

Tetiana Yankovets, PhD in Economics

Kyiv National University of Trade and Economics, Ukraine

Maryna Vyshnevskaya

Kyiv National University of Technologies and Design, Ukraine

INNOVATIONS AND DIGITAL MARKETING: CURRENT TRENDS OF DEVELOPMENT

The modern trends of marketing development on the basis of innovations and digital technologies have been studied in the article, in particular: prevalence of using mobile devices in the world; omnichannel sales development; predictive analytics with the use of BigData technologies and methods; personalization of the offer; artificial intelligence development; virtual and augmented reality. The basic principles of digital marketing for predicting consumer behavior, sales growth of the companies and their future development have been substantiated: human orientation, systematicity, innovation, mobility and communicativeness, omnichannel, informativeness, automation and individualization, profitability.

Keywords: innovation, digital technology, digital marketing, omnichannel, data analysis, artificial intelligence, virtual and augmented reality, principles of digital marketing, value, sales, development.

Introduction. Today in the modern world there is an emergence of an information society concept, which claims to play the role of a new social development paradigm. At the same time, in the sphere of socio-economic development, the doctrine of the knowledge economy is being formed, which replaces liberal capitalism. Knowledge economy is typical for the post-industrial society, where the main outputs of production are information and knowledge that are not consumed and not spent, with the same property to accumulate. The globalization processes development has led knowledge to become a leading factor in world economic progress. As knowledge is an intellectual product, the knowledge economy is primarily based on science and innovation, implemented in all spheres of society – production, business, culture, education, health care, and others.

The basis of knowledge economy as a new form of economic relations organization on a global scale are information, communication and other innovative technologies, which are called «digital technologies». The combination of globalization and digital technology development leads to rapid mutual acceleration of these processes, and, in the business and other social spheres, digital marketing, which in modern conditions is reborn and changes its key marketing function, from the promotion of the product to the constant generation of innovation changes, is emerging.

Recent researches and publications analysis. The theoretical and practical aspects of marketing development on the basis of innovations and digital technology were studied by foreign and domestic scholars such as F. Barden¹, F. Kotler, G. Katarjaya, I. Setyavan², O. Kryukova, D. Savelyev³, O. Marchuk⁴, M. Oklander⁵ and others. A significant number of publications on selected topics indicate the relevance and importance of ongoing research. At the same time, the speed of digital transformation of society, business and marketing involves the need for continuous monitoring of these changes. A great deal of practical data in the field of digital marketing requires the use of systematic and situational approaches to substantiating the scientific principles of digital transformation and identifying the possibilities not only to accept changes, but also to be prepared for them, adapt to them.

¹ Барден, Ф. (2018). *Взлом маркетинга: наука о том, почему мы покупаем*. Москва: Манн, Иванов и Фербер.

² Котлер, Ф., Катарджая, Г., Сетьяван, И. (2018). *Маркетинг 4.0. Від традиційного до цифрового*. Київ: КМ-БУКС.

³ Крюкова, Е., Савельев, Д. (2018). *100+ хаков для интернет-маркетологов: Как получить трафик и конвертировать его в продажи*. Москва: Альпина Паблишер.

⁴ Марчук, О.О. (2018). Цифровий маркетинг як інноваційний інструмент управління. *Економіка та суспільство*, 17, 296-299.

⁵ Окландер, М.А. (2017). *Цифровий маркетинг – модель маркетингу XXI сторіччя*. Одеса: Астропринт.

The aim is to identify current trends of marketing development based on innovation and digital technology to enable consumer behavior prediction, increase sales, long-term development of enterprises; substantiate the basic principles of digital marketing.

Research results. Over the past 20 years, digital transformation has gone from organic, then paid search, through the development of social networks to the rapid growth of worldwide mobile devices use (especially smartphones). Mobile phones today have become the world's most popular device for viewing web pages (51,4% with an annual increase of 25%). Computers and laptops are used less (annual decline is 19%), although they continue to occupy a significant place in use (43,4%). Tablets are less used (4,9% with an annual decrease of 6%). The use of other devices has increased by 30% per year, but their share is the least (0,13%)¹. For businesses, in the light of growing smartphones use, the prospect of developing and/or implementing mobile applications for expanding markets, increasing sales volumes and, consequently, financial results, of brand value, is also growing.

