

---

A N N A L E S  
UNIVERSITATIS MARIAE CURIE-SKŁODOWSKA  
LUBLIN – POLONIA

VOL. LVI, 2

SECTIO H

2022

---

JAN RYMARCZYK

jan.rymarczyk@wsb.poznan.pl

WSB University in Poznań

5 Powstańców Wielkopolskich St., 61-895 Poznań, Poland

ORCID ID: <https://orcid.org/0000-0003-4701-439X>

*The Impact of Industrial Revolution 4.0 and the COVID-19  
Pandemic on the Corporate Marketing*

**Keywords:** marketing; Industrial Revolution 4.0; COVID-19

**JEL:** L2

**How to quote this paper:** Rymarczyk, J. (2022). The Impact of Industrial Revolution 4.0 and the COVID-19 Pandemic on the Corporate Marketing. *Annales Universitatis Mariae Curie-Skłodowska, sectio H – Oeconomia*, Vol. 56, No. 2.

**Abstract**

**Theoretical background:** The transformation of marketing that has been taking place for the last 150 years involves the gradual change of its concept, strategy and operational activity models to meet the manifested challenges and the future development trends. The main factors that determine the evolutionary change in corporate marketing include the development of production technique and technology, organization and management processes, and the monetization of goods and services. Another factor includes changes in the environment of enterprises, primarily related to the processes of globalization and to the behaviour, tastes and preferences of consumers. Paradoxically, having affected almost the entire globalized world, the COVID-19 pandemic has become the catalyst for the processes of marketing transformation. The impact of these factors on marketing was the basis for distinguishing four stages in its development, i.e. Marketing 1.0, 2.0, 3.0, and 4.0. This classification is parallel to the one related to industrial revolutions described as Industrial Revolution 1.0, 2.0, 3.0, and 4.0.

**Purpose of the article:** The identification of the main factors of the corporate marketing transformation and the assessment of their impact and effects on the changing ideas, tools and forms increasingly based on digitization and artificial intelligence.

**Research methods:** The author was motivated to undertake the research in question by the lack of systematic and comprehensive studies capturing the impact on marketing of the effects of industrial revolutions and the deriving changes in the corporate environment and the preferences and tastes of consumers, as well as the COVID-19 pandemic. The author used the previous research findings included in various studies (periodical, thematic and online) and conducted their critical analysis and synthesis, and supplemented those with his own reflections. The result of the above was the formulation of a thesis about a close relationship between the development of the techniques and technology of manufacturing, changes in the macro environment of entities as well as the needs and tastes of consumers, and the COVID-19 pandemic and the evolution of marketing.

**Main conclusions:** Over the last 150 years there have been revolutionary changes in the corporate marketing. The main drivers of change included four industrial revolutions, the transformation of the corporate environment as well as of consumer needs and preferences, and the COVID-19 pandemic. They resulted in the gradual development of marketing from the stage defined as Marketing 1.0 through 2.0, 3.0 to 4.0. This last stage is taking place today and is characterized by a plethora of innovative forms. It has been subject to further transformations together with the progress in the implementation of inventions related to the Industrial Revolution 4.0.

## Introduction

The civilizational development of societies is conditioned by the progress in science and its effective application to the production of goods and services. Innovative techniques and technologies determined the transition to its subsequent, higher stages called “industrial revolutions”. Their dividing line was marked by the breakthrough inventions: steam as the driving force in Industrial Revolution 1.0, electricity in Industrial Revolution 2.0, computers, the Internet, mobile phones and automation in Industrial Revolution 3.0. Their development and the wide inclusion of big data, cloud computing, virtual and augmented reality, block chain, cyber-physical devices, 3D printing, autonomous devices for production, transport and communication and various forms of application of artificial intelligence, determined the transition to the Industrial Revolution 4.0.

Parallel to these processes, there was a transformation of marketing tools, forms and strategies providing ground to identify Marketing 1.0, Marketing 2.0, Marketing 3.0 and Marketing 4.0. The engagement of increasingly sophisticated digital tools and artificial intelligence in marketing efforts was accompanied by a shift of focus from product to consumer. In response to changes in the environment and consumer behaviour, companies began to include the cultural, social, spiritual and environmental aspects in the form and content of their offers. Increasingly, companies treat consumers as equal partners and involve them in the processes of designing and creating products strictly tailored to their individual needs and tastes. They also try to anticipate future trends and prepare to meet emerging challenges. The COVID-19 pandemic has been a factor that has significantly accelerated the digitization of marketing. The pandemic has resulted in an extraordinary increase in the importance of online contacts, skills, experience and the scope of using innovative information and communication techniques by consumers and by companies. With a high degree

of probability, it can be assumed that even after the pandemic has subsided, this trend will continue as a result of the continuous improvement and development of the tools used, and above all, artificial intelligence, as it significantly increases the added value of companies and consumers. It seems that it will be possible to talk about intelligent marketing in the near future.

