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Application of Lean Tools and xRM Software Solutions in Order to Increase the Efficiency of Business Processes

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Abstract

In this paper wants to stress the importance of connection between organisational Lean tools and software tools that have great flexibility and ability to adapt to business processes of companies. LEAN management means creating more value for the customer by using fewer resources. Lean organisation knows which values their customers require and focuses its key processes to continuously add value to the customer. Elimination of losses in the whole process in stead of in certain parts of the system only creates processes that need less human effort, less space, less capital and less time to develop a product or to perform a service. On the other side, CRM as a concept and software tool have significantly contributed to improving relationship with customers. Development of CRM system is oriented by xRM (Anything relationship management). Processes which can be covered with these solutions are no longer related to relations with customers only, but to a large number of other processes such as managing relationships with suppliers, managing employee relations and managing machinery maintenance. This work wants to show that combining concepts of xRM and Lean can lead to the increase of efficiency and transparency of business processes.

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Keyword: CRM; Lean; xRM

1. Introduction

CRM, or Customer Relationship Management, is an old business concept that is becoming topical again thanks to technology that enables and supports it. Basic idea of CRM is not only the focus of the company towards the

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product, but also creating personalised lasting relationship with their customers. It is desirable that the products and services are adapted to the requirements and specifications of individual customers, and it has become possible with the development of databases that enable you to store data on individual users and with the development of software that enables the analysis and optimal use of these data.

CRM is a relatively simple concept that refers to the understanding of customer requirements and actions, so that the company would be able to meet those needs in order to build strong relationships with customers, with the aim that all this leads to the increased customer loyalty and increased sales.

Table 1. Customer requirements.

OLD APPROACH	NEW APPROACH
Attract new customers	Retain existing customers
Get orders	Become preferred supplier
Identical customer management	Managing every customer in a specific way
Sell to anyone	Concentration on customers who make a profit

Customer is a party that is involved in the process of acquiring assets (enrichment) of a company in the form of purchase of goods and services and that is of interest for the company. According to research, costs of attracting a new customer are 7 to 10 times higher than the costs of retaining an existing one.

One goal of CRM is to transform valuable data regarding clients into knowledge about them. This knowledge must be recorded, stored, accessible and open for analysis, so that management and employees would be allowed to use them for better understanding of past and present environment and to predict its future operating results.

CRM includes :

Preliminary identification of needs and desires of customers; Differentiation of customers – according to needs and importance in order to achieve goals of the organisation; Interaction with customers – identification of customer needs; The design of products/services that are offered to groups of customers.

2. CRM as a philosophy and as a software tool

Concept of customer relationship management evolved through history. In the beginning, the only way to contact the client was personal contact. Invention of phone allowed the improvement of relations with clients. Over time, the phone has become an important mean by which clients of the companies were trying to obtain necessary information. This changes lead to the formation of the organisational unit in the company, so called call centre. Contact centres evolved from call centres, main difference between call and contact centre derives from the name. Both centres serve for establishing communication between professional staff working in the office and the client, provided that at the time of using call centres people used classical fixed phone as the main medium of communication, while contact centres provide much more diverse channels and forms of communication, and the emphasis is on the use of various Internet services such as e-mail, www, Internet telephony, mobile devices to access the Internet, etc. [19]. Software tools to support CRM strategy in its current form have been developed in several phases. There were applications that were developed before discovering CRM philosophy and served for accelerating the process of selling or marketing. This refers primarily to the precursors SFA (Sales Force Automation) and Field Service Automation. Then they were called Customer-facing Applications. Help Desk Applications were known as Contact Management Applications. With the advent of a new trend, CRM, they were adapted to the new philosophy. Basic structure of the system to support the CRM strategy consists of three parts :

- Operational – basic business processes (marketing, sales, service)
- Analytical – presents support in the analysis of consumer behaviour and implements business philosophy as well as technology
- Collaborative – to contact consumers by phone, fax, Internet, mail, in person, etc.

