Marketing in the digital environment

Textbook

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Marketing
in the Digital Environment

Textbook

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The textbook contains provisions that reveal the main points of marketing in the digital environment and the basic tools necessary for a marketer to successfully implement a variety of projects on the Internet. In particular, the types of Internet business, business models and characteristics of creating a business in the Internet environment, Internet marketing, development and promotion of web resources. It provides analysis of the practical aspects that illustrate the theoretical positions of marketing in the digital environment.

The publication contains a series of practical exercises, cases and tests to assess the level of knowledge. It is recommended for students of economics and specialities in the field of Internet business, marketers, teachers, graduate students, as well as a wide range of readers interested in marketing in the digital environment.

CONTENT

INTRODUCTION

We live in a time when the business environment is constantly changing and marketing in the digital environment is becoming increasingly important. Companies need to inform the public about their activities, find and attract customers, collaborate with partners and consumers, and take into account the changing needs of customers. The online environment is the best place to do this.

The task of the company's marketer is to create an effective system of interaction with customers, inform about all offers, improve the quality of services in the digital environment and much more. The success of modern companies in the market depends largely on the effectiveness of the use of various Internet marketing tools.

Thus, the relevance of the material presented in the study guide is due to the growing interest in marketing in the digital environment as a means of development of modern companies.

The study guide covers a wide range of theoretical and applied issues, including the history of Internet business, its main components, types and characteristics, business models, features of creating a business in the Internet environment and Internet marketing, web design and promotion. Some sections pay attention to modern aspects of marketing in the digital environment. Steps of web-resource development and its further internal and external optimization are described. The main tools of Internet marketing for the promotion of goods and services are considered.

To consolidate and test the knowledge in the field of marketing in the digital environment, calculation, analytical and case tasks are offered.

The materials of the publication are practically tested in the educational process of Sumy State University. The conciseness and accessibility of the given material gives the opportunity to master a series of provisions of a course without any effort. The study guide is structured in such a way as to combine theoretical learning with the acquisition of certain skills and abilities as a result of practical classes, aimed at enhancing the cognitive activity of students not only in the classroom, but also in the process of independent work.

The main purpose of this publication is to provide students, beginners and business professionals with the necessary marketing knowledge for promotion on the Internet, modeling situations and individual tasks in strategic planning and management of Internet business.

New and modernized chapters and case studies contain materials on health issues and the development of the medical domain, prepared within new discipline modules with the support of Ministry of Education and Science of Ukraine, grant numbers 0122U000781, 0122U000778.

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CHAPTER 1
HISTORY OF INTERNET BUSINESS

1.1 The essence and history of the Internet

The digital revolution is changing lives with incredible speed and momentum. Today there is an evolution of the information society, called the "digital economy". Digital technology is becoming an integral part of our lives. Modern digital trends cover almost all areas of life: from medicine and education to ordering food at home, characterized by the "uberization" of the economy. Today, the following technologies have the most significant impact on the digitalization of the economy [1]:

– Internet of Things and manufacturing automation;
– digital design and modeling;
– virtualization technologies (remote access, remote office);
– mobile technologies and cross-channel communications.

Internet (short for INTERconnected NETworks) is a set of independent networks and computers connected by standard protocols. From an informational point of view, the Internet is a collection of information centers (called websites) that contain a variety of information with different interconnections that form the "World Wide Web". From a socio-economic perspective, which is close to the primary marketing goals in business, the Internet is the environment for communication, entertainment, exchange of views and business support. Today, the Internet is a powerful "fourth channel" of communication between people (in addition to personal communication, telephone and mail) [2].

Today, the Internet covers many areas of public activity. Let us imagine the situation given in the dialogue below:

Phone call:
- Restaurant "Everything for you", good – afternoon!
- Which restaurant?
- Restaurant "Everything for you". What would you like to order?
- But this is the phone number of the "Delicious Lunch" restaurant.
- There used to be such a restaurant, but a network company bought it. Now our range of services has expanded considerably.
- This is great! I'd like to order.
- Of course you can. Would you like to repeat your usual order?
- Where do you keep information about my regular orders?
- We have a customer base. We can see that roast potatoes, Olivier salad and pomegranate juice have been ordered four times from this phone number.
- How informed you are! OK, repeat the order.
- Can I give you some advice?
- What advice?
- Look at our updated menu. My advice is to order mashed potatoes, Greek salad and freshly squeezed orange juice.
- Mashed potatoes, Greek salad with olive oil and orange juice? I would not say that I like it all.
- I understand, but I note that it is good for my health. Fried potatoes, mayonnaise in a salad and packaged juice with

lots of sugar are not healthy foods. And you have high blood sugar...

- Where do you get this information from?

- There is a simple explanation. We have identified your surname through your telephone number (you have registered on several websites) and have access to your tests at the local clinic.

- I am on medication and can eat what I want. Give me my order, which I love!

- You are lying because you have not bought a pill recently.

- How else would you know? Are you spying on me?

- We just have a database of all the pharmacies in the city. And as far as I can see, the last time you went to a pharmacy in the city centre was almost five months ago. I will note that you only bought one packet of pills, and there are only 30 of them. You need to take two pills a day, so it is not difficult to calculate that this pack will not last you five months...

- How do you know I bought exactly one pack of pills?

- You used a payment card to get a discount. The database tells us the cost of your purchase. And you used this card to pay for other goods at the same time, so you did not lose it.

- Or maybe I paid in cash?

- This is unlikely. You only pay cash to your daughter's tutor - UAH 500 per week. Everything else is paid by card.

- How do you know how much I pay my tutor?

- She pays income tax...

- I don't want to talk to you anymore.

- I only wanted the best for you.

- I'm tired of your databases, your payment systems, your Google searches, your social networks, and your lack of personal life in the XXI century!

- Do not worry. You can't be nervous.

- Tomorrow I will rest outside the city, away from the Internet, which is always watching me!

- I understand you.

- No, not like that, I will fly to an island where no one and nothing can get to me!

- Wonderful...

- I am cancelling my order at your restaurant.

- Well done. Can I give you the information?

- What else have you not told me?

- I would like to inform you that your passport has expired...

- 💣

This dialogue shows how comprehensive the Internet is and that different databases contain a lot of information about us as consumers, customers, citizens of a particular country, etc. World Internet Day is celebrated every year on 4 April, the feast day of Saint Isidore of Seville, whom the Catholic Church has declared the patron saint of the Internet. In 1998 Pope John Paul II recognized the World Wide Web as an encyclopaedia of human knowledge, and in 2001 Isidore of Seville, considered the first encyclopaedist, was chosen as its patron. His most outstanding work, Etymology, consisted of 20 volumes. He was the first to use a system of cross-references in his work, similar to the hyperlinks used on the web today. Moreover, the date 4.04 resembles the common error 404 ("Page not found") [3].

It is worth noting that the Internet began with military developments. During the Cold War, the US Department of Defense understood the importance of preventing the

destruction of critical military data in the event of a nuclear attack. There was also an urgent need to maintain communications between command posts. A group called ARPA (the Agency for Advanced Defense Research Projects) was set up. This agency created the ARPANET network in 1969. The first attempt to access this network failed - when the letter G was entered from the word "LOGIN" (the noun "login" is formed from the prepositional verb "log in"), the system crashed. By 1973, ARPA had improved its technology. The new system, called "INTERNET", was based on a single protocol to control the information transfer process. For the next two decades, Internet users were mostly scientists and computer specialists. This changed in the early 1990s, when a hypertext project on the World Wide Web was set up at the European Centre for Nuclear Research in Geneva to facilitate the exchange of information between research groups within the organization. It became clear that the system had potential for private use [4]. In December 1990, T. Berners-Lee, a British scientist at the European Organization for Nuclear Research, launched the first website. The world's first web address is:

http://info.cern.ch/hypertext/WWW/TheProject.html.
His plan was to help scientists find and share information. The site published a description of the new World Wide Web technology, based on the HTTP data transfer protocol, the URL addressing system and the hypertext markup language HTML. It described the principles of installing and operating servers and browsers, the technical details of creating a Web page, and instructions for finding information on the Internet [5].

Today, with a simple click of a computer mouse, a network user can view documents from all over the world on his or her computer screen. Search engines help find information stored on millions of servers around the world. The

World Wide Web has become a social medium, allowing people to communicate over any distance through email and social media.

Employees of the Technosoft Interdisciplinary Research Centre for Programming Technology in Kiev were the first in Ukraine to connect to the Internet in 1990. At that time, the ua domain did not exist, so mail was sent to the first Internet site through ussr.eu.net. In 1991, Technosoft obtained the status of an Internet provider. At the beginning, the Internet speed was very slow - only 2.5 Kb/s. The ua domain was officially registered in 1992. The first web content appeared in 1993. In 1995, domain registration was opened in the com.ua, gov.ua and net.ua zones. Registration of short geographical domain zones was opened in 1996 (km.ua for Khmelnytsky, dp.ua for Dnipro, sm.ua for Sumy). The first Ukrainian site was launched in 1997. The official opening of the Ukrainian search engine META took place in Kharkiv. The first version of the ukr.net portal was launched in 1999. In 2000, the registration of freemail.ukr.net was opened. Although the ukr.net portal is purely Ukrainian and one of the first to offer e-mail services, the Ukrainian-language version appeared only seven years later. In 2001, the first private second-level domain name was registered - business.ua. In 2007, the first Ukrainian torrent tracker "Hurtom" was launched (later a forum was launched on the site), which is also one of the first Ukrainian sites to start broadcasting foreign-language video products in Ukrainian through crowdfunding. In 2011, Ukraine obtained the Cyrillic domain zone .укр [6].

Currently, UAnet, or a segment of the Internet in the Ukrainian language, is among the 30 most popular language segments. Websites in Ukrainian make up about 0.2 % of the global network [7]. At the same time, only four of the 25 most popular websites in Ukraine have Ukrainian as their main

language (sites of Privatbank, 24TV (the first Ukrainian 24-hour news channel), TSN and Nova Poshta). There are even sites that do not support Ukrainian at all. The rest have Ukrainian, but Ukrainian is either a secondary language or one of the languages into which the site is translated [8]. Thus, the Ukrainian Internet has the potential for development, but it needs to take many steps to achieve a leading position in the global space of the Internet.

1.2 The concept of Internet business and its evolution

E-business is a business activity that uses the capabilities of global information networks to transform the internal and external links of the enterprise in order to generate profit.

The first companies to start working on the principles of e-business were Amazon.com, which started selling books, and eBay, whose online platform provided opportunities to sell goods not only to legal entities but also to individuals (1995) [9]. The term "e-business" was first used by former IBM CEO L. Gerstner [10] (it was IBM's marketing team that coined the term in 1996, and the company led the relevant market segment). According to IBM experts, e-business is the transformation of basic business processes using Internet technologies. IBM based its e-business advertising campaign on a pragmatic approach to how the Internet can affect a business. Figure 1.1 shows a poster from an IBM advertising campaign developed with the agency Ogilvy&Mather. In this poster, the central red logo "e" resembles the "@" sign so that viewers can associate it with the Internet [11].

Figure 1.1 – Poster from IBM's e-business advertising campaign, developed in 1997 [11]

According to UNIDO, the business comprises four components: production, marketing, sales and payments. If any two stages are carried out using electronic systems, the business can be considered electronic [12]. The following definition is the most concise and conveys the essence of Internet business. ***E-business*** is a type of economic activity that is carried out for profit via Internet.

The main factors of expediency of doing business on the Internet:

For business:

– the opportunity to work around the clock on any day of the week;

– lack of geographical reference of the place of work to direct consumers;

– minimization of costs (including initial investment in the business);

– opportunities for business globalization;

– equality of market access conditions for all business entities;

– facilitating marketing communications with customers and potential consumers (including the provision of interactive communications with them);

– increasing the speed of business operations;

– reducing risks associated with the human factor;

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– reducing the time of bringing goods to the market;

– the need to pay customs duties related to electronic payments.

For consumers:

– Availability of business information to most consumers (in real time, 24 hours a day, excluding weekends);

– ability to receive goods and services from business confidentially;

– purchase goods and services at lower prices than at companies' physical points of sale;

– availability of rare goods and services from foreign markets;

– unlimited opportunities to communicate with company representatives;

– providing access to buying goods and ordering services for people with disabilities;

– convenience of comparing competitive offers (saving time and financial resources).

E-business, like any other system, operates on certain principles, which the authors have systematized [13; 14] (Table 1.1).

Table 1.1 – Principles of e-business operation (supplemented by the use of [13; 14])

Principle	Essence
Online	Adherence to a continuous mode of operation, which contributes to achieving a high level of comfort for potential customers of the network and ensuring economic efficiency
Legitimacy	Operations in the e-business system must be carried out considering the current state legislation, which considers the relevant international legal norms

Principle	Essence
Globality	Electronic activities should be created taking into account the needs of the domestic market and the world
Independence from nationality	The need to provide customers with access to an integrated electronic communications system, regardless of nationality
Independence from geography	Availability of real access to e-business systems regardless of the geographical location of customers
Probability	Any information circulating in the field of e-business must be accurate and reliable
Standardization	When designing e-business platforms, it is necessary to be guided by a system of uniform international standards
Interactivity	E-business systems must respond quickly to any actions (requests) of network customers
Anonymity	Information about the owner's virtual account in the e-business system should be known only to that person
No discrimination	Enterprises of all sizes and different organizational and legal forms, as well as individuals, should have equal access to the resources of e-business systems
Safety	Information about the participants in commercial relations may not become the property of third parties
Friendly interface	The possibilities of using network technologies provided by e-business systems should be simple, convenient and accessible to a wide range of potential users
Market principle	The operation of e-business systems should be based on market approaches by different businesses, depending on the industry

The digitalization of the economy has gone through several stages, which are shown in Figure 1.2. Consider the key characteristics of these stages.

Impact on business

Electronic enterprises

E-commerce   E-business

Use of the Internet at an early stage

DIGITALIZATION

1995   1997   1999   2000   Year

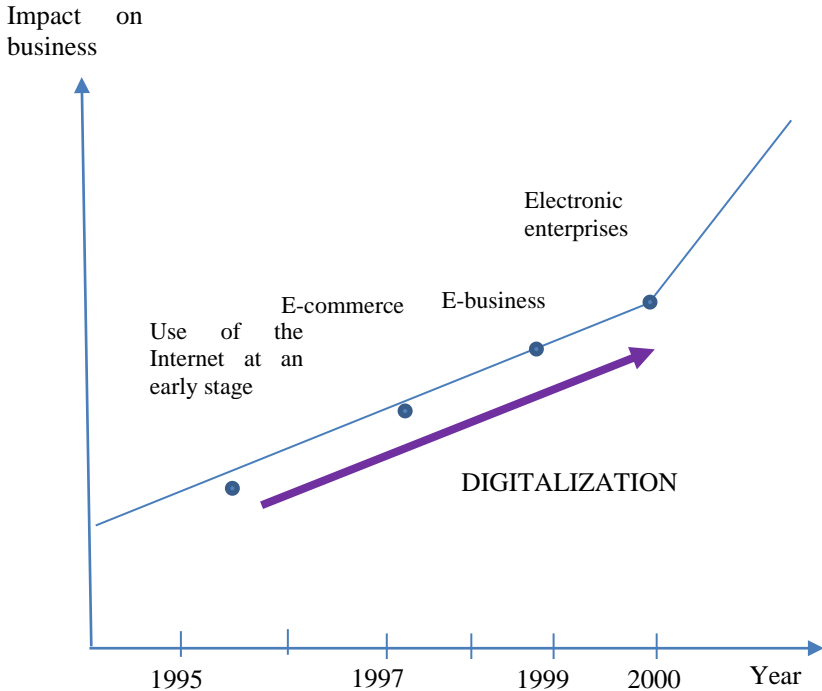Figure 1.2 – Transformation of electronic business processes in evolutionary development

Early use of the Internet (Internet in the B2C segment as a cheap source of information about products and services). Interaction with the consumer takes place by viewing text and images. All business calculations are made offline.

E-commerce (when buying, selling, distributing, ordering and paying for goods is done over the Internet).

Interaction between company and customer is possible without face-to-face communication (online banking, online shopping, online ticket booking). This stage is still typical of the B2C business model. There are many operators on the market whose success factors are successful branding, marketing, personalisation of the offer.

E-business (the spread of the Internet to different business sectors). The key success factors are fast software, the ability of the team to work with integrated solutions, and the right organizational structure.

Today, an increasing number of electronic companies carry out all their business processes in a virtual environment, from the creation of their product to sales and the handling of any complaints.

Levels of Internet business development within the enterprise:

– the first level: only the presence of a company on the Internet (availability of a web page, e-mail box, advertising on the Internet);

– the second level: interaction with suppliers and consumers based on the use of Internet capabilities;

– the third level: the transformation of business processes when most business actions are performed using Internet technology.

1.3 The main aims of creating a business on the Internet

At some stage of their development, many businesses conclude that it is necessary to expand their presence with a wide range of tools to offer the Internet. Today, the prevailing opinion is that every company that seeks to be successful in its efforts to attract customers should ensure at least a minimum presence in the Internet environment (the presence of a

business card site, the periodic launch of Internet advertising, the company's social media page, etc.). Some services allow companies to provide information about themselves to consumers, work with reviews (because, according to experts, consumers trust about 1.7 times more companies that respond to reviews than those who ignore them). Such a service is, for example, the Google My Business service, which allows companies to present themselves on Google pages, including Search and Maps (address, hours of operation, website) (Figure 1.3)). Also, with the help of this service, it is possible to respond to customer feedback, publish photos.
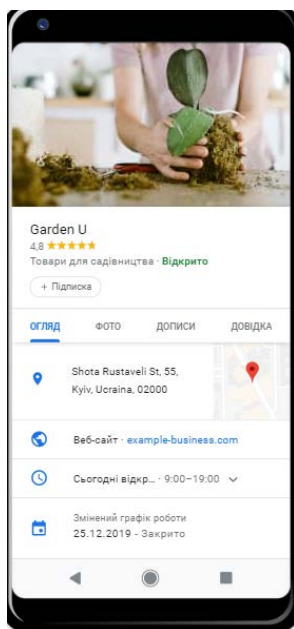

Figure 1.3 – Example of presenting information about the company on the Google My Business page (screenshot from the official page of the service in Ukrainian) [15]

The main goals of the company's transition to the Internet environment may be different. In the current conditions of the rapid development of Internet technologies, the company can be represented only in a virtual environment from the very beginning of its existence. It has become commonplace, for example, when stores successfully sell their products without their warehouses, using third-party carriers' services, placing their showcases on the Internet, i.e. all key processes of trade are performed remotely without reference to physical locations.

The goals of the organization of a company's Internet presence:

– support for existing offline business (as another channel of communication with partners and consumers). For example, creating a corporate website. This approach is typical for the B2B industrial market;

– organization of online sales of goods or services of existing non-e-business to use the opportunities of the Internet for advertising and marketing (the so-called "new retail" proposed by the founder of Alibaba Group Jack Ma in 2016). For example, the creation of an interactive site with the ability to order products online (such as the Ukrainian supermarket chain "Epicentre" with their website epicentrk.ua; the domestic network of bookstores Bookstore "Ye" with a website that provides the ability to order books online; the resource f.ua, which has grown from a small kiosk to one of the most visited online stores in Ukraine [16]);

– creation of a company that sells products exclusively on the Internet to implement in the electronic environment of the full business cycle. Such a business is fully implemented remotely, including payment settlements, work with feedback and complaints from consumers, consulting). There are now more and more examples of companies entering the market

under such rules. One of the first online stores on the Ukrainian market was the Rozetka store. Examples of businesses created for this purpose include the Ukrainian online photobank Depositphotos, which acts as an intermediary between the of photo authors and their buyers;

– business for advertising purposes, when someone creates an Internet resource for a segmented audience of visitors and gathers their contact for further selling to advertisers, for example. Such sites contain information of interest to the target audience to attract the maximum quantity of users. This monetization method is typical for many information resources, sites that provide free services (for example, Ukrainian site "Na chasi", which contains information about business and entrepreneurship).

There are examples of companies that have expanded their presence from online models to physical stores. For example, in contrast to the Ye Bookstore, the Yakaboo bookstore, which started its business from an online shop, also opened an offline store in 2019 [17].

CHAPTER 2
BASIC CONCEPTS OF INTERNET BUSINESS

2.1 "Citizen of the Internet": distinctive characteristics and the role in the digital environment

The term "Internet citizen" originated in the 90s of the last century. This is a person who, despite geographical boundaries, cares and actively works on the development of the Internet for the benefit of the whole world [18]. Although there are about 4.1 billion Internet users in the world (i.e., more than 50 % of the world's population [19]), not all of them can be considered "citizens of the Internet". According to the classification of Forrester, *all Internet users are divided into the following groups* [18]:

– inactive persons;
– observers (view and read content posted on the Internet);
– followers (join social networks and visit them);
– collectors (add tags to web pages and use RSS feeds);
– critics (publish their assessments and comments on the Internet); and
– creators (create and publish online content).

Collectors, critics and creators best describe "Internet citizens" – those users who make an active contribution to the development of the Internet, not just consume it. Their role in influencing others is related to their desire to always be in touch and contribute. "Citizens of the Internet" are social connectors. They like to make connections and communicate with each other, and in the course of this communication, information is transmitted. "Citizens of the Internet" are

expressive propagandists. Without disclosing their personal information, Internet users can express their opinions very aggressively. The downside of this is the emergence of cyberbullying, trolls and haters on the Internet. However, the positive side is the emergence of brand promoters. There are three factors in the world of the Internet: followers, fans and friends. If they manage to capture and achieve emotional devotion to the brand, the "citizens of the Internet" become promoters of the brand, its fans instead of haters. Sometimes they are passive but become active when they need to protect their favorite brand from cyberbullies or trolls. Advocates also become storytellers on behalf of the brand, spreading the news on their networks. They tell real stories from the customer's point of view.

The work of "citizens of the Internet" simplifies the lives of other Internet users. With the help of tags, information on the Internet becomes better organized, and it becomes easier for other people to find quality content. By "voting" for websites, Internet users recommend quality sites to others. With the help of product ratings and reviews on the Internet, other users can easily find the best available option [18].

2.2 Components of e-business

Considering e-business in its components, we highlight several essential terms in this area.

The information economy is an economy in which knowledge is the essential resource, characterized by convergence and integration of communications and technology in IT, the comprehensive impact of information technology on economic activity [20] (most employees of companies operating on the principles of information economy

are IT specialists) (system administrator, SMM manager, internet marketer, content manager, online consultant, SEO specialist, web developer, web programmer and other). The products produced by these companies are mainly information products and services.

E-commerce is a set of technologies and services that allow virtually present products and services, accept orders, bill and receive payment, and transfer funds to counterparties via the Internet (includes e-commerce, e-trading (e-trading on stock exchanges)), distance learning, electronic travel systems, banking).