### Marketing development stages – the impact of industrial revolutions

Revolutionary transformations in the technique and technology of production constitute the most important factor of changes, practically in all areas of the economy and the existence of societies. Their appearance preceded, outlined and determined the nature of economic, social, cultural and political phenomena. Breakthrough innovations marked subsequent stages in the development of material and spiritual culture of societies, classified, as mentioned in the introduction, as Industrial Revolutions 1.0, 2.0, 3.0 and 4.0 (Schwab, 2016; Prisecaru, 2016, pp. 59–60; Petrillo et al., 2018; Rymarczyk, 2020, pp. 187–192; Ghobakhloo, 2018, pp. 924–929; Al Mulhim, 2021, pp. 1355–1365). Following such a general division, similar ones are made in particular spheres of material functioning of societies, including marketing. Its individual stages of development, i.e. Marketing 1.0, 2.0, 3.0 and 4.0, were determined by differences in both their content and the applied forms (Kotler et al., 2017; 2019, pp. 140–150; Jara et al., 2012, pp. 854–857; Hilker, 2022; Andhyka, 2020, pp. 50–52; Łukowski, 2017, pp. 190–202) (Table 1).

**Table 1.** Marketing concept development stages

| Stage         | Time range                                         | Characteristics                                                                                                                                                                                                                                                                                                                                      |
|---------------|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Marketing 1.0 | 1760–1914<br>(Industrial<br>Revolutions 1.0 & 2.0) | product focus; traditional information channels; one-way flow of information; passive role of customers; marketing mix strategy                                                                                                                                                                                                                      |
| Marketing 2.0 | 1970–2010<br>(Industrial<br>Revolution 3.0)        | customer focus; product differentiation and positioning; modern information channels (Internet, mobile phones); two-way direct communication; activated role of customers in the creation of products; 4C marketing strategy (customer solution, customer cost, communication, convenience)                                                          |
| Marketing 3.0 | 2010–2019<br>(Industrial<br>Revolution 4.0)        | customer welfare is the highest law; treating the client as a human being with mind, heart and spirit; value based strategy; development of information and communication techniques; the great importance of social media; cooperation stakeholders employees and customers for social welfare; social and environmental responsibility of business |
| Marketing 4.0 | 2019 – present<br>(Industrial<br>Revolution 4.0)   | widespread digitization of marketing; increased use of the Internet of Things and services, big data, cloud, computing, 3D, printing, augmented reality and artificial intelligence; focus on knowledge about clients, their habits, emotions and creativity; adjusting the strategy and marketing tools to the predicted market trends              |

Source: Author's own study based on the literature on the subject.

The first stage in the development of marketing, i.e. Marketing 1.0, is associated with the first and second industrial revolution, which date back to the second half of the 18<sup>th</sup> and the first half of the 19<sup>th</sup> centuries, or to 1870–1914, to be exact. The use of new sources of energy, i.e. steam, and later electricity and machines, enabled the mass production of standardized products. Producers focused on achieving large-scale production and reducing its unit costs (Basyazicioğlu & Karamustafa, 2018, pp. 623–626). Henry Ford's use of assembly line production of cars was the most representative of this idea. The customer played a passive role in this system, limited to the decision to buy what the manufacturer provided. Over time, the number of manufacturers of alternative products grew rapidly and the low cost strategy was supplemented with a strategy of high quality products and their differentiation. Increasing fierce competition meant that manufacturers began to look for new ways to reach more customers. The focus on the product was enriched with new forms of sales, where the fundamental role was played by aggressive advertising and promotion. However, it was noticed that excessive advertising misleading consumers caused a loss of their trust. Providing accurate, truthful information about the product and care for customer satisfaction was more profitable in the long run. Companies segmented customer groups, selecting the most important ones and providing them with products that best met their physical needs. Communication with consumers continued to be one-way, which meant maintaining their passive role in the creation of the value chain.

The concept of Marketing 2.0 was implemented in practice in the late years of the Industrial Revolution 3.0, commencing in the 1970s and, as it was assumed, ending in 2010. The development of modern information and communication technologies, among which the Internet plays the most important role, intensified the processes of globalization (Goldfarb & Tucker, 2017; Gillpatrick, 2019, pp. 142–146). There was an extremely dynamic growth in international trade and foreign direct investment. Many places around the world saw an abundant supply of similar goods meeting the same consumer needs. At the same time, there was an increase in the purchasing power and education of consumers that resulted in the diversification of motives and greater awareness when selecting offers. In comparison to the past, and apart from the functional value of the product, the decision on its purchase was increasingly based on emotional considerations. Companies understood that they had to change their sales strategy from the one based on the customers' belief of being provided with the right quality products, at the right price, in the right way and at the right time, to a strategy of strong two-way relationships between companies and customers (Mazurek & Zach, 2018; Tobiasz & Szymański, 2018; Woźniak, 2018). The determinant of the company's marketing activities was not its perspective as a seller, but as the buyer. The Internet and smartphones became the most important means of communication with customers. Social media on digital platforms enable dialogue with customers, strict adaptation of products to their needs and tastes, i.e. mass customization of products and their co-creation, i.e. the participation in the process of designing and manufacturing products. Consumers involved in the processes of

creating and promoting a given brand, called “prosumers” (a portmanteau word combining “producer” and “consumer”) are an important element of the marketing strategy of companies, contributing to the growth of their sales.

