








Usage of IT Solutions by the Members of the Supply Chains on the Example of Pharmaceutical Market

Svetlana Shirokova¹  , Anastasiia Prosvirina¹ , Olga Rostova¹ ,
and Hussam N. Fakhouri² 

¹ Peter the Great St. Petersburg Polytechnic University, Saint-Petersburg, Russia
swchirokov@mail.ru

² The University of Jordan, Amman, Jordan

Abstract. This article discusses the influence of digitalization on procurement and logistics on the example of automation systems. This trend has caused several changes in the SCM and CRM systems which now offer more features than they did years ago. Nowadays they go above and beyond traditional customer relationship management and are of great help to all the people involved in a supply chain management during all of the stages from procurement to operations management and delivery to consumers. The latter one will be emphasized on in the paper. The use of CRM has broadened. Nowadays it is widely used in all of the spheres including logistics. The use of CRM and Power BI for logistic companies is explained and illustrated in the article on the example of a pharmaceutical company. Moreover, the trends appeared under the pandemic circumstances will be considered.

Keywords: Logistics · CRM system · Digitalization · Pharmaceutical company · Customer-centered approach · Digital transformation

1 Introduction

The 21st century is considered to be a century of digitalization for a good reason. This trend has also influenced procurement and logistics. Digitalization has been affecting all the processes related to the supply chain management which led to the severe changes of the traditional features of SCM and CRM systems [1]. E-commerce automatization is concentrating on three systems: Supply Chain Management, Enterprise Resource Management and Customer Relationship Management. In order to effectively automatise all the processes involved in the product manufacturing and realization all of them are to be optimized. Traditionally, logistics focuses on the Supply Chain Management (SCM) systems yet CRM system is of key importance since the process of the product delivery to the customer is controlled and defined by it. An important role is also played by the way of approaching the customers [2, 3].

Besides, the research has indicated two key issues related to the supply chains. The first one being the difficulty in interaction between all of the members of the supply

chains is believed to find the solution in the introduction of a CRM system. The second problem connected to the big data analysis can be answered by the BI systems. Besides the big data processing and analysis, it also allows to present the required information in the perception-friendly way.

CRM systems are becoming more and more functional and now are a good fit for logistics companies. They cover all the needs of the entrepreneurs both in B2B and B2C sections and simplify the process of work. The key sections of a CRM system for logistics company are ... One more important role played by the CRM system in the company is getting closer to the customers and reaching a better understanding of the target audience needs [4].

Before talking about the digital trends, it is of key importance to highlight the relevant events of the logistics related to the pandemic. The first thing to notice is that the shipments were reduced due to the lockdown as the transportation capacity was severely reduced. The Asian market was first to start the process of the recovery and has almost gone through the crisis. The time of the shipments has increased forcing the less competitive companies to leave the market. The damping strategies were also noticed in the logistics since the demand has decreased. Logistics companies were forced to come up with the novel solution to the problem. The remedy was to introduce IT-technology and offer an opportunity to order delivery vis mobile devices. The first one was felicitous since most of the employees have started working remotely which was possible mainly due to the IT-technologies, especially, CRM systems. The second one is an answer to the upswing of demand on the delivery of the essential goods.

Both will be considered on the example of a pharmaceutical company.

2 Materials and Methods

The purpose of the study was to highlight the trends in the logistics on the example of the pharmaceutical industry and single out IT solutions.

The methodological basis of the study was the works [5–7], research on the management of project activities of organizations [8, 9], as well as case studies of the impact of the integration of IT solutions, such as cloud computing and CRM systems, on logistics processes [10, 11].

In addition, various reports were reviewed [12, 13], articles [14, 15] were examined and news reports [16] were also taken into account.

It was a study following a mixed-method approach for data collection.

The object of the explanatory research was pharmaceutical companies that operate all over the world and are recognized leaders of the field.

The main tasks of digitalization in terms of pharmaceutical companies were improving Overall Equipment Effectiveness, providing the ability to explore the customer requirements, achieving transparency, and an opportunity to promote its brands to the right audience. The key task was turning to hybrid selling. It is a strategy that combines two approaches: on-line sales and the sales activities defined through personal presence. The first one has become of high demand under the COVID-19 circumstances.

Besides, the methodology of IT projects management were also researched. The basic principles of the project management are:

1. Statement of the roles and responsibilities;
2. Constant business feasibility;
3. Learning through experience;
4. Focusing on the product;
5. Management by differences;
6. Management step-by-step.

It is also important to remember that whenever a new member or a system is integrated into a part of the environment, the whole environment changes. Thus, implementation of an IT-solution changes the responsibilities of the employees and the business processed involved.

