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Digital Distribution as an E-commerce Sales Channel

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Abstract

In a matter of decades, digital technologies have transformed the way we communicate with others, conduct business, produce goods and services, as well as the way we live, work, and spend our spare time. These, often rapid, developments hold a lot of promise for the future, in terms of wealth generation, technological advances, and improving the quality of life. At the same time, they also bring challenges associated with a lack of skills, new and fast-emerging markets, consumer protection, industrial re-organization, trust, security, and privacy.
The private life of society, as well as the world of business, have moved to the virtual world. The transformation to e-business is complex, and to be successful, a balance needs to be struck between strategy, a customized business model, the relevant processes, and the technology used.
The aim of the article is to present the essence of digital distribution and the key factors in the dynamics of its development. Secondary data on the development of digital distribution in the world and in Europe over the past 20 years are presented, and the forecasts for the coming years are calculated.

Keywords: digital distribution, e-commerce, sales channel, digital product

JEL: L81, M39, D12

Introduction

What would the world be like today without the Internet? Contrary to appearances, the answer is not difficult – more or less like 50 years ago. While interpersonal communication would certainly be limited, the degree of intimacy would undoubtedly be greater. A similar process of changes occurred when the first mobile phones appeared. They

evolved into smartphones with Internet access and numerous games and applications, without which we cannot imagine functioning in society today.

The Internet did not come about overnight as a result of a technological breakthrough. It is a response both to civilization's technological development and the needs of modern society, where many changes in customs and views have occurred (Maigret 2015, pp. 452–453). The Internet has made it possible for society to have instant access to a lot of information from the country and the world; it has opened new paths for business development, education, and entertainment (Hoffman, Novak, and Stein 2012, pp. 28–38).

The Internet that we use today, i.e., the network of computer networks based on the Transmission Control Protocol (TCP)/Internet Protocol (IP) suite of protocols – is now a relatively old technology. Research on its design commenced in 1973, and the network became operational in January 1983. For the first two decades of its existence, it was the preserve of a technological, academic, and research elite. From the early 1990s, however, it began to percolate into mainstream society and is now widely regarded as a General Purpose Technology (GPT), without which modern society could not function. So, in a relatively short period, the technology went from being something regarded as exotic to an apparently mundane utility, like mains electricity (Naughton 2016, p. 5).

The Internet entered its commercial phase between 1984 and 1989. It was facilitated by the upgrading of backbone links, the writing of new software, and the growing number of interconnected international networks (Cohen-Almagor 2011, p. 45). In March 1989, Tim Berners-Lee and Robert Cailliau submitted to CERN a project to create a network of hypertext documents called the World Wide Web. It was intended to be a collection of hypertext documents to facilitate work at CERN. In December 1990, Tim Berners-Lee created the HTML foundations and the first website. Two years later, the first graphical web browser, Mosaic, was written.

In Poland, on July 30, 1990, the national top-level domain ".pl" was registered at the Computer Center of the University of Copenhagen. The analog line, later transformed into the Internet network, was launched on September 26, 1990, and had a speed of 9600 bit/sec. The Internet in Poland has been officially available since December 20, 1991.

The web provides limitless income potential for the enormous number of companies that exist in the global economy. Internet access is largely transforming traditional businesses into modern companies, and the network is becoming a strategic part of those companies' operations.

The 21st century will surely be remembered by historians as a period of unprecedented change in the business world. Within a few years, entire industries have been radically transformed, hundreds of thousands of new companies appeared, huge fortunes were won or lost by entrepreneurs and investors. All were the results of digital technology. Many people have referred to this process as the "e-business revolution" (electronic business revolution), an idea that has captured the imagination of many companies, governments, and people everywhere.