According to the Ukrainian representative of the world leader in marketing research – Kantar company, today in Ukraine 75% of the population, including villagers, use the Internet. 85% of Internet audiences use mobile devices. The average age of those who predominantly use mobile devices is 29 years old. The average age of those using computers is 43 years old. Each smartphone has on average 44 mobile applications, using on average 15 apps per day^{2: 3}. Table 1 shows rating (percentage of use of smartphone users) of the most popular applications among domestic consumers, as of May 2019.

Table 1

TOP 15 mobile applications in Ukraine

Mobile application	Rating	Mobile application	Rating
Viber	97%	Instagram	61%
Chrome	95%	Telegram	52%
YouTube	92%	Duo	52%
Gmail	88%	OLX.ua	42%
Facebook	81%	Нова пошта	34%
Google Maps	78%	WhatsApp	32%
Приват24	73%	AliExpress	32%
Facebook Messenger	68%		

Mobile apps on smartphones are used for news, sports, weather (53%), product information searches (43%), video views (36%), online shopping (29%). At the same time, the goals of using smartphones are increasing (from an average of 3,9 daily tasks in 2012; 4,2 daily tasks in 2015 and, respectively, 5,6 in 2018).

The goods that are most often bought online using smartphones are distributed as follows: clothing and footwear – 60%, airplane and train tickets – 50%, home appliances – 47%, cosmetics – 46%, mobile devices – 44%. Mobile payments are preferred by 44% of users.

Table 2 shows the trend of using smartphones and computers by country. The sequence of countries in each sector goes from those where the most time of using devices is spent overnight and further in descending order.

¹ Chaffi, D. (2019). 10 reasons why you need a digital marketing strategy in 2019. *Smart Insights (Marketing Intelligence) Limited*. <<https://www.smartinsights.com/digital-marketing-strategy/digital-strategy-development/10-reasons-for-digital-marketing-strategy/>> (2019, May, 20).

² Homepage (2019). *КАНТАР в Україні*. <<https://tns-ua.com/>> (2019, May, 30).

³ Шахдинарян, Г. (2019). Що потрібно знати маркетологу про аудиторію мобільного інтернету. *iForum2019*. <<https://2019.iforum.ua/>> (2019, May, 30).

Global mobile centricity trend in 2019¹

Devices used most often during the day	Countries
Smartphones	Saudi Arabia, United Arab Emirates, Romania, Chile, Argentina, Serbia, Israel, Sweden, Bulgaria, Mexico, Hong Kong, Malaysia, South Korea, China, Brazil, Columbia, Greece, Singapore, Taiwan, New Zealand, Republic of Ireland, Luxembourg, Spain, Italy, Norway, Denmark, the USA.
Computers and smartphones	Hungary, Poland, Slovakia, Czech Republic, Canada, the Netherlands, Great Britain
Computers	Australia, Ukraine, Germany, Russia, France, Belgium, Finland, Japan

Ukraine is on top of the transfer from using computers predominantly to using computers and smartphones. Mostly smartphones in the world are mostly used by Arab, Asian, South American and some European countries, as well as the United States. Residents of European countries and Canada use both types of devices. Interestingly, the inhabitants of such innovative countries as Germany, Finland and Japan use computers predominantly during the day.

In general, the growth of mobile centricity leads to an increase in psychological dependence and anxiety among users. Today, there is a term like «the number of phones», that is, for an average of 80 times a day; users take the phone in their hands in order to log in to any application. The average duration of «being on the phone» is 3.6 hours per day. 77% of users use messengers, 78% – social networks. In today's world 56% of users think that they spend too much time on their mobile phone. In Ukraine, this figure is much lower – 19%^{2,3}.

