

ONLINE TRADE - DEVELOPMENT AND DIGITAL MANAGEMENT¹

Ana Todorova – Student

Department of Management and Business Development,
University of Ruse “Angel Kanchev”
Phone: +359899202925
E-mail: s165530@stud.uni-ruse.bg

Principal Assist. Prof. Miroslava Boneva, PhD

Department of Management and Business Development,
University of Ruse “Angel Kanchev”
Phone: +35982888776
E-mail: mboneva@uni-ruse.bg

Abstract: *The research aims to discuss online trade and information systems that support the digital control of the relevant business processes. To achieve this goal, the development of online commerce in Bulgaria has been explored and briefly presented; the key business processes in e-commerce have been identified and functionalities of some management information systems suited to online marketing have been investigated.*

Keywords: *E-commerce, Online Commerce, e-sales, e-business, Online Business, Digital Management; Management Information Systems*

INTRODUCTION

E-commerce has boosted the volume (Otsetova, 2018) in a variety of forms such as shopping: online, mobile apps, or self-service by vending machines marks its upward trend in recent years. According to data from the National Statistical Institute for the period 2006–2016, the value of Internet sales and / or networks other than the Internet increased more than 30 times - from BGN 234 million to BGN 7,167 million with an average annual growth of 693 million. According to Eurostat (2018) analysts “in 2017, 20 % of EU businesses reported that they conducted e-commerce sales (e-sales) to consumers, other businesses and/or public authorities; this is a moderate increase compared with 15 % in 2010”.

The purpose of this paper is to discuss online commerce and some information systems to support the digital management of key business processes.

Achieving this goal is possible through the following research tasks: (1) explore the development of online commerce; (2) Identify key business processes in online marketing; (3) explore the functionalities of part of the on-line management information systems available on the software market.

EXPOSITION

Development of online marketing

The development of e-commerce and the key moments that have influenced the evolutionary processes and the distribution on a global scale are presented in chronological order in Fig. 1.



Fig. 1 The evolution of e-commerce, (adapted from Klarna.Knowledge, 2018)

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The potential of e-commerce in Bulgaria is extremely high and at this stage there are no longer questions as to whether and why business organizations can activate online sales and when and how to do that. Undoubtedly, many offline businesses rediscover the virtual space and perceive it as an additional channel for communication with their customers. *"Moving from traditional to e-commerce ... in the current period of transition to a digital economy turns from opportunity into engagement, which, if not realized, will soon become an obstacle to development and even a cause for decadence for those who do not."* (Petkov, 2016).

Additionally, the availability of a website in a company's portfolio increases its competitiveness, and if to *"10-15 years ago online trading was something new, unfamiliar, niche ... after 2014 ... began to grow wild and physical traders understood that if they are not virtual, then they do not exist"* (Goranova, 2017). The analyzes show that in order to maintain this competitive advantage and to keep the market positions of a given business in the web relatively stable, the timely monitoring of a number of indicators and the introduction of state-of-the-art information and communication technologies is imperative. The latter is of utmost importance for service to be more than satisfactory and effective and to meet the increasing demands of customers and contractors.

Unlimited quantity and variety of products offered and purchased on the internet, as well as shortening delivery times, completely alter the meaning of traditional shopping. Sites that not only offer a variety of items, but also "extras" like 24-hour, mobile and / or express delivery, change consumer habits and increase the likelihood that customers will buy more than needed, but also increase their expectations. in the future. Many of the major online companies are targeting the development and adaptation of Artificial Intelligence (AI) technology, the so-called artificial intelligence, by creating virtual consultants that direct and assist potential customers throughout the online selection and purchase process - through filtering their searches to the choice of provider and payment method. From the point of view of business, artificial intelligence has a wide range of techniques including data extraction and analysis techniques, process control, automation and optimization, improved forecasting and risk minimization (Carvajal, Maucec, Cullick, 2018).

In this regard, Gartner studies show that *"By 2022, at least 5% of digital commerce orders will be predicted and initiated by AI"* (Moore, 2018)