The practice of advanced countries has proven that even the use of new technologies requires a series of investments in technical means, especially human resources, and the benefits of e-business are more and more evident at both the micro and macro levels. A lack of initiative and involvement in the process of transitioning to the digital economy can have serious consequences both for the survival/maintenance/development of the organization and the economic sector, region, or country as a whole (Caraiani 2008, p. 84). The sales process has also been shortened and streamlined. There is no longer any need for face-to-face meetings with customers and suppliers – this can be done entirely online and in much less time. Anywhere in the world, depending on the company's profile. The same applies to marketing and advertising and the delivery of products or services. Traditional forms of advertising are constantly being replaced by the continuously developing online market of advertising services. It can be safely assumed that most enterprises have access to the Internet and use it on a daily basis to conduct their business. Every company needs a website, but it must be readable for the visitor and contain the most crucial information about the company (Kotler 2003, p. 58).

Petouhoff stated, "What social and digital devices have done is really transform marketing, customer service, and even sales" (Petouhoff 2006, pp. 1–8). In order for a company to be competitive, it must constantly change and renew itself, adjusting to the new changes of technology.

The essence and development of digital distribution

Distribution is one of the four elements of the marketing mix. Distribution is the process of making a product or service available to the consumer or business user who needs it. This can be done directly by the producer or service provider or using indirect channels with distributors or intermediaries.

Distribution is fundamental to ensuring that products reach target customers in the most direct and cost-efficient manner. In the case of services, distribution is principally concerned with access (Dent 2011, p. 5–15). Although distribution, as a concept, is relatively simple, in practice, distribution management may involve a diverse range of activities and disciplines including detailed logistics, transportation, storage, inventory management, as well as channel management, including selecting channel members and rewarding distributors (Armstrong et al. 2014, p. 297).

Distribution as a component of e-commerce has been facilitated thanks to Internet technology. The width of the distribution channel on the Internet is unlimited – the Internet has no place or time limitations, and the delivery of any product takes place either directly via a link where the files can be retrieved from in the case of electronic products) or via suppliers.

The distribution of products sold on the Internet is divided into several components. We can distinguish the distribution of:

– standard products (books, electronics, household appliances, etc.) distributed by post or courier,
– products sold online and distributed electronically (programs, licenses, gadgets, reports, newspapers, etc.),
– products or semi-finished products (parts of components, prints, documents), distributed in various ways between two cooperating companies or within branches of one company.

The forms of distribution on the Internet, depending on the nature of the product, are presented in Figure 1.

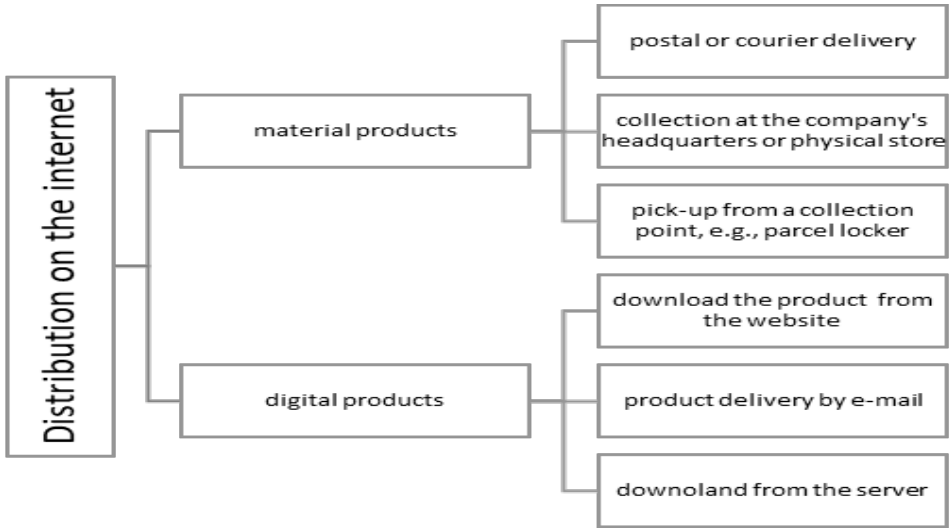


Figure 1. The forms of distribution on the Internet, depending on the nature of the product
Source: own study.