Based on the above, it is recommended that companies should take into account the content consumers pay attention to and, as a result, demand for their products: interesting information – 46%; useful information allowing finding the answers one needs and/or solve the problem – 45%; entertainment – 42%. At the same time, it is important to place the person on the first place with their feelings and the benefits they give to any things. Today in the context of digital transformation of business the approach to work with consumers has changed due to changes in consumer behavior. The rapid growth of various types of digital instruments and the intensity of their use leads to increased irritability and rejection as consumers react to increasing digital contacts from companies without their consent. As a consequence, the ineffectiveness of such companies' actions is observed, which makes it difficult to change the approach to doing business and working with consumers.

One of the modern approaches to customer relationship management is the combination of various communication channels, both online and offline, which reduces the irritability factor and increases sales and, consequently, performance. This approach was called omnichannel. Unlike single-channel, when only one communication channel is used (for example, only Email), multichannel (the use of separate communication channels without their interconnection), the omnichannel implies the use of all channels of online and offline communication and sales as a single mechanism (Figure 1).

¹ Шахдинарян, Г. (2019). Що потрібно знати маркетологу про аудиторію мобільного інтернету. *iForum2019*. <:https://2019.iforum.ua/> (2019, May, 30).

² Homepage (2019). *KANTAR в Україні*. <https://tns-ua.com/> (2019, May, 30).

³ Шахдинарян, Г. (2019). Що потрібно знати маркетологу про аудиторію мобільного інтернету. *iForum2019*. <:https://2019.iforum.ua/> (2019, May, 30).

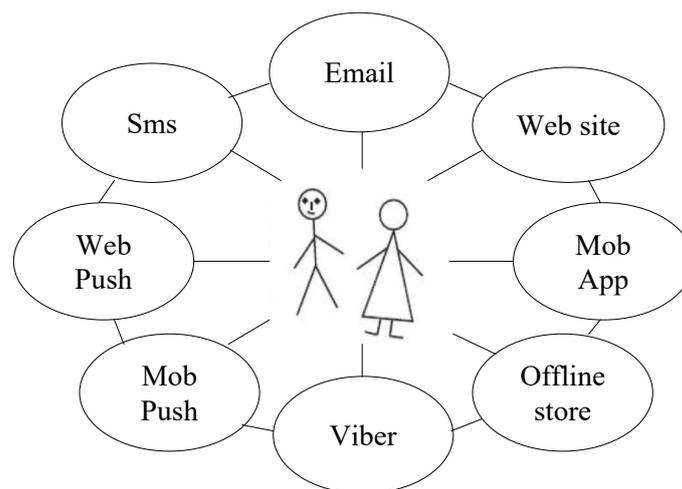


Fig. 1. An example of omnichannel in digital marketing

The main advantage of using omnichannel is that consumers will not lose their company when changing the communication channel in the process of purchase¹. The channels are interconnected and complement each other, which makes the process of switching the consumer from one channel to another «seamless», that is, invisible to him, which facilitates consumer perception when using all the channels both individually and in a complex.

Another advantage of using omnichannel is the ability to collect detailed data on consumers from all communication channels, which gives marketers an understanding of how they work (Figure 2).

One of the main tasks is to tie short-term sessions to long-term through the application of united rules for all channels of communication and sales. To solve this problem, BigData technologies and techniques are used to handle and analyze a huge amount of data, both structured and non-structured, which cannot be processed using classical methods precisely because of the huge amount of information.

Since the vast majority of data in digital space is unstructured, the most up-to-date innovative technology that include artificial intelligence and machine learning are used to transform them into information that is readily perceived by humans. The automation of information collecting and processing, the transformation of unstructured data into structured, as well as data analysis, significantly reduce time and money costs and help to predict consumer behavior.