The study considers possible solutions to the problems faced by the members of the supply chains.

3 Results

The paper describes the IT solutions integrated into the pharmaceutical companies over the last years and the impact of such integrations. Moreover, the key stages of implementation are mentioned as well as the causes of the process. The business processes optimized by the IT solutions were also considered in the paper.

The authors considered the issues of pharmaceutical companies related to the customer service and the decline of the income due to pandemic-related troubles, the principles of the IT solutions implementation, the process and the stages of the implementation as well as the result of this process.

The implementation of digital technologies includes but isn't limited by the following stages:

1. Planning;
2. Designing;
3. Implementing;
4. Supporting.

The main causes of the implementation of IT solutions were the lockdown circumstances forcing people to order medicine online and the decrease of the transport capacity due to several regulations as well as the limitations in international mobility.

According to the NOVARTIS report, COVID-19 has been a boost and 73% of the companies were noticed to improve a lot. One of the main changes is introduction of information technology systems.

Technology professionals believe that the healthcare and pharmaceutical industry's digital moment has arrived.

CRM systems were quite helpful as they allowed not only to easily track the drug development but also analyze the drug commercialization process. Besides, novel CRM systems offer an opportunity to set the features just the way the pharmaceutical company needs them.

Novel CRM systems are a very flexible since its workflow and parameters that can be fully tailored to the client's needs. For instance, one of the CRM system manufacturers'

clients has implemented a highly configurable suit (mobile, web and app) providing real-time access for key clinical trial needs. It has boosted the process of procurement [17].

The system is capable of providing insights into every phase of clinical trial management, empowering clients and key stakeholders to connect and use data within their studies in an entirely new way.

On the one hand, recent reports on COVID-19 have stressed the rise in the use of Internet and social media (Donthu and Gustafsson, 2020) [12]. The key reason is the rise of use of the social media and Internet which has become the main channel of purchasing activities.

Several cases of implementing CRM are presented below [18].

One of the challenges during the pandemic was the need to limit in-person patient contacts to the emergency only cases. Implementation of the CRM system was chosen as a way to overcome it. As a result, in spite of the increased call volume employees in the pharmaceutical industry were able to interact with patients from their own homes. Thus, both patients' expectations were met and the health of the staff was not endangered.

The second case of CRM system being of hand to the healthcare industry was the cloud containing all the redundant data for incoming patients. It has created a more efficient screening process and made it safer for both patients and the employees.

In a general way, the result of the implementation of the CRM system has enhanced the online sales of pharma by 60%, according to statista.com. Besides, during the pandemic the activity on the pharma websites has been noticed to increase by 35%.

One more important example that has become a center of the research conducted as a part of this study is a case of a Germany-based pharmaceutical company. The company specializes in fertility, diabetes, and MS treatment options. As a part of this implementation of a CRM-based marketing and sales strategy they have also adapted the customer-centric strategy. Thus, the company has accessed a new way of data collection which then transformed into the sales.

Customer-centric strategy

According to TechValidate research, such implementation has improved customer service by 40%, simplified project management across departments by 38%, and has improved the performance of marketing teams by 34% by making it easier for them to connect. Besides, ability to interact between departments has also been improved by implementation of a CRM system.

However, the whole process of implementation cannot be considered to be easy. On the contrary, it implies reorganizing existing principles of management and the whole system itself. Though the methodology of implementation of an IT solution used by the company considered is not mentioned in the report, this paper discusses the process as in the Signature methodology.

It is believed that introduction of an IT solution is mostly a technical task. However, though it is definitely related to that, the most significant changes are usually noticed in the organizational structure. The key tasks during that process are:

- Changes in the positions according to the requirements of the newly implemented system;
- Personnel training;

- Planning new organizational structure and roles reorganization;
- Preparation for the organizational structure change.

Besides, it is crucial to prepare all the partners to the upcoming changes, especially when they include several changes in the informational system. Otherwise, partners may not be ready for the new way of interaction.

The process of transition to the new system sometimes implies temporary usage of both systems: familiar and newly-introduced one. This period can be characterized by double effort expenditure.