In the next concept of marketing, i.e. Marketing 3.0, which occurred in 2010–2019, i.e. in the first years of the Industrial Revolution 4.0, consumers are treated not only as potential customers, but, first of all, as people driven not only by mind but also emotions, having not only physical but also spiritual needs (Erragcha & Romdhane, 2014, pp. 138–140). Self-realization, creativity, social and ecological sensitivity, the need to integrate with the environment, to have the customers’ individual aspirations recognised and accepted are the values that are strongly taken into account in the marketing activities of companies that try to create the image of socially responsible organizations that follow the principles of corporate governance formulated in their regulations and provisions of various international organizations, sensitive to environmental protection and social and individual well-being. The humanistic and cultural image of the brand becomes a priority in its popularization. The companies’ staff, owners, suppliers, investors, financing institutions, shareholders and other stakeholders, and above all consumers, are involved in these activities. Even to a greater extent than it was in Marketing 2.0, consumers participate in the creation of products that meet not only the functional criteria, but also their spiritual needs. Marketing that is collaborative, transparent, consistent and based on humanistic values is the core of its new idea called “Marketing 3.0” (Pacut, 2020; Lisowski, 2018).

The continued dynamic development of information and communication technologies and the application of artificial intelligence, the intensification of global competition, changes in consumer behaviour, the growing servicisation of societies and COVID-19 pandemic outbreak resulted both in the growing importance of directions, forms and scope of activities represented by Marketing 3.0 and the appearance of new ones. This gave rise to the identification of a new phase in its development, i.e. Marketing 4.0 for which 2019 was used as the starting date (Kotler et al., 2017; Dejnaka, 2020, pp. 19–25; Ungerman & Dedkova, 2019, pp. 5–7; Yuan, 2020; Hollensen, 2001; Mazurek & Zach, 2018, pp. 27–52). There is a parallel here to the Industrial Revolution 4.0, the essence of which was the improvement of inventions from the previous industrial revolution and the emergence of new ones. Cheaper and more sophisticated tools, above all, the Internet of Things, digital platforms and artificial intelligence have greatly increased the role of social media as communication channels between companies and consumers and other stakeholders (Urbach, 2019, pp. 19–21, 31, 44). The number of their active participants and views has increased dramatically. The dialogues between them and with companies have become visible to many millions of people around the world and have been influencing their opinion about companies, their products and making purchasing choices. The combination of the profit paradigm with the humanism paradigm has become the salient point of companies’ marketing activities.

Marketing 4.0 is based on the experience of previous marketing development stages and combines the offline activities with the online ones. In particular, as in the case

of Marketing 3.0, the focus of its attention is the consumer, as a person representing humanistic aspirations and desires, as well as physical needs and emotions. Marketing 4.0 focuses on the largest possible level of meeting these needs of consumers and other stakeholders of the company and assessing the degree of their satisfaction. With the help of appropriate devices, direct interaction of consumers with the offered products is ensured in real time (Vassileva, 2017, pp. 48–51; Basyazicioğlu & Karamustafa, 2018, pp. 627–633; Nosalska & Mazurek, 2019, pp. 10–18). Using their smart phones, they can obtain information on product features and make purchases by scanning the matrix barcode, radio frequency identification (RFID) and near field communication tags (NFC). Improving the flow of information and diversifying its channels (omni-channel) results in consumers making more informed choices, confronted with the opinions of other network participants, and increasing their share in the development of personalized products that can be designed and prepared without the participation of a third party, using 3D printing technology (Maciejewski, 2012, pp. 101–121; Buttle & Maklan, 2015). Previous marketing activities aimed at the optimal adjustment of the offer to the consumer demand of that time have been supplemented by forecasting the future development of the demand and the appropriate modification of the offer. The forecasts concerning the future trends are based on detailed marketing research related to the changes in the consumers' awareness and behaviour as well as in the changes in the direct and more distant environment. The large collections of data and their cloud processing performed with the application of artificial intelligence significantly improve the realism of the forecasting processes.

### **The impact of changes in the corporate environment**

The second stimulator of changes in marketing were changes in the environment of enterprises (Kumar, 2018; Kadirov & Varey, 2010, p. 372; Kumar & Christodouloupoulou, 2014, pp. 37–40) (Table 2).

These include depleting natural resources and environmental degradation. Companies are under the pressure of diminishing resources of fossil fuels, i.e. gas, crude oil, and coal, and their use is associated with the emission of gases harmful to humans and other organisms, as well as climate warming and its catastrophic consequences in the current and long-term perspective. Abusive management of forest resources, overexploitation of arable areas, disappearance of various species of animals and plants constitute other effects of reckless activities of companies. These phenomena increase the costs of the companies and, at the same time, remain under strong pressure from consumer groups demanding changes in their behaviour. In response to these challenges, companies are taking steps to reduce the use of consumables and raw materials, apply renewable energy sources, create environmentally-friendly technologies and components, and recycle or even produce in a closed loop. In the mass media, on social platforms, they present themselves as companies that care for

the environment and manufacture ecological products. The labels of goods of many companies contain information that they were produced from the recycled material. The companies aim these advertising and public relations activities at gaining the trust of consumers and persuading them to buy the products on offer.