The advantages of artificial intelligence in digital marketing are classified^{2, 3}:

- complete client base review and segmentation based on the identified values of consumers; assessment of marketing activities for each target group, identification of possible losses of the most valuable consumers; development of effective marketing strategies based on accurate forecasting of consumer behavior, which helps to increase sales and improve financial results;

- the ability to link sales reports, marketing companies, the emergence of new online tools, applications or social networks that potentially can contain new data on target customers, which will help to determine their value for the company;

- collection of a huge amount of data on customers and potential consumers (leads) from both external and internal sources, which makes it possible, thanks to the powerful algorithm of analysis, to arrange the leads in order to reduce the likelihood of their conversion, that is, transformation into customers, and develop appropriate strategies that will reveal their value;

¹ Виноградова, О.В. (2019). Використання омніканальної збутової стратегії в інтернет-маркетингу. *Global marketing: analysis and challenges of our time: Conference Proceedings of International Scientific-Practical Conference (Batumi, Georgia, May 16-17th, 2019)*, 4-8, 4.

² Виноградова, О.В., Дрокіна, Н.І. (2019). Використання омніканальної збутової стратегії в інтернет-маркетингу. *Global marketing: analysis and challenges of our time: Conference Proceedings of International Scientific-Practical Conference (Batumi, Georgia, May 16-17th, 2019)*, 4-8.

³ Миронова, К. (2019). П'ять основних переваг штучного інтелекту в маркетингу. *km.365days*. <<http://km.365days.com.ua/5-osnovnih-perevag-shtuchnogo-intelektu-v-marketingu/>> (2019, June, 12).

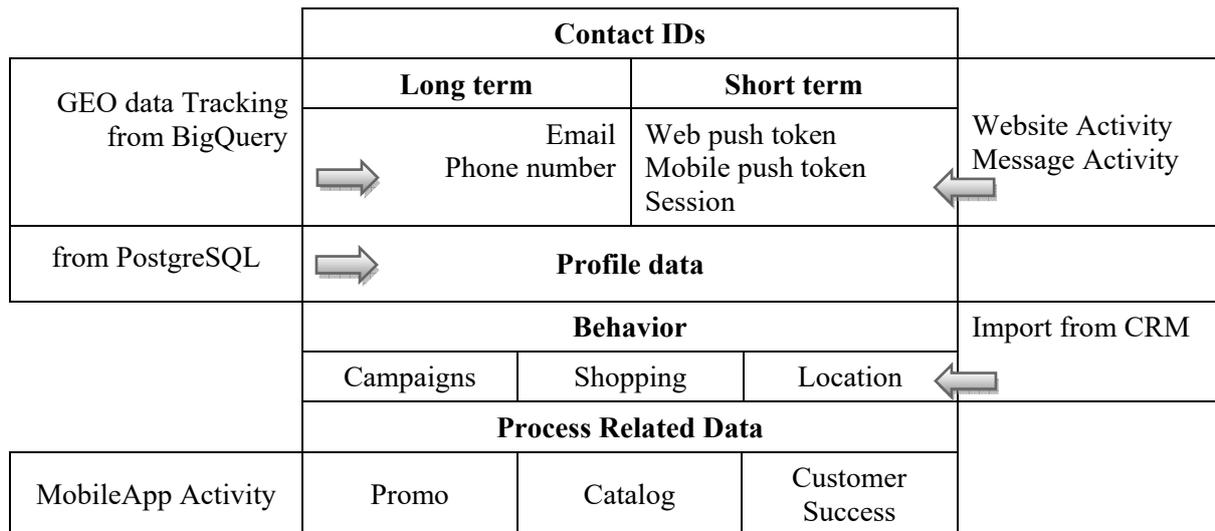


Fig. 2. The ways of data collection, consumer identification and consumer behavior¹

- summarizing information on the range and clients and proposing specific assortment positions for specific consumers, taking into account their individual needs and values, which allows to increase sales volumes and optimize costs;
- the possibility of developing an optimal marketing strategy for customer retention based on data collection by artificial intelligence and the generation of valuable information through the machine learning technology.