At the level of the ESD (Electronic Software Delivery) marketing instrument, enterprise distribution covers the ways, in what form (physical or digital), and how (e.g., through a specific online distribution platform) a product reaches the recipient.

Digital distribution essentially means distributing content through an online delivery medium via the Internet, thus bypassing physical distribution methods such as compact discs, videocassettes, or paper. With advancements in network bandwidth capabilities, the adoption of online distribution of content became prominent in the 21st century. Content distributed online may be downloaded or streamed, and it often consists of films, television programs, digital books, music, video games, and software (Ojala 2016, p. 451). Streaming content involves downloading and using the data at the user's "on-demand" request instead of allowing it to be permanently stored.

Digital distribution has surpassed physical distribution in key markets and will soon become the dominant distribution model for multimedia content (Peltz 2013, p. 99).

The increase in the number of Internet users, which reached 3.5 billion globally, has resulted in an unprecedented increase in the consumption of online content. For example, the demand for video on smartphones has doubled over the past three years. These factors support the development of the global digital distribution market. By online content, we mean digital goods or e-goods, i.e., intangible goods that exist in digital form (Lambrecht et al. 2014, p. 3). Examples include digital media such as e-books, downloadable music, Internet radio, Internet TV, and streaming media; fonts, logos, photos, and graphics; digital subscriptions; online advertising (purchased by an advertiser); Internet coupons; electronic tickets; documentation processed electronically from many different fields; downloadable software and mobile applications; online games.

Not all companies, especially online stores, have to create digital products, but having them in their portfolio can significantly diversify the range and increase sales. There are several key reasons why digital products should be created.

1. Only one copy of a digital product is made. It is not necessary to design and manufacture multiple products to ensure supply.
2. There is no need to invest in warehousing and logistics, such as preparing products for shipping.
3. Online sale of products can be fully automated (for example, the product is sent to an e-mail immediately after purchase).
4. Digital products are usually cheap to create. There is no need for a huge financial base to prepare prototypes, manufacture physical products, or replenish stock, and the revenue from the product becomes profit as a whole.
5. Most of the work related to preparing a digital product can be done by the seller.
6. A digital product can be sold as a bundle, allowing for a higher price for the physical product.
7. Modern clients have never invested so much time and budget in developing their talents, knowledge, and interests. This consumer trend can be used to develop sales of digital products such as online training or guides.

In the 1990s, the digital distribution of computer games was especially good for PCs. However, there was no dominant form or platform in this industry. Nonetheless, Sega, who created the Sega Channel, had a dedicated digital distribution channel, with monthly access costing US $12.95. One of the most popular games via the Sega Channel was "Test Drive" (Katz 2015, pp. 32–36).

The cyber revolution started with digital music distribution. In 1999, Napster and its successors revealed the potential of digital music distribution, but failed to develop a legal business model. Prior to Apple's iTunes Music Store, all previous legal attempts failed.

The rapid development of digital content distribution began at the turn of the 20th and 21st centuries when the Internet developed rapidly, and bandwidth and speeds increased, enabling faster and easier access to digital content. It applied to computer

games, books, movies, and music. One effect of technological facilitation and changing trends is the popularity of e-books, i.e., books in electronic form.

Delivery is the act of moving goods from the supplier to the recipient, which must take place at a specific place and time. Online delivery is within the scope of the concept of delivery, but it differs from the traditional non-digital delivery mode. With ESD, the good is delivered digitally (Nishio and Kishino 2003, p. 196), i.e., in the form of data. Electronic delivery usually takes place by enabling the product to be downloaded via the Internet from an external server from the supplier to the recipient's computer or other device. Access to a specific product, e.g., video material, may be time-limited, forcing the consumer to consume it immediately. The technique of delivering multimedia information is called streaming. It can be compared to purchasing a cinema ticket, which entitles you to watch a certain film, a certain number of times, at a certain place and time.