**Table 2.** The impact of changes in the environment of enterprises on their marketing

| The division criterion       | Description                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Natural factors              | depletion of natural resources; environmental degradation; global warming; the disappearance of animal and plant species; soil erosion; natural disasters; pandemics (“Spanish” flu, “bird” flu, SARS, “swine” flu, Ebola, COVID-19); wars and local conflicts                                                                                                                     |
| Economic factors             | globalization and regionalism; competition; changes in the economic situation; increase in prices of raw materials and materials                                                                                                                                                                                                                                                   |
| Legal factors                | laws on environmental protection; regulations concerning hygiene and safety at work of machines and devices; sanitary and phytopathological regulations; restrict or prohibit the use of certain ingredients in foods; recycling regulations; restrictions on the use of certain advertising and promotion measures                                                                |
| Socio-psy-chological factors | changes in customer preferences; increase in education and income of the population; increased knowledge of new information and communication technologies; increase in customer requirements regarding quality, delivery time, price and service; preferring personalized products that meet social, ecological, health and ethical criteria; expectation of promotional benefits |

Source: Author’s own study based on the literature on the subject.

The changes in the applied marketing strategy are also influenced by macro- and microeconomic factors. The high pace of economic growth, investment and consumption related to the favourable economic situation translate into an increase in income, prices, consumption and investment expenditure of companies and households. The changes in demand concern not only basic consumer goods, but also a shift towards the demand for higher-level and luxury goods. Companies need to adapt their marketing efforts to these changes. The multi-channel information transfer using innovative means of communication and promotion is varied and adapted to the current and predictable shopping preferences of customers. The increased income of companies allows to allocate more funds to marketing, employing high-quality specialists and, consequently, increasing its effectiveness.

Economic downturns and crises may have an adverse effect on marketing activities. Corporate bankruptcies, the growth of unemployment, and inflation will lead to a decline in a real household income and a greater concentration of spending on basic necessities. The income of companies as well as advertising and promotion expenses will also decrease, as their tools must be applied selectively in accordance with the changed situation and targeted at the most promising customer groups (Nikbin et al., 2021).

Another very important factor that prompts companies to reorient their marketing activities involves changes in consumer preferences (Kumar, 2018; Kovanovienė et al., 2019). Increased income, better education, common use of mobile means of communication, demographic changes, the need for authenticity, changes in the ways

of spending income, increasing environmental awareness and sensitivity to environmental protection and ethical considerations, new quality of social visions, valuing experiences over products, increasing knowledge of new technologies and IT tools, a preference for personalized products and openness to changes constitute a rich set of features that characterize contemporary consumer communities. They cause a profound change in the profile of consumers and the necessity to apply marketing measures that differ significantly from traditional ones. They are predominantly based on IT media, personalized, taking into account social, environmental, health-related and ethical conditions, significant knowledge and experience of customers and an increase in their requirements for quality, functionality, price, reliability, speed of delivery, user friendliness and the level of after-sales services. It is also common for customers to expect various promotional benefits.

Competition is the factor that forces companies to constantly change their behaviour in all spheres of their activity, including marketing. A company is competitive if it has the ability to manufacture and sell products whose price, quality and other product values are more attractive than those proposed by the competition (Kisiel, 2005, p. 15). Radical changes taking place in the processes of production, distribution, information and communication under the influence of the Industrial Revolution 4.0 caused a change in the paradigm of competitiveness. There was a departure from the traditional approach to competitiveness represented by Porter, that assumed the possibility of a company applying one form of competitiveness at a time, i.e. either low-cost strategy or high quality or market niche (Porter, 1992). The new paradigm of competitiveness assumes the possibility of simultaneous use by the company of all three strategies. Autonomous or semi-autonomous cyber-physical devices are able to manufacture high-end products at a low cost due to the elimination of a large number of employees. On the other hand, thanks to 3D printing technology, products with such features can be personified and delivered to consumers in market niches. The new paradigm of competitiveness is affirmed in the information and advertising channels of companies that meet its criteria.

In all countries, corporate marketing is influenced to varying degrees by government regulations (Kumar, 2018, pp. 7–8). They most often relate to advertising that applies sexual content, children, promotion of the consumption of alcohol, smoking cigarettes and taking drugs, dissemination of racist or sexist content, discrediting competitors' products or emphasizing one's own advantage over a specific product of another company. Restrictions can be used not only for the social good, but also to achieve other goals, such as restricting imports, for example. Hence, in the past, in Japan, foreign companies could only advertise their products in the language of their own country. Official requirements regarding the composition of a given product, certain substances used as its components, which are to be allowed in some countries and forbidden in others, such as formaldehyde used as a preservative in the USA and banned in Japan, force companies to adapt their products to local requirements. Various international regulations related to the safe operation of devices and vehicles

and their impact on the natural environment operate in a similar way. This applies in particular to the permissible exhaust emission standard. In such cases, global marketing must be modified and replaced with a dual local and global strategy. Also, certain forms of trade, such as franchising, are subject to restrictions in many countries, and e.g. door-to-door trade is prohibited in China. The activities of sharing economy companies such as Uber or Lyft are subject of restrictive regulations of the governments of many countries. Although changing regulations force companies to modify their strategies and marketing activities, thus, constituting additional costs, they also protect those companies from unfair competition and protect consumers from harmful corporate practices.