BigData technologies and techniques in digital marketing with the use of predictive analytics of artificial intelligence and machine learning allow enterprises to conduct global marketing companies tailored to specific target customers, taking into account their individuality, and accordingly develop personalized tailor-made proposals that directly affect sales, profits, capital, brand value.

Another trend of innovation in the digital marketing development is the use of virtual and complementary technologies and tools. The behavior of consumers and their decision to make purchases takes place on the implicit (subconscious, hidden) level of perception and is based on such principles²: *sensitivity* – the signals directed to the subconscious in order to influence the decision to make a purchase must be obedient and accessible to perception; *instantaneousness* – consumers subconsciously seek to receive remuneration instantly; *confidence* – the subconscious gives preference to the faithful and safe variants. Virtual and augmented reality make the product tangible and valuable in the eyes of consumers, which stimulates the desire to get it right away and gives confidence that the decision taken is correct.

So, for example, Lego developed a system by which, when the package with design details goes up to the special screen in the store, the image of the collected figure appears on top of the box.

Ikea has offered consumers who buy catalogs, using the virtual reality to visit the 3D kitchen, to test its size, location, color, without leaving home.

The Swiss watch manufacturer Tissot has allowed shoppers to try magnificent watches on right on the sidewalk. The showcases have been redesigned into interactive interfaces that turn the white paper bracelet into any Tissot watch using the camera, touch panel and 3D projector. Buyers can not only see how the watch will look on the wrist, but also try out different functions: compass, stopwatch, and thermometer. In addition, virtual watch allow people to take pictures and take photos in Twitter or Instagram to take part in the weekly drawing of watches they liked. It was this Tissot marketing campaign that turned out to be the most successful in the UK (sales in Selfridges grew by 83%)³.

¹ Кудренко, Д. (2019). Нові горизонти омніканального директ-маркетингу. *iForum2019*. <:https://2019.iforum.ua/> (2019, June, 10).

² Барден, Ф. (2018). *Взлом маркетинга: наука о том, почему мы покупаем*. Москва: Манн, Иванов и Фербер. 166.

³ Там само, 168.

Boucheron (French jewelry manufacturer), Tiffany & Co (jewelry transnational company), Gucci (Italian garment maker), Zara (famous clothing brand of the Spanish company Inditex) and other manufacturers and traders are actively using virtual and augmented reality (mobile applications upgraded showcases, etc.), as it is a powerful tool for increasing the product value in the buyers' perception, which allows, through clear signals, to influence conscious choice through the subconscious. The revealed tendencies of digital marketing development allowed to form the basic principles under which modern enterprises should carry out their marketing activity in order to accurately predict consumer behavior, increase companies sales and their development in the future (Figure 3):

– *human-oriented*: a person with the feelings and benefits that he/she gives to any things should be on the first place. Consumers today in the face of tight competition in the world of brands are not just people who buy goods but partners with their own attitude to the product, who take part in the management process together with companies;

– *systematicity*: the speed of change and a large array of information in the area of digital-marketing, which needs to be constantly monitored by current trends in digital technology;