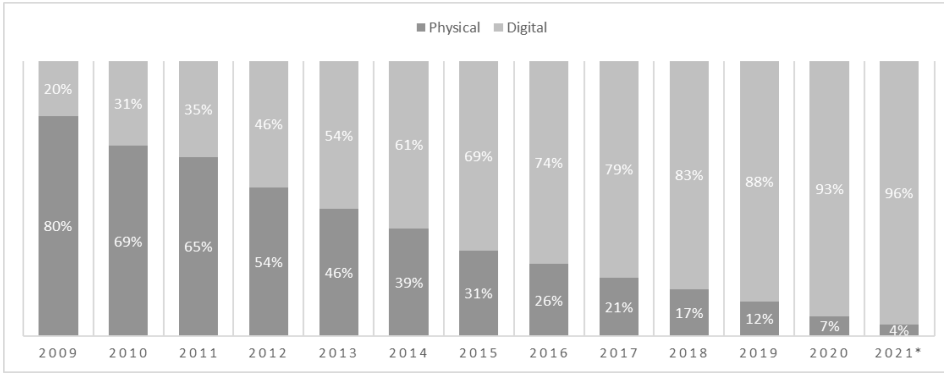
Digital delivery takes place over the Internet, which is a medium something like a channel or pipe through which water flows. The source is the supplier's server, and the tap is the electronic distribution platform. It is a gross simplification, a kind of diagram to show how electronic delivery is done. In order to sell and then deliver a digital product, one needs the tools to do so. Such a tool is primarily an e-commerce or m-commerce, web, desktop, or mobile application through which distribution takes place. Manufacturers or suppliers provide their own software for users to order, pay, collect, and consume the product. The clearest example of an online distribution platform is an online store that sells e-books. The user connects to the e-commerce platform, i.e., the store's website, from the browser level, orders, pays, and then downloads a specific product.

A general issue is the large number of incompatible data formats in which content is delivered, possibly restricting the devices that may be used, or making data conversion necessary. Streaming services can have several drawbacks: they require a constant Internet connection to use the content; some content cannot be stored locally; the content cannot be transferred to physical media (Furr and Shipilov 2019, pp. 94–103).

Vendors in the digital distribution market focus on developing content distribution software and solutions to meet customers' requirements. They compete in terms of quality of service and the way they address and meet their users' expectations. Key vendors operating in the global digital distribution market include Google, Inc., aiScaler Ltd, AT&T Inc, Akamai Technologies, Highwinds Network Group Inc, Ericsson, Limelight Networks, and Level 3 Communications. The digital distribution enterprises are also focused on modifying their pricing models to strengthen their position in the global digital distribution market.

Digital distribution in Europe and around the world

The global digital distribution market can be segmented on the basis of content type, end-user, application, and geography. Based on content type, the digital distribution market can be divided into static content and streaming content. Based on the end-user, the digital distribution market can be classified into small and medium-sized enterprises and large enterprises. The digital distribution market can be segregated, based on application, into e-commerce, online gaming, advertising, healthcare, education, and others.



* Forecast values.

Figure 2. Game sales in the United States by distribution type in 2009–2017
Source: own study.

In terms of region, the global digital distribution market can be categorized into North America, Europe, Asia-Pacific, the Middle East & Africa (MEA), and South America. Compared to the market in other regions, the digital distribution market in North America is expected to constitute the leading share during the forecast period and to witness significant growth. The US and Canada are expected to drive the growth of the digital distribution market in the region, supported by technological advancements in communication. Another factor propelling the growth of the digital distribution market in North America is the presence of leading players in the region. Analyzing game sales in the United States by distribution type in 2009–2017 (Figure 2), it can be noticed that digital distribution is replacing the sale of boxed versions of games in this market. It is anticipated that by 2025, sales of games in the US will be made only through the digital channel.