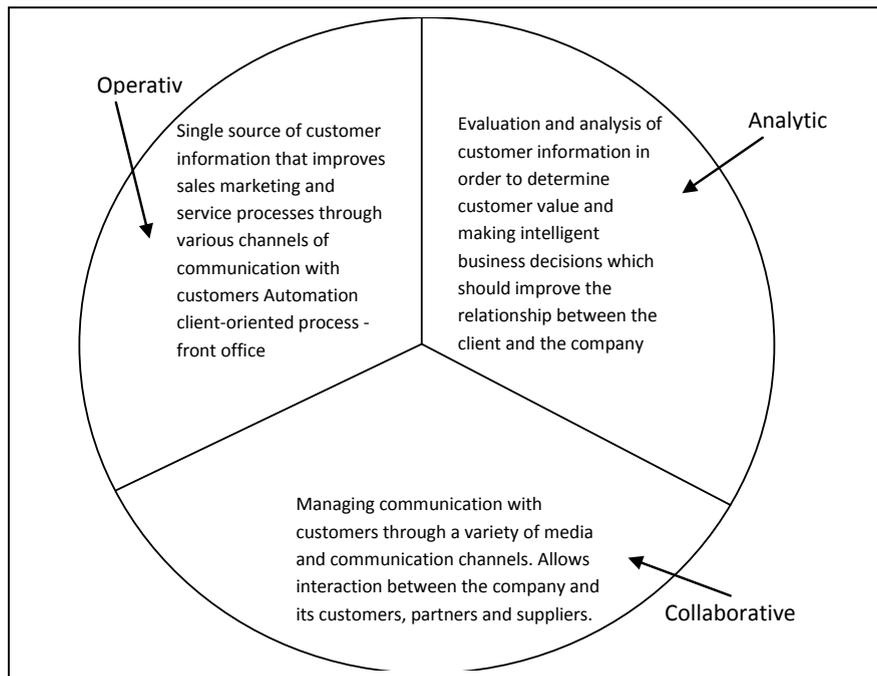


Fig. 1. Components of CRM [16].

2.1. XRM – new paradigm of traditional CRM

One new phenomenon is the introduction of CRM without explicit emphasis on the client or customer, so that the CRM acronym is now being replaced with the new xRM acronym where xRM represents the management of any type of relationship. xRM began to appear in legal departments, purchasing departments, finance, human resources, project offices and various back office processes. Moving the CRM towards xRM leads to the large demystification of CRM process so that it stops being an island that aggregates data from other systems and it becomes an integral part of everyday processes.

Capabilities of the xRM:

- CRM-oriented systems support sales, marketing and customer service department; xRM-oriented systems can support any department in the organisation
- CRM-oriented systems automate processes in marketing, sales and customer service; xRM-oriented systems automate any business process or connection of greater significance
- CRM-oriented systems provide insight into the interactions, activities and tasks; xRM-oriented systems do exactly the same for “anything” or “anyone” .

xRM-oriented systems enable functionalities such as: data management, creating a flowchart, recording user experience, access and security, making analysis and reports. As far as adjustment is concerned, configuration of basic application was done through a visual user interface, so that non-technical resources can quickly create and configure applications. [10]

Table 2. Comparison of CRM and xRM. [10]

	C – client	x – any
	CRM	xRM
Usage	Marketing, sales and customer service	Any team
Management	Relationship with clients	Any relationship
Automation	Marketing, sales and processes of business services	Any significant process
Overview	Interactions, activities, tasks and annual history	Interactions, activities, tasks and annual history for X
Provides	Client-oriented analysis	X-oriented analysis
Integration with	ERP applications	ERP and CRM applications

3. Lean management as a philosophy and tools

According to the APICS Dictionary, the essence of lean production is to emphasize minimising of the amount of used resources (including time in various activities in the company). This includes identification and elimination of activities that do not add value in development, production, supply management chain and communication with customers. Lean manufacturers have teams of employees with multiple skills at all levels of the company and they use highly flexible and increasingly automated machines in order to produce large volumes of products with potentially big variations. “Lean” philosophy sets out principles and practice of reducing costs through elimination of waste and through simplification of all manufacturing and support systems. Conditions that led to the development of this system of production appeared after the Second World War, when Japanese carmakers faced serious competition from U.S. manufacturers.

Toyota Motor Corporation realised that the only way to survive was to offer Japanese (and world’s) consumers the only thing that American manufactures could not offer at that time – variations of the product – and at the same time to maintain quality, short delivery time and as lower costs as possible.

Toyota, facing tough competition in terms of quality and price, market opportunity for the increases number of variations of the product, limited productive resources and raw materials, had to create a new radical way of production in order to survive. The result was the aforementioned TPS, which methodically eliminated any waste in the production process and remained focused on meeting customer demand. This approach has revolutionized car production with the following methods kaizen, poka-yoke, kanban updates and deliveries to the place of use, and innovations on the assembly lines that are now the basis of almost every car factory around the world.

Today’s concept of lean production originated from the TPS, and the word “lean” comes from the main principle of using less of everything (for example fewer employees, less space, less inventory, less movement, etc.) than in traditional production processes, although there are more variations of the product.