### **Impact of the COVID-19 pandemic**

The outbreak of the COVID-19 pandemic at the end of 2019 had a drastic negative impact on the economies and societies of the vast majority of countries in the world. The more the countries were involved in the global system of creation of values, the more they felt the effects of this natural disaster. There was a temporary collapse in global production of many goods due to the disruption of supply chains, increased unemployment, inflation, a decline in human income and company profits. Restrictions on the cross-border and internal movement of people as well as the restrictions related to the presence of more than a certain number of people in one place, the need to maintain a social distance, ban on gatherings, lockdown in the catering, hotel and entertainment, transport and other industries were introduced for sanitary reasons to a different extent in individual countries. This resulted in the suspension or limitation of production in many workplaces and the need to work remotely, where such a form was possible. It was estimated that in 2020, as a result of the COVID-19 pandemic, world trade decreased by 30% and foreign direct investment by 30 to 40% (Kilic & Marin, 2020, pp. 13–16). In order to survive, companies reduced their marketing expenses sometimes to a drastic extent (Hillier, 2021). This was especially true when regarding such traditional forms of marketing as newspapers, magazines, leaflets, banners and illuminated advertisements. Isolation, limited contact with other people and remote work and learning resulted in an enormous growth of the importance of communication through digital media. Marketing found itself among those industries that underwent the greatest transformation from traditional to digital techniques of operation.

COVID-19 significantly accelerated the digitization of marketing and became a catalyst for its innovative changes. The situation determined by the pandemic transformed the behaviour of consumers – there was a dramatic turn towards e-commerce, an increase in shopping at one-stop-shop retailers, focus on the purchase of goods of local and personalized brands. Meanwhile, many companies reduced their expenses for traditional marketing, made staff reductions and developed innovative marketing strategies that were adapted to these new phenomena in consumer be-

haviour as closely as possible (Hoekstra & Leeflang, 2020, pp. 2–9; Nikbin et al., 2021; Ritter & Petersen, 2020, pp. 215–220; Sirkeci, 2020, pp. 2–5; Sterne, 2017; Corsaro et al., 2021; Khalled et al., 2020, pp. 832–835; Sheth, 2020, pp. 280–282; Kamel, 2021, pp. 37–41; Tao et al., 2022). Generally, their activity was based on increasing the scale and diversity of the use of digital marketing tools. This concept refers to the activities of companies aimed at persuading consumers to buy their goods or services using digital media such as the Internet and mobile phones. The most frequently used tools and related types of marketing include (Ayuash & Gowda, 2020, pp. 226–228; Ungerman et al., 2018, pp. 137–140; Khan & Nawaz, 2021, pp. 33–36; Sharma, 2020, pp. 1476–1478; Bapat, 2018, pp. 58–62; Smolucha, 2017, pp. 120–131; Yusoff, 2019, pp. 724–725; Kang & Kim, 2018, pp. 2370–2372) (Table 3):

**Table 3.** Types of modern marketing tools

| Type                                       | Characteristic                                                                                                                                           |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Social media marketing                     | Use of online platforms such as Facebook, Twitter, Instagram, YouTube, TikTok.                                                                           |
| E-mail marketing                           | Information is sent online to the fixed or mobile devices of potential customers.                                                                        |
| Search engine optimization marketing (SEO) | It consists in increasing the visibility in organic search results for specific keywords, which makes it easier to obtain information about the product. |
| Video marketing                            | It is providing customers with content about the product in the form of short films.                                                                     |
| Affiliate marketing                        | It is when company transmits a link to its website to affiliates in order to perform certain marketing activities on its behalf.                         |
| Influencer marketing                       | It means promoting the company's products by paid celebrities.                                                                                           |
| Content marketing                          | It is an approach to marketing that focuses on the creation and delivery of high-value content through online platforms, e-mails and blogs.              |

Source: Author's own study based on the literature on the subject.

- social media marketing. It is one of the most popular and effective forms of marketing. It involves the use of online platforms such as Facebook, Twitter, Instagram, Snapchat, YouTube, Pinterest, TikTok and many others for advertising and promotion. It is estimated that around 3 billion people worldwide visit the website of these platforms. It is believed to be the most powerful marketing tool in a pandemic as people have much more free time, spend it at home, and prefer to shop online for products traditionally purchased in-store,
- mobile marketing is based on mobile devices such as smartphones and tablets. Companies contact owners of these devices on their websites, via e-mail, SMS, MMS, social media and various applications. It is also a very effective form of marketing, because the content provided can be personalized and related to time and location, i.e. delivered at the time considered by the companies as optimal and to the consumer located at a certain distance from the company. It is possible to reach a huge number of consumers as it is estimated that 80% of Internet users own smart phones (Bapat, 2018, p. 62),
- e-mail marketing is a segment of Internet marketing. Information is sent online in the form of e-mails to fixed or predominantly mobile devices. It may include con-

tent targeted at specific groups or individuals and offer special product promotions, e.g. for birthdays. It is a very common means of advertising, maintaining constant contact with customers and their loyalty,

- search engine optimization (SEO) marketing, also known as web positioning. It is the process of increasing the visibility in organic search results for specific keywords, which translates into increased quantity, quality of traffic on websites by optimization of a specific search engine. Such improvement makes it easier for users to find information about the product and possibly make a decision to buy it,

- video marketing provides consumers with content in the form of short films aimed at strengthening the brand image or promoting a new product or service through various channels (social media, websites, video services such as YouTube, TikTok, Vigo, Video). Video blogs, webinars (online training), product video reviews and video tutorials belong to the forms of video marketing that are used most often,

- affiliate marketing is a form similar to common sale. The advertiser delegates the performance of marketing activities to affiliated entities by providing them with a link to their website. Each time a consumer visits the company's website or purchases its product, it pays the partner a fixed amount of commission. In this way, it increases the range of activities and reaches new customers,