According to the Law of Ukraine on e-commerce, this definition is somewhat different. E-commerce is a relationship aimed at making a profit arising from transactions for the acquisition, modification or termination of civil rights and obligations, carried out remotely using information and telecommunications systems (including the Internet)), as a result of which the participants of such relations have rights and obligations of a property nature [21]. Quite often e-commerce is identified with e-business, although e-business is a general concept. It includes any form of interaction between market participants through digital technologies: information exchange; conducting marketing research; establishing contacts, for example, between potential customers and suppliers; pre- and aftersales support, for example, providing detailed information about products and services, providing answers to customer questions, etc.; sale of goods and services; electronic payment, in particular with the use of electronic payment systems; product distribution, including delivery management and tracking for physical products, direct delivery of products that can be distributed electronically; the possibility of organizing virtual enterprises (groups of individual professionals or even independent companies to conduct joint

business activities); implementation of business processes jointly managed by a company and its trading partners; management of information flows within an enterprise.

Online sales are e-commerce, and the process of attracting and retaining customers already covers e-business in general. That is, for successful sales, it is not enough to have a website. It is also necessary to attract the attention of potential consumers. For example, if the company Moyo sells household appliances online, then in total it is an e-business because when a visitor sees the site, the first thing that "catches his eye" is the design of the site and the navigation, which should help him find the goods he needs. The information provided should remove any doubts the visitor may have and turn him/her into a buyer. No cash transactions have yet taken place in this situation. This is not e-commerce. This is e-business. Only after the purchase do the company and the consumer have an e-commerce relationship.

E-commerce is a component of e-commerce that includes the activities of online stores, online auctions, e-malls (websites that contain a significant number of e-shops and catalogues. The more popular name for them today is "marketplaces").

Every year we can observe changes in e-commerce, both in terms of technology and in the approach to doing business. In particular, multi-channel marketing (maximum use of all available channels to attract customers), niche specialization, e-commerce festivals (Double 11 in China, Cyber Monday in the USA) have recently become increasingly popular ([22]). The levels of electronic economic activity are listed in Figure 2.1.
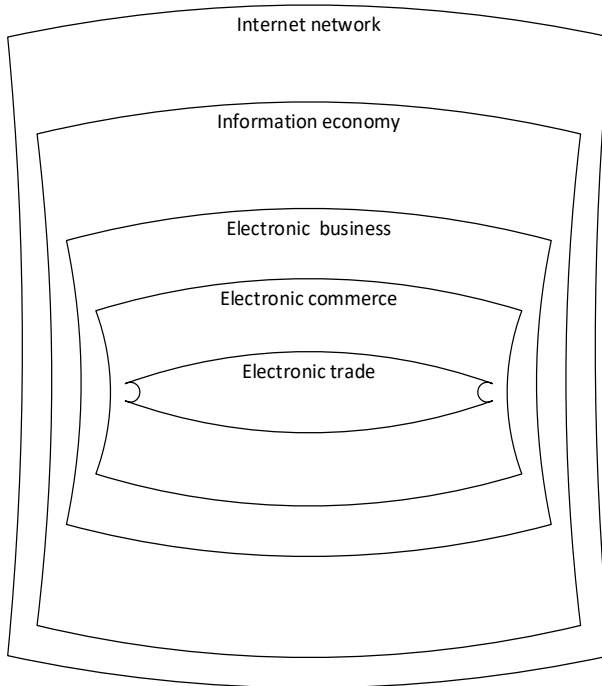
Figure 2.1 – Components of the electronic sphere in their relationship [23]

The objects of Internet business are information, information systems, products, services and everything else to interact with various electronic market participants.

Internet business entities are any individuals or legal entities that use the Internet for commercial, advertising, production or other activities to make a profit or meet other socially significant needs. Business entities on the Internet include manufacturing and distribution companies, retailers, buyers, advertising agencies, Internet service providers, government agencies, associations, supervisory and standardization bodies, etc.

A virtual product is a product that can be manufactured and adapted to the needs of the consumer in the shortest possible time, anywhere and in various forms. To do this, it must exist in some preliminary, ideal form before it is produced by the manufacturer (for example, furniture modeled and equipped by a customer with standard capabilities via the Internet).

The basis of the World Wide Web is electronic resources, which by their functional purpose can be divided into the following categories:

– Internet construction technologies (network construction technologies at the level of communication channels, network devices and their software, network construction protocols, server and client station software);

– Internet services (services provided to network users: e-mail, teleconferencing, mailing lists, FTP-file transfer,, IRC,, WWW hypermedia system, cloud, streaming services, as well as other developments that use the Internet as a medium of information transfer);

– Internet users (users of network products, individuals or legal entities).

2.3 Important terms in the field of e-business

Every online business starts with a web page. Therefore, it is first necessary to understand how a website, a "packaging" of information (content) of a particular organization or individual, receives its address – a unique IP address on the Internet, where information is delivered.

IP address (*Internet Protocol address*) is a network layer identifier (unique numeric number) used to address computers or devices in networks built using TCP / IP [24]. An

example of an IP address is 127.0.0.1 (local IP address, cannot be changed, and only one on each OS). IP addresses are very convenient for computers, but people are used to another address: country, city, street, house, last name. Domain names are built on this principle.

A domain name (domain address) is a unique set of characters that make up a site's address, which can be used to find that site on the Internet. A domain name is different from a mail address with an "@" character that separates the domain name from the mailbox name. The name is called a domain because all computers classified by some attribute belong to a separate domain zone or domain [25]. For example, such a feature may be the state in which the host computer is located (host) – a device that provides web hosting services (services for providing resources to host information on a server that is located continuously in networks). As a rule, such a domain is defined by two Latin lowercase letters: ca – Canada, fr – France, jp – Japan, ua – Ukraine, uk – Great Britain. There is also a variant of domain zones, which indicate the institution's nature to which a host belongs. Such a domain index is defined by three or more letters: com – a commercial organization (bank, construction company, an insurance company, etc.), gov – a government agency, edu – an educational institution, mil – a military organization, net – a network organization (which manages part of the Internet) or is part of its structure), org – an organization that does not belong to any of the above types. Users can utilize domains that do not indicate the geographical location of the host (biz – business project, info –information resource, int – international institution, name – personal page, shop – online store) [26]. Using the principle of building domain names, one can get to the desired organization's site without knowing its exact address. For example, if someone needs to access an IBM server, it is logical to look for it at

www.ibm.com. The process of converting a domain name to an IP address is performed by a DNS server (Domain Name System).

URL address (Universal Resource Locator) is a unique website address [27].

Web analytics is the observation and collection of data on who and how visits particular Internet resources and the analysis of the obtained data [28].

Site indexing is the process of adding information about a site by a search engine robot to a database to search for information on indexed sites [29].

A search query is a word or phrase that a user enters into a search engine.

Semantic core ("semantics" is a section of linguistics that studies the meaning of language units) is a set of keywords, phrases and their morphological forms that most accurately reflect the theme and structure of a site, as well as more consistent with users' perceptions of the site (relevant to them) search queries) [30]. An essential indicator of Internet resource activity is traffic as the total number of visits to a website for a particular period. The constant flow of growing traffic is the key to the success of the Internet business. Traffic can be classified (Table 2.1). Working on any of the traffic channels is important because it can positively affect business growth. This classification of traffic is not exhaustive because there are many types of traffic. For example, in such programs for site users' marketing analytics as Google Analytics, Similarweb among channels and accordingly types of traffic distinguish display traffic (banner advertising traffic), email traffic (links to emails).

Closely related to the concept of traffic are the three definitions below, which are fundamental concepts in e-business.

Table 2.1 – Traffic classification (developed using [31])

Type of traffic	Features
Search (organic)	Users who visit site for a specific query in the search engine. For example, a person enters the query "specialty marketing Ukraine" in the search bar and sees a link to the Department of Marketing of SumDU in the list of results and clicks on it to go. This type of traffic is greatly influenced by how well the site ranks in search engines for various keywords in the search
Paid	Visitors come to the site through the use of any type of online advertising. Ads can appear in various formats, in search, in different places on a webpage, and more (Figures 2.2-2.4)
Direct	It consists of visitors who go directly to the site instead of getting there from other channels. For example, a user enters the site URL directly into the browser's address bar or clicks on a pre-saved bookmark. It is a kind of indicator of audience loyalty and brand recognition. A type of direct traffic is branded as part of the audience of users, which goes to the web resource on request, including the company's name, brand, directly associated with a particular company
Referral	It consists of Internet users who go to the site by various links to other resources. For example, if a press release with a link to a specific site is published on a third-party Internet resource, and a user clicks on that link and goes to that website page
Social	Users who found a link to one of the pages of the site and followed it in one of the social networks

Traffic accounting is assessing the effectiveness of the Internet resource (analysis of visitors' quantitative and qualitative characteristics). Modern web analytics programs provide opportunities for traffic analysis. For example, a researcher can analyze such parameters as the number of site visitors, number of viewed pages, a regional affiliation of visitors, site visit time, etc. Programs can provide an analysis of the level of popularity of sections of the site, the value of the average depth of page views, ways to view the resource pages, etc.

Rising traffic is increasing the number of visitors to a particular Internet resource. To ensure the growth of search traffic, the site's visibility by keywords in search is crucial. To do this, a marketer needs to gather a broad semantic core, optimize existing pages and create new ones so that a certain resource is linked to other sites and users of social networks. These tasks belong to the scope of SEO specialists.
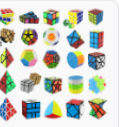
Traffic monetization (traffic arbitrage) is paid redirection of visitors from one site to another. After achieving daily traffic of more than 5,000 users, it is advisable to connect monetization, i.e., converting the flow of visitors into cash flow. Selling traffic means the conversion/click or other targeted action of a user for which the owner of the site that placed the ad is charged a monetary reward. Many intermediaries on the Internet (teaser, banner and advertising resources) connect customers and sellers (owners of such sites). In traffic monetization, we can talk about direct monetization, when the site owner gets buyers for his product when switching to its Internet resource (traffic arbitration is not used). However, it is much more profitable with the popularity of the resource to use the possibilities of both types of traffic monetization [32].

Figure 2.2 – Examples of contextual advertising and advertising of Google Shopping*

* – the highlighted area labeled "1" shows an example of an online ad like Google Shopping that appears when you search for the Rubik's Cube (Ukrainian search phrase "кубик-рубик". The highlighted area labeled '2' shows an example of contextual advertising

Figure 2.3 – An example of advertising with the ability to go to the advertiser's site on the social network Facebook

Cookie-file (the word "cookies" comes from the phrase "magic cookies" – small pieces of information stored by the browser) is a small file created by the web-server to store in the browser information about visiting the resource (login, password, nickname, e-mail, individual settings, etc.). Thus, the next time a definite user visits this site, he/she goes through the authentication procedure. In practice, cookies are used to track and collect statistics of site users' visits.

Conversion is the ratio of the number of site visitors who performed any targeted actions on it (purchased the product, left a review, subscribed to the newsletter, etc.) to the

total number of site visitors, expressed as a percentage [33].

Lead is a potential customer who in some way reacted to the marketing communication on the site, showed interest in goods or services, left the data for further contact.
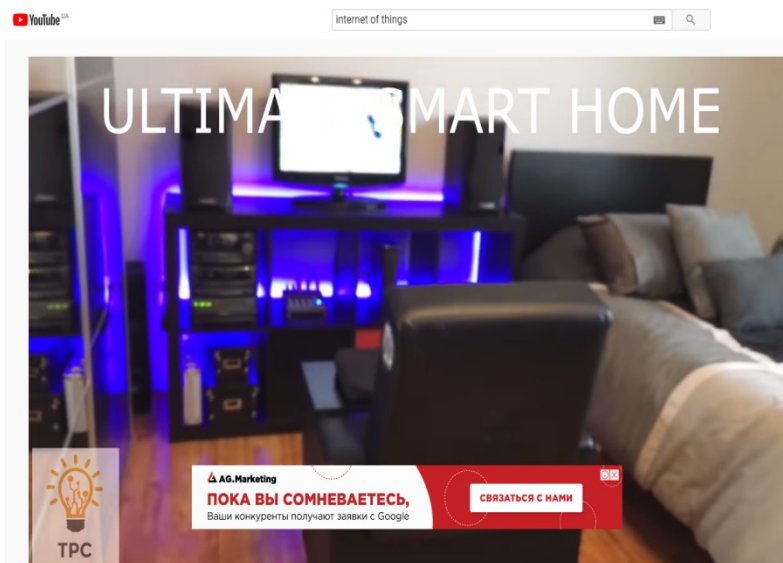
Figure 2.4 – Advertising in the process of playing videos on YouTube

The terms given in this section are key to understanding the specifics of the digital sphere and the implementation of Internet marketing. In the following sections, various aspects of the above terms will be given more attention.

2.4 Successful examples of e-business in Ukraine and abroad

In this section, we will give some examples of successful business on the Internet, so that before a full-scale

study of the course, it was clear what opportunities the electronic field provides, what can be associated with the Internet environment and what are the features of starting and developing business in the digital area. Below are examples of successful ***Ukrainian Internet startups:***

1 *Preply*. Even though the competition in the educational projects market is high, this online tutor search service, launched in 2013, is thriving. Initially, it was intended as a service for learning English, but the creators changed its concept several times. It is now an online marketplace where visitors can find a tutor in more than 20 languages [34; 35].

2 *Grammarly*. A service that uses artificial intelligence to improve the writing of text in English in terms of correcting grammatical and spelling errors. This service is integrated into the browser, makes suggestions for accurate vocabulary selection, and optimizes correspondence statistics. The service also works as a teacher in the paid version, explaining the rules [36].

3 *Restream.* A streaming service allows users to stream video content across multiple platforms and social networks (including the most popular video channels such as Facebook, YouTube, Twitch, Mixer, LinkedIn). The leading service is online cloud broadcasting, which allows the author to broadcast videos to various streaming video sites.

4 *PatentBot.* Digital assistant for online trademark registration. This service checks name of a new trademark. If a name is free, it helps to draw up necessary documentation. It helps to save up to 80% of the time and paying lawyers [37].

5 *Depositphotos.* International online photobank, which is an intermediary between the authors of the images and their buyers. The founder of this photo bank D. Sergeev also launched the online journal "Bird in flight" about photography and visual culture [38; 39].

6 *Na'Vi* (full name – Natus Vincere, translates from Latin as "Born to Win"). Ukrainian multi-game eSports organization. The development of technologies, such as streaming services, allows for the mass viewing of competitions [40].

7 *Prom.ua.* Ukrainian marketplace, on the platform of which entrepreneurs can create online stores or place their products in the general catalog, receive SEO promotion services, and advertise their products within the internal budget of ProSale.

8 *Jooble*. A search engine which aggregates job postings from job boards, newspapers, corporate career pages, and recruitment agencies. The search engine starts the site search by entering the city and job title. Filters allow sorting ads by city, date, salary and company name. The ad search algorithm considers hundreds of parameters and selects relevant vacancies for the user. By clicking on an ad, a user is redirected to a relevant company page where he/she can find employer contacts and submit a resume [42].

9 *TicketForEvent*. Online service enables event organizers to automate registration and questionnaire of visitors on their website, accept payment from their clients and secure them with electronic tickets/badges. The service is focused on various events by type and scale: exhibitions, conferences, forums, training, seminars, cultural and entertainment events [43].

10 *Hubbub.* A social network where people communicate by recording and exchanging short voicemails "bubs" [44].

11 *Address.ua* is a real estate portal. The site contains a complete and reliable database of homes for sale and rent. The ads go through a rigid system of control before posting on this resource [45].

A special place in the market of Ukraine is occupied by online stores, which now became popular not only for the purchase of goods, such as electronics, household appliances, clothing, cosmetics, but also food, baby goods, home goods and so on. Market leaders in Ukraine by the number of visits include such projects as Rozetka, Allo, Citrus, Comfy, Make UP, Foxtrot, 27.ua, kasta.ua, f.ua, Moyo, Eldorado, Intertop. At the same time, it is natural that projects that place clothes, shoes, cosmetics, jewelry in the catalogs (Bonprix, kasta.ua, Leboutique, Make UP, zolotoyvek.ua) are leading by the number of visits. The rapid development of information communication technologies has expanded the possibilities for marketing communication. To increase electronic business competitiveness and carry out marketing activities, it has become essential to acquire knowledge about e-consumers and identify their purchase preferences [46].

The Internet provides opportunities for the development of traditionally offline organizations, such as, for example, universities. The distance learning system is gaining more and more development in Ukraine, the introduction of which in the country would not be possible without the advantages of the electronic environment. Such universities of Ukraine have already introduced distance learning: Ternopil National Technical University named after Ivan Pulyuy, Odessa National Academy of Food Technologies, Khmelnytsky National University, University of the State Fiscal Service of Ukraine and others. [47]. The information system of e-learning of Sumy State University is provided by a set of such software and information environments: automated distance learning system, the platform of open online courses "Examiner", platform for blended learning, open educational resources, e-catalog, institutional repository, and for online consultations and classes for distance learning students, there is an online

studio that provides two-way audio and video communication between teacher and students, recording and online broadcasting of educational videos [48].

Thanks to international electronic trading platforms for entrepreneurs from Ukraine, there are more opportunities to organize their homeland. Thus, such an activity as purchases in foreign online stores with subsequent delivery of goods to end consumers-customers of products is becoming especially popular today for individuals. Many sites like next.co.uk, sportsdirect.com, decathlon.co.uk, hm.com, mountainwarehouse.com, lidl.de, carters.com, amazon.com, 6pm.com, calvinklein.com, zara.com and others provide favorable conditions for cooperation in the case of wholesale purchases of goods and occasional promotional offers. Therefore, for this type of business, the only restriction may be ignorance of a foreign language, which is the main requirement for carrying out this type of activity to understand the information provided on foreign sites.

The world leaders among the sites in terms of profitability are (the products of these companies are analyzed in the Internet environment, although the scope of most of these companies is much broader outside of purely e-business) [49]:

– Amazon (international online store);
– Google (the company's products include search engine, browser, mail service, etc.);
– eBay (online auction);
– Yahoo! (search engine, mail service);
– Alibaba (online store);
– Expedia (online service in the field of booking);
– Priceline (service in the field of online booking with the main distinguishing feature – the service "Name your price");

- AOL (social networks, music portal);
- NetFlix (entertainment portal);
- Facebook (social networks);
- Baidu (searching system);
- Skype (internet telephony);
- TaoBao (online store);
- Groupon (group discount service).

When we analyze the business in the Internet sphere, we can name many exciting and extraordinary ideas that brought their founders' significant profits and fame. Examples include YouTube. The idea for this unique portal of various videos came to three former PayPal employees in 2005.

The Million Dollar Home Page project (Figure 2.5), created by student Ales Tew in 2005, proved that anything can be sold, especially on the Internet. He created a website where he posted images with a total size of 1,000,000 pixels. He offered to buy 1 pixel of the image for only 1 dollar. The minimum size of such a purchase was an area of 10 * 10 pixels. There he placed an image of the advertiser and a link to take visitors to the site. As a result, all the space on the site was filled and the student received the sum of 1,037,100 dollars and 37.1 thousand dollars, which he received in addition when he put the last thousand pixels up for sale in an eBay auction.

Tumblr.com is a trendy blogging platform created by a 19-year-old man. The idea came to David Carp in 2006. In 2009, the site was so popular that the founder was given the title of a best young entrepreneur in Internet technology [50].

Analysis of domestic and foreign examples of successful Internet projects shows that the electronic sphere is profitable for starting a business. The network provides unlimited opportunities to communicate with potential customers, inform about its products, analyze competitors, collect business statistics and more.

In the following sections, we will pay more attention to the types of online business and their specifics, in particular, analyze the types of business activities in the electronic field, which are already mentioned as examples in this section, and explore other businesses that have not yet been listed.
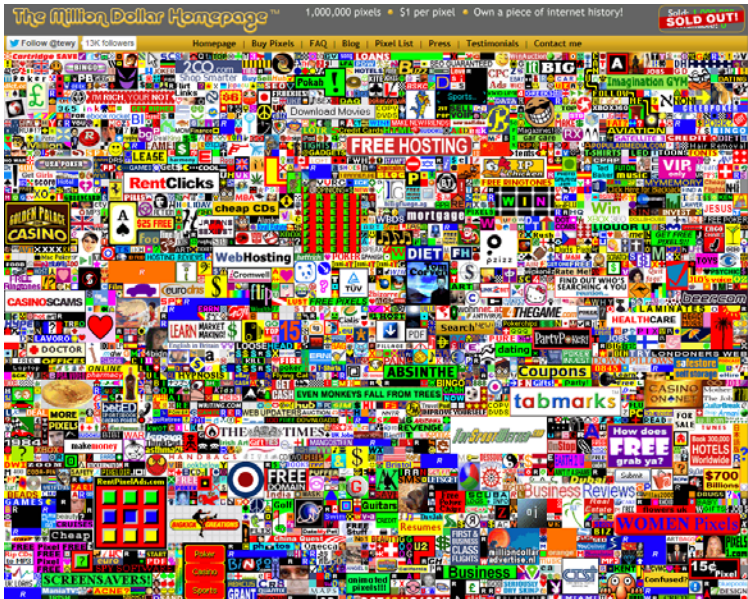
Figure 2.5 – Site "The Million Dollar Homepage" [51]

Trends show that business is becoming more and more online every year. As the electronic field is very changeable (new and new technical solutions appear every day), the information about the latest innovations quickly becomes obsolete. Nevertheless, the Internet projects analyzed in this section are already engraved in the history of e-business, so they will be used as an example, imitate certain features of their business processes and create something new or upgrade existing current and future online business start-ups.

CHAPTER 3
TYPES OF INTERNET BUSINESS

3.1 Classification of business in a digital environment

The history of e-business began more than 40 years ago, and to this day, this field of activity continues to develop, surprising with its innovations, which ten years ago no one could have imagined. Amazon.com was one of the first e-commerce sites in the United States to start selling goods online, and since then, thousands of businesses have entered the global Internet market each year. The first online transaction took place in 1994 when two friends sold a Sting CD [52].

According to statistics, every fifth European company carries out electronic sales. The following data demonstrate the degree of development of the modern Internet environment: users of the social network Instagram like about 2.5 million posts per minute, on Twitter they manage to send 9.7 thousand tweets with emoji per minute, on YouTube video hosting – 400 hours per minute new video, and in Facebook Messenger to share more than 216 thousand messages in just one minute. Snapchat users view 6 million videos in one minute they spend online. Almost 570,000 new images appear in GIF services every minute. Visitors upload 830,000 new documents in Dropbox (cloud file sharing and file synchronizer). Siri (cloud personal assistant and question-and-answer system adapted for iOS) answers 100,000 questions in one minute [53].

Emoji is a unique graphic language of ideograms and smilies to express emotions in interactive communication. The

main difference between emoji and emoticons is that users enter emoticons in personal correspondence, while emojis they mostly use in public texts. Emoji is the next stage in the evolution of emoticons. With the help of emoticons, it is possible to convey the sender's emotions. With the help of emoji, it is possible to convey an action or state.