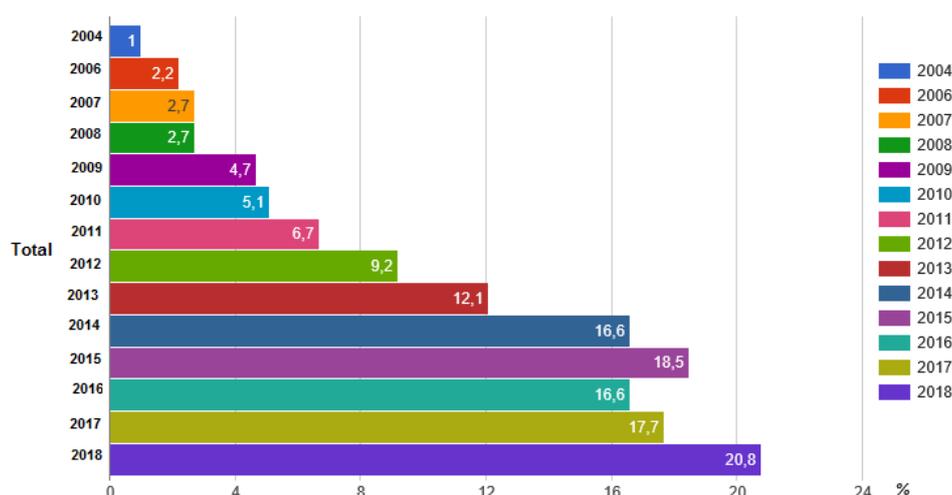


Fig. 2. Persons (in%) who have ordered / purchased goods and / or services on the Internet for personal purposes (Infostat, 2019)

To date, e-commerce trends are literally formed by consumer needs, and it is one of the leading reasons for web-based marketers to be over-flexible and to develop strategies to achieve and maintain a long-lasting business-to-customer relationship. Buyers are becoming more and

more (Figure 2), more pretentious, and for businesses it is becoming increasingly difficult to attract and retain their attention.

It is these intense changes that require the automation of all business processes by implementing a management information system that best suits the needs of the organization so that managers can *"find important trends in their business in a timely manner - what problems they are experiencing at different times, where are the causes of the problem, how to overcome, what are the most successful "moments" and how they can be multiplied "* (Petkov, 2013).

Achieving success online depends on the ability of dealers to plan and implement a comprehensive strategy on how to find and present in the channels that customers prefer and use and on how to offer a better package of goods and services of its current and future users. A crucial step is for traders to spend a considerable amount of time planning and forecasting before choosing and implementing a particular strategy or strategy.

Key business processes in e-commerce

Every business has its own specific processes that it must pass through. The operation management in commercial companies has its specificity (Yorgova, 2013) and can serve as a starting point for key business processes in the e-commerce. Depending on product selection, e-commerce may, for example, have design and production, but the latter are not inherent in any online merchant. Unlike storage, delivery, order acceptance, marketing, customer service (Cumming, 2006). For a clearer visualization of the most important business processes in e-commerce, the following figure is used (Figure 3):

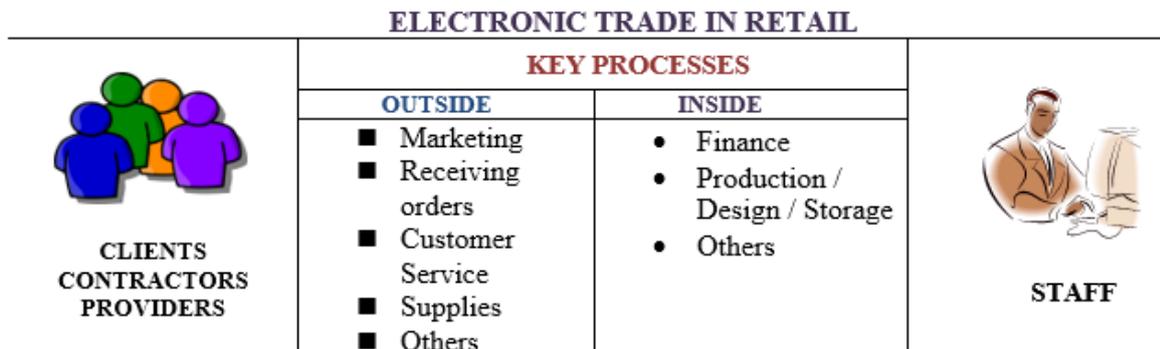


Fig. 3. Key business processes in e-commerce retail

For every emerging or growing internet store, it is important to optimize processes, achieve more traffic, and increase the number of orders. This also means avoiding the most common problems with online sales and purchases of goods and services, which for 2017 according to INFOSAT data have the following indicators: wrong or damaged goods were delivered (4%); delivery time is longer than indicated (7%); insufficient payment options (2%), etc.

Visa survey, quoted by the online edition of the Capital newspaper in a publication dated 04.08.2017, shows that 40% of consumers in Bulgaria shop online several times a month. According to Krassimira Raicheva, Manager of Visa Bulgaria, nearly 20% of respondents said they would refuse to buy if the merchant does not accept online payments, ie, as a key element of e-commerce business processes, management of payments to customers and contractors.