- influencer marketing means promoting a company's products by paid celebrities. Most often they are artists, popular sportsmen, actors, singers and dancers who advertise fashion, cosmetics, jewellery, etc. on television and on social networks,

- relationship marketing is also called "partnership marketing" or a "tie-in marketing" and is based on building lasting relationships with customers using various digital marketing tools, which have already been mentioned. Communication with them is based on dialogue, providing a personalized offer, tailored to the known needs and tastes of consumers. For this purpose, companies often use software such as customer relations management (CRM) or customer experience management (CXM),

- content marketing is an approach to marketing that focuses on the creation and transmission of high-value content. Social media platforms, e-mails and blogs are most often used for this purpose. The content conveyed must meet the criteria of reliability, credibility, usefulness, uniqueness, personification and optimization of the message. The message is addressed to consumers with significant knowledge, experience and a critical approach to the advertised products.

The list presented here includes the most important forms of digital marketing, but is not complete. Companies confronted with a decline in their profits and the threat of bankruptcy on the one hand, and with a declining demand of impoverished humanity on the other hand, have taken a lot of steps to maintain communication with the client while relying on reduced budgets and experiencing cuts in marketing expenditures in general. Therefore, they focused on those forms of marketing that, at a relatively low cost, would provide income that would allow them to survive the difficult period. This criterion is largely met by digital marketing.

## Conclusions

The studies on the evolution of marketing carried out in the article indicate fundamental changes that have taken place both in terms of its content, as well as forms and tools. The determinants of these processes were, first of all, revolutionary transformations in the technique and technology of production, defined as industrial revolutions. Therefore, parallel to the Industrial Revolutions 1.0, 2.0, 3.0 and 4.0, the classification of marketing as 1.0, 2.0, 3.0 and now 4.0 appeared. The extraordinary impact of the dynamic increase in the quantity and quality of goods and innovative methods of their production was the most important reason for the emergence of new types of marketing but not the only one. There were important changes in the behaviour of consumers whose knowledge, education, social awareness, sensitivity to human rights and environmental protection grew. Economic factors were of great importance to changes in marketing strategies. The transformation of marketing was a *sine qua non* for the existence of companies and the possibility of increasing their profits when confronted with growing competition. In their marketing activities, companies were forced to move from focusing on the product to focusing on consumers and treating them not only as potential buyers of their products, but above all as human beings with their minds and emotions, in possession of needs that were not only physical, but also increasingly spiritual, developed with the culture of societies and the progress of civilization.

The developments of technique and technology, and most of all modern means of information and communication, proved to be the perfect tools to achieve these goals. Their use resulted in a remarkable improvement in communication between companies and consumers and mutual relations, i.e. on the part of the company, an increase in the care for customer satisfaction, providing them with the expected, individualized value, enriched with a social component were observed, and on the part of the customer, an increase in purchases, loyalty and dissemination of positive information about the company and its products and participation in the design and development of products took place. New technologies enabled the inclusion of new distribution channels and reaching new customers, opening new markets, producing new, better products, greater integration of the company's functions and activities of stakeholders, improvement of efficiency, its measurability and competitiveness.

The COVID-19 pandemic has played a very important role in the transformation of marketing. The limitations of physical human communication, the use of various devices of the material infrastructure, lockdown, the need to work and learn remotely, and the increase in the amount of free time meant that people began to use information communication devices to a much greater extent and enrich their knowledge and skills in using them. This greatly accelerated the digitization of businesses in response to the challenges of the pandemic and changing consumer behaviour. It can be assumed that after the disappearance of the pandemic, and because it has been supported by the benefits of companies and consumers so far, a new marketing model

will be implemented, characterised by an increasing use of digital innovations and artificial intelligence.

The article has been based on the desk research method, which is its limitation. Systematizing theoretical knowledge and its conceptual approach, however, constitute an indispensable basis for empirical research that should be undertaken in order to verify hypotheses and intuitive assessments of the processes of marketing transformation and the impact of external and internal factors on those processes. Future research should answer, in particular, the questions: 1) Whether companies use digital marketing tools. If so, what and to what extent?; 2) What are the motives for using digital marketing forms?; 3) What are the stimulants and barriers to the implementation of digital forms of marketing?; 4) How did the application of digital forms of marketing influence the income and profits of companies, relations with consumers and relations with stockholders?; 5) What digital forms of marketing are the most popular ones among customers?; 6) Are companies planning further digitization of marketing and the use of artificial intelligence?; 7) How do companies evaluate the relationship between costs and the effects of using digital marketing tools?; 8) How did COVID-19 influence the use of digital forms of marketing, its expenses and effects?

The presented list of questions certainly does not exhaust the issues related to the transformation of marketing, but the answers to them will be helpful in determining its status and perspectives as well as necessary activities to be taken to increase the results of companies and consumer satisfaction.