The time of the birth of the emoticon is known to the nearest minute. On September 19, 1982, at 11:44 a.m., Scott Falman, a professor at Carnegie Mellon University in Pittsburgh, USA, sent an e-mail to colleagues asking them to use a smiley to express emotions in online communication.

```
19-Sep-82 11:44     Scott E  Fahlman               :-)
From: Scott E  Fahlman <Fahlman at Cmu-20c>

I propose that the following character sequence for joke markers:

:-)

Read it sideways.  Actually, it is probably more economical to mar
things that are NOT jokes, given current trends.  For this, use

:-(
```

Figure 3.1 – The original message of S. Falman to colleagues in 1982 [54]

*In 1995, DoCoMo, a telecommunications operator in Japan, distributed smilies to many users. The specialists of this company added hearts to the icons, and people liked it. Since these symbols significantly loaded the network, in 1999, the company's employees developed a set of 12 * 12-pixel image symbols. These were emojis. Emoji translated from Japanese means a picture with a character. The Western culture changed some of the traditional meanings of smilies. After all, some icons may have a specific designation, which is found only in Japan (for example, a white flower in Japan means well-done homework). The Unicode consortium includes the department*

that standardizes emoticons. Specialists in this department make suggestions for improving and correcting existing icons to return them to their original meaning. They try to optimize and improve emoji images to understand and reflect the standard values of different countries.

Nowadays, almost all global brands use emoji language when publishing information on social networks. According to 2017, large companies have made more than 800 million publications using expressions of feelings and emotions. Emojis are capable of influencing the outcome of advertising messages. For example, the US pizzeria chain Domino's Pizza has launched a chatbot that responds to emoji in the form of a slice of pizza. If the customer sends a message to the chat with this emoji, the chatbot immediately connects with the person who sent such a message to discuss pizza delivery terms (Figure 3.2).

Marketers from the company Miracle-Gro (USA), which sells gardening products, offered their customers to repost emoji in the form of a virtual flower. In the end, the number of reposts amounted to 1.6 million units. Furthermore, on Disney's YouTube channel, there is a whole series of cartoons made in the style of emoji (Figure 3.3) [55-57].

Talented entrepreneurs have generated many activities to implement through the Internet.

The main types of business in a digital environment are:

– trading platforms (catalogs of goods and services (marketplaces), online auctions, online exchanges);

– electronic procurement management (electronic bidding system);

– financial services (internet banking, payment system services, online insurance);

– online stores;

– information business on the Internet (periodicals on the Internet (publications, news sites, price aggregators, directories, etc.));

– Internet marketing (site promotion in search engines);

– social networks;

– blogging;

– affiliate programs (affiliate marketing);

– Internet franchising;

– service providers (providers of network services, hosting, domains, cloud services);

– provision of services (distance learning, network libraries, Internet consulting, etc.);

– gambling business (virtual casinos, bookmakers, sweepstakes, lotteries);

– shopping clubs (purchase of goods of world-famous brands);

– portals (corporate, information, commercial, personal);

– content projects (sites for editing pictures, photos, videos online);

– communication services (IP-telephony);

– web mastering (website creation, web programming, web design);

– MLM (network) marketing (abbreviation from "Multilevel marketing") (a form of out-of-store retail), etc.
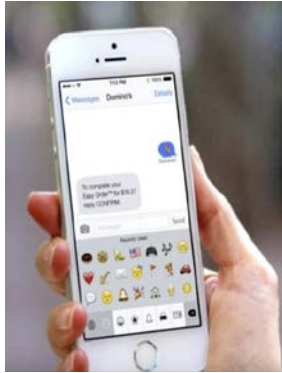
Figure 3.2 – Domino's Pizza chatbot response window with emoji
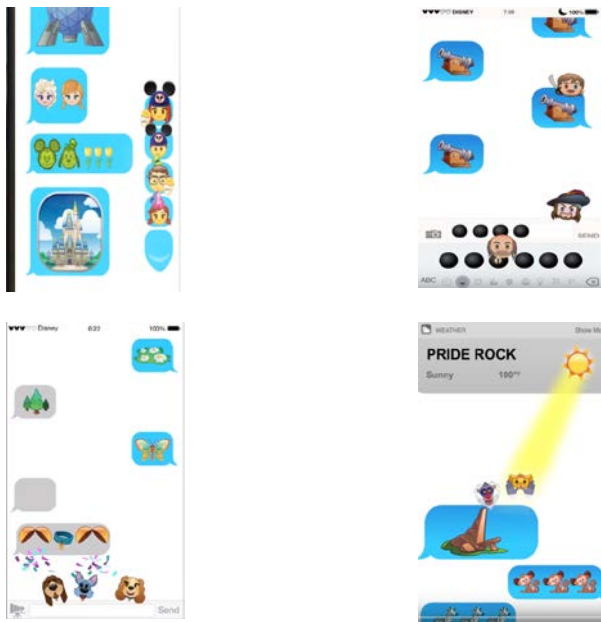
Figure 3.3 – Screenshots from cartoons of the series As Told by Emoji from Disney on the YouTube channel

The most common e-commerce services in Ukraine are booking and selling tickets, selling electronics, selling books, booking and paying for hotel accommodation, paying for public communication systems, selling travel vouchers, subscribing to various services, selling software.

3.2 Features of trading platforms in the digital environment

The marketplace is an e-commerce platform that provides information about third parties' products and services. The marketplace is essentially a market site where buyers and sellers meet, communicate and make deals. The main characteristic that identifies the marketplace is the presence of many vendors on one site. The price of the product may differ from different retailers [58]. Today, the world's largest marketplace with branches around the world is Amazon (it became the most expensive in the world in 2019), which began its activities as an online book retailer (in 1998, the range was replenished with audio and video products, and in 2000 a smiley-arrow appeared on the company's logo, which symbolizes that any goods can be ordered in the marketplace catalog – from A to Z (Figure 3.4).

amazon.com

Figure 3.4 – Amazon, the world's largest marketplace logo

In 1996, Hiroshi Mikitani founded the Rakuten e-commerce store in Japan (the Japanese word "Rakuten" means optimism), and in 1997 he allowed retailers to build

their websites based on their online store. In 1999, Alibaba, an online resource created by Jack Ma, appeared in China and became one of the largest marketplaces in the world.

The second wave of marketplaces occurred at the beginning of the XXI century. Travis Kalanik and Gareth Gramp tried to catch a taxi in Paris when the city was covered with snow. Then they had an idea: how convenient it would be to press a button on a mobile phone and see free cars nearby. In 2009, they implemented this idea in America. So Uber (from German "Über" is above) has become one of the most popular marketplaces in the services market. It helps to find transport in different countries. Following the example of this marketplace, there are others (marketplaces with the functions of finding a gardener, veterinarian, tutor, educator, etc.). In Ukraine, the market leaders are OLX, Rozetka (the first steps to becoming a trading platform was made only in 2014), Prom.ua, Kidstaff.com.ua, Shafa.ua, Kasta.

The *auction* is a specially organized and periodically operating market for the sale of goods, public auction property to the buyer who offered the highest price, sold on the Internet. The main advantage of online auctions is that they can involve anyone, regardless of their location at the time of bidding. Online auctions provide an opportunity to track bidders' ratings and reputation and provide a platform for payment and dispute solutions [59].

In 1995, the eBay online auction site started to work in the United States. The first to sell on eBay was a broken laser pointer for $14. The man who offered this lot has been collecting pointers since childhood. He had a desire to exchange exhibits with someone who had a similar hobby. The new service gave him such an opportunity. After that, strange things were repeatedly sold on eBay: wedding invitations, a manuscript of Shakespeare, survived in the fire, a resort in the

United States and others. Whatever the strange proposals – each found the appropriate reaction in the audience. Hence the company's slogan: "When it's on your mind, it's on eBay."

Online auctions, unlike face-to-face auctions, take a long time (usually from 3 to 10 days), so buyers do not have to be physically present at the computer during the auction. It significantly expands the geography and number of participants. The auction model is a new pricing option for many markets, where numerous sellers and buyers place competing bids. It is an ideal model for eliminating surpluses at the best price, as potential buyers can make competitive (rising) offers to purchase goods at market prices [59].

Direct auctions (English) are auctions initiated (organized) by sellers. The seller publishes a list of lots (goods) for sale. Buyers who participate in the auction offer their price for the product or service through the auction system, sometimes using automated software (bots). They use bots in conditions where a better response than human capabilities is required. The issue of using bots to automate sales transactions at one time was controversial. The company that owns the eBay online auction tried to sue a third party who used bots to search for bargains. However, this has attracted the attention of even more people who use bots. During the auction, the lot's price is increased continuously until the highest price is set, and the auction ends after a predetermined time interval. To counteract automatic actions, the most widely used today is the so-called CAPTCHA, which is essentially a test used to distinguish a machine from a human by displaying graphically processed text. This text is relatively easy to read by humans, but modern artificial intelligence implementations often do not cope with such a test. The English type of auction is the most common. At such auctions, unique goods are sold, such as items of collections, luxury items. Bidding ends when the

auction deadline set by the seller expires. The goods go to the buyer who proposes the highest price. The auction does not always end with a sale. If the minimum price at which the owner of the goods agrees to sell is not reached, the goods are not sold.

Reverse auctions are diametrically different from direct ones. The buyer indicates the product he would like to buy, and many sellers compete with each other, gradually reducing the price of this product. The priceline.com service, for example, works on this principle.

A Dutch auction is a type of auction with one seller and many buyers, in which the seller lowers the price (beginning with a starting price) until a buyer agrees to buy a lot for that price. It is a wholesale auction where a seller can put many units of goods at once. Accordingly, buyers can claim to purchase many units of goods. All winning buyers pay only the minimum of the winning prices. For example, the seller put up for sale five smartphones. The highest price is $150, and the lowest of the winners is $135. All five smartphone buyers will receive them for $135. There is no opportunity to set a reserve price at a Dutch auction. An example of such an auction is an auction for the sale of flowers in Alsmer (Netherlands), but it is not held remotely. An example of an online promotion that sells lots on this principle is the American auction platform ubid.com.

A discriminatory auction is a closed form of the bidder. The winner who gave the highest price receives the goods for the price he sets. In such an auction, bids submitted blindly are sorted from highest to lowest. Goods are distributed in this order until they are finished. The winners pay different prices for the goods.

In many systems, the seller can insert a "blitz price". If the buyer makes a bid in the amount of the blitz price, the

auction ends early, and he is the winner of the auction. A standard auction can be held in a modified form when a small amount of money is taken from buyers for each bid.

At present, trading platforms are beginning to compete with Internet search engines. In the USA, 55% of buyers search for Amazon, eBay, Etsy, bypassing Google. On Google and Yahoo!, advertising auctions placed near the keyword search line bring more than $10 billion. Pay-per-click advertising systems are now prevalent. Every time a user enters the site looking for something, an auction is held. It depends on which ads will be shown to this user and in which position. *In Google Ads, the auction works like this:*

1) the user enters search words in the search bar. Based on them, Google Ads selects the ads that match the query;

2) the system eliminates ads that do not meet the display criteria (for example, for non-compliance with geotargeting);

3) only ads with a high enough rating are shown.

Ad rank depends on several factors:

– cost-per-click (advertiser bid). In pay-per-click (PPC) advertising systems, when setting up an advertising campaign, the advertiser sees the average cost-per-click and the highest and lowest bid at the top of the page;

– ad quality – the most important thing for search engines is the degree to which the ad text headline and URL match the user's search query. The click-through rate (CTR) of the ad is taken into account, which is the ratio of ad clicks to demonstrations. A high CTR indicates that users find the ad useful, which means high ad quality for the system. The higher the quality, the better the ad position can be on the page, and the more often the search engine will show it;

– landing page quality considers the relevance of the page to the user's search query (whether there are the necessary

keywords, whether the search topic matches) and the ease of navigating the site.

If a company's ads match the query exactly, get a high CTR, and lead to a high-quality landing page, they may rank better or appear more often than the ads of competitors with higher CPC bids.

Internet exchange is an organized form of market in which free trade in goods (commodity exchange), securities (stock exchange), currency (currency exchange), hiring workers (labor exchange) online, and where prices are formed based on the actual ratio of supply and demand.

Closely related to the concept of Internet exchange is Internet trading, which emerged in Ukraine in 2009 thanks to PJSC "Ukrainian Exchange". Online trading on the stock market in Ukraine is currently carried out on two trading platforms – the already mentioned PJSC "Ukrainian Stock Exchange" and JSC "PFT" (First Stock Trading System). The broker gives access to trading. It provides clients with the appropriate software package for communication with the exchange and technical support during trading.

The market of cash transactions is called the spot (cash) market. When agreeing in this market, the rights to the contractual relationship's subject pass immediately. Payment is immediate, as is the delivery of the subject of the transaction. Within the time frame, mutual settlements take no more than 2-3 days. A market with futures contracts is called a futures market. Agreements in this market are for future deliveries of the contract's subject but on the terms prescribed at the time of the agreement. The settlement period is more than two days from the date of concluding the contract. The most common types of term instruments (derivatives) are forwards, futures and options. The difference between these tools is in the rights and responsibilities of buyers and sellers. *A forward contract* is

an agreement under which one of the parties to the contract must deliver within a specified period and the other – to pay a certain amount of goods at a previously set price. *A futures contract* is a document that certifies an obligation to buy or sell the subject of an agreement at a specified time and on agreed terms in the future. Prices are fixed at the time of fulfillment of obligations under the contract. *An option* is a document that confirms the right to buy or sell the subject on agreed terms in the future. Prices are fixed at the time of the contract or at the time of purchase. The seller has an unconditional obligation to buy/sell the contract's subject under the terms of the option contract. In this case, the buyer of the option has the right to refuse to buy/sell the contract's subject at any time. The most common options are of two types: American (can be redeemed on any day before the expiration of the option) and European (can be redeemed only on one specified date).

Each contract has two parties:
− buyer (has a long position);
− seller (has a short position).

Each contract has a standard quantity of goods set by the exchange called a contract unit. For example, in grain contracts on USA stock exchanges, it is 5,000 bushels (138.9 tons). The establishment of trade units and the number of such units in the contract is based on trade practice.

A quotation is fixing the actual contract prices and deriving the typical (average) price on exchange transactions for a certain period.

Volatility is a statistical, financial indicator that characterizes the price change.

The stock market is a place for purchasing and selling securities. The placement of securities issued for the first time takes place on the primary market and their resale – on the secondary market. The concept of *credit leverage* is related to

stock market trading (the ratio between a trader's funds and borrowed funds that a trader takes from his broker). Example of the operation with credit leverage: the trader chooses the arm 1:500. At the same time, he/she has 200 euros in the account. Leverage 1:500 will allow buying a contract amounting to 100,000 euros.

Among the methods of exchange trade are:

− hedging (insurance against the risk of price changes by taking the opposite position in a parallel market);

− scalping (intraday speculative transaction in the stock market, currency or commodity, the feature of which is the transaction's closure when a small amount of profit is achieved in several points. As a rule, the transaction is carried out in a short period (fraction of a second));

− exchange arbitrage (the process of concluding several exchange agreements, which aims to make a profit due to the difference in prices for the same or related assets simultaneously in different markets or at different times in the same market.

Forex (from *For*eign *Ex*change) is an interbank international currency market. Forex is usually called the foreign exchange market in the English-speaking environment, as well as currency trading. In Ukraine, it refers to speculative currency trading through commercial banks or dealing centers, which is carried out using leverage. Such trading is called marginal currency trading.

The UX index is a Ukrainian stock index whose change reflects an increase or decrease in the weighted average price of shares in the "index basket" relative to the period under review. It is calculated based on stock prices of "blue chips" of Ukraine (shares of the largest Ukrainian companies, leaders in their industries. The weight limit in the index of shares of one issuer is 25%). This index began to be calculated in 2009 [60].

The ticker is a short name for the instruments listed (stocks, bonds, indices) in the stock exchange. It is a unique identifier within a single exchange or information system [61]. Ukraine has its *commodity exchanges* (Table 3.1).

Table 3.1 – Ukrainian commodity exchanges

Name of the exchange	URL	Specialization
Agricultural Exchange	https://agrex.gov.ua/	Raw wood, flour, land
Ekaterinoslav Commodity Exchange	http://www.tbe.com.ua	Agricultural products and products of its processing, food products, energy resources
Kyiv Trade Exchange	https://kme.ua/	Coal and mineral fertilizers
Pre-Carpathian universal commodity exchange	http://pfg.if.ua/	Raw wood
Sumy resource exchange	http://srbtb.com.ua/	Raw wood, grain
Rivne interregional universal commodity and property exchange "PRAIS"	http://price-trade.org.ua/	Raw wood, land
Ukrainian Energy Exchange	https://www.ueex.com.ua/	Energy resources (natural gas, liquefied gas, petroleum products, etc.), ammonia, etc.
Ukrainian Universal Exchange	https://uub.com.ua/	Energy resources, agricultural products, raw wood

Name of the exchange	URL	Specialization
Commodity Exchange "Universal Commodity Exchange"	http://www.utsb.kiev.ua/	Energy, metal, agricultural products, wood, vehicles, etc.
Commodity Exchange "Perspective-Commodity"	http://www.e-commodity.fbp.com.ua/	Property, derivatives
Kharkiv Commodity Exchange	http://www.xtb.com.ua/	State property, objects of tax pledge, land, sale of property rights

Almost all commodity exchanges are for trading non-standardized property (land, sale of debtors' property, privatization objects, a property of banks for liquidation, etc.).

3.3 Electronic trading system

Electronic procurement management is directly related to the field of public procurement, which includes operations for the purchase of tangible and intangible goods from budget funds, social insurance funds, central bank funds, state and municipal enterprises and enterprises with a state share of more than 50 % of authorized capital.

Tender is one of the methods of competitive selection of proposals that best meet the customer's requirements. Tenders are open and closed. Only companies invited by the supplier participate in closed bidding. Any company that meets the requirements set by the customer can participate in open bidding.

Terms of participation in the tender. Suppose that a company has found several eligible purchases. It decides to participate in the tender. An application for participation in bidding for an electronic trading platform is submitted. Participants can sign the application with an electronic digital signature. The use of electronic signatures makes it possible to reduce the volume of documents several times. The winner of the tender is the one who can offer the most attractive for the customer terms of the contract. The customer will work with this supplier. The bidder, who became the second, also has several chances to conclude a contract with the customer. For example, weaknesses may be found in the winner's application: lack of experience in performing similar work or lack of documentary evidence of the necessary equipment availability. In this case, the bid with the most advantageous price offer may be rejected, and the priority will be given to the bidder submitted the second most advantageous offer.

In Ukraine, there is state electronic tender ProZorro and commercial – RIALTO. The differences between these tenders are due to the regulation of public procurement at the legislative level. Commercial organizations independently decide when and what to buy through a tender procedure. State organizations must procure publicly following current legislation, so there are more government tenders today. For participating in government tenders, it is necessary to prepare many documents, including a bank guarantee. The commercial customer does not need it determining itself, which is essential to confirm the supplier's reliability. Participation in commercial tenders is interesting for cooperation with major brands, the opportunity to build long-term relationships and further recognition in the market.

According to the Law of Ukraine "On Public Procurement" [62], the Customer has the right to require all

bidders in the tender proposals to submit tender security for the tender offer, provided only in the form of a guarantee. The purpose of such provision is to guarantee the proper Customer protection from "non-serious" participants.

There are these types of guarantees to provide

– banking;
– insurance;
– guarantee of a financial institution (not banks).

The most common in practice is the requirement to provide a bank guarentee. It is only an obligation because if the company fulfills the tender conditions in the tender, it pays the bank only the cost of processing the document. Any bidder seeks to minimize their financial risks. Today, tender insurance is widely used as an alternative to a bank guarantee. The insurance company reimburses all risks and financial losses if the tender winner refuses to comply with the terms of the tender, or these conditions will not be fully met.

3.4 Electronic financial services

Electronic financial services are services that (or part of which) are provided via the Internet online using the features of the communication environment: the possibility of simultaneous information interaction of the service provider with a large number of customers, ensuring the availability of information regardless of customer location and time of day, globality and personalization of services [63].

Electronic financial services include

– banking services;
– Internet payment and financial systems;
– online insurance.

Information technologies for banking services for working with customers include*:*

1 ***Mobile banking.*** It allows carrying out most banking operations with personal accounts: providing information on the account balance, payments, money transfers, etc. With the help of NFC-chips in a smartphone, the system identifies a customer. The first Ukrainian bank to introduce this innovation was PrivatBank with its Privat24 system (Figure 3.5).
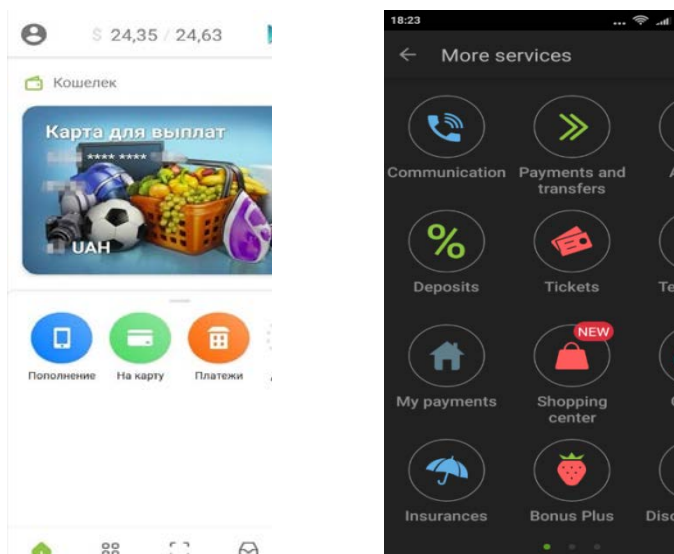
Figure 3.5 – Personal account in the mobile application "Privat24"

2 ***Internet banking*** is a system that allows standard banking operations to be carried out via the Internet. In a narrower sense, Internet banking is a type of banking service offered by a financial institution on the basis of a special licence to provide customers with financial instruments for remote management of their bank accounts. Internet banking opens up great opportunities for banks: customers no longer

need to visit bank branches and stand in line. Anyone can log on to their personal account and carry out financial transactions online and in real time (money transfers, bill payments, loans, payment for online purchases, currency exchange, ticket purchases and much more). In addition, it is possible to select specific services: issuance of a virtual card (a type of card, the balance and details of which are different from those of the main account); geolocation management (the possibility of sending a message to the bank about the planned visit to certain countries, and then, when paying by card in these countries, the transaction monitoring service will not bother the client with calls).

Almost every bank in Ukraine has its own Internet banking system together with a physical bank and its branches. The characteristics of the Internet banking systems of the leading banks of Ukraine are presented in Table 3.2.

There are still some technical limitations to using online platforms. Technical restrictions mean certain obstacles for customers to use Internet banking. For example, up to 90 % of all banking transactions are performed 24/7, but individual transactions can only be performed on weekdays at certain hours.

There are innovative banking institutions in the Ukrainian market, entirely on the Internet "MonoBank", "Izibank". These banks do not have physical offices. To become a client of these banks, potential clients register on the official website and come to the place of issuance of plastic cards.

3 *"Zone 24".* This technology allows the clients to manage their accounts, get advice from a call center specialist, leave a request to receive the service, sign up for service in any bank branch. Almost every such area is equipped with an ATM, CashIn replenishment module, and a telephone to access

the information service. If the working day of physical institutions is over, it does not mean that customers can not carry out financial transactions or contact the bank [64].