The data presented draws attention to the most common "complaints" on the part of customers and shows gaps in the most important business processes inherent in online marketing. Issues related to delayed delivery and misdirected orders may be due to insufficient optimization of the Deliverables, Customer Relationship and / or Storage process (s). Traders often delay sending the order due to insufficient or exhausted availability of the product, which is unacceptable unless the goal is to disappoint customers and the business to go bankrupt.

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Payments also prove to be inadequate for customers - it is a common practice to restrict consumers to the possibility of 'cash on delivery', and business often explains that this is the most secure way from the client's point of view. In fact, it is the most economical option for the trader, otherwise he has to invest in costly certificates to protect sensitive e-shop data such as bank accounts and passwords. The problems in this case arise from the insufficient optimization of the Finance and Customer Service processes, which, as has been emphasized, are key and need to be developed and upgraded. *"In order for an online trading website to be successful, traders should support multiple currency transactions, accept the most common card and alternative payment methods in all regions, and match supply with local purchasing habits."* (Holloman, 2016).

It can be seen from this structural element of the development that e-commerce processes are exclusively related. This is probably true for every business, but in the case of distance marketing, each mistake or problem causes double damage. Therefore, introducing a dedicated management system should be a priority for online merchants, whether they are starting or trying to develop their business.

Exploring the functional capabilities of management information systems suited to e-commerce

The functionality of a management information system (MIS) is the extent to which the system meets the enterprise's information needs. These needs can be represented as a mix of standard and nonstandard requirements, a business model, reporting methodology, etc., which suggests that there is no system that could cover 100% of all requirements. It is important to assess which functionalities are essential to business and lead the way in choosing the MIS.

From the point of view of the needs of e-commerce with relatively appropriate parameters, three management systems are distinguished: Prim TM; SAP Business One and Coriti (Table 1).

Table 1. Comparison of the main functionalities of the studied management information systems, suitable for e-commerce¹

			
SALES	√	√	√
E-sales	√	√	√
MARKETING	√	√	√
FINANCES	√	√	√
STORAGE	√	√	√
HUMAN RESOURCES	⊗	⊗	√
MANUFACTURE	√	√	√
SECURITY	⊗	√	√
MOBILITY	√	√	√

The main processes that need to be satisfactorily "covered" by a system in the way they are carried out in the enterprise are: the business process (from meetings and contacts, through the

¹ Legend: √ - Relevant functionality is available in the product portfolio. ⊗ - it is not clear whether this functionality is embedded in the core software package or whether additional upgrade is possible and / or necessary;

conclusion of transactions, to tracking the development of relationships); the processes of obtaining the necessary technical means and materials; planning the necessary resources, human, material, time, etc. for the correct implementation of the commitments made; - cash flows (tracking, authorization, planning, accountability); other accompanying activities.

Obviously, the differences in the functionalities of the three proposed programs are within the permissible minimum. This is because targeted software is targeted to fully meet the needs of e-retailers. This product is becoming popular like *Omnichannel E-commerce Solution Hub* and covers various items – goods , stocks, supplies, integration with courier companies, orders and, last but not least, multi-channel sales in one interface.

The Finance module is set for each product, and this is also essential. Those not familiar with e-commerce believe that the cost of an e-shop is lower than the traditional one. This is definitely not the case, just the investments are in a different direction. *"If the majority of the costs are related to the shops and warehouses themselves, we also have a serious investment in warehouses, but also more marketing and handling and delivery systems for online merchants. In the retail sector, most of the staff are sellers and warehouse workers, ie lower paid professions, e-commerce also has employees - mostly in warehouses, but there are also many people with specific skills and high wages who deal with systems, with an inch -integration with build processes with marketing concepts."* (Kapital, 2017)

Given the latter, it is puzzling that the Human Resources module is not pre-set or, at least, has no indication of this in any of the business management systems described. E-business as a whole and e-commerce in particular are areas that are still developing and properly selected staff are of the utmost importance for their successful realization and competitiveness.

CONCLUSIONS

It has been found that e-commerce has developed exponentially in recent decades. As a special case, online commerce in Bulgaria follows international trends, albeit with little delay. This can also be viewed positively, as it allows to predict the upcoming phenomena in the country as well.

It is argued that the key business processes in e-commerce are excellent customer service, timely execution of orders and deliveries, more payment options and maintenance of stock availability, relevant to the quantity of goods and services offered. The control and optimization of each of these elements of online offering is both a prerequisite for successful strategic and economic goals and a significant competitive advantage.

It is argued that in order to be responsive to change, online marketers have to keep track of trends in their field, but above all they need to have a wealth of information about their own business (clients, orders, finances, stocks, marketing) take quick and accurate decisions. Management information systems satisfy the need for information and simplify the decision-making process, assisting the trader in achieving its goals and enhancing its competitiveness.

