephone systems shall increase the possibilities of transferring information or fare collection in this way.

Even the very fact of development of web pages and electronic mail is the proof that there is a huge space in the need for information. Information must be prepared selectively, should be provided quickly and in a competent way. As a result, a great need for implementation of CRM systems arises. Communication with the clients cannot be exclusively via e-mail, though. Equally important are data bases which enable mailing information (e.g. information to the passengers who buy season tickets for a particular line about changes in the timetable for this line, price lists, new versions of maps, etc.) as well as implementation of automated telephone information systems.

5. SUMMARY

Because of great competitiveness among the companies present in the market, the huge number of service-recipients and the nature of the transportation activities, the sphere of transportation requires advanced systems of managing the contacts with the clients. Their implementation must be combined with reorganization of the company towards the model which is more client-oriented. The CRM Systems are a natural enhancement of the integrated information systems already present or implemented in the companies. Web pages have a special role in the contacts with the clients. This results form ever increasing access to Internet, facile use, and possibility of downloading large documents as well as the possibility of providing applications which enable transfer of information in two directions.

BIBLIOGRAPHY

[1] Jacek Florek: Designing Integrated Information Systems, (Internet site: http://ii1.ap.siedlce.pl/~florek/zsi/)
[2] Internet pages of transport and forwarding companies acting in the territory of Poland.
[3] Report: The market for logistic services, Internet site of the company Data Group S.A. (http://www.datagroup.com.pl/podstrony/produkty/Raporty/logistyka/Raport2.htm).
[4] Discussion group on city transport ((http://www2.gazeta.pl/usenet/704354,27013.html?group=pl.misc.transport.miejski).

Reviewer: Ph. D. Grzegorz Dydkowski