Table 3.2 – Internet banking systems from domestic banks

Name of the banking institution	The name of the Internet banking system	Payment protection	Protection of viewing statements	Availability of the mobile version	Technical limitations
Privatbank	Prival24	Password, SMS		+	−
Oshchadbank	Oshchad 24/7	Password, SMS		+	−
Raiffaizen Bank Aval	Raiffaizen online	Password, SMS		+	−
UkrSybBank	UKRSIB online (before February 2018 – Star24)	Log in online with FACE ID or at the touch of a finger		+	24/7 not for all transactions
Alfa-bank	My Alfa-Bank	−	Password	+	−
PUMB	PUMBonline	Password, SMS		+	−
A-bank (Aktsent-Bank)	ABANK24	Password, SMS		+	−
Credi Agrikol	i-Bank	Personal or one-time password		+	−
Bank Pivdennyi	Pivdennyi MyBank	Password		+	−
OTP Bank	OTP Smart	Digital signature using asymmetric algorithms, password		+	−
Bank Credit Dnipro	Free Bank	Password		+	−

4 **_POS-terminals in retail chains_**. It is equipment installed in outlets. The terminal has the same functions as in the Internet banking system. The client can carry out operations both with the help of a plastic card and a telephone number to which his/her financial account is assigned.

An essential issue in the banking sector is the security of credentials and their protection. It is enough to specify a login and password in simple Internet banking systems. These systems are not reliable, as they can easily break. Many banks additionally require confirmation via a call to the customer's mobile phone. The latest approach to ensuring the security of user accounts is demonstrated, for example, by UkrSibBank, for which it becomes possible to log in online with the help of FACE ID technology or at the touch of a finger (TOUCH ID). Touch ID is a fingerprint scanner developed by Apple. Face ID (Face Recognition Technology) is a 3D face shape scanner developed by Apple. The True Depth camera places a dense grid of infrared dots on the user's face and can accurately determine the distance for each of them. So the system gets a model of a person's face (even if you change your hair, grow a beard, the system still recognizes the person).

Advantages of Internet banking:
– round-the-clock control of bank accounts;
– inexpensive or free personal service;
– services available in the mobile application;
– no queues;
– providing cashback, i.e., a refund of part of the funds spent;
– possibility of contactless payment;
– card protection levels;
– it is possible to pay for utilities, telephone, TV programs, online shopping, food, fines and much more from a mobile phone.

Disadvantages of Internet banking:
− limited opportunities for mobile banking;
− Internet fraud;
− the older generation is not ready for banking innovations;
− misunderstanding of processes, and therefore not trust in them, because they are intangible processes, virtual payments;
− sometimes, it is dangerous and inconvenient to replenish the account in the terminal for large sums.

A bank card is a personalized plastic card, which allows its holder to pay for goods or services in cash and receive cash at bank branches and ATMs [65].

Types of bank cards:
− debit plastic cards (allow to spend only as much as is in the account of the cardholder);
− credit plastic cards (provide an opportunity to spend the bank's funds (which the client then returns) within the established credit limit);
− overdraft plastic cards (have a limit set by a bank, but if necessary, allow to go to a small minus). Their difference from credit cards is that the client needs to pay the bank's debt in a strictly limited time, for example, a month.

An electronic payment system is a service that allows the consumer, using Internet access and credit card number, to buy goods and services [65].

Online stores, online services, merchants, freelancers are thinking about the possibility of paying for goods and services on the Internet. Possible modern *payment systems of websites* are
− payment terminals (older people prefer this method of payment);

‒ e-money (a necessary condition is the presence of an electronic wallet);

‒ bank transfers (accepting online payments by bank transfer is rare today).

‒ plastic cards (this is preferred payment method for most consumers).

‒ aggregators of payment systems (full set of payment methods, when there is no need to connect each payment method separately (aggregator supports electronic money, payment terminals and cash registers, mobile payments, bank payments, online acquiring, bank cards).

An electronic wallet is a smart card or other electronic media with a built-in chip that allows to store e-money and make retail payments (for example, NFC-wallet from the bank "Privatbank", the system "Savings Pay" from the bank "Oschadbank", both of which are mobile applications for contactless NFC payments).

E-money is a type of means of payment that circulates electronically. According to Ukrainian legislation, only banks listed on the NBU's website can issue e-money in Ukraine. Several systems offer e-money in Ukraine, for example, Novapay (the service is available for clients of the postal operator "Nova Poshta"), Alfa-Money (e-money from Alfa-Bank), Electrum (e-money issued by Ukrgasbank), GlobalMoney (e-money issued by Globus Bank), XPAY (e-money from Bank Sich JSC).

Online acquiring is a technology that allows accepting bank cards for payment via the Internet (expands the possibilities for payment, for example, orders from a customer in an online store). The main difference of it from commercial and mobile acquiring is the absence of a terminal (POS, mPOS) for a physical reading of card data. Users of virtual

bank cards and e-wallets that do not have physical bank cards can use Internet acquiring.

Method of payment for online purchases as cash on delivery is still prevalent in Ukraine, but alternative payment methods make it easier to interact with those Internet consumers who prefer non-standard solutions.

The global development of payment cards and systems. Cards as a means of payment first appeared in Great Britain. E. Bellamy proposed the idea of credit cards in his book "Looking Backward", published in 1888 (a utopian novel about Boston in the year 2000, in which the protagonist, under the influence of hypnosis, falls asleep in a lethargic sleep in the XIX century and wakes up in the year 2000).

American Express Company, a regular courier service engaged in the transport of money, issued the first American Express traveller's cheque in 1892. The author of the idea of travellers' cheques is Thomas Cook. He organised tourist trips using a circular note (the prototype of the modern traveller's cheque). The countdown to the history of payment cards began in 1914, when merchants began issuing credit cards to their regular customers to encourage them to visit their shops. In 1919, the Western Union Telegraph made the paper credit card available only to members of the US government. It allowed telegrams to be sent on credit at the government's expense. The short life of the cardboard cards meant that alternatives had to be found. The Farrington Manufacturing Company introduced steel embossed cards. Their use made it possible to automate the payment process. The clerk would print out the data to make the payment to the customer. However, these types of cards were quickly replaced by payment cards as a more practical means of payment.

Diners Club cards were the most successful experiment in 1951. Three entrepreneurs set up a credit card company in

New York City for restaurant visitors. These cards became popular and were issued only to customers with a good reputation. These customers dined at restaurants. Representatives of the establishments, in turn, transferred copies of the invoices to the Diners Club, which accumulated them and subsequently issued a general invoice to customers for payment. Commercial banks joined the issuance of such cards. In the late 1950s and early 1960s, the first national system, the National Bank American, was created in the United States, which later went beyond the country. In 1977 it was renamed Visa International. In the late 1960s, another nationwide Interbank Card Association credit card system emerged in the United States, which also went international. Credit cards of this system today are called "Mastercard" [65].

Visa is a pioneer of non-cash payments, which created the world's first network of ATMs, prepaid cards and much more. MasterCard can be considered a catching-up player. The US dollar is the primary currency for Visa. It means that any conversion transaction bases on the dollar. For MasterCard, both the dollar and the euro can be the base currency for banking transactions.

As the credit card market showed positive results, European and Japanese companies entered the market after USA companies. For example, the Credit Card Bureau of Japan began issuing JBC cards, which also began to spread worldwide. Union Pay is a relatively young payment system, a little over 20 years old. This payment system made the first steps in China's largest cities, then covered the country's entire territory, and in 2003 a card was issued, which is valid worldwide.

The world payment system is very diverse. Residents of some countries hardly use the international payment systems Visa and MasterCard, preferring national payment systems. A

striking example is France, whose 85 % of residents use the local Carte Bleue. In the Netherlands, a significant share of the market is occupied by the local payment system iDeal, in Sweden – Klarna, which can pay for purchases in 15 thousand online stores. Visa and Mastercard mostly pay residents of Spain and Italy. In China, the national payment system Alipay, created by the empire of Alibaba Group, occupies 60 % of the Chinese market and dominates among all possible payment methods. China's Tenpay, chosen by online gamers, and the already mentioned UnionPay, the only government system supported by the Central Bank of the People's Republic of China, are considered reliable and profitable electronic payment systems in China.

The first ATM appeared at Barclays (one of the largest banks in the UK) in 1967 in London. It only accepted paper vouchers. The client could receive from it no more than 10 pounds simultaneously. Scottish inventor J. Sheppard-Barron made a significant contribution to the automation of receiving money [66]. Lloyds Bank established the first ATM for accepting bank cards in Great Britain in 1972. A little later, ATMs networks began to be created, which could be used by customers of various banks [67].

In the early 90's of the twentieth century in Europe, smart bank card standards have begun to be developed. There were plastic cards with a built-in chip similar to a SIM card (subscriber identification module). Currently, the chip installed inside the card allows contactless payments using PayPass (MasterCard) and PayWave (VISA). Contactless payment technology was invented and first introduced to the world in 2002 in the United States. The new technology pioneer was the MasterCard payment system, which was quickly followed by Visa and American Express with their analogues of contactless technologies. The first to use this technology was the

McDonald's restaurant chain, followed by other fast-food chains in the most developed countries (America, Canada, Japan, etc.). Many banks immediately wanted to have such an innovation to be in trend and gradually this technology spread around the world because its benefits are enough: hygiene, no need to enter the PIN code as is often the case in supermarkets.

Payment systems came to Ukraine in 1996 when six leading Ukrainian banks joined the Visa International Service Association. The undisputed leaders of the payment systems market in Ukraine today are Visa and MasterCard [68]. According to the acquiring agreement from 2010 in Ukraine, only one Ukreximbank bank accepts and services American Express payment cards (abbreviated AmEx) in Ukraine [69]. Payment systems in their technologies focus on modern advanced users of gadgets, including smartphone owners with Apple Pay and Google Pay. Many Ukrainian banks already have Garmin Pay technology.

Another area of payment services is *money transfers*. Fascinating is the story of the creation of Western Union money transfer. New York State Sheriff Hiram Sibley once realized how promising telegraphs were, so he bought several telegraph companies and later received an order to build a transcontinental telegraph line in the United States. Later, the idea of using the telegraph for money transfers arose [66]. The second-largest network of money transfers is MoneyGram. The third most popular customer system is IntelExpress – an international money transfer system specializing in the transfer of funds between individuals.

Second generation payment systems (non-bank electronic payment systems). Many people continuously carry several bank cards, which is not very convenient. Money transfer services charge relatively high fees, and the processing time for SWIFT payments today is from 3 to 5 days.

Today, the most well-known non-bank payment systems appeared in 1998 (PayPal payment network and Webmoney Transfer electronic payment system). E-money is the hart of second-generation payment services. The most well-known and widely used aggregators of payment systems in Ukraine are LiqPay, Interkasa, iPay.ua, portmone.com, EasyPay (Belarusian service). For example, LiqPay was founded in 2008 as an alternative to WebMoney and PayPal. The parent company of the service is PrivatBank. The account's identifier in this payment service is the phone number in the international format, and the account itself, in turn, is linked to the owner's bank card in PrivatBank. Aggregators set a fixed percentage of the transaction. The amount of the commission is set differentiated depending on:

– monthly money turnover of the site (the higher the money turnover, the more favorable conditions for the owner of the website. It may be proposed to develop an individual tariff plan);

– type of business (for example, a separate tariff grid is being developed to pay for utilities, ticket search sites and charity exchanges);

– payment method (a different percentage is set for each payment method. For example, when paying by bank card, the fee is lower and when paying at the terminal – higher).

The choice of payment system aggregators for e-business should be based on selecting those services that support a larger number of payment methods, not limited to one or two (e.g., LiqPay, Interkasa). This choice is critical because if the site does not accept payment in a convenient way for customers, it is likely to lose a potential consumer of its product.

In contrast to the offline counterpart, ***online insurance*** can provide the process of forming, paying and purchasing insurance policies, obtaining insurance premiums via the Internet. With the help of its corporate website, the insurance company has opportunities to improve its image, implement insurance policies, provide a full range of information and consulting services, maintain constant contact not only with its customers but also with business partners, provide additional services and conduct necessary research using Internet resources, for example, to search for potential customers and create an authorized list of e-mail addresses of future policyholders. In addition to the corporate site, domestic insurance companies actively use such services as Facebook, mobile applications on Google Play and App Store for owners of various gadgets, YouTube, Instagram, Twitter, Viber and other popular messengers to promote their services [71]. The insurance services market analysis showed that all leading insurance companies of Ukraine cover information about their services on their websites (Table 3.3 shows a fragment of the research results). Innovative for the domestic insurance market is bicycle insurance, but due to the growing popularity of this type of transport among the population and the emergence of various bicycle models on the market, including high-value, this type of insurance will become increasingly popular.

3.5 Internet stores

Online stores in Ukraine operate in the legal field thanks to the Law on E-Commerce. ***An online store*** is a way to present or sell a product, work or service by making an electronic transaction [72]. Internet stores use the principle of personalization. It bases on profiling technologies (the systematic collection and analysis of information about customers) [73]. Table 3.4 shows the fragment of online store classification.

Table 3.3 – Products presented on the websites of the leading insurance companies of Ukraine

Insurance product	Insurance company						
	PZU Ukraine	UNIQA	Universalna	Vuso	Providna	Persha	Omega
Motor third party liability insurance	+	+	+	+	+	+	+
Property insurance	+	+	+			+	+
Tourist insurance	+	+	+	+	+	+	+
Voluntary health insurance		+	+		+	+	+
Accident insurance	+	+	+		+		+
CASCO	+	+	+	+	+	+	+
"Green card"	+	+		+		+	
Sports support							
Protection for a child	+		+				
Bicycle insurance	+						
Farm animal insurance			+				
Personal insurance				+		+	+
Liability insurance for legal entities	+		+	+		+	+

Table 3.4 – Online store classification [74]

№	Sign of classification	Types of online stores
1	Specialization	1. food; 2. non-food; 3. universal; 4. specialized; 5. highly specialized.
2	Scope of activity (by the territory of customer service)	1. local (one or more territorial-administrative units of the country, region); 2. regional (several oblasts) 3. national (within one country); 4. international (different countries).
3	Type of product	1. real goods and services; 2. virtual goods and services.
4	Type of trade	1. retail online store; 2. wholesale and retail online store; 3. wholesale online store.
5	Price segment	1. online stores of the "elite segment"; 2. online stores that serve the price segment "medium +"; 3. online stores that serve the middle price segment; 4. online stores that serve the price segment "medium –"; 5. online stores at reduced prices.
6	Number of trademarks	1. mono-brand; 2. multi-brand.
7	Official representation	1. with official representation in the country; 2. without official representation in the country

In order for an e-shop to operate under Ukrainian law, it must have [75]:

– site;

– a computer program for online store management (website designers, management automation programs, CRM-systems, etc.);

– domain name;

– trademark (for an online store that does not register its trademark), there are many risks – from interception by competitors of the domain name to profound dissatisfaction of consumers in the case of copying products and selling low-quality analogs under the company name). The procedure of trademark registration in Ukraine takes from 18 to 24 months, but at the applicant's request and subject to payment of the relevant fee may be an accelerated examination of the application (in this case, the whole procedure takes 6-7 months) [76]. A domain in the Ukrainian zone .ua can be obtained if there is a trademark that entirely coincides with the domain name.

– provided with a virtual consumer basket, payment system, anti-fraud system;

– back-office (warehouse, accounting, management information systems, accounting and control of orders).

The site of the online store contains such information:

– full name of the legal entity or full name of a person-entrepreneur;

– location of the legal entity or place of registration and place of actual residence of the natural person-entrepreneur;

– the e-mail address and/or online store address;

– identification code for a legal entity or registration number of the taxpayer's account card for a person-entrepreneur;

–information on the license (if the economic activity is subject to licensing. For example, in the sale of pesticides and agrochemicals, veterinary drugs, articles of precious metals [77]);

–information on the inclusion of taxes in calculating the value of the product.

The online store includes front office (an online storefront located on a web server). It should be borne in mind that if the delivery of goods to the buyer will be by mail, some types of goods are prohibited by mail, including food products that do not exceed ten days, poisonous plants, melee weapons and other items specially designed for attack and defense, explosives and flammable substances, etc.

The range of goods that will be sold in the online store is determined by its owner, except for goods whose sale is prohibited through online stores. For example, some products can only be sold in specially equipped retail outlets. It applies in particular to the retail sale of tobacco products. Besides, it is forbidden to trade in Internet drugs, alcoholic beverages. These goods can only be booked online [75].

An interesting example is the Ukrainian Internet service Liki24. It is an aggregator for finding and delivering medicines. This service is not a pharmacy. It does not sell anything. It is an intermediary whom the service user instructs to go to the pharmacy, buy medicines and bring them. It also includes the service "I'll take it myself". Pharmacies provide customers with a discount of up to 30% when they are using this service. The service cooperates with insurance companies when the patient applies to the clinic for insurance. In the United States, in contrast to Ukraine, online pharmacies are allowed. To be able to operate, one must obtain a pharmacy license.
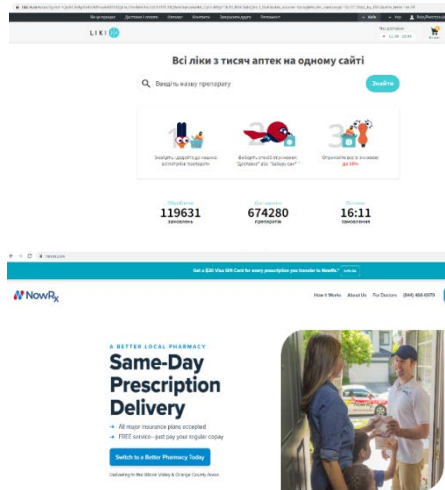
Figure 3.6 – Liki24 Internet service interface

Services such as NowRx and Capsule represent a new type of online pharmacy that delivers medicines directly to its customers [78].

Modern technologies allow to choosing different payment options in the online store: payments using bank payment cards, non-cash payments through banking institutions, cash payments with the transfer of money to the courier, using electronic money. In practice, the most commonly used methods of delivery of goods to the buyer: delivery by mail, delivery by courier, receipt of goods from the warehouse, the seller's representative office. The parties to the e-commerce must enter into an electronic contract. Such an agreement is concluded by offering to conclude (offer) it by one party and its acceptance (acceptance) by the other party. An offer to a potential buyer can be made by sending a commercial e-mail to the post office, posting an offer on the

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Internet or in other information and telecommunications systems [79]. To trade in the online store of consumer goods (FMCG) businessman chooses the code 47.91 "Retail sale by mail order companies or via the Internet". In general, the code 47.91 can sell any goods in the online store, but if the online store presents some specific categories of goods, one should choose other codes, namely: code 45.1 or 45.3 in the case of retail trade in motor vehicles, as well as parts and accessories to them; code 45.40 at the time of retail sale of motorcycles and related parts and accessories. When selling products for further use in the production process, for example, in the B2B market segment, it is appropriate to use codes related to wholesale trade [80].

One of the benefits of online shopping is that there is no need to place shelves indoors. Nevertheless, the rules of sale of some groups of goods are set by the rules for proper storage and placement of goods in warehouses (garments, knitwear, fur products, footwear, household goods, household chemicals, etc.). The presence of an exhibition hall (showroom) has a positive effect on the online store's reputation [75]. One of the schemes of organizing an online store's activities is that it sells goods that it does not yet own. After receiving the order, the online store buys the ordered goods from another business entity (manufacturer or intermediary) and sends them to the customer. This form of relationship in the process of online commerce is called dropshipping.

Regarding the ease of selling specific categories of goods online and the complexity, consumers in Ukraine still say that they are not ready to buy different categories of goods online. The reasons for this behavior vary depending on the product category. For example, respondents are still pessimistic about their willingness to buy food online. The barrier to buying shoes is the need to try them on; for cosmetics and

perfumes – the desire to "try" the product and evaluate it personally. Habits can explain consumer behavior when shopping online, peculiarities of making a purchase decision, as well as opportunities to get acquainted with the full characteristics of goods, the work of the online store (no technical glitches, ease of filling out order forms, the sociability of store managers, etc.). Retail trade via the Internet is influenced by the characteristics of the product and the economic feasibility of selling goods online.

It is possible to identify several parameters that are a prerequisite for the product to be suitable for e-commerce [81]:

– ease of delivery to the target buyer;
– the price of a product in the offline store is higher than in the online store;
– long expiration date;
– easy transportability;
– a rich assortment of goods;
– status or other importance for buyers;
– high frequency of purchases to replace the product with a new model;
– lack of urgency of the purchase by the customer.

Figure 3.7 presents an analysis of the suitability of some groups of goods for sale via the Internet. The most difficult is to sell products that spoil quickly. Such products include food [82]. It is necessary to involve the "cold" logistics market operators to deliver such products from the online store.

As for the marketing strategy of promotion, the influential players of the e-commerce market use mainly omnichannel strategy. The main problems of niche online stores are the diversification of payment methods and paid delivery by courier services.

Product characteristics				
- intangible or IT product; - standardized design	- material product; - relatively standardized	- customized good	- non-standardized; - require careful transportation	- spoil quickly; - low-income
Logistical conditions				
Logistics costs are absent or close to zero	There is a need to involve a logistics company	There is a need to involve a logistics company	There is a need to involve a logistics company (with the prescribing of additional conditions of transportation, for example, parcel lattice)	There is a need to involve a specialized logistics company (time and temperature restrictions for transportation)
Examples of products				
Tickets, travel vouchers, e-books, software, copywriting services	Home appliances, electronics, books, fabrics, clothing accessories, watches	Clothes, shoes, glasses, jewelry	Utensils, toys, furniture, mirrors, lamps	Fresh foods, plants, cosmetics in the summer

Easier to sell online ➡ **Harder to sell online**

Figure 3.7 – Ease of selling different categories of goods
via the Internet (formed using [83])

The most successful stores offer convenient options for implementing fulfillment with free delivery to self-pickup points or delivery by own courier service or third-party services.

3.6 Information business on the Internet

The sale of information on the Internet has appeared with the development of information technology and is developing. This business is appropriate when a particular resource has unique information that is useful and interesting to many people. This resource includes online publications on various topics, news sites, directories of various categories, and price aggregators.

An online publication (an online media) is an information site that is regularly updated and serves as a media outlet, enjoys particular popularity and authority, and has a regular audience. Most online media is updated daily.

The number of news reaches several hundred. Due to their efficiency, online media are often used as sources of information for print media. Many publications have their offices on the Internet. They publish materials of their issues there and sometimes even create an independent online publication.

The types of online publications the Ukrainian media Internet space:

– Internet versions of print media (for example, the newspaper "Express", the magazine "Week", the business weekly "Business");

– sites of news agencies (unian.ua, regionews.ua, xpress.sumy.ua);

– own online publication (for example, "Mirror of the Week. Ukraine", "Ukrainian Truth", "iPress.ua").

Directories on the Internet can cover various topics (tourism, education, Internet use, national characteristics, culture, etc.). Some directories contain potentially useful commercial information that can be used in economic activities (directories with information on the rules of document circulation, accounting, advertising, etc.). A separate category consists of directories with systematic information about businesses, the so-called "yellow pages" (the name came from the United States, where this color was painted telephone directories with information about businesses and organizations). The name is because such directories are traditionally printed on yellow paper (white is used for the directory of private phones, blue – for the pages of government and municipal organizations). Therefore, with the advent of the Internet, the term "Yellow Pages" began to be used for online directories of a similar profile.