In other words, basis of philosophy is focused on creating activities that bring value to the customer, system identification and elimination of waste and continuous improvement of the production environment in order to increase productivity.

Primary focus is on the activities that create value to the customer, while elimination of waste and constant improvement are a result of these activities.

3.1. Lean CRM

A pioneer in the implementation of Lean CRM is Toyota. In 2003 Toyota expanded Lean principles of management into CRM field of marketing, sales and services. These are the areas that are the slowest adapted to improve their productivity, despite huge investments in technology over the past decade. It is expected that introducing Lean CRM will revolutionize this areas, even more than in the case of production.

Principles of Lean CRM are implemented in Toyota. The project was implemented in a number of Toyota sales offices and goal was reached, not only because of the implemented CRM software and applied Lean tools, but because of the implementation step by step.

It is necessary to do the processes to meet customer needs, and they are well equipped if they achieve good results on the market. On the other hand, customers are more demanding today than ever before. Today customers expect friendly competent service, good availability and reliability in the set deadlines and product quality. It is necessary for the company that all its processes are efficient and customer-oriented. Simultaneously, demands on controlling the company are set and they should be fast, reliable and simple.

It is possible to automate processes with xRM strategy and tools by applying new technology that leads to greater efficiency and transparency of processes and simple controlling. Lean management provides us methods and techniques for the analysis of processes and their improvement. We can see that processes are the focus of xRM and Lean. For this reason, we cannot apply these organisational and software tools in the same way in different environments and expect the same results, but we need to adapt them to a particular company or people in this company.

4. Concept implementation of CRM - xRM system in business

Implementation of information system in the company is a very important project for the company. This project represents not only a significant engagement of necessary resources of the company, but also a significant risk for the economic success of the project itself. For this reason, it is necessary to pay special attention to the planning of these projects.

It is necessary to begin by choosing strategy for the implementation of the project. Basically there are two possible implementation strategies:

- phasing,
- simultaneous introduction.

In addition to the choice of strategy and standard factors of success of one project, a significant impact on the outcome of the project has the following:

- Type of the selected software solution in terms of
 - o functionality of the software solution,
 - o reputation of the producer of the software solution,
 - o software solution reliability,
 - o use of reference models,
 - o technological completion and modernity,
 - o adaptation of solutions to the business practice
- Contractor of the project in terms of
 - o experience in implementing software solutions,
 - o partnership of the company and the supplier (contractor),
 - o confidence of users in the capability of the project contractor
- A company that made the introduction of a new system of

- support of the supreme leadership,
- compliance of the IT and projects with the business strategy,
- broad support for the project,
- transparency of information and procedures in the organisation,
- level of information technology and IT knowledge within the company,
- use of modern forms of communication and working in teams,
- knowledge of the techniques of project management,
- quality training of the users,
- duration of the project

Concept of the implementation describes and generally regulates the entire process from initiation through implementation to the completion of the project. Since there are a number of different types of the projects of implementation of information systems, there are many concepts of implementation described in the literature. Within this work one concept of the implementation of the new CRM – xRM system in the company will be presented.

Implementation of the information system is done in two parts.

1. implementation of the system in the entire company with achieving basic functionality of the system
2. implementation of the system from the reached level in the first part in implementation to the desired level of the system by applying Lean tools to improve business processes

4.1. First phase of the introduction of CRM - xRM system

First part involves implementation of the system in the entire company through two forms of describing the problem. One form defines phases of introducing a new information system in the company, while the other form defines reference organisational model of the company that is adapted to the individual needs of the process of that company.

This part of the introduction of an information system is divided into five stages:

1. Project management
2. Analysis of the current state
3. Development of a concept that meets the needs of the company
 - a. Reference models
4. Installation of the information system
5. Implementation phase

In the phase of project management the following things are done: defining goals, creating project plan, forming project team and other activities necessary for the realisation and implementation of the project.

In the second phase of the analysis of current state the following things are done: process of interviewing and documenting of the flows of the process and defining specific values of measurements, which will be further processed through the analysis of the bottlenecks in the process.

In the third phase (Development of a concept that meets the needs of the company), analysed processes are discussed within the project team and a decision on the changes that need to be executed is made. Within the concept development there are developed reference models. From one side, these models can be adjusted to the functionality of the software package and its modules. On the other hand, these reference models offer a transparent view of business processes that can be adapted to the individual needs of the company and simultaneously serve as a basis for customizing the software to the needs of the company.