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REFERENCES

Carvajal, G., Intelligent Digital Oil and Gas Fields, Maucec, M. & Cullick, S., *Components of Artificial Intelligence and Data Analytics*, 2018, Pages 101-148, <https://www.sciencedirect.com/science/article/pii/B9780128046425000049?via%3Dihub>, (Accessed 16.04.2016)

- CORITI.COM, <https://coriti.com/>, (Accessed 15.04.2019)
- Eurostat, (2018) Online businesses & e-sales, <https://ec.europa.eu/eurostat/cache/-infographs/ict/bloc-2b.html>, (Accessed 15.04.2019)
- Goranova, K. (2017) Prodavay.bg, v-k Kapital (**Original title:** Горанова, К. (2017) Продавай.бг, в-к Капитал, 04.08.17г.), <https://bit.ly/2XbgAil>, (Accessed 15.04.2019)
- Holloman, C., (2016) Kak da prodavame onlayn, izdatelstvo Hermes (**Original title:** Холломан, К., (2016) Как да продаваме онлайн, издателство Хермес)
- Infostat, (2019), Biznes statistika ▷ Izpolzване на ИКТ от domakinstvata (**Original title:** Инфостат (2019), Бизнес статистика ▷ Използване на ИКТ от домакинствата), <https://bit.ly/2Demfg6>, (Accessed 15.04.2019)
- Kaming, T., (2006) Malkoto „e“ – golemiyat biznes, planirane za internet targovia. Izdatelstvo Klasika i stil (**Original title:** Къминг, Т., (2006) Малкото „е“ – големият бизнес, планиране за интернет търговия, издателство Класика и стил)
- Kapital, (2017) Kak se razviva onlayn targoviyata v Bulgaria, v-k Kapital (**Original title:** Капитал, (2017) Как се развива онлайн търговията в България, в-к Капитал, 04.08.2017г.), <https://goo.gl/SXeXQJ>, (Accessed 15.04.2019)
- Klarna.Knowledge, (2018), The evolution of e-commerce: 7 epic milestones <https://www.klarna.com/knowledge/articles/the-evolution-of-e-commerce-7-epic-milestones/>, (Accessed 17.04.2016)
- Moore, S. (2018) Top 10 Trends in Digital Commerce <https://www.gartner.com/smarterwithgartner/top-10-trends-in-digital-commerce/>, (Accessed 17.04.2016)
- Natsionalen statisticheski institut, (2018), Stoynost na pokupkite i prodazhbite na predpriyatiyata po internet i/ili mrezhi, razlichni ot internet (**Original title:** Национален статистически институт, (2018) Стойност на покупките и продажбите на предприятията по интернет и/или мрежи, различни от интернет), https://infostat.nsi.bg/infostat/pages/reports/query.jsf?x_2=1366, (Accessed 05.04.2019)
- Otsetova, A., (2018) Quality of Universal Postal Service in Bulgaria, International Journal of Advanced Research in Management and Social Sciences, Vol. 7, No. 3, p.p. 252-278, ISSN: 2278-6236
- Petkov, A., (2013) Upravleniski informatsionni sistemi, ueb baziran kurs, Rusenski universitet „Angel Kanchev“ (**Original title:** Петков, А., (2013) Управленски информационни системи, уеб базиран курс, Русенски университет „Ангел Кънчев“)
- Petkov, A., (2016) Prouchване na razprostraneniето i razvitiето na e-targoviyata v Bulgaria. V: VIII Mezhdunarodna nauchna konferentsia „E-Upravlenie i e-komunikatsii“, Sofia, TU Sofia, 145-156, ISBN 2534-8523 (**Original title:** Петков, А., (2016) Проучване на разпространението и развитието на е-търговията в България. В: VIII Международна научна конференция „Е-Управление и е-комуникации“, София, ТУ София, стр. 145-156, ISBN 2534-8523), <https://bit.ly/2bZw4k3>, (Accessed 16.04.2019)
- PRIM.BG, <http://prim.bg/bg/>, (Accessed 15.04.2019)
- SAP, <https://www.sap.com/bulgaria/index.html>, (Accessed 15.04.2019)
- Yorgova, Yu., (2013) Osobenosti na upravlenie na operatsiite v targovskite organizatsii, sb. "Regionalni i globalni izmereniya na targoviyata", Izd. "Nauka i ikonomika", IU, Varna, s. 426-435 (**Original title:** Йоргова, Ю., Особености на управление на операциите в търговските организации, сб. "Регионални и глобални измерения на търговията", Изд. "Наука и икономика", ИУ, Варна, 2013, с. 426-435)