Price aggregators are a specific category of information business, as they are resources that specialize in

collecting data on the products of online stores. Price aggregators are optimized systems for searching, comparing and selecting goods without buying. For purchasing a product, the potential buyer is redirected to the online store's website, where it is possible to purchase such goods at the specified price. In Ukraine, there are several price aggregators: hotline.ua, price.ua, ek.ua. Such information catalogs with a comparison of prices and goods are most relevant for online stores' topics, where purchases are made guided by logic (electronics, home appliances, telephones, cameras, etc.). In these categories, visitors can compare the characteristics of different products and choose the best option. Less effective are price aggregators for the sale of goods bought based on emotions (jewelry, children's goods, sports equipment, perfumes, cosmetics, etc.).

3.7 Social networks

Social networks, primarily created for entertainment, have now become a powerful marketing tool. The first social network appeared in 1995. American Randy Conrads created Classmates.com. In it, registered users gained access to the catalog of graduates of various educational institutions. Today, Facebook is the world's leading social network, an important social platform for business. Other robust social networks: Twitter and LinkedIn. Advertising is the primary source of income for the above social networks. Instagram is also a widespread network in Ukraine. Social networks such as Qzone (China's leading social network, created by the Chinese telecommunications company Tencent) are not as popular in Ukraine, but no less widespread in the world; Pinterest, Snapchat, Tumbrl, Sina Weibo (a kind of hybrid

between Twitter and Facebook), TikTok (average between Instagram and Snapchat) and others.

The main advantages for business in Ukraine to create social networks [84]:

– the ability to open own business with minimal start-up financial capital (the use of social networks is a means of finding audience of consumers);

– use of social networks to create own brand (information that is published tells about a particular company and its brand);

– coverage of information about the startup (publishing content regularly as part of a marketing strategy forms followers, then almost any ad or content of the publication spreads quickly);

– expanding the customer base (presentation of information about the company and its products at the discretion of the general public converts this audience into customers);

– PR tool (opportunity to present the company in a favorable light by providing feedback, coverage of information about participation in public events, etc.).

Social networks' convenience is that they can distinguish the audience to which the ad will be displayed thanks to unique settings with high accuracy. Impressions can be limited by location, gender, age, interests and other parameters.

Tools provided to the business by social networks (in addition to advertising):

– posting in the company profile posts that tell about the goods and services sold by a particular business entity;

– announcement of events held by the company;

– holding competitions and promotions.

For some businesses, social networks can even replace call centers or an online store as such. Engaging content can have a viral effect.

3.8 Blogging

The blogosphere is a collection of all blogs on the Internet. The first blog is considered the British information technology specialist's page, the main developer of the World Wide Web, Tim Berners-Lee. It was the web page on which he had been publishing news since 1992. He posted information about the development of the Internet and the emergence of new sites. In 1999, Blogger.com was launched in San Francisco, which is considered the first free blogging service. Blog service is an open service that provides the user with a convenient tool that allows blogging without the need to maintain software on the server. Blogging on the corporate site allows companies to improve their search engine rankings [85].

Types of blogs depending on the topic:
– personal blog;
– thematic blog (travel blog, beauty blog);
– business blog (created by companies to draw consumers' attention to goods, services, brands, for example, blogs of the retailer Comfy, a technical company Lenovo or a company that provides Internet marketing services Lemarbet, etc.)
– scientific blog (for example, the blog of Igor Oklander, PhD in Economics, with materials related to the scientific component of marketing);
– an educational blog (for example, a blog from the online education studio Educational Era).

A blogging derivative is a *vlog* (short for video blog) – a blog where transmitting information is a video [86].

3.9 Affiliate marketing

Affiliate marketing is a type of Internet cooperation in which customers' search is not the seller's deal. The persons who act as intermediaries, distributing the trade offer. Targeted customer engagement helps increase sales, for which partners receive a certain percentage of the seller's income.

There are four main models of affiliate marketing collaboration:

1) Cost Per Click (CPC):

– revenue from clicks made by visitors on the ad units placed on the partner's site;

– Pay Per Click has one of the lowest margins.

2) Cost Per Action (CPA):

– payment for the action to be taken by the visitor involved through the advertisement (for example, registration, call).

3) Cost Per Sale (CPS - payment for sale):

– the advertiser pays for a specific result - the sale of a service or sale of goods);

4) Cost Per Install (CPI):

– payment for installation of the offer is provided;

This model is used to promote software, applications, browsers, games, as well as to set the pages of advertisers as the home page of the browser;

– the advertiser pays only for a successful installation.

Participants in affiliate marketing include [87]:

– publisher (a person or company who buys traffic for a client at their own expense). They receive payment for each

conversion. Any sale, registration, program download, call, etc. can be considered a conversion. You can get traffic in any way. The affiliate rarely knows how the customers come to them;

– affiliate (a person or company involved in referrals. The main purpose of the affiliate is to find offers at affordable prices from advertisers and to find a publisher who will advertise them. Affiliates look for an affordable offer and offer it to a publisher at a reduced price and make the difference. For example, an advertiser is willing to pay 1,000 UAH for each sale of a product. If the affiliate finds publishers who will promote the offer for 700 UAH, the affiliate earns 300 UAH from each sale.

Affiliates are not restricted from using channels to place an offer (information about a product or service that needs to be sold). For example, if an affiliate has a beauty blog, they may post a link to a sunscreen offer on the blog page. If there is no blog, the affiliate can create a one-page site with an engaging thematic article and find ways to attract visitors to this site with a link to the offer.

3.10 Innovative types of e-business

Internet crowdfunding is the collaboration of a large number of people on the Internet. They voluntarily contribute resources to support other people's or companies' ideas. A specialized Internet portal is created to collect money, where after registration, the user can describe project that needs funding. The most popular platforms globally and in Ukraine today are the international Kickstarter project and the domestic platform "Big Idea" (Total Cost). The topic of crowdfunding is of great interest to marketers today because it promotes and presents the idea of any project that

determines whether it will receive funding to implement it [88; 89].

New types of business appear on the Internet, sometimes quite exotic. There is a website "Virtual Jerusalem" (www.virtualjerusalem.com), which offers visitors an exciting service. The Wailing Wall, the only surviving part of the Jerusalem Temple, is considered the largest shrine in the Jewish world. According to an ancient tradition, believers bring notes to it with their wishes and put them in the stones' gaps. On this site, it is possible to send a request to the specified address on the Internet so that the group that serves the site will deliver the visitor's wishes to the shrine. Prayer requests sent to the e-mail address are copied to a laser disk inserted into the crack of the Wailing Wall once a week.

Outreach is a link-building method (in other words, link building is a process of external site optimization) by establishing links, agreements with bloggers, journalists, site administrators. This type of activity's ultimate goal is to place articles, links, and banner advertising on Internet resources.

There are two types of outreach [91]:

– paid (when payment is made for the fact that the resource contains a link to a particular article, banner, etc.);

– conditionally free (no payment for accommodation). The costs include the cost of content preparation, the work of an outreach specialist. The partner site is interested in the content and does not charge for its placement because it attracts attention and is useful for its audience.

Bookcrossing is an innovative social movement based on the principle of social networks. The idea for the movement was proposed in 2000 by R. Hornbecker, an Internet technology specialist. Its essence is that anyone who has read a book leaves it in a public place for another random person to find and read. The next person repeats the process,

and so on. The movement of the book can be tracked via certain sites on the Internet. In this case, a simple exchange of books without registering on such sites is not bookcrossing, because when someone registers, the book receives its unique code. The bookcrosser can then record the book (where, when it is "released"). The person who finds the book also makes an entry about the book on the site [92].

The field of Internet business is developing very fast, so by the time you read this textbook, there will probably be new activities carried out via the Internet, those types of business that do not yet exist. This section of the study guide can be endlessly expanded with new material. The authors of this publication welcome your wishes and suggestions for additions.

CHAPTER 4
BUSINESS MODELS IN THE INTERNET ENVIRONMENT

4.1 Types of electronic business models

The expediency of doing business in the Internet environment is confirmed by the following factors [93]:

– low entry barrier (in most cases doing business in the Internet environment does not require special technical skills or significant investment);

– a large number of market niches (the problem is only to reach relevant market niches using tools of influence);

– a variety of sources of income. (a significant number of different forms of doing business and monetizing actions in the Internet environment);

– availability of technologies (web browsers, software, web servers, etc. are equally accessible to all e-business participants);

– the universality of access (Internet access is available to residents of many countries around the world. Connections can vary in speed, quality and price).

The starting point for considering an online business is the understanding that it is the same business with all its characteristics. Its purpose is to make a profit, achieve advantages over competitors, level risks, etc. In the electronic world, the achieved competitive advantages are fleeting. The life cycle of any marketing strategy is 12-18 months (for traditional business, this period is 3-5 years). The Internet has reduced the time frame when the product is assimilated by the market [93].

E-business models and their fundamental difference from traditional offline business are a popular topic of discussion among e-commerce practitioners. The Internet business model is a method of its implementation on the Internet, thanks to which a particular company can exist and earn income.

Online businesses can interact in a variety of ways. Categories of entities interacting in the electronic market:

– business (B) – legal entities;

– individuals (C) – ordinary citizens, buyers / consumers of goods and services;

– state (G) – state structures.

Table 4.1 shows interaction models.

Let us analyze these business models on specific examples.

B2B model. The company supplies tools for construction companies; the consulting company provides audit services for other entities' economic departments; trade relations between several legal entities; online exchanges.

B2C is one of the first e-business models. This model's examples are retail on the Internet, aimed directly at end consumers; systems for booking and selling tickets, tours, and information services from companies.

B2G model. Legal entities provide goods and services to government agencies. As a rule, we are talking about the implementation of public procurement and orders.

C2B model. The end consumer creates value for a business, for example, by making inquiries for relevant products that are not in the range, offering new product ideas, writing reviews about products. It includes consumer recommendations and reviews. Another form of interaction is processing price requests for which consumers would like to purchase goods and services.

Table 4.1 – Models of e-business

	Business	Private individuals	State
Business	B2B: integration of internal networks of partner companies for joint electronic document management, creation of a system of direct orders with the ability to detail their parameters and track its execution in real-time	B2C: interaction of companies with consumers, providing additional opportunities to promote goods and services to consumers (bypassing intermediaries)	B2G: interaction of companies with government agencies
Private individuals	C2B: interaction of consumers with companies	C2C: Interaction of individuals for the sale, exchange or provision of goods, services and information in electronic commerce	C2G: interaction between individuals and government agencies
State	G2B: interaction between government agencies and business	G2C: state for individuals	G2G: Interaction between different government departments

* – The number 2 in abbreviations means "to" when written in full. It describes from whom to whom a product or service is provided

This model is used by some Ukrainian online catalogs of goods and services to expand the service. This model's idea

is that a site-catalog on which many sellers and companies exhibit their products. Individuals who visit the site can leave an application to purchase a product from the catalog at a price not higher than specified. This application becomes available to all legal entities registered in the catalog. If one of the sellers considers the price offered in the application acceptable, it contacts the buyer through the site-catalog.

C2C model. Examples of this form of interaction are bulletin boards and online auctions.

C2G model. Tis is feedback to the state, for example, participation in online social surveys. Another example of such interaction is online voting, which many countries have already experienced in elections at various levels. Electronic voting involves the integration of electronic technologies for collecting, transmitting and counting votes.

G2B model. Operation of the public procurement portal; provision of information on legal issues; various registers.

G2C model. State online services for convenient payment of taxes, utility bills, online registration in various government agencies.

G2G model. Secure access services designed to facilitate interaction between different government departments, agencies, etc. Services provided by one government agency to another.

Products in the field of e-business are divided into the following categories [94]:

– mass-market goods traded not only on the Internet but also by traditional means (household appliances, garden products, furniture);

– specialised digital and virtual goods, which are mainly traded on the Internet due to a more convenient way of communicating information to target consumers and cost effectiveness (various courses, digital content);

– services whose offer exists outside the electronic environment and the presentation of goods on the Internet is only complementary (travel services, insurance services);

– services whose offer is conditioned by the origin and development of the Internet (web hosting, web design).

4.2 Models of e-commerce in Ukraine

The most common forms of interaction in Ukraine are the B2B, B2C and C2C models. They are all related to e-commerce. Competition with foreign online sellers has a significant impact on the development of Ukrainian Internet sellers in the B2C category. According to marketing research, the primary motivator for buying in foreign online stores is the lower price, especially in the segment of electronics and home appliances, and in the segment of clothing, collection, children's and sporting goods even higher quality and broader range, the ability to track the delivery. The most popular foreign online stores among Ukrainians are eBay, Amazon, 6pm, Carter's, Victoria's Secret, H&M [95]. According to another source [96], the Chinese marketplace AliExpress leads by a significant margin. On AliExpress, product information is automatically translated into different languages. The service's feature is that the seller receives money for the goods only after their delivery to the buyer. AliExpress operates as an open platform that connects buyers with sellers without warehouses, without direct sales.

Other top positions are not universal, but niche markets: the already mentioned Carter's (baby goods store), Victoria's Secret (lingerie store), Iherb (eco-products chain), Gap (clothing retailer). In Ukraine, people prefer foreign sites with a marketplace model and electronic auction due to the wide range of products, better service of such sites, the ability to pay

with hryvnia credit cards and the ability to find lower-priced goods.

As far as Ukrainian Internet services are concerned, e-merchants use different business models. Table 4.2 describes typical models for B2B, B2C and C2C.

Table 4.2 – Business models of leading domestic e-traders (formed using [97])

Model	Essence	Form of income	Examples of companies
Electronic show-window (manufacturer's website)	Sale of goods of own production through the corporate site	Income from the sale of goods of own production	An e-shop of clothing manufacturer "Petro Soroka", e-shop of shoe manufacturer "Kantsedal", e-shop of toy factory "Levenia"
Electronic shop	Sale via the Internet of goods purchased from various manufacturers, on their behalf at fixed prices (mostly from their inventories)	Trade margin, advertising	Comfy, Modnakasta, Allo
Electronic bulletin board	A site where individuals or businesses post information about their products and services	Mediation, advertising	Kidstaff, Kloomba.com, Ria.com

Model	Essence	Form of income	Examples of companies
Electronic marketplace	A platform for contacting and implementing transactions between sellers and buyers (making payments, delivery, etc.)	Intermediary, a fee for using the platform	Prom.ua, Bigl.ua, Crafta.ua
Electronic auction	A platform for contacting sellers and buyers with each other in the trading process	Intermediary, fee for using the platform	BitOk, CETAM, UNC
Price aggregator	Catalog with the ability to search and compare offers from different sellers and then go to the seller's website	Vendor subscriptions, referral payments, mediation payments	Hotline, Price, EK
Electronic order table	A platform for contacting sellers and buyers of services, with the possible provision of property for a particular time	Platform usage fee, subscriptions (from sellers), brokerage (from sellers)	Uber.ua, Kabanchik.ua, jobbee.com.ua

The dominant share of the e-commerce market in Ukraine is occupied by enterprises using the following models: online shop, electronic bulletin board, electronic marketplace, price aggregator. The activity of many companies is a hybrid business model, which is a combination of several models: "electronic bulletin board + price aggregator", "online shop +

marketplace". There are also click and bricks on the market (when a company integrates offline (bricks) and online (clicks) presence) [98].

From the traffic dynamics of Internet merchants with different business models, marketplaces and bulletin boards are the most advanced. The advantages of these business models are lower infrastructure costs and customer relations per unit of sales, less dependence on the product group and brand, opportunities to change the fullness of fulfillment services, less dependence on the national currency.

In Ukraine, e-commerce business models are developing and changing in line with global e-commerce trends. For example, the Ukrainian project SvitStyle started with the price aggregator model, but quickly turned into a B2C marketplace, which now cooperates with 230 stores, taking over some of the fulfillment functions - the complete order. The Rozetka project started as a niche online store and gradually became multidisciplinary, moving to a hybrid "supermarket + marketplace" model, offering a full range of fulfillment services to independent sellers. Since 2019, it has also launched a virtual travel agency, which allows customers to book and pay for tours online. The original is the business model of the Skidka.ua website, which aggregates the offers of the world's leading online stores and marketplaces in the "Sale" category, with the provision of a full range of fulfillment services and the formation of a system of discounts for regular customers. The PrivatMarket project went even further, combining a marketplace, a price aggregator for goods available on credit, and online lending for PrivatBank customers in the B2C and C2C categories.

The trend in e-commerce is omnichannel where

– the store is well represented both offline and online (same prices, level of service, promotions, range, etc.);

– an online store is well represented on any gadget (laptop, tablet, smartphone);

– the buyer gets the same experience both when visiting a physical store and when going to the website (registration and execution of a purchase request, delivery of goods; a single range, form and description of goods; uniform prices; similar programmes and loyalty cards; a common history of customer appeals regardless of the channel with the ability to seamlessly interrupt the transaction and switch from channel to channel without losing the previous steps).

Omnichannel is characterized not merely by the transition from one (single-channel) to several (multi-channel) channels of communication with potential consumers but also by the integration of these channels into a single system with common organization of business processes.

Bright players in the Ukrainian market are companies that combine offline and online sales in a particular area (Foxtrot, Bukva); platforms that deal exclusively with online sales in a particular area (Makeup.ua, Stylus); companies that sell their products through the online network, delivery services, such as Glovo and large e-commerce platforms (the leader in Ukraine is Rozetka).

Marketplaces usually have advantages over e-shops, especially niche sites, in terms of omnichannel and the convenience and variety of ways to pay for goods. For example, if a niche site offers payment either in cash upon receipt or prepayment by non-cash account or bank card, some large players even introduce the possibility to pay with cryptocurrency (the first online player to introduce bitcoin purchases on its website became in 2015. online store "Allo", then joined the projects "Citrus", "Tix24", etc.).

Researchers [99], based on the generalization of statistical studies of the success of different business models of

Internet activity, proved that the choice of the e-marketplace model over the online store should be made when suppliers provide sufficient product information to make a purchase decision. The products themselves, in terms of prices and demand for them on the market, are little different from analogs, of which there are a large number; goods of a wide range of products with small production volumes ("long tail" model); products are in the later stages of the life cycle.

Regardless of the business model's choice, success in e-commerce depends on the introduction of innovations, primarily in the direction of personalization and implementation of fulfillment.

4.3 Types of monetization of Internet resources

The concept of "monetization" is considered in various aspects. There are different approaches to the classification of types of monetization of Internet resources. In particular, there are concepts of direct and indirect monetization. Direct monetization means the sale of real goods and services, and indirect – virtual products' sale. According to the authors of [100], in the modern Internet environment, such main models of monetization have been formed:

– *"subscription"* (unlimited access to digital content for a certain period for a certain fee, regardless of the amount of content downloaded). This method of monetization is quite common. It is considered the Asian model of monetization, as it is often used in Korean online games. Most modern services use not just a subscription but an extended subscription model with a free trial period and other modifications;

– *ad-supported content* (free user access to digital content requires mandatory viewing of commercials). In this

case, the owner of the content receives income in the form of advertising fees;

– *purchase of digital content piecemeal* ("a-la-carte") (use of digital content with payment "per piece"). This model is simple and is most often used for niche segments;

– *free basic and paid premium content* ("freemium") (providing the user with basic content for free, and additional services for a fee (so-called PRO-account (with improved features)). In English, the prefix "pro" is used to indicate movement forward, improving something);

– *obtaining a commission on sales* (used by intermediary services, and is to obtain a percentage of each sale of the main service. In general, this type of monetization can be divided into two categories: payment systems that receive their percentage of each sale; ice generators, which receive their percentage for the involved users);

– *the "Pay as much as you want" model* (an experiment with this model was conducted in 2008 to sell the album of the British rock band Radiohead "In Rainbows", when listeners could pay for the album any amount they considered acceptable). In addition to sales, this decision was a successful PR (more than 3 million copies of the album were sold in the year).

The choice of the type of monetization of the resource depends on the type of digital content and its unique properties (copy and duplicate). Practice shows that each type of content has its own business model of monetization. For music – subscription and advertising model, for video content – monetization model with advertising support, for games and software – "freemium" model, when users often use additional functionality for a fee, for e-books – "a-la-carte" model.

In [101] an extended classification of types of monetization of Internet resources is given, which we will consider in Figure 4.1.
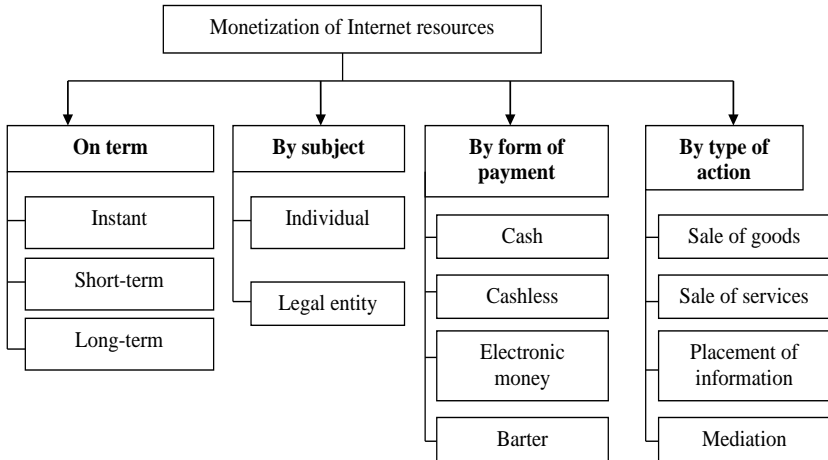

Figure 4.1 – Classification of types of Internet resource monetization

– *About Term.* The term means the period from the implementation of the client's action on the monetizable Internet resource to the financial gain. With immediate monetization the purchase of a product or service is the main action of an Internet resource. Such monetization is typical for goods and services that have a low average purchase price and are relatively simple in nature so that the buyer can make the decision to purchase without any additional action by the seller. For example, an online store of children's toys or books (karapuzov.com.ua, yakaboo.ua). Under the conditions of short-term monetization, the goods are purchased for the decision to buy, which the buyer needs additional advice from

the seller, for example, to agree on the characteristics of the goods, selection of equipment, specific terms of payment or delivery, etc. This type of monetization is typical for most online stores of household appliances, clothing, furniture (eldorado.ua, vovk.com, sofino.ua). Long-term monetization is different from other types of monetization. It requires long-term interaction between the seller and the potential buyer to agree on all aspects of the acquisition. Such monetization is typical for industrial goods and complex technological services. An example is the website *mainhaus.com.ua.* This company sells certain categories of goods and provides a range of services to develop a design and technical documentation, the purchase or order of which can be made even up to a year or more.

− *By subject matter*. Monetization of individuals requires less action on the part of the Internet resource owner. Monetization of legal entities in the Internet environment is a more complicated process, as it often requires the company to move offline with the customer. This is often due to the high average purchase price, the need for special payment terms, product consulting, etc.

− *By form of payment*. Cash and non-cash forms of payment in the online environment are also widespread in the offline environment. E-money is a form of monetization that involves settlements between the buyer and seller using the electronic currency. Barter as a form of monetization of Internet resources is quite rare. For example, a company may offer its customers advertising on its Internet resource in exchange for goods. Mutual advertising of Internet resources is also a form of barter exchange. It is often be found in the business relationships of distributors and manufacturers who advertise on the Internet.