According to the above-mentioned Signature methodology, the process of a CRM system integration implies going through 6 major steps (Fig. 1):

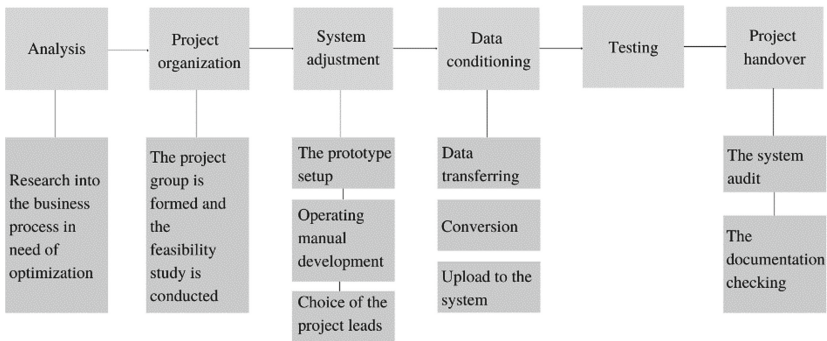


Fig. 1. 6 steps of a CRM system integration

Any IT solution implementation is focused on the achieving the intended objective and is limited by the timing and the funding.

While considering the pharmaceutical company in question, it is of high importance to notice the significance of the customer role played in the realization process. The company's target was to enhance the quality of interaction with the clients. This goal defined the transition from the product-based strategy to the customer-centred one. After having the consumers involved into the marketing strategy, the figures rose dramatically. According to a data published by Accenture, "70% of pharma sales and marketing executives identified mastering multichannel marketing as a top strategic priority." Before implementation of CRM system, the major part of data was lost due to the logistical difficulties. Thus, CRM system was the solution to the problem faced by a pharmaceutical company in question. Even though the process of transition was challenging, the end justified the means which can be proven by the figures presented above.

One more crucial case to discuss is the experience of a pharmaceutical company that implemented BI system called Power BI in order to simplify the process of the data analysis, support the business processes development and the structural changes in the company, and ensure sustainable process of the data analysis even under the circumstances of increased flow of data. Power BI is quite easy to implement. Usually, there are to requirements from the clients:

1. Data actuality which is important since the financial director is eager to see the financial results of the previous day by 12 pm of the current one.
2. Data quality which may be lost during due to rounding. Approximate numbers may lead to the differences which must be remembered during the development.

In addition to that, usually the following requirements are also proposed:

1. Simplicity and visual clarity;
2. Design;
3. Compilation of various reports;
4. Solution completeness (meaning that the system is to make decisions, not just output factors and exponents);
5. Several visual requirements, for example, taking into consideration that the human being is more likely to pay attention to the information placed on the top-left corner.

After collecting all the requirements, the team has moved on to the development which included the following steps:

1. Data import and conversion;
2. Data prototype development;
3. The application development;
4. The solution presentation.

Power BI offers various graphs, tables and other types of visualization yet is still relatively easy to implement.

Thus, implementation of Power BI has been of great help to the above-mentioned company.

4 Discussion

Undoubtedly, the companies have been through a lot during the COVID-19 pandemic and are still experiencing the effects of a rapidly changing environment.

Having implemented the CRM system, it is crucial to make sure that all the employees are on the same wavelength with the changes. Training the staff is one of the significant steps of the CRM or any other IT system introduction. However, it is nearly impossible to install a system that would be changing at the same pace with the world. It only means that the company is to update the software while noticing the need in new features. It may be assumed that such trend will raise the demand in the business analytics able to conduct analysis in narrow-focused companies, such as pharmaceutical.

Besides connection to the prospects and the real-time analysis of the crucial processes, CRM systems also help meet the deadlines and track the products development stages. Thus, this IT solution is of great help while controlling the business processes from the drug production and to the delivery to the customer.

The implementation of the CRM architecture is the basis for exploiting further technological potentials [19].

As for other IT services, their for example, such ones as Power BI, their usage is of great help for those companies that are able to state the problem in need of answering clearly.

In addition to everything said before, it is paramount to mention that the future of digitalization combines such tools as Artificial Intelligence, neural networks, NLP, bioengineering, machine learning, evolutionary algorithms, etc. Only by integrating them with the traditional tools will it be possible to achieve success on the market of the future.

5 Conclusion

The COVID-19 pandemic and lockdown experienced by almost all of the countries has influenced the world of logistics that will never come back to normal. However, the flexible companies that are able to change considering the trends have great changes of becoming the leaders on the market.

One of the trends included the customers engagement in the sales process. Introduction of the CRM system was essential since it has helped not to lose the essential data. It also implied implementation of project management strategies along the way.

Thus, pharmaceutical companies can benefit from the CRM system implementation in the following ways:

- Product development and marketing processes control and optimization;
- Improving brand quality in a competitive market;
- Improving revenues by the means of engaging the customers in the marketing strategy
- Development of customer-centred services.

Reports and analytics updated and available at real time are the tools that allow pharmaceutical companies stay competitive on the rapidly changing market. It is of high importance to possess enough flexibility to be able to adjust to the new reality. The companies that managed to do it under the extraordinary conditions now have a chance at becoming the leaders on the market or at least at keeping the spot on it.

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