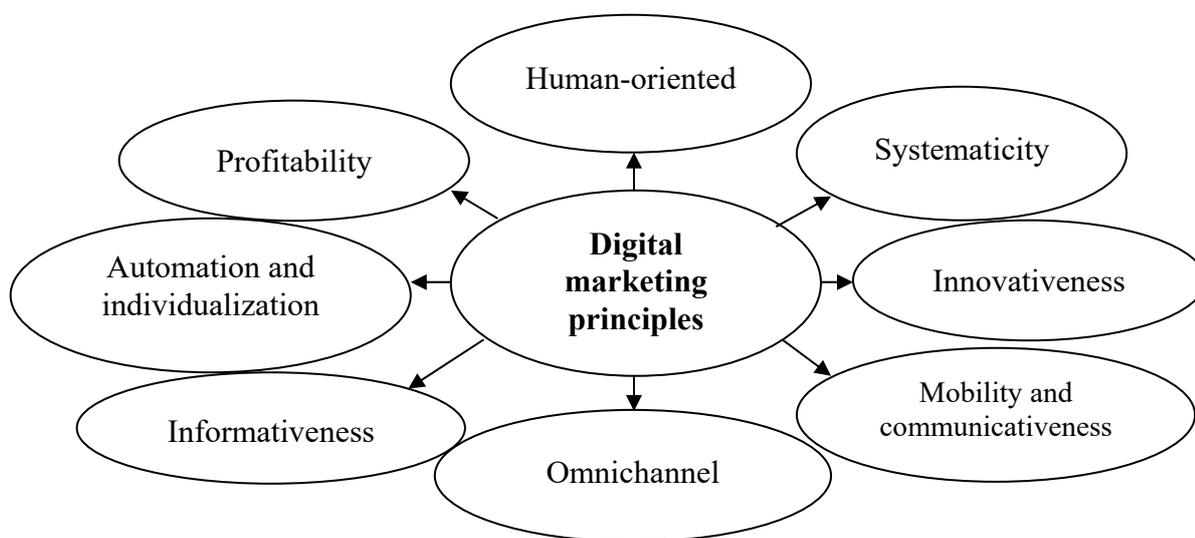


Fig. 3. Basic principles of digital marketing

Source: developed by authors

– *innovativeness*: all marketing activities based on the use of modern digital technologies should be aimed at increasing competitiveness and, accordingly, the product value for consumers;

– *mobility and communicativeness*: the rapid introduction of the latest communication and sales channels in marketing activities based on the most widely used consumers of modern technical devices;

– *omnichannel*: the use of all online and offline channels of communication and sales as the only mechanism to facilitate consumer perception based on common rules for all channels;

– *informativeness*: sales growth is provided by high-quality content. Content marketing remains the most powerful digital instrument in the field of digital marketing¹. Qualitative content should meet the following requirements: generate large traffic; represent the company as an expert, which brings the *user* to the opinion that company product is necessary for him; sell²;

– *automation and individualization*: using BigData technologies and methods, artificial intelligence, machine learning that allows processing huge amounts of information and, based on the results of analysis,

¹ Chaffi, D. (2019). 10 reasons why you need a digital marketing strategy in 2019. *Smart Insights (Marketing Intelligence) Limited*. <<https://www.smartinsights.com/digital-marketing-strategy/digital-strategy-development/10-reasons-for-digital-marketing-strategy/>>. (2019, May, 20).

² Крюкова, Е., Савельев, Д. (2018). *100+ хаков для интернет-маркетологов: Как получить трафик и конвертировать его в продажи*. Москва: Альпина Паблицер. 14.

to develop accurate forecasts of consumer behavior, to formulate personalized offers for each particular customer, which contributes to the increase of value and sales, profits, financial results of enterprises;

–*profitability*: justification of marketing strategies and measures, using innovative digital technology and related tools aimed at increasing the value of the product for consumers, ensures meeting the primary goal of innovation-oriented enterprises – increase in sales, profitability, capital and brand value.

Conclusions. The main current trends in the digital-based marketing development on the basis of digital technology include the following: the prevalence and growth of mobile devices use over the use of computers; the development of omnichannel sales, the possibility of «seamless» consumers transition from online to offline and vice versa; individualization of the offer due to the possibility of collecting detailed information about the consumer and his preferences using BigData technology and methods; development of forecasting analytics using artificial intelligence technology and machine learning; more active use of technology and various tools of virtual and augmented reality.

The revealed tendencies allowed forming the basic principles of digital marketing: human-orientated, systemic, innovativeness, mobility and communicativeness, omnichannel, informativeness, automation and individualization, profitability. Compliance with these principles will ensure that companies achieve competitive advantage, increase sales, revenue, profit, profitability, and capital and brand value.

Subsequent studies will be devoted to the development of a system of indicators for measuring marketing activities effectiveness, carried out on the basis of innovations and digital technology, for the purpose of management.

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