– *By type of activity*. The sale of goods as a form of monetization is typical for trade and manufacturing enterprises that sell their products via the Internet. The sale of services is characterized by the keyword "service", which provides a specific benefit to the customer, which cannot be assessed in advance, see or feel. This type of monetization requires a specific impact on the customer and the availability of unique forms of payment, such as post-payment. Information placement as a form of monetization can take different forms. In theory, you can monetize any page by placing certain information. In practice, monetization will only be successful if there is enough traffic to the site. For example, with a small number of visitors, it is unlikely to generate significant revenue from contextual or banner advertising, but if that small audience has value to potential advertisers, it is possible to generate revenue from advertising. Among the subspecies of this form of monetization, we distinguish the following [102; 103]:

– contextual advertising (a small ad that is relevant to the site's subject or its visitors' interests). To add contextual advertising to the site its developer must register in the advertising service and place the code on the site. Paid clicks on the ad. The cost per click depends on the niche;

– banner advertising (small graphic images of advertising nature, which are static or animated. It is necessary to register in the service of banner networks and install a code on the site to display banners. It is possible to configure the display of banners: ban irrelevant banner themes. Revenue is earned for the number of banner views or the number of clicks; each banner ad network has its requirements (a certain number of unique visitors, visitor geography, site theme, etc.);

– teaser advertising (a variant of banner advertising that is a static or animated image in graphic form and an

announcement in text form). The teaser may not contain direct advertising and its purpose is to intrigue the user, arouse his interest and motivate him to click;

− CPA advertising (from Cost per Action - payment for the action) (The site owner receives payment only if the visitor performs a specific targeted action (register, fill out a form, purchase goods, etc.));

− sponsored content (if the site has a section with articles or blogs that visitors are interested in, it is possible to publish material from advertisers). It is a form of native advertising. The site owner determines the cost of sponsored content;

− subscription to premium content (paywall) (paid subscription to online publications. The site offers some content for free and the visitor pays to study the material in more detail. Another option is when the site provides a free opportunity to read the announcement and content of the article, and for a fee opens full access to it);

− monetizing data (when interacting with visitors) Sites collect valuable data about users, such as geography, gender, age, preferences, etc.. Sites can then sell non-personally identifiable user information (type of device used to log in, demographics, country, etc.) to third parties. Such data may be of interest to companies that conduct marketing research on the Internet environment;

− to post various surveys (it is possible to post surveys from advertisers on the site. In order to interest users in answering the questionnaire, sites may offer access to the content that is the subject of the survey. going to this link and answering questions, the site owner is charged a fee);

− online broadcasting of events (with the rapid development of Internet technologies and changing consumer needs, this type of information placed on the Internet has

appeared. Thus, such popular events as sports matches, concerts, events are broadcast). The pandemic caused by the COVID-19 virus has made adjustments in the life of the whole society. Life in the online environment began to develop at a remarkable pace, including online broadcasting of many events. For example, many Ukrainian theaters began to broadcast their performances online. Thus, any Internet user can watch his favorite shows online;

– intermediation (aggregator of buyers) (certain site places real goods and services from different sellers). Marketplaces work with this form of monetization.

Other peculiarities of Internet resources must be taken into account, as monetization can change significantly depending on many factors and require adjustments in the management of Internet resources.

4.4 Pricing models in the field of Internet business

Every business entity operating in the Internet environment must have a clear and well-thought-out pricing policy. The results of economic activity significantly depend on the quality of its development and implementation. The pricing strategy affects sales, image formation, financial condition and competitiveness in general.

Pricing policy in e-business is a set of measures aimed at determining the optimal pricing method, which will increase the company's income and help achieve its goals.

The main factors that determine the price level in the e-business environment [104]:
– the value of the product for the consumer;
– quality and features of the goods;
– stage of the product life cycle;
– the competitive state of the market;

– accepted pricing goals;

– used promotion channels;

– upper and lower price levels for similar products and substitutes.

The specifics of Internet business has led to the emergence of certain innovative *pricing factors in the electronic environment:*

– access to a significant array of price information;

– the ability to estimate the price regardless of the location of the buyer;

– lack of psychological factors influencing buyers when making a purchase decision (greater influence of price).

There are three principles and three pricing systems in the Internet environment. *The principles of pricing*:

The first principle: "*The buyer wants to pay*". This principle indicates a constant change in price depending on fluctuations in supply and demand. The electronic environment's first pricing system is based on the factor of consumer willingness to pay for the product. Competitive advantage is determined by two factors: the speed of response to consumer preferences changes and the correct targeting of supply. These factors provide the maximum price for the product. The second principle: "*Advertising pays for the goods*". This principle means that when the seller adds revenue from advertising to the original price of the product, it is possible to sell it at a price below cost. The product can be sold at a price below cost, receiving income from other sources. For example, of such business, the media provide access to online publications at a price lower than their cost at advertisers' expense. The third principle: "*The price is determined depending on the number of transactions*". Instead of the product's full price, only a small amount is paid each time user utilizes the product. Under such a pricing system, companies receive a stable income [104].

Table 4.3 shows one of the approaches to pricing model classification.

Table 4.3 – Pricing models in the digital environment

Model	Price limits	Essence
High price	The price reaches the maximum possible limits	Used when the product is presented only in the digital environment. It is unique. Thus, the seller has formed an offer that will not be repeated by competitors in both online and offline environments for a long time
Average price	Prices at the level of existing on the market	The product is not very different from the competition. There is a stable demand for it. There is no need to find a market niche. The product provides stable profitability for the company
Undervalued price	Setting a price lower than the price of competitors	The company wants to win the the electronic market share. It has income from other activities that create opportunities to compete
Free price	Prices are set randomly	Market value indicators and revenues are more important for the company than profitability, active policy to consolidate market position

Pricing in the electronic environment is similar to pricing in the offline environment. However, access to pricing information allows the buyer to choose the optimal offer of goods at a price and other essential parameters that entrepreneurs in the Internet business must consider.

CHAPTER 5
CONTENT MARKETING

5.1 The essence of content marketing

The basis for the development of digital marketing in the modern world is content marketing. It is the technology of the future aimed at creating and distributing information to increase sales. There are several approaches to understanding the concept of content marketing, in particular from the standpoint of *the subject of perception*:

− *for consumers*, **content marketing** is a way of identifying and meeting their information needs. They are looking for information that will help them make a decision about a product or service, a quantity, or a location. Because of this, content marketing technologies focus on determining a consumer's need for information about a particular product position;

− *for the seller*, **content marketing** is the planning, creation and distribution of content to attract the target audience. The main thing is the benefit to the seller: the disclosure of information that focuses on the benefits of the product and/or points of sale and encourages the purchase of the desired quantity of goods or services. Thus, content marketing technologies aim to promote the production unit and its presentation on the market to fully meet the needs of consumers.

Also, you can interpret the concept of content marketing from the standpoint of the *subject of perception*:

− **technology** focused on the development and placement of content (attractive to the potential target

audience) and the creation of favorable conditions for the purchase of goods;

 − the **strategy** of conquering the market segment and increasing the overall level of competitiveness of the product by placing information about its essence and purpose of the product, characteristics, identification of competitive advantages, and explanation of disadvantages;

 − **information** received by a potential consumer (on packaging, banners, web pages, social networks or messengers) and used to decide whether or not to purchase goods in a particular place.

Content marketing can be used not only on the Internet space. The model of placing consumer-relevant information that helps increase sales, promote and explain the value of a product or service also works offline. Content on packaging or labels, price tags, or printed catalogs enables consumers to buy the desired product.

Content marketing is a strategic marketing approach. Its main idea is to generate and manage demand, optimize costs, and increase customer loyalty to the brand in general (Figure 5.1). Content marketing is possible if the company has long-term prospects for working in the Internet environment because the development of strategy, implementation of the tools, and achievement of the desired result are gradual.

Understanding content marketing as a model of prompt manipulation of consumer opinions is not correct because it does not involve using the model "call to action – buy only now".

Effective content marketing involves the gradual increase of content (text, photos, videos), which increases the level of trust in the point of sale, brand and product at the same time.
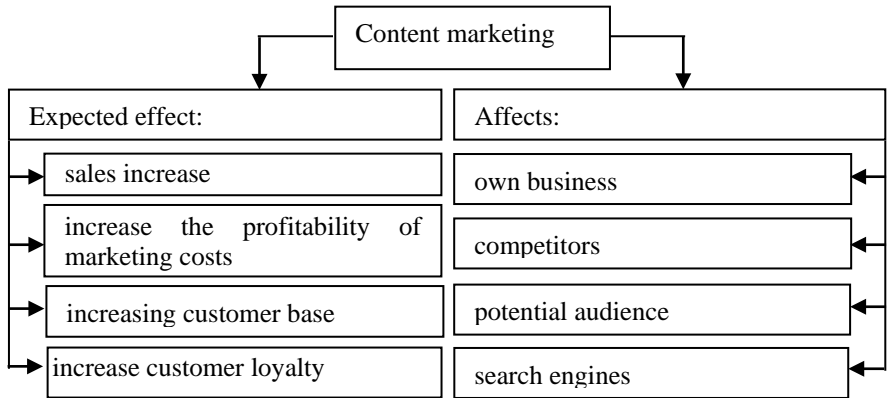
Figure 5.1 – The result of using content marketing

Content marketing provides its unique tools, which are not present in other marketing models of product promotion. Unlike advertising developers who directly offer to buy and set requirements for the purchase, content marketing works more gently and helps to objectively understand the need for a particular product, the need for it tomorrow, or the advantage of a specific store over others.

Content marketing does not use aggressive and "dirty" methods of working with the target audience. Content creation helps to gradually build a quality relationship with a potential consumer, to make him/her a real customer, changing the status from "potential" to "permanent".

If we draw a parallel between public relations (PR) and content marketing, we can find some similar features because these two methods are used by marketers to develop a brand awareness model, change public opinion about the company, etc. Unlike PR (brand promotion), content marketing is aimed at explaining to the consumer the need to buy a certain product, which raises customer problems with their simultaneous solution – a call to buy the product here.

The difference lies in the platform for placing information. PR-technologies focus on newspapers, magazines, television, etc. Content marketers are more cautious in their choice of promotion channels, taking into account the relevance of the content, its target audience, and the level of user activity and traffic on the platform where they are placing information.

Thus, *content marketing* is an effective model of increasing sales and brand promotion, highlighting the desired characteristics of the product (service), which help make decisions about buying it from the specified seller.

5.2 Stages of content marketing implementation

There are **five steps** to implementing content marketing: *planning, creating, editing, placing, and monitoring.* Each step involves several actions that should be taken into account when implementing content marketing.

At the **beginning** of implementation, it is necessary to determine the duration and scope of work, estimate marketing activities and form strategic directions for a certain period. Based on the obtained data, a content plan of information coverage is created to determine the content essence, volume and frequency of placement.

It is advisable to specify the type of platform on which the information will be published (Table 5.1).

At the **content creation** stage, marketers establish subject-object relationships that help answer questions such as: *who will create the content; who will choose the actual content and type of content; which keywords and how many should be used; is it possible to make adjustments to the content plan defined in the previous step?*

Creating quality content involves implementing technical tasks to ensure these goals of content marketing. **A technical task** is a document that contains the technical characteristics and purpose of the content, keywords and additional information that helps to understand the requirements for its content. The technical task is written based on the results of evaluating the content of competitors (choose the first five or ten on the search engine query) and are determined by the type:

− as competitors and the average values of the parameters (volume of publication, number of tables, figures, videos);

− as competitors and the minimum values of the parameters (choose the lowest values);

− as competitors and the maximum values of the parameters (greater than competitors);

− create unique content that is fundamentally different (for example, competitors have thematic content represented by text and photos. In this case, developers generate content in the form of video, text or infographics).

After selecting the type and analyzing competing publications, marketers begin to create a technical task. Table 5.2 shows an example of a developed technical task for textual content.

Automated control helps reduce marketing costs, increase sales, and ensure the smooth operation of online sales.

Once content is written, the next step is **editing**. This process should include checking the content for semantic, relevant, syntactic, and grammatical errors, while evaluating the created content for uniqueness, integrity of borrowing, interest, and style of the material presented. Sometimes the process of editing content can take longer than the step of creating it.

Table 5.1 – Types of platforms used to host content

Type of platform	Expected result
Searching system	ensure the flow of consumers who will come to the site through informational and commercial publications
Online publishing by profile	popularization of competitive advantages of a brand using the placement of information articles of the general character and without an invitation to purchase
Contextual advertising system	increase the return on investment by placing information for a specific target audience for certain parameters of time and location
Direct Mail	expand the customer base by finding potential customers and changing their status to a buyer; increase the number of repeat purchases
Social Media	building unique target audience; formation of a model of quality affiliate marketing
Corporate blogging	attracting top bloggers who will place content in the right market segments

If the content has been created not independently, but with the help of outsourcing, then at this stage it is advisable to check it for certain parameters and not to assign this function to the persons who created it. If the content is suitable for the client, you can move on to the next step of **placement**. It is one of the most important because the place, time, frequency and reusability of the content on different platforms play an essential role. Choosing the right distribution channel for the created content is 50 % of the success of the result.

The main task of content marketing is to deliver content to those who need it. Dynamic visual content is posted on social networks and corporate blogs, and analytical text with tables and photos on their web resources, online publishers and contextual advertising systems. For email, it is advisable to use text formats of content, saturated with active buttons and links, supported by keywords or individual phrases.

Table 5.2 – Terms of Reference for the text content on the specialty "Marketing", planned to be placed on the website

Parameter	Recommendations to the author	Competitive parameters *
Topic	Specialty "Marketing"	1 Marketing is the specialty of the future; 2 Marketing specialty; 3 Specialization 075 Marketing; 4 Marketing specialty - universities of Ukraine; 5 Profession "Marketer" – specialty and position
Volume (number of characters without spaces)	6 668	1 3 397 2 2 622 3 8 706 4 2 204 5 16 413
Goal	Explain that marketing is a promising profession in the market in various fields. What is the job of a "marketer" and who can you work for?	Inform the entrant about the specialization of marketing; making a ranking of higher educational institutions in Ukraine where you can get knowledge in marketing

Parameter	Recommendations to the author	Competitive parameters *
Keywords	marketing, year, university, direction, market, direction, market, demand, among, specialist, becomes	future, training, direction, rating, high, educational, program, good, school, international, economic, Ukraine
Lemmatization	profession, marketing, specialty	university, career, marketing, specialty, Ukraine
Tips of Google	marketing, specialty	marketing, specialty, higher education institution, Ukraine
Availability of photos	yes	yes
Availability of video	no	no
Availability of tables	yes	yes
Availability of bulleted lists	yes	yes

*– calculated on the top 5 Google search query

At the same time, it is essential to remember that uploaded public speeches and interviews, analytical reviews and annual reports, presentation materials and booklets can also be considered as tools to implement content marketing. It is advisable to include such content in the content plan and monitor its frequency. According to experts, such content quickly becomes outdated, so it needs less attention. But not always, because content marketing is a strategically planned list of actions aimed at creating a stable, loyal consumer opinion. Therefore, not all publications should be "call to action – buy". At the final stage, it is advisable to conduct

analytical control, which will determine the effectiveness of marketing activities, calculate the growth of the target audience for certain types of platforms and identify ineffective channels of content promotion. The obtained information should be used to estimate costs for the next period and to review the content plan. It is advisable to pay attention to the parameters that can serve as indicators of effectiveness. These include: data on web analytics (level of conversion of goods; the number of page views, authorizations of potential consumers, purchases of goods made after two visits to the site, etc.); data on distribution (accumulation of data from all partners on the number and structure of the offer);

in social networks: number of new subscribers, unsubscribers, preferences, tone of comments, etc.; the number of sales in absolute and relative terms; the growth rate of the average check size or online shopping cart; brand awareness.

5.3 Types of content: targets and formats of information presentation

Content is prepared for the platform,
rather than choosing a platform for content

Most content marketers use the same content for different platforms, but it is not always possible to get the desired result because:

− each platform has its user-supported ideology. For example, Facebook users like videos with subtitles (according to statistics, more than 65 % of videos are viewed without sound), text content is not personalized and is not interested in personalization, but in keywords, phrases or emotion that conveys photos, smilies or punctuation. Telegram positions the transmission of information through the frame of personal correspondence, i.e., the call to action is personalized. Thus, public posts and private messages are almost indistinguishable.

The content must have a unique format, appeal and tone that will provoke the consumer to the necessary actions;

− the consumer is not interested in seeing the same content on different platforms. This issue is encountered when content aims at event reminders, subscriptions, or purchases. If the consumer is interested in the content, he/she is ready to receive information from different sources (the effect of self-examination) and monitor it on various platforms. In this case, the use of the same text leads to a decrease in loyalty to the product and the brand as a whole.

Therefore, when developing content, it is advisable to consider the presentation format and the location of the content. Depending on the type and objectives of the content, there are five groups: *informational*, *commercial*, *entertainment*, *viral* and *engaging* content.

Informational content

Before buying a product, the consumer is interested in meeting information needs: what product (brand, model) it is advisable to buy; is there an alternative; whether one product can meet all needs simultaneously; how much financial and time resources the consumer needs to receive the goods; availability of quality guarantees, etc. At this step, the content can help to highlight the basic parameters of the product, its purpose, advantages and disadvantages of use. To do this, you can create:

− *reviews of the product in general* (without emphasizing the brand or specific names of product models). It will reveal information about the choice of product that will fully meet the need. For example, the product review "scooter for a child" explains: why it is advisable to choose a scooter and not a bicycle or rollers; what types of scooters exist; advantages and disadvantages of purchasing a scooter (Figure 5.2);

– *usual reviews* using expert opinions, ranking, determining the best models or brands for the next period. It will help potential consumers to choose a particular product. Such content encourages the use of filters on websites, product card comparison systems, ranking by price or popularity (Figure 5.3);
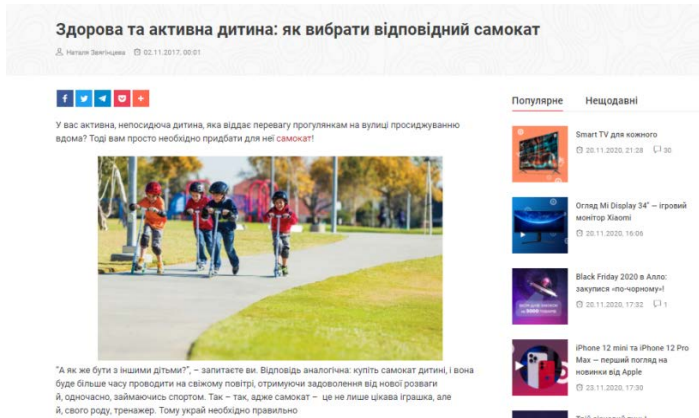

Figure 5.2 – An example of a product overview in general, based on the ranking of Google search queries [105]

Figure 5.3 – An example of a usual review, based on the ranking of Google search queries [106]

– *how-to publications*. In search queries, the potential consumer often asks the question "how to do it". This formation is suitable for those customers who do not want to spend much time on self-comparison and are ready to solve their problem in one click (Figure 5.4);
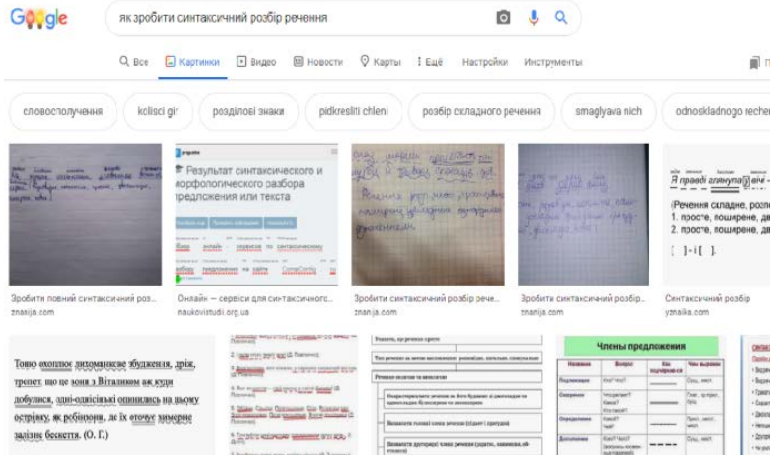

Figure 5.4 – An example of a how-to publication based on the ranking of Google search queries

– *answers to questions* that often arise in consumers allows forming a lasting impression of the consumer that: he/she is not the first customer and the company has been operating in the market for a long time; tt is important for a company to help its potential customers get answers quickly. This content allows to show dynamism on the site, because questions and answers can be supplemented, not replaced (Figure 5.5);

– *formation of a checklist base*. Unlike previous types of content, checklists marketers use for customers with "experience", i.e. those who no longer need to explain the main characteristics of the product or the advantages and

disadvantages of the model range. In this text format, they place assembly instructions, setup algorithms, step-by-step actions, etc. (Figure 5.6);
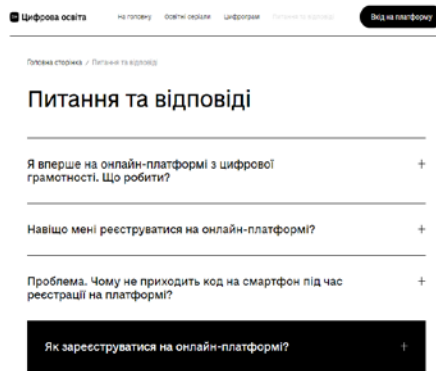

Figure 5.5 – An example of publishing answers to questions based on Google search engine ranking [107]

Figure 5.6 – An example of publishing checklists, based on the ranking of Google search queries [108]

– *selection of useful resources* on selected topics. Advertising competitors is not always bad. Sometimes such content helps to increase the number of regular customers, although there may be a slight outflow. It is advisable to understand that there are many participants in the market and the coverage of truthful information about them allows to form a lasting impression of a responsible business that respects its competitors (Figure 5.7);

Figure 5.7 – An example of publishing a selection of valuable resources, based on the ranking of Google search queries [109]

– *masterclasses or experiments* allow to informally represent the practical capabilities of the product, the expanded scope and features of use, and the rules of conduct and operation of the product. Recently, popular content about the results of the misuse of goods. Thus, they cover a new target audience, which begins to be interested in the product, not from the urgent satisfaction of needs (Figure 5.8).
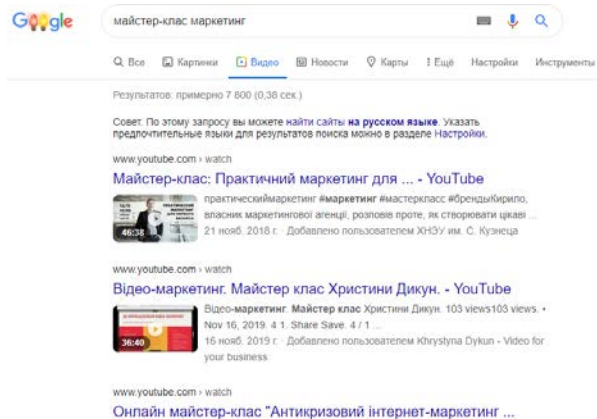
Figure 5.8 – An example of publishing a selection of valuable resources, based on the ranking of Google search queries

Commercial content

Content that sells is a different type. Its main purpose is to provide information to a potential consumer and to encourage them to take an action: subscribe, book or order a product, attend an event, etc. Unlike informational content, this type of content contains a specific commercial offer for a product or action. This content can be categorized:

– *commercial offers*, *promotional e-mails, private messages of messengers* and *social networks* are used to present content to a potential consumer who is already interested in a particular product. In the classic sense, commercial offers were recommended for large companies engaged in wholesale purchases. Today, commercial offers are one of the first stages in the formation of a sales funnel (sending content to someone who has requested a product via search engines) (Figure 5.9);

Figure 5.9 –An example of publishing a commercial offer from the SumDU Marketing Center

− *one-page sites (landings)* allow to show the product without comparison with others, focus only on a particular product and its benefits, increase sales of a specific product, automate the order processing process, and minimize purchase time. The created landing platform can very quickly be reoriented to another promotional offer or seasonal sales (Figure 5.10);

Figure 5.10 – An example of publishing the landing of the sphere of educational services [110]

– *reviews* as content that enhances the purchase of goods. The presence of comments, dialogues about the product allows to create a positive impression, eliminate doubts about the integrity of the seller and the quality of the product, etc. (Figure 5.11);
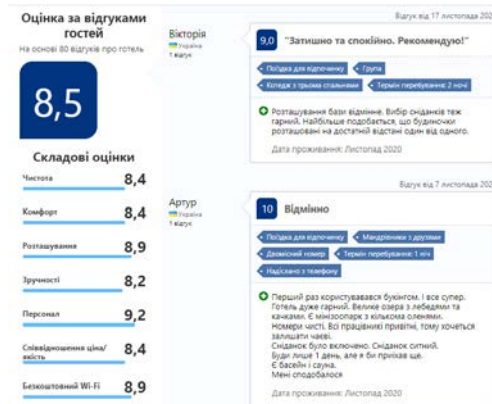
Figure 5.11 – An example of published reviews of hotels in Ukraine [111]

– *cases* as a form of product promotion allow to demonstrate the functionality of the product in practice, especially the implementation of projects. It is advisable to use cases to promote services that are new or relatively new to the market (Figure 5.12);

– *posts on social networks that sell goods*. Commercial content in a specific field allows the use of social networks for sales and as a tool for forming the target audience. The post provides an opportunity to briefly describe the characteristics of the product, identify the benefits for potential consumers, and emphasize the price or promotional offer. At the same time the creation of a hashtag system makes it possible to combine

all posts into a single system to refer to other commercial offers (Figure 5.13).
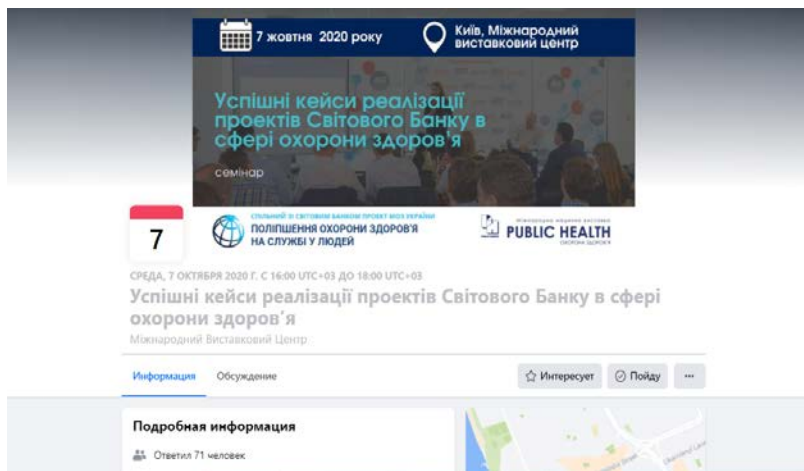
Figure 5.12 – An example of publications of success stories from World Bank projects [112]

Figure 5.13 - An example of publishing a social networking post that sells educational services [113]

Entertainment content

It is proved that the use of only informational and commercial content leads to the fact that interest in content gradually disappears. One of the ways to interest existing subscribers or fundamentally new users is to create entertaining content. Its frequency of placement should be systematic but not overlap the main (in the overall structure of the content plan is not more than 10 %). Entertainment content can be represented as: *exciting facts*, *provocative publications*, *puzzles*, *logical tasks for attentiveness*, *quotes from famous people*, *content associated with a particular emotion* (*comic*, *lyrical*, *satirical*, *dramatic*), *historical facts*, etc.

Pattern placement of entertainment content can only harm and minimize the expected effect. You can experiment with this content and try out new ideas for presenting content. If they are successful, you can use them for informational and commercial content and create your layout to help implement sales policy.

Attractive content

One way to get feedback from a potential consumer is to use engaging content. The main task is to get likes, reposts and answers, save posts on users' pages on social networks. One of the indicators for assessing the quality of content is the *ER* criterion, calculated by the formula:

$$ER = SF_t/SP, \qquad\qquad 5.1$$

where
SF_t – the total number of actions on the content during the specified period t;
SP – the number of members of the community, group, platform (on which the content is posted), which are signed / authorized at the time of payment.

Such content is often implemented through:

– *survey*, which allows to quickly increase the number of active actions on specific content quickly. The main idea is not to get an answer to the question but to maximize the number of activities on a particular content;

– publishing *open-ended questions* as a way to get objective feedback. If you need feedback on a specific product, this form of content creation will be more profitable because the comments will have the effect of expert opinion (of those who have already used the product);

– *games,* which allow to publish answers, enter into a discussion about the correctness of the decision, waiting for someone else's solution. The main problem of such content is that it quickly loses its relevance and requires the author's (previously unrepeatable) conditions, which cannot be answered in previous content publications;

– *provocations* is intentional one-sided coverage of the problem, which provokes to write own opinion of a potential consumer, to find ways to convince the author. As such content encourages active action, negative comments, dislikes, etc. are also taken into account.

Viral content

Viral content is content where the growth rate of active actions is more significant than the number of community members, groups and platforms. After the content is posted, it begins to be stored en masse on their pages, reposted without being tied to the target audience, and comments and responses become uncontrolled. In fact, this is the most desirable effect that the content is trying to achieve.

Viral content is used by marketers for

– creation of new audiences for which content plans are developed;

− increase in natural traffic, obtaining more favorable positions in the ranking of queries by search engines;

− the involvement of new focus groups, public figures, bloggers and experts in the discussion can later participate in advertising campaigns.

Unfortunately, it is not possible to predict which content format will go viral. It can be both IGTV and video advertising format, high quality photos and memes, both short publications and e-books.

CHAPTER 6
INTERNET MARKETING

6.1 Basic concepts of Internet marketing

Internet marketing is one of the modern marketing tools that allow you to adjust customer relationships, effectively implement feedback, receive timely marketing information, make effective decisions, and conduct quality advertising campaigns.

The concept of "*Internet marketing*" began to be used only in the early 1990s, when information technology began to develop actively. Internet marketing is not just about advertising and its placement; this is a large branch of economics. The purpose of Internet marketing is to increase a web resource's efficiency, a business tool in today's world.

The tasks of Internet marketing are to increase the web resource position and increase the number of visitors, which leads to increased profits as the result of this work. Internet marketing studies the market situation, consumer needs, and demands identifying demand trends; it allows you to understand how to make the product most attractive to the end consumer.

Internet marketing (electronic marketing, e-marketing) is marketing based on electronic technologies. It mainly applies to traditional and electronic sales using the Internet as an auxiliary technology. If marketing attracts and retains customers, Internet marketing attracts and retains customers on the Internet [114].

Internet marketing allows you to create mechanisms that will provide the enterprise's constant interaction with customers in an interactive mode.

E-marketing divides into two areas. The first concerns the Internet tools used to strengthen the companies' traditional marketing: the company's research organization, the optimization of information interaction between employees, partners, and customers; advertising, sales due to the Internet, and product delivery to the consumer, organization of after-sales service.

The second direction is related to the use of new business model types based on the Internet. It has fundamental importance for some businesses, such as online shops, virtual news agencies, companies that provide services to Internet market participants, electronic trading platforms, etc. [115].

Internet marketing is divided into three *areas by tools and features* [116]:

1) organization of marketing research by the manufacturer or seller;

2) launch of an advertising campaign;

3) management of trade carried out through the Internet.

The main purpose of marketing is to increase the company's profits, and Internet marketing as its component must also ensure the achievement of this goal.

The main advantages of Internet marketing [117]:

− decrease of costs for the goods and services promotion;

− the possibility of entering new markets;

− non-availability of territorial limits;

− greater accessibility of the target audience;

− the ability to calculate everything in numbers;

− establishing interactive cooperation with customers;

− high speed of information spreading.

There are different views on what should be considered a marketing tool.

The main tools of Internet marketing [118; 119]:
− search engine optimization (SEO);
− contextual advertising;
− media advertising;
− banner advertising;
− interactive advertising;
− email marketing;
− virtual marketing;
− latent marketing;
− corporate site and work with it;
− external promotion of the company in the Internet environment (outside its site);
− social media optimization (SMO);
− creating and brand development on the Internet;
− community marketing and social media marketing (SMM);
− VR and AR;
− related environments;
− direct marketing;
− blogs;
− viral marketing;
− SMS marketing;
− infographics, etc.

6.2 Internet marketing tools

Online stores, businesses in the industrial (B2B) and consumer (B2C) markets, service companies actively use Internet marketing tools by to promote their brands.

The company's success is influenced by the size of the marketing budget aimed at advertising on the Internet and the scope (Table 6.1).

Table 6.1 - Internet marketing tools using depend on the purpose [120]

Internet marketing tools	The direction of the company			
	Internet shop	B2B	B2C	Brand promotion
Site	+	+	+	+
SEO	+	+	+	+
Media advertising	+	+	−	+
Contextual advertising	+	−	+	−
Direct marketing	+	−	+	+
SMM (SMO)	+	+	+	+
Blogs	+	+	+	+
Viral marketing	+	+	+	+
SMS marketing	+	+	−	−
Infographics	+	+	+	+

Let's analyze the main advantages and disadvantages of each Internet marketing tool for different types of businesses. Remember that *all areas have some differences* (Table 6.2):

− the B2B market uses more specificity and objectivity in advertising messages; on B2C are essential emotions, successful visualization, spectacles, etc.;

− on the B2B market, the sales system has a personal character, the communication is personalized, and the price, volume, contract conditions depend on them;

− on the B2B market, the main goal is to ensure the product or service effectiveness, to demonstrate how to increase revenues and reduce customer costs; on the B2C

market – the maximum number of consumers coverage by the message and achieving the top sales volumes of the goods.

Table 6.2 – Advantages and disadvantages of the main Internet marketing tools [120; 121]

Name of the tool	Definition	Advantages	Disadvantages
Corporate site	A site that contains the complete information about the company, its products or services, news, achievements and other aspects of activity	– attractive to the client; – contains detailed information about the company; – provides prompt feedback to the consumer	– a significant budget for the launch; – long payback period of invested funds
SEO optimization	Search engine optimization, which strengthens the position of the site in the issuance of search engines for consumer requests	– high clickability; – small budget; – high conversion in terms of converting target visitors to customers	– regular site optimization; – the results are noticeable in a few months; – significant dependence on changes in search engine algorithms
SMO (site optimization under social media)	A set of actions to attract potential consumers from social networks, blogs, forums to the site	– the ability to directly contact a potential consumer; – word of mouth effect	– it isn't easy to find an SMO professional; – significant time spent on painstaking monotonous work

Name of the tool	Definition	Advantages	Disadvantages
Contextual advertising	Banners or text ads that appear just below the search bar for specific queries	– attracting the target audience attention; – high visibility in the search engine; – does not require site optimization; – the ability to limit the budget	– comparatively low clickability of ads; – price formation as the auction; – higher costs than SEO
Direct marketing	Send text, graphics or video messages of an advertising nature directly to a specific client	– direct communication with the consumer; – personification; – opportunity to evaluate the results; – the ability to establish strong relationships with the consumer; – availability of e-mail in almost all; – ease of message distribution	– low result in the short term; – oversaturation of communication channels with spam; – reduction of loyalty and image due to poor quality advertising

Name of the tool	Definition	Advantages	Disadvantages
SMS marketing	A set of marketing activities aimed at goods or services advertising via mobile communications, including SMS messages	– receiving messages from a large number of target consumers; – low costs	– perception of messages as spam; – the difficulty of obtaining of target consumers numbers database
Blog	A website with regularly updated content: texts, images, or multimedia; it's an online journal or event diary	– the ability to easily and quickly create a new post; – free registration of the blog site; – the published post becomes instantly available	– the inaccuracy of the disseminated information is possible; – negative reviews help to reduce the brand image
Media advertising	Advertisements in the form of static or animated banners placed on the third-party sites pages to advertise the brand, goods, services	– emotional impact; – well-remembered; – coverage of large audience	– high costs; – few visitors become customers

Name of the tool	Definition	Advantages	Disadvantages
Viral marketing	Rapid information spread about services, products, brands among users on their initiative	– low costs; – attracts the attention of potential consumers to the company's activities; – word of mouth effect	– the opportunity to get bored and cause negative emotions from constant "viruses"; – uncontrollability of the "virus" influence the consumer attitudes formation to the brand
Info-graphics	Graphical representation of textual information, data arrays or knowledge	– attractiveness of the image; – conciseness; – easy perception; – high information delivery efficiency	– high costs for creating quality infographics

The main tools are more detailed.

1 Website. It is one of the most important tools for big business sales. With the site it is possible to get a contactless conversion, to get more sales, to improve the public search. In such a way, it is more important a design, the handiness for the users, and the functionality of the site [118; 122; 123]. Some sites not only have mobile adapted designs, but also mobile applications for easy interaction with consumers [126].

2 SEO, or search engine optimization, is the set of actions of the site structure and its posture for increasing traffic to the web resource. It's happening thanks to its position in the search engine increases at the specific consumer request. At the same time, it is optimized both internal factors (text and graphic content, structure and navigation, internal relinking) and external (quantity and quality of links to a specific web resource) [117]. Search engine optimization is effective in many types of business. It is relatively cheap to get leads (the main cost is the time of the employee who optimizes the web resource), but requires considerable painstaking monotonous work of a specialist. The first results are visible only after a few months.

3 SMO (Social Media Optimization) is the site optimization for social media (social networks, blogs, forums) according to the rules, principles and success criteria. The main thing in SMO is to create valuable and attractive content for users, so that the stink will voluntarily expand and recommend it to them [117]. There are several ways of working with SMO:

– creating a company's group or corporate page, a social network thematic group;

– creating and maintaining your blog;

– interacting with bloggers through their resources/

Among the basic rules of working with social networks are the following [122]:

– communicate regularly;

– be gentle and always in touch, honest;

– work with feedback and motivate readers to be active.

4 Contextual advertising involves focusing on the content of the site's website. At the same time, the theme of the site and the ads must coincide. Contextual advertising can see on the page of the search engine. It is paid for impressions or

clicks on links. The choice of payment form depends on the particular promotion campaign purpose. Setting up contextual advertising involves selecting indicators: location, age, gender, marital status, interests, profession/place of work of the user, etc. [122].

5 Direct marketing involves [117]:

1) *Sending by e-mail* - sending messages to subscribers who have voluntarily agreed to receive such materials by e-mail;

2) *RSS feed*, information (in XML format) about new materials, and articles on sites and blogs to which the user subscribed. It can be sent to users through special aggregators, Internet browsers so that all subscribers will be informed of news on the company's website or blog;

3) *mail spam* - mass sending of advertising messages to e-mail addresses, the owners of which did not agree to receive them;

4) *bulletin boards and other platforms* – the ability to place your ads or information about the company, its products, and services on third-party web resources. This option allows you to receive a certain number of additional applications, at least – orders through them – examples of such resources: Prom.ua, All.biz, Zakupka.com, and others.

6 SMS marketing is a way to promote goods and services via SMS messages. It belongs to Internet marketing because messages are sent through online services, although received contact information outside the Internet. This type of marketing is for communication with customers, advertising goods and services, and forming the image of a company that cares about its customers [117].

7 A blog is a website that consists of entries (posts) that displays in reverse chronological order. The latest entry

appears in the feed first. Mostly you can leave comments, links to ensure a two-way conversation.

Today, there are more than 440 million blogs [124-126], and their number is increasing every day. Blogs are now not just online diaries. They can influence politics and business. Opinion leaders (or bloggers) are being listened to by a growing audience. They strengthen relationships with customers, partners, improve site optimization, provide communication between the company and consumers.

8 Media advertising involves the publication of graphics or banners on the Site and on affiliate and distribution pages. It helps to attract more consumers to the site. It is used for PR, improving brand image and increasing popularity [125].

Recently, microblogging has started to develop. It differs from blogs in that it contains only short messages, usually up to 140 characters, that users can read and comment on [127]. Thanks to microblogs, public figures become opinion leaders for consumers. It contributes to the formation of the right attitude of the Internet user towards the brand.

9 Viral marketing is the voluntary transfer of information from one person to another on the principle of the spread of the epidemic [128]. The viral marketing algorithm is as follows: you create engaging, interesting, unexpected content that you want to send to friends and acquaintances to please them. Package this content in a convenient, attractive, simple and accessible package for sharing between users. People should be able to quickly post, email, or link to a file on their blog or social network. In other words, the content should be easily accessible to users at any time. You can transfer the following information: photos, videos, text, flash games.

10 Infographics are a collection of images, charts, and minimal text that provide an easy-to-understand overview of a topic.

There are nine types of infographics [125]: statistical, chronological, geographic, hierarchical, matrix, algorithmic, photographic, comparative, and research.

The creation of an infographic consists of several stages:

– thinking through the main idea;
– collecting statistical data;
– necessary facts;
– choosing the most successful type of infographic;
– writing an explanatory text;
– selecting the appropriate color scheme.

The basic principles of creating infographics are [125] conciseness of the material, the presence of a relationship in the content, the uniqueness of the images, copyright.

They also include modern *Internet marketing tools*:

– ***3D-marketing*** associated with the visualization of marketing processes of the enterprise (mobile devices that allow you to view 3D-images, 3D-printers, 3D-laptops, 3D-displays without special glasses, 3D-video, 3D-movies, 3D-games, etc. are becoming more and more accessible for 3D-marketing) [118];

– ***affiliate marketing*** (discussed in section 3.9);

– ***videos*** - the effectiveness and profitability of the original video advertising on the Internet has long proved, and recently it has become easier and cheaper to develop quality videos [127];

– ***photo and video services*** - sites where users can share their photos and videos with the world. Such services work together with social networks. More and more companies

are actively using them in their activities, thus improving performance [104].

    – ***social tabs*** - sites that offer users to store links to interesting sites, share them with friends, and access them from third-party computers [118];

    – ***podcasts*** - A media file or multiple files distributed over a network for playback on portable media players or personal computers. They allow you to create materials for any network user. The company offers to subscribe to a particular podcast, and it is automatically updates with the advent of new media files [118];

    – ***geosocial networks*** - social media that invite users to use their mobile phones, smart phones, or communicators to mark places they visit daily or have visited before. If you carefully consider the work with consumer recommendations, it can ensure an effective communication result, while significantly inferior in cost [118].

These resources allow you to form the necessary attitude to the company's goods and services in searching for information on the Internet - the components of the company's internet marketing use comprehensively, which allows achieving better results. And the tools above help in this.

6.3 Advertising campaigns on the Internet

Now it is hard to imagine your life without online technology. According to a study by Factum Group Ukraine commissioned by the Internet Association of Ukraine (IAU), the share of regular users of the World Wide Web in 2019 was 71 % and had a steady upward trend: in 2016, this figure was 63.1 %, in 2013 – 53 %, and 2010 – 33 %. Internet at home is available in 65 % of the population of Ukraine (2019) [129;

130]. Such indicates the relevance of the use of network technologies to promote companies and brands. Simultaneously, different Internet advertising tools provide different levels of effectiveness, so they are suitable for various tasks (Table 6.3).

Table 6.3 – Use of Internet advertising tools [129]

	Search engine optimization (SEO)	Contextual advertising	Banner advertising	Social Media Marketing	E-mail advertising
Bring an unknown product to market	–	+/–	+	+	+/–
Get a quick result	–	+	+/–	+	+/–
Get a long-term result	+	–	–	+	+
Target advertising messages	+/–	+	+	+/-	+
Organize resale	–	+	+	+	+
Bypass advertising restrictions	+	–	–	+/–	+/–
Save budget	+	+/–	–	+/–	+

There are three types of advertising campaigns on the Internet [131]: image, product, and sales. The difference between them lies in the marketing objectives.

Image advertising promotes a brand or company in general. Its purpose is to form a positive attitude towards a particular brand or trademark in the target audience, the brand loyalty.

At the heart of *image advertising* are the attributes of a brand or trademark, special unique characteristics and values inherent to the brand, which increase its value and usefulness. These can be reliability, prestige, conservatism or extravagance, etc., such as the brand "iPhone" – "Think different!"

Product advertising promotes specific goods or categories of goods. It allows the target audience to obtain information about a particular product or product category, highlight its features and competitive advantages. Product advertising emphasizes the characteristics of the product itself. For example, the product iPhone X – "Say hello to the future."

Commercial advertising promotes a specific product or seller. Such an advertising campaign aims at the target buyer, ready to buy due to the influence of image and product advertising, loyal to the brand, familiar with the characteristics of the product. At this stage, he is interested in the price of the goods, conditions, guarantees, and the possibility of purchasing them in the nearest place. In the center of product advertisings are the price, conditions, and location of purchase. For example, a specific store sells the iPhone X – "Buy from us at the lowest prices!"

The main stages of organizing an advertising campaign on the Internet [146] include determining:

1) the purpose of the advertising campaign;
2) the target audience;
3) the subject of advertising.

Stage 1 The organization determines the *purpose of the advertising campaign* [132]:

1) to form a positive image of the enterprise, goods, or services;

2) to provide sufficient information about the organization, goods, services for a considerable number of potential consumers, including geographically remote;

3) to provide information about goods or services through graphics, sound, animation, video, etc .;

4) to update market information (price lists, company data, contact data, information on goods, services, presentation of new products, etc.);

5) to sell goods via the Internet.

Stage 2 *The target group* involves the creation of a portrait of a potential consumer. To make a list of a considerable number of characteristics and describe them on a particular consumer example. On the basis of the information obtained, the target group is defined.

Stage 3 *The subject of advertising* involves finding out what the advertising campaign is aimed at a product, service or company. You can invest not only to sell goods or services, but also to develop the image of a brand or organization.

Thus, based on the capabilities and features, online advertising is a significant share of the advertising market, which is constantly growing.

6.4 Research on the Internet

The first online surveys were conducted in 1994–1995 by James Petko and Margaret Becker of the Georgia Institute of Technology. Every year, the number of surveys on the Internet is increasing, displacing telephone and mail surveys.

Online surveys in most countries worldwide with the spread of the Internet by more than 80–90 % of the population in terms of use do not differ from telephone or face-to-face interviews. In Ukraine, surveys are conducted primarily among

the urban population with higher education under 50. It is mainly marketing research, in which it is enough to interview the most advanced, active buyers, of which there are many among Internet users. Surveys also conduct among rare populations, such as consumers who have stopped using one brand and switched to another.

Online surveys have their advantages. You can analyze complex experimental designs, use interactive video and audio content and multi-level lists, for example, to evaluate the activities of regional branches. At the same time, it is possible to analyze consumer behavior in terms of product selection, political and media content, perception of advertising in the natural environment, and real-time. An online survey is an opportunity to get quick access to a city's target audience over time.

An online survey is a survey that uses the Internet to convey a researcher's questions to respondents and their answers to a researcher.