In Asia-Pacific, the prominent countries contributing to the growth of the digital distribution market are South Korea, China, Japan, India, and Singapore. The digital distribution market in the region is primarily driven by the considerable growth of small and medium-sized enterprises due to the rise in industrialization. Furthermore, the increased use of smartphones is another key driver of the digital distribution

market there. Digital distribution organizations are focusing on emerging economies such as Bangladesh, India, China, Thailand, and Malaysia. These countries hold the maximum potential to adopt advanced technologies due to increasing industrialization (*Digital Distribution Market*... https://www.transparencymarketresearch.com/digital-distribution-market.html) (accessed: 31.12.2020).

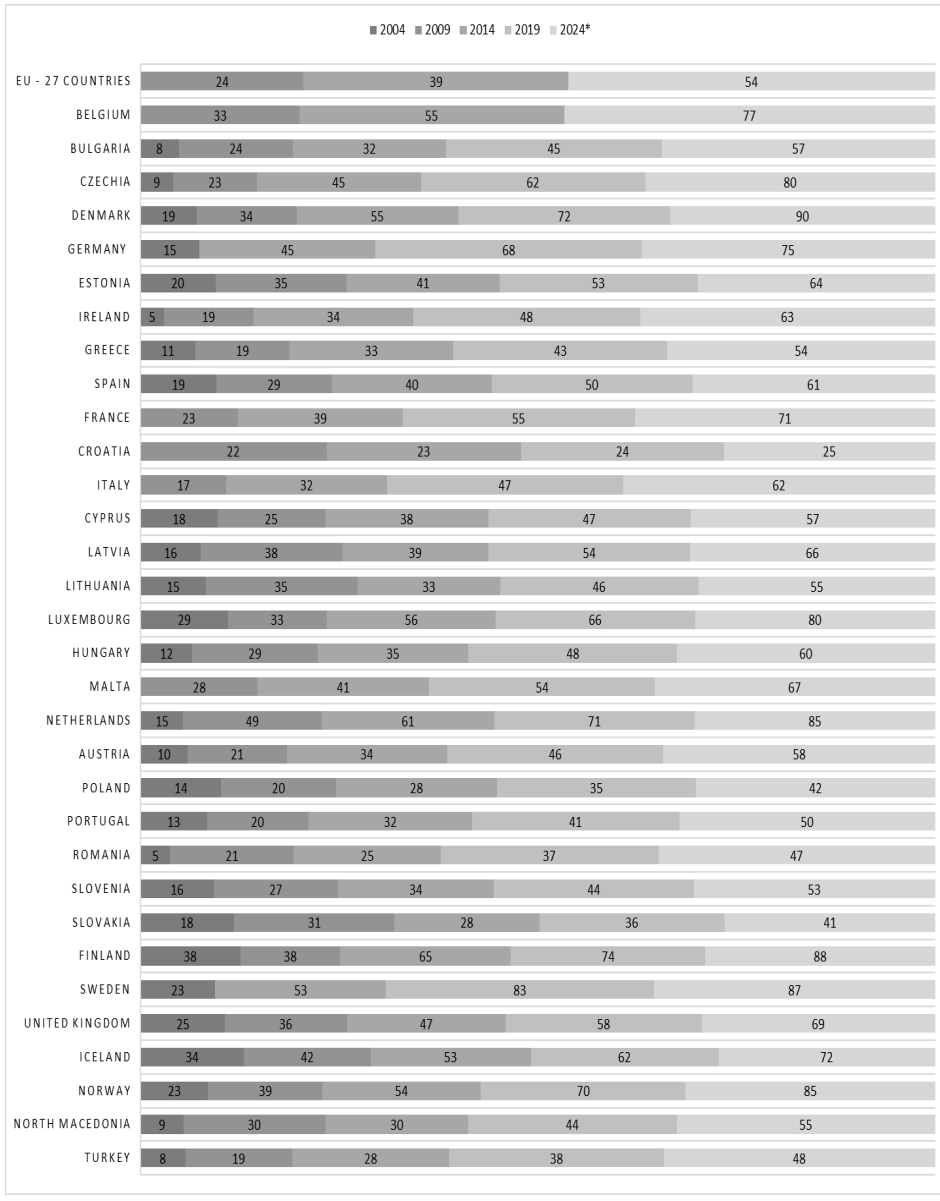
In 2014, half of all Europeans (50%) ordered goods and services online, and 16% bought content online. The most frequently purchased digital goods and services for private use were tourist and holiday accommodation (27%), tickets for events (20%), and books, magazines, and newspapers (including e-books) (19%). Meanwhile, 14% of individuals purchased films and music over the Internet, and 9% had downloaded or accessed music or films online (Eurostat Survey). The development of digital distribution in European countries is shown in Figure 3.