## References

- Al Mulhim, A.F. (2021). Smart supply chain and firm performance. The role of digital technologies. *Business Process Management Journal*, 27(5), 1353–1372. doi:10.1108/BPMJ-12-2020-0573
- Andhyka, B. (2020). Marketing 4.0. A literature review. *IOSR Journal of Business and Management*, 22(4), ser. III, 49–52.
- Ayush, G.K., & Gowda, R. (2020). A study on impact of COVID-19 on digital marketing. *Vidyabharati International Interdisciplinary Research Journal (Special Issue)*, 225–228.
- Bapat, S.S. (2018). Digitalization in Marketing. *International Journal of Trend in Scientific Research and Development (IJTSRD)*. Conference Issue Sangi. Oct. 2018, 57–63.
- Basyazicioglu, H.N., & Karamustafa, K. (2018). Marketing 4.0: Impacts of technological developments on marketing activities. *Kirikkale University Journal of Social Sciences (KUJSS)*, 8(2), 621–640.
- Buttle, F., & Maklan, S. (2015). *Customer Relationship Management Concept and Technologies*. London – New York: Routledge.
- Corsaro, D., Maggioni, L., & Olivieri, M. (2021). Sales and marketing automation in the post-COVID-19 scenario. Value drivers in B2B relationship. *Italian Journal of Marketing*, 2021(4). doi:10.1007/s43039-021-00024-x
- Dejnaka, A. (2020). Zmiany w sposobie obsługi klientów 4.0 w aspekcie rozwoju przemysłu 4.0 oraz IoT, IIoP oraz IoRT. In M. Kowalska & A. Szwałik (Eds.), *Rewolucja 4.0. Nowe Technologie w Marketingu*. Warszawa: PWE.
- Erragcha, N., & Romdhane, R. (2014). New faces of marketing in the era of the Web: From Marketing 1.0 to Marketing 3.0. *Journal of Research in Marketing*, 2(2), 137–142.

- Ghobakhloo, M. (2018). The future of manufacturing industry. Strategy roadmap toward Industry 4.0. *Journal on Manufacturing Technology Management*, 29(6), 910–936.
- Gillpatrick, T. (2019). The digital transformation of marketing: Impact on marketing practice & markets. *Economics*, 7(2), 139–156.
- Goldfarb, A., & Tucker, C. (2017). Digital economics. *Working Paper*, 23684. Retrieved from <http://www.nber.org/papers/w/23684>
- Hilker, C. (2022). *Marketing 4.0. Die Digitale Marketing Transformation*. Retrieved from <https://www.hilker-consulting.de>
- Hillier, L. (2021). *Stats roundup: The impact of Covid-19 on marketing and advertising*. Retrieved from <https://econsultancy.com>
- Hoekstra, J.C., & Leeftang, P.S.H. (2020). Marketing in the era of COVID-19. *Italian Journal of Marketing*, 249–260. doi:10.1007/s43039-020-00016-3
- Hollensen, S. (2001). *Global Marketing*. Harlow: Pearson.
- Jara, A.J., Parra, M.C., & Skarmeta, A.F. (2012). Marketing 4.0: A new value added to the marketing through the Internet of Things. *6<sup>th</sup> International Conference on Innovative Mobile and Internet Services in Ubiquitous Computing*. 4–6 July 2012, Palermo, Italy, 852–857.
- Kadirov, D., & Varey, R.J. (2010). Future marketing: Dialectics of post-industrial development. *Journal of Customer Behaviour*, 9(4), 357–377. doi:10.1362/147539210X543565
- Kamel, A.E. (2021). The impact of COVID-19 pandemic on marketing philosophy. *Delta University Scientific Journal*, 4(1), 36–43.
- Kang, M., & Kim, W. (2018). Marketing issues in the Fourth Industrial Revolution. A conceptual study. *Journal of Digital Contents Society*, 19(12), 2365–2375. doi:10.9728/dcs.2018.19.12.2365
- Khalled, A.S.D., Jray, A.A., Alomari, K.M., Salah, A.A., & Alshaketheep, M.K. (2020). Digital Marketing during COVID-19; Consumer's Perspective. *WSEAS Transactions on Business and Economics*, 17, 831–841.
- Khan, R.Z., & Nawaz, H. (2021). Impact and challenges of digital marketing during Covid-19 pandemic. *Gorteia Journal*, 34(8), 31–38.
- Kilic, K., & Marin, D. (2020). Wie COVID-19 Deutschland und die Weltwirtschaft verändert. *Ifo Schnelldienst*, 73(5), 13–16.
- Kisiel, M. (2005). *Internet a konkurencyjność banków w Polsce*. Warszawa: CeDeWu.
- Kotler, P., Kartajaya, H., & Setiawan, I. (2017). *Marketing 4.0*. Warszawa: MT Biznes.
- Kotler, P., Kartajaya, H., & Setiawan, I. (2019). Marketing 3.0: From products to customers to the human spirit. In K. Kompella (Ed.), *Marketing Wisdom. Management for Professionals* (pp. 139–156). Singapore: Springer.
- Kovanovienė, V., Mačytė, M., Petkevičiūtė, R., & Zaikauskaitė, G. (2019). *The influence of marketing tools on consumer behavior and its assessment*. Vilnius University Open Series. 14<sup>th</sup> Prof. Vladas Gronskas International Scientific Conference. Retrieved from <https://www.journals.vu.lt/open-series/article/view/18402/17614>
- Kumar, V. (2018). Transformative marketing. The next 20 years. *Journal of Marketing*, 82(4), 1–12. doi:10.1509/jm.82.41
- Kumar, V., & Christodouloupoulou, A. (2014). Sustainability and branding: An integrated perspective. *Industrial Marketing Management*, 43(1), 6–15.
- Lisowski, S. (2018). Social media marketing. In G. Mazurek (Ed.), *E-marketing*. Warszawa: Poltext.
- Łukowski, W. (2017). The impact of the Internet of Things on value added to Marketing 4.0. *MINIB*, 26(4), 187–204.
- Maciejewski, I. (2012). Customer Relationship Management – strategia biznesowa i technologia informatyczna. *Zeszyty Naukowe Wydziału Informatycznych Technik Zarządzania Wyższej Szkoły Informatyki Stosowanej i Zarządzania. „Współczesne Problemy Zarządzania”*, 1, 100–137.
- Mazurek, G., & Zach, K. (2018). Strategia i planowanie e-marketingowe. In G. Mazurek (Ed.), *E-marketing* (pp. 27–52). Warszawa: Poltext.