In the fourth phase they do editing, i.e. setting parameters of the information system. In the final fifth phase, perhaps the most important stage, implementation of the software is done as well as systematic and organisational

documentation. In the implementation phase it is necessary to pay attention to the order of realisation of certain steps in order to quickly achieve results from the introduction of the new CRM - xRM system. Return on investment at this stage has a very high priority.

4.2. Second phase of the implementation of CRM - xRM system

After the implementation of the CRM – xRM system, it is necessary to move to another part of the implementation by using Lean tools to improve business processes (KAIZEN, Value stream mapping). In this part of the implementation of the information system, a major engagement of the employees of the company is present with minimal involvement of the consultants or programmers. More effects occur through the second step of the implementation of the information system and simultaneous application of methods to improve business processes. Information and data requirements for establishing controlling system for the processes are set in the first step of the implementation of the information system, and that represents a prerequisite for the implementation of methods to improve business processes. In the implementation of the methods for the improvement of business processes all employees will be engaged to improve business processes, and those improvements will be integrated into the information system, which will add additional quality and speed within business processes.

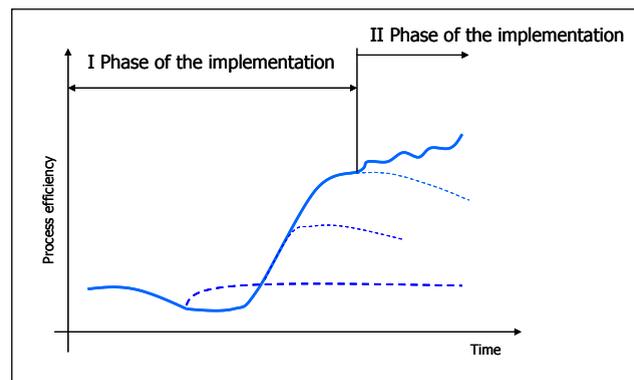


Fig. 2. Stages of the implementation of the information system. [18]

Figure 2 shows stages of the implementation of the information system in relation to the efficiency of business processes. Process of the implementation of CRM – xRM solutions has an impact on the efficiency of business processes in the company. One part of the companies cancels further implementation of the system in the first phase of the implementation and thus the efficiency of business processes remains unchanged. Increase of the efficiency of the business processes that are covered by a new system is visible over time in the companies that continue with the implementation. Also, not using the second phase of the implementation of the CRM – xRM system leads to a drop of efficiency of business processes. For this reason, it is necessary to apply Lean tools at this stage as instruments that will help in the further analysis and improvement of business processes.

5. Conclusion

In this work we wanted to point out the necessity of linking organisational tools such as Lean tools and software CRM – xRM solutions. Both groups of these tools are focused of processes which have to be more efficient. Through the described concept of the implementation of software solution and application of Lean tools, efficiency of business processes can be significantly improved. Proposed concept allows that the company which is introducing the new CRM – xRM system has insight into the costs, duration and progress of the project from the beginning of the project. In addition, the company can use the moment of the implementation of the CRM - xRM system to change and improve business processes with continuous improvement of the processes in the future. With this concept, activities of introducing new CRM – xRM system become transparent and clear, and thus it is possible to control and achieve set goal of the project. This concept of the implementation allows parallel enhancement and

improvement of business processes of the company by applying Lean tools as well as automation of business processes through the implementation of the CRM – xRM system. This concept allows transparent measurement of the improvement of business processes caused by the implementation of the new information system. The disadvantage of this methodology is reflected in the time of the implementation. Implementation time is significantly longer compared to the standard methodologies, however, this method achieves greater level of the use of the selected software tool and of course greater efficiency of business processes. With its organisational tools Lean methodology is widely used in production, but recently Lean tools have also been used in administrative business processes. On the other hand, even today, xRM tools provide automation of administrative activities within business processes. Thanks to the technology development, we have the ability to create parts of business processes by end users within xRM software solutions, without significant usage of programming work. Scope of application, number of business processes covered by the xRM tools as well as flexibility of the xRM software tools will be increased in the future. xRM as a software tool is not and will not become a replacement for the ERP systems, but its application will be extended to the administrative processes that are not covered by the ERP system in a company. Combined application of the organisational (Lean) and software (xRM) tools can influence increase of efficiency and transparency of the company's administrative business processes. Application of Lean tools improves administrative business processes and at the same time xRM tools automate those processes. Combined application of Lean and xRM tools in improving administrative business processes presents one of the main challenges in the future. Simultaneous application of these tools requires multidisciplinary skills (organisational and IT) of both individuals and teams, and it presents challenge when choosing appropriate method of applying these tools in practice.

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