Currently, Scandinavian countries are in the lead in the sale of digital products in the European arena: Denmark is in first place, followed by Finland, Sweden, and Norway. Croatia is characterized by the lowest growth dynamics. According to forecasts, by 2024, at least half of Europeans will be buying digital products.

In 2019, 64% of people in Europe used the Internet to collect information about goods and services, and 52% read newspapers and magazines online, thus paving the way for new ways of consumption. When it comes to online content consumption, 38% of people played or downloaded games, images, movies, or music, often for free (Eurostat, n.d.). The percentage of people using the Internet to play or download games, pictures, movies, or music in 2019 is shown in Figure 4.

The countries that dominate when it comes to the percentage of people using the Internet to play or download games, pictures, movies, or music are the Scandinavian countries. On the other end of the scale are the countries of the Mediterranean and Central and Eastern Europe.

The drive for digital distribution is a natural corollary of technological progress. Digital distribution is gaining more popularity and shows that packaging box and the paper manual are not something that the consumer must necessarily have. A lower price, however, is sufficient to induce the customer to abandon the traditional format for one that will only be available on their computer's hard drive. Traditional distribution used to be a cheap and simple method of delivering a product to the buyer. Unfortunately, it is no longer the cheapest or the most convenient solution.



* Forecast values.

Figure 3. The development of digital distribution in European countries in 2004, 2009, 2014, 2019, and 2024 (data as a percentage)
Source: Eurostat, n.d.