- Nikbin, D., Iranmanesh, M., Ghobakhloo, M., & Foroughi, B. (2021). Marketing mix strategies during and after COVID-19 pandemic and recession: A systematic review. *Asia-Pacific Journal of Business Administration*. Retrieved from <https://journals.sayepuo.com>
- Nosalska, K., & Mazurek, G. (2019). Marketing principles for Industry 4.0 – a concept framework. *Engineering Management in Production and Services*, 11(2), 9–20. doi:10.2478/emj-2019-0016
- Pacut, M. (2020). Marketing wirtualnych społeczeństw jako instrument kształtowania zasobów relacyjnych przedsiębiorstwa. In M. Kowalska & A. Szwałik (Eds.), *Rewolucja 4.0. Nowe technologie w marketingu*. Warszawa: PWE.
- Petrillo, A., De Felice, F., Cioffi, R., & Zomparelli, F. (2018). Fourth Industrial Revolution: Current practices, challenges and opportunities. In A. Petrillo, R. Cioffi, & F. De Felice (Ed.), *Digital Transformation in Smart Manufacturing*. Rijeka: IntechOpen.
- Porter, M.E. (1992). *Strategie konkurencyjności*. Toruń: Dom Organizatora.
- Prisecaru, P. (2016). Challenges of the Fourth Industrial Revolution. *Knowledge Horizons – Economics*, 8(1), 57–62.
- Ritter, T., & Pedersen, C. (2020). Analyzing the impact of the coronavirus crisis on business models. *Industrial Marketing Management*, 88, 214–224.
- Rymarczyk, J. (2020). Technologies, opportunities and challenges of the Industrial Revolution 4.0: Theoretical considerations. *Entrepreneurial Business and Economics Review*, 8(1), 186–198.
- Schwab, K. (2016). *The Fourth Industrial Revolution*. London: Portfolio Penguin.
- Sharma, P. (2020). Impact of Covid-19 on marketing strategy and expenditure. *International Journal of Advanced Research (IJAR)*, 8(09), 1475–1478.
- Sheth, J. (2020). Impact of COVID-19 on consumer behavior: Will the old habits return or die? *Journal of Business Research*, 117, 280–283.
- Sirkeci, I. (2020). Marketing and consumer in an era of disruption caused by COVID-19 pandemic. *Transnational Marketing Journal*, 8(1), 1–6.
- Smolucha, D. (2017). W pogoni za klientem mobilnym – wykorzystanie narzędzi nowych technologii w marketingu. *Studia Ekonomiczne. Zeszyty Naukowe Uniwersytetu Ekonomicznego w Katowicach*, 317, 118–135.
- Sterne, J. (2017). *Artificial Intelligence for Marketing*. Hoboken: Wiley.
- Tao, H., Sun, X., Liu, X., Tian, J., & Zhan, D. (2022). The impact of consumer purchase behavior changes the business model design of consumer services companies over the course of COVID-19. *Frontiers in Psychology*. doi:10.3389/fpsyg.2022.818845
- Tobiasz, M., & Szymański, W. (2018). Content marketing. In G. Mazurek (Ed.), *E-marketing*. Warszawa: Poltext.
- Ungermaier, O., Dedkova, J., & Gurinova, K. (2018). The impact of marketing innovation on the competitiveness of enterprises in the context of Industry 4.0. *Journal of Competitiveness*, 10(2), 132–148.
- Ungermaier, O., & Dedkova, J. (2019). Marketing innovations in Industry 4.0 and their impacts on current enterprises. *Applied Sciences*, 9, 1–21.
- Urbach, N. (2019). Die Digitalisierung des Marketings – Wie innovative Technologies die Marktkommunikation verändern. *Transfer*, 65(2), 18–23.
- Vassileva, B. (2017). Marketing 4.0: How technologies transform marketing organisation. *Óbuda University e-Bulletin*, 7(1), 47–56.
- Woźniak, T. (2018). Technologie mobilne w marketingu. In G. Mazurek (Ed.), *E-Marketing*. Warszawa: Poltext.
- Yuan, X.-M. (2020). Impact of industry on inventory systems and optimization. In T. Banyái, A. Petrillo, & F. De Felice (Eds.), *Industry 4.0*. London: IntechOpen.
- Yusoff, M. (2019). Positioning relationship marketing in Industry 4.0. *International Journal of Academic Research in Business and Social Sciences*, 9(12), 720–727. doi:10.6007/IJARBS/v9-i12/6773