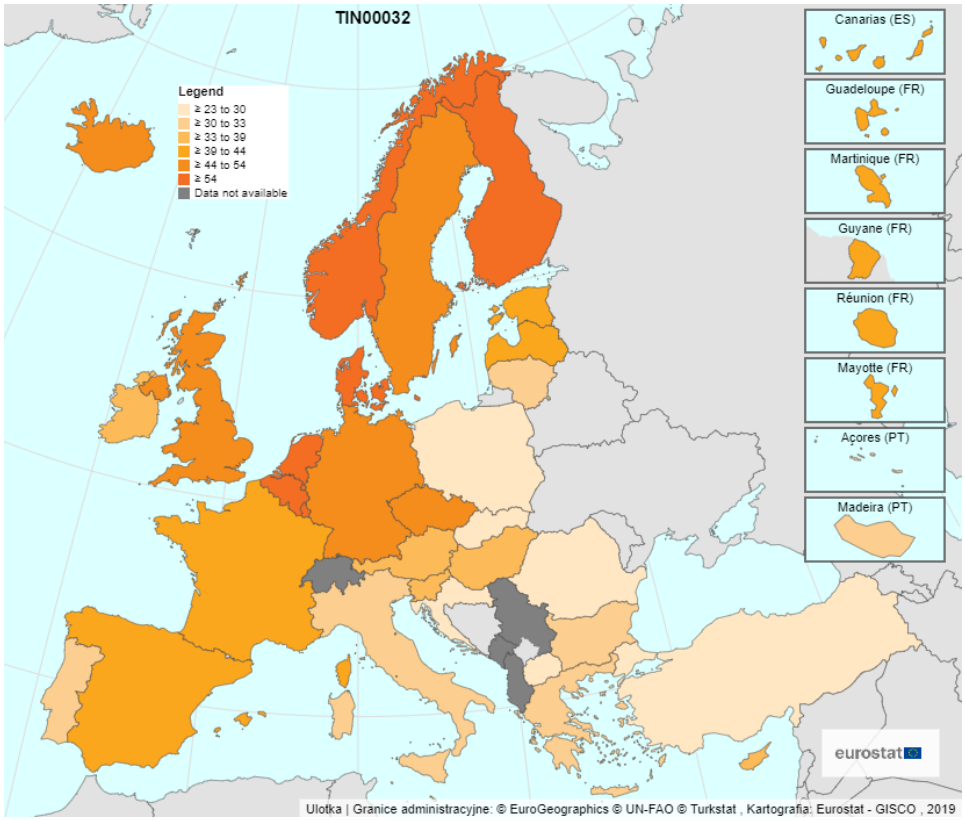


Figure 4. The percentage of people using the Internet to play or download games, pictures, movies, or music in 2019
Source: Eurostat, n.d.

Conclusion

The ICT sector, as the generator of new technologies that are applicable across a wide range of other sectors, and the provision of high-speed Internet, have led to the increased digitization of manufacturing and content delivery, the exploitation of platforms for eCommerce, and the need for new skills. At the same time, the way the Internet is used not only by businesses, but also by consumers, has also changed, raising questions about trust, security, and the protection of personal data.

It has to be borne in mind that each of these themes should be looked at from the perspective of both the suppliers of technology and infrastructure and the consumers (i.e., how it is used), be it individual users, enterprises, or public authorities.

The expansion of online distribution has sparked controversy over traditional business models and brought challenges and new opportunities for traditional retailers

and publishers. Online distribution affects all traditional media markets, including music, the press, and broadcasting.

However, in the context of a Digital Single Market, it is not sufficient to assess the extent to which Internet users consume content online. It is also necessary to monitor where that content is obtained from, whether it is obtained legally, and whether there are obstacles preventing users from obtaining their desired content (in particular, obstacles related to geographical restrictions).

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Dystrybucja cyfrowa jako kanał sprzedaży w handlu elektronicznym

W ciągu dziesięcioleci technologie cyfrowe zmieniły sposób, w jaki komunikujemy się z innymi, prowadzimy interesy, wytwarzamy towary i usługi, a także sposób, w jaki żyjemy, pracujemy i spędzamy wolny czas. Te, często szybkie, zmiany są obiecujące na przyszłość, jeśli chodzi o tworzenie bogactwa, postęp technologiczny i poprawę jakości życia. Jednocześnie niosą ze sobą wyzwania związane z brakiem umiejętności, nowymi i szybko rozwijającymi się rynkami, ochroną konsumentów, reorganizacją przemysłu, zaufaniem, bezpieczeństwem i prywatnością.
Prywatne życie społeczeństwa, a także świat biznesu przeniósł się do świata wirtualnego. Transformacja do e-biznesu jest złożona i aby odnieść sukces, należy zachować równowagę między strategią, dostosowanym modelem biznesowym, odpowiednimi procesami i stosowaną technologią.
Celem publikacji jest zapoznanie czytelnika z zagadnieniami określanymi jako dystrybucja cyfrowa, rozumiana jako sposób zarządzania treścią, np. oprogramowanie, filmy, muzyka czy gry komputerowe. Jest to łatwy sposób na dodawanie dodatków do innych produktów, lepiej znanych jako DLC, które można pobrać z globalnej sieci. To są zagadnienia, z jakimi radzi sobie cyfrowa dystrybucja, wraz z następującymi po niej procesami, które pozwalają na dostarczenie zamówionego towaru do klienta. Przedstawiono także dane dotyczące rozwoju dystrybucji cyfrowej na świecie i w Europie na przestrzeni ostatnich 20 lat.

Słowa kluczowe: dystrybucja cyfrowa, e-commerce, kanał sprzedaży, produkt cyfrowy

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