There is also a definition of "web survey". It is a survey in which the questionnaire creates as a web page. It fills out by the respondent and sent to the server by the researcher.

There are the following types of online surveys [133]:

− email survey;

− sample survey from the list of members of the general population;

− uncontrolled web survey;

− online panels of Internet users with online and offline recruitment;

− online panels, representative of the general population.

An email survey is a survey in which questionnaires are sent to respondents by email to their email addresses, and they fill in and send them to the researcher. In this case, the

questionnaire can be in the body of the email or Word format attached to it.

It needs to select respondents from a list of the general population members for a *sample survey* and email them an invitation to participate in the study by hyperlink.

These two methods use organizations and businesses, schoolchildren, students, graduates of free economic zones, professional associations, customer satisfaction research. The sample includes all members of the target group whose addresses are in the database.

Advantages of these types of surveys: low cost; the survey's cost do not depend on the sample; high survey speed; it is easier to ask hard-to-reach respondents (for example, high-income people living in guarded houses), ease of conduct.

Disadvantages of these types of surveys: for the most part, there are no lists of the general population, or they are incomplete; spam filters prevent mass mailing; omission of questions or answers; impossibility to make the respondent not see specific answer options; no automatic entry of returned questionnaires.

An uncontrolled web survey is a survey, the procedure of which involves placing questionnaires on the server of the research organization as web pages, on popular sites publish invitations to click on the button and fill out the questionnaire.

Advantages of the method: no email lists of the target group are required.

Disadvantages: no control over respondents' selection; researchers don't know why some potential respondents to answer and others do not; unknown reliability of the information.

Online panels of Internet users with online recruitment form a panel of network users invited online to participate in surveys on various topics. Respondents are attracted by how

they place ads on popular sites with an offer to register and participate in online surveys for a fee. As a result, an online panel is formed – a database of potential respondents, which contains their socio-demographic characteristics and email addresses.

For each survey, the address is checked against the necessary demographic characteristics, forming different target groups. At the same time, the panel should be aimed at tens of thousands of participants.

Advantages of the panel: it is possible to verify the information provided by respondents thoroughly; thanks to the payment, the respondents take the survey more seriously, report more accurate data about themselves; fewer cases of hoaxes, raffles, and deception.

Disadvantages of the panel: it is necessary to ensure the payment of remuneration for respondents for participating in each survey, which increases its value; difficulties with paying for respondents' participation.

Online panels of Internet users with offline recruitment form a panel of network users invited offline to participate in online surveys potentially. It is mainly done in other surveys representing the country's population: general interviews when they ask questions about using the Internet and then invite them to participate in various surveys and get paid for it. Among the methods of conducting online surveys of Internet users, this is the most reasonable.

Advantages of the panel: is representative for Internet users; users are equally likely to be included in the sample.

Disadvantages of the panel: respondents' low motivation to enter the panel and provide information about themselves; professional respondents register in many online panels, which negatively affects the quality of the data obtained.

Online panels that are representative of the general population are formed as follows: first, the sample is made representative of the population of the country, regardless of the availability of the Internet; further research is conducted among them; if these respondents have access to the Internet, they are invited to participate in the panel; if not, special equipment is installed to provide such access. In any case, these panels provide scientifically sound and reliable information about the population as a whole, which is their main advantage. Sometimes combined surveys are conducted. Respondents with Internet access are interviewed through an online panel, and respondents without Internet access are interviewed in person, by mail, or by telephone.

Recently, a large number of surveys are conducted using a tool like Google Form. It is a simple web service with minimal functionality, but it is actively developed and available to anyone with a Google account. Google Forms allow you to quickly create and distribute questionnaires to many respondents and receive a large number of responses quickly.

6.5. Features of using basic digital tools

In today's environment, the use of digital marketing tools is of great importance for domestic manufacturers, as it allows them to promote their products on the world markets quickly and at relatively low cost, to influence the target audience, to create and improve their own image and the image of their products, etc.

In our opinion, the pace of updating all communication tools is accelerating. In turn, their priority and the highest efficiency of application changes and determination of the best becomes a constant urgent task for each producer.

From a technical point of view, the Internet offers businesses an unlimited opportunity to implement image policies. No other types of advertising make it possible to place the amount of textual, analytical, graphic and video information on an enterprise and its products necessary to create its positive image. As a means of communication, the Internet is the best way to fully exchange information with clients and partners, build a system of requests and data exchange. The main advantage of online advertising for the industry is its low cost compared to other types of advertising. But when using promotion methods in the Internet environment, some of its features must be taken into account. Since manufactured goods are not mass-marketed goods, bulk email advertising, banner advertising, or image advertising on popular online portals will not work. Special attention is given to specialized forums that provide the opportunity not only to showcase products and find consumers, but also to communicate with colleagues. The question of researching digital marketing tools (in particular, Internet technologies, communication tools) to promote industrial products have been studied in the works of many Ukrainian and foreign scientists. There are considered various aspects of industrial products promotion with the help of digital marketing tools, its main methods and mechanisms [134–136]. However, analytics show that most Ukrainian producers are haphazardly formulating and implementing policy on the Internet, which does not allow it to use its potential, and in many cases even denies the very idea of running an online business. In these circumstances, the task of systematizing the tools and methods of Internet communications and developing recommendations on their effective use is relevant. This issue is particularly acute for the industry, which determines the pace of development of other sectors of the national economy. The constant updating of the

Digital Marketing toolkit and the disagreement among scientists regarding the systematization and classification of the objects of the digital environment need further consideration.

Communication Internet technologies are communication technical (software) methods of creating a communication message, supporting information resources and bringing this information to the target consumer on the Internet [137]. Systematic analysis and generalization of literature sources and practices of marketing activity in the Internet environment gave us grounds to identify the main tools of digital marketing, as well as the main features of their classification, which distinguish domestic and foreign scholars, as well as what we offer (Fig. 6.1).
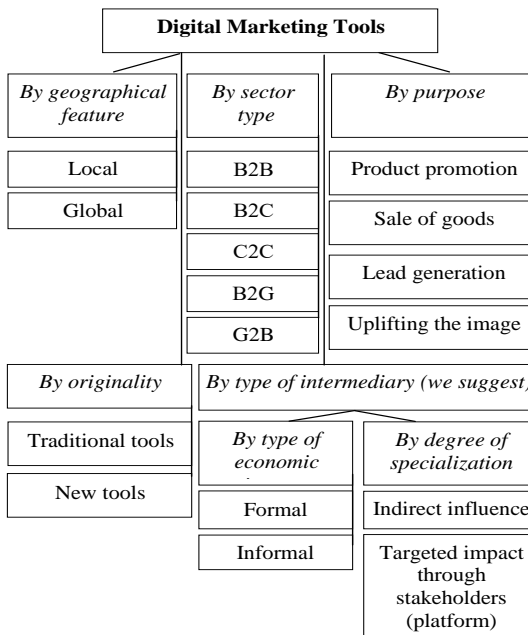
Figure 6.1 – Classification of digital marketing tools

1 By geographical feature:

– local (target audience is limited by geographical location). These include: local online marketplaces, sites and groups of cities / regions / countries in social networks;

– global (target audience is not limited by geographical location). This is especially true of services such as site creation, design and more. These include aggregators.

2 By sector type:

– B2B (Business-to-Business) – communications between commercial partners - it is advisable to use: personal site, registration in special forums, etc.;

– B2C (Business-to-Customer) – communications between the enterprise and consumers – it is advisable to use: site, marketplaces, social networks, price aggregators, etc.;

– C2C (Customer-to-Customer) – communications between consumers (for example, the world-famous "EBay" and "Amazon" stock platforms);

– B2G (Business-to-Government) – communications between business and government (government) – e-commerce systems (e.g., e-procurement systems);

– G2B (Government to Business) – a set of software and hardware for the on-line interaction of the executive and commercial structures to support and grow the business (e.g., government information websites, e-procurement systems, etc.).

3 For the purpose of:

– development, creation, improvement of the product and its promotion in the market (sites, advertising on the Internet, forums, blogs of the producer);

– sale of products or services (it is advisable to create a website where the consumer will be able to buy / order the service directly);

– lead generation – attracting the target audience to the

selling site by different methods: E-mail, social networks, use of contextual, banner or teaser advertising;

− enhancing the image (it is necessary to monitor the reputation of the company on the Internet by using only qualitative and unique content distributed in the Internet environment).

4 By uniqueness:

− traditional tools (advertising, public relations, direct marketing, sales promotion)

− new tools: interactive communities (chats, discussion groups, communities); Virtual Marketing (Internet word-of-mouth or gossip marketing), an online e-commerce platform ("Amazon", "OLX").

5 By type of mediation (we offer this feature):

5.1 by degree of specialization:

− tools of indirect influence (Internet sites and other tools and tools, which contain multidirectional information, not specialized);

− tools of purposeful influence (through interested intermediaries: e-commerce systems, specialized portals, platforms).

5.2 by type of economic interest:

− formal (defined and enshrined in special agreements for the provision of intermediary services);

− informal (used randomly, no cooperation agreements).

Separation of a new classification attribute (by type of mediation) helps further systematization of digital marketing tools, deepening understanding of the impact of different tools (indirect, focused), their degree of specialization and economic interest, which allows to determine the most effective use of their various entities [138–139].

Table 6.4 summarizes their characteristics and specifies the application features of each of the Digital tools listed above.

Table 6.4 – Characteristics and features of Digital tools

Name of method/ tool	Essence of the tool	Description features		Application features
		Pros	Cons	
1	2	3	4	5
Web site of the manufacturer	Site for placing information about the company, product catalog, etc.	Ability to present it on any platform and declare its existence on the global market	Need to have a full-time professional to support the site	It is advisable to use a site such as "business card", "landing page"
E-commerce sites (platforms)	Site for placing information about the company / product / service (placement)	Shareware information placement	It is required to update regularly (on average once a month)	It is necessary to install a utm-tag to track the traffic
Online storefront	Specialized site to sell custom-made products through own website	Ability to provide broad product information	Extra maintenance costs for manufacturer	Similar to online store

Table 6.4 (continued)

1	2	3	4	5
Electronic ordering table	Platform for communication between sellers and buyers	Providing certain property for use	Mostly temporary, short contact time, has usage fee	It is necessary to constantly analyze data
Electronic bulletin board	Website where businesses place promotional offers or sell products	Opportunity to submit various information for advertising	Need to constantly update ads	Need to use the services of a middleman
Price Aggregators	Resources that specialize in collecting data on product availability, price, and providing this information to the buyer in an easy to compare and select form	Opportunity to present price advantages, better delivery or service conditions compared to international competitors	High placement rates, the need to constantly update the price due to the volatility of the exchange rate, etc.	Price - aggregators only generate traffic to the site
Electronic marketplace	Platform for transactions between sellers and buyers	Specialization for the provision of certain types of services	Defined list of rules	Need to fulfil individual transaction elements (making payments, etc.)

Table 6.4 (continued)

1	2	3	4	5
E-shop	Sale of goods purchased from different manufacturers on their behalf	Additional sales channel	Sale of products at middleman prices	Products are sold mainly from their own inventory
Online Auction	Platform for communication between sellers and buyers for transactions	Opportunity to sell product for a good price	High competition	Buyer and seller set competitive price during the transaction
Direct Email	Emailing	Targeted impact on a potential customer. Opportunity to attract a potential customer for free	Unlimited response speed. The letter may be out of date.	The content plan, its purpose of the mailing list should be clearly defined
Social networks	Creating own profiles, activities, thematic groups, and more	Depth of targeting, trusting influencers	Lots of unnecessary information. High cost for testing	Considered as a source of traffic to the main site or landing page
Forums	Web resource for discussing issues, topics in a specific area of activity	May be a supplement to the site	Minimum user profile information	Availability of administrators and moderators who can edit / delete user comments

Based on the main features of the classification

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(highlighted in Fig. 6.1) and features (defined in Table 6.4), we propose the following definition of the scope of the above-mentioned Digital tools (Table 6.5).

Table 6.5 – Scopes of Digital Tools

Classification		Internet platform	Electronic showcase	Online auction	Website	Price aggregator	Electronic order table	Online bulletin board	Electronic marketplace for specialist search	Online store	Direct mail	Social networks	Forums
By geographical feature	Local	+	+	+	+	+	+	+	+	+	+	+	+
	Global	+	+	+	+	+	+	+	+	+		+	+
By sector type	B2B	+	+	+	+	+	+	+	+	+	+	+	+
	B2C	+	+	+	+	+	+	+		+	+	+	+
	C2C											+	+
	B2G	+			+								
	G2B	+			+								
By purpose	Sale of goods	+	+	+	+	+	+	+		+	+		
	Lead generation	+	+		+			+	+		+	+	
	Uplifting the image	+			+							+	+
By originality	Traditional tools										+	+	+
	New tools	+	+	+		+	+	+	+	+			
By intermediary type	Direct	+	+	+	+	+	+	+	+	+	+	+	+
	Intermediate	+	+			+	+	+	+	+			

When you have a limited budget, all digital tools using is impossible. That's why we define importance coefficients for

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industrial product promotion by cross-comparison. The base on such analysis may be information about competitors' advertising campaigns.

In the top five essential tools:

1) website;

2) Internet platform;

3) online store;

4) electronic ordering table;

5) online auction.

It should be noted that the above classification is not exhaustive. The market for digital technologies and online resources is constantly changing, and everyday creative developers, managers, marketers, and other professionals add more and more tools for promoting goods and services [143].

It can be argued that these digital tools are main, basic but also need those that simplify and help in their use. Additional tools include digital tools that optimize and ensure the most efficient performance of the main tasks.

Considering additional digital tools on the example of the main - direct mail, you should pay attention to platforms for finding people and lidogeneration used to form databases of e-mail distribution. Such Internet platforms can be different depending on the specifics of the company for which the database is created. The most popular platforms used in almost any field are LinkedIn.com, Insideview.com, Crunchbase.com, Builtwith.com and many others.

For the use of such a digital tool as emailing, the main requirement is the availability of recipients' email addresses. Still, in the case of "cold" emailing, i.e., the first contact, the company may not have such email addresses. Specialized digital resources such as guesser.email, emailgenerator.io have been developed to generate and verify valid email addresses. These services can help you generate and select an email

address if you know the name of the potential consumer and/or the company they work for.

Another alternative to creating a database of email addresses for email sending is to search for available addresses on the Internet. Services such as findanyemail.net, app.voilanorbert.com, app.anymailfinder.com, neverbounce.com do not generate possible addresses and check them, but search for available ones, collecting and analyzing information from many Internet sources on the search query of a person who is potentially hit the mailing base. These services also belong to the additional that help in the organization of marketing digital communications.

Among the additional direct mail's components can be singled out services designed to verify email addresses. They are often an application or extension to the email in the browser from which it is sent. Examples of such services are name2email.com, rapportive.com, mailtrack.io. These tools help track the letter's delivery stages and status: whether the letter was delivered to the recipient, whether he read it, and so on.

Of course, focusing on direct mail, it is impossible not to mention the platforms and resources on which it is conducted directly. Today, there are many variants to configure and perform emailing. Such platforms are more or less known depending on the country from which they send and interface languages. They can also be classified according to specific characteristics. There are services for configuring up direct mail from regular mail ("SendPulse", "MailChimp", "UniSender," "GetResponse," etc.), as well as those multifunctional, aimed at performing many functions of managers, including email.

CHAPTER 7
CREATION OF A WEB RESOURCE
AND ITS PROMOTION

7.1 Features of creating a website

Today, many factors are a necessary component for the successful Internet business development. However, until recently, just having a website was already a guarantee of an advantage over competitors. Let's consider the website development stages [144].

1 *"Site availability = competitive advantage"*. After the Internet and search engines occurrence, the main factor in success was information about a particular company on the network. It makes it possible to post up-to-date information about the company, its contacts, etc. At this stage, the most important was the site's quality and the ease of content management because the main thing was its availability and the ability to find in the search engine.

2 *"Site availability + external links = competitive advantage"*. After a while, the sites were already in many companies. It's just that having a site is no longer an advantage. It was necessary to be higher than the sites of competitors in search. Specialists who engaged in placing links to a specific site on third-party resources began to be in demand. This approach has been effective for a long time - before updating search engine ranking algorithms. Better and more sophisticated marketing strategies for promoting web resources began to emerge.

3 *"Site availability + external links + optimization = competitive advantage"*. When the number of links to the site ceased to be the main factor in its promotion (although it is

important now), the site's optimization for search engines became relevant: developing a semantic core, searching for keywords for site pages, writing SEO-texts, etc.

4 *"Give the consumer what he needs and declare yourself"*. At this stage, offline and online businesses are closely interconnected. It is essential to adhere to certain principles, in particular: to demonstrate the benefits of goods or services; analyze and segment the target audience to establish practical cooperation with it; promote the company's brand, not just the site; automate individual business processes (work with leads, orders, internal business processes, etc.).

Due to a large number of web projects, there is no single classification of sites. They differ in subject matter, structure, functionality, purpose, and method of development. The choice of the type of resource because of a specific task affects its further effectiveness: promotion in search engines, the formation of visitor loyalty, information about the company, and more.

Website classification [145]

1 By availability for users:

− open (all sections of the site are always available to visitors);

− semi-open (after registration, certain sections of the site become available, such as wholesale prices);

− closed (mostly corporate sites with access only for a limited number of users).

2 By content display technology:

− static (consisting of immutable HTML pages. The user views the page in the form in which it is stored on the server. For example, a business card site);

− dynamic (consisting of variable pages formed based on user requests, for example, an online store site).

3 By purpose:

− business card sites (contain only general information, such as about the company, personality. Consist mainly of 5-7 pages);

− business sites (product catalogs of companies with product descriptions, customer reviews);

− promotional sites (sites of specific trademarks (brands), developed to advertise a product or brand in general);

− online stores (catalogs of goods with the ability to order online);

− corporate sites (contain the most detailed information about companies, they usually have a complex structure and advanced functionality);

− landings (one-page sites to attract the attention of potential customers and further implementation of targeted actions (e.g., filling out a questionnaire, subscribing to email-mailings);

− multi-landings (subtypes of landing. Information in the blocks of the site contacts changes depending on the user's geographical location or the query from which he came from the search engine. That is, each visitor displays their information. It can significantly increase the conversion of any landing audience);

− quiz sites (a trend in marketing in 2018) interview users to identify their needs and help choose a product. At the end of the survey, the customer is asked to leave contacts, offering a discount for passing the test).

4 By implementation technology:

− HTML sites. The abbreviation HTML stands for "HyperText Markup Language", i.e., "hypertext markup language". It is marked with tags (in Ukrainian - labels). Tags are sets of characters that are placed in angle brackets. A simple example: A text placed in a character will be

displayed in bold. A hypertext markup language is not a programming language, but no modern site can do without scripts - pieces of code installed in HTML pages. Note that the most popular scripting language for HTML pages is JavaScript. These sites can be written in a notebook, made by hand. They are minimally loaded on the server, suitable for any hosting. The HTML site's main disadvantage: if you need to change at least one word in the menu, which is on all pages of the site, you have to edit all the pages. Therefore, such sites are more suitable for a business card site and a landing site;

– CMS sites. Creating sites using templates for special programs - CMS-engines. They provide an opportunity to create a site with an exciting design if the developer has limited resources (skills, time, financial resources, etc.). Most engines are free. Each of them has templates with design and functionality for any business. Pages consist of blocks, for each set a template – a piece of code with inserts of variables. CMS-based site owners have access to paid and free templates that use to customize the site's appearance. With the help of plug-ins, you can perform technical tasks and provide the site's necessary functionality.

5 By purpose:
– news;
– entertaining;
– educational;
– informational;
– commercial;
– advertising.

The site is the link where the business owner expects targeted action from the visitor. In this case, several factors are essential, including the conformity of the design to the business theme (rigor, minimalism, or, conversely, brightness and

originality), site navigation, technical parameters, and the content's usefulness, etc.

Components of website quality:

1) informativeness is the sufficiency of the necessary commercial and technical information about the product or service, provider, etc. Everything that interests the site visitor and is the purpose of his viewing the page of a particular resource. It is a reasonably subjective indicator evaluated by Internet users. There are three aspects to this parameter:

− semantic (which evaluates the possibility of a perception of information and its understanding by users);

− syntactic (the logic of presenting information on the web resource);

− graphical (graphical interface of the site contributes to a pleasant acquaintance with it).

It is also necessary to consider the diversity of representative information on the resource, clarity, accuracy, and timely updating. The information on the site should be as relevant as possible to the user's request so that he is interested in the resource and stays on it for a long time;

2) ease of use of the site. The quality of site navigation depends on several factors: the logic of the transition between pages; quality of the developed navigation tools and simplicity of their search; technical parameters (for example, significant page loading time); no confusion in the sections;

3) design success. Essential parameters, in this case, are graphics, color gamut, use of appropriate images, animations, videos, built-in windows, music, etc .;

4) The website's security, how well it ensures users' personal data confidentiality and protects online payments made through a particular web resource. Often visitors to specific resources do not provide such valuable information for marketing research and customer base formation because they

do not trust the site or do not understand how to provide it (the provider does not clearly explain this);

5) reliability. This component covers such factors as compliance with the expected deadlines for service, the correctness of all the client's wishes, a successful presentation of products, and more.

Creating a web resource can be divided into *the following stages:*

1) the preliminary stage (definition of the general concept, the purposes of a resource).

2) design (definition of resources, with the help of creating a site, planning the structure, forming a list of components to connect, etc.);

3) development and testing;

4) placement of the resource;

5) development.

For many users who visit a site, it is necessary to obtain a domain name and place it on the Internet. Hosting a web resource on a server and its administration is, after this referred to as hosting. Particular companies provide this service. Hosting is paid and free.

The domain is the name of the site. For easier memorization of concepts, imagine that the site is a collection of pictures, in which case the hosting is the house in which they locate, and the domain is the address where you can find this house. Any domain consists of levels. Domain levels are parts separated by dots. They are needed to systematize the work of domain names. For the most part, each domain consists of two levels, but there may be more [146].

Levels count from right to left. The first level of the domain (top) is part of the site name, located to the last point's right in the site address. It is not possible to invent your first-level domain during registration. It is chosen from those

already available. The full list of top-level domains is available on the website of ICANN (Internet Corporation for Assigned Names and Numbers), an international non-profit organization established in 1998 to regulate issues related to domain names, IP addresses, and other aspects of the Internet. The first of them are .com, .net, .org. Gradually, other domains were added: .info, .biz, .name, .museum, .aero (common top-level domain for airlines), .pro (the name comes from the English. Professional and indicates the purpose of the domain for professionals from different fields of activity), .travel and others. The second level of the domain (primary or parent) is the part of the web resource name to the left of the last point. For example, the marketer is a second-level domain in the name of the site marketer.ua.

The third-level domain (or subdomain) is a part of the site name, usually located to the left of the penultimate dot. This level use if you need to assign a unique address to different sections of the site. Subdomains make the site structure clearer. Suppose the site has two versions: Ukrainian and English. Each of them will have its own subdomain: uk.site.com and en.site.com. In this case, it is easier for users to immediately switch to the language version they need. Also, search engines index each section separately. This means that you can promote different sections of the site in the search engine. For example, a company launches a blog on its website. In order not to go to the main page of the site and then look for the necessary section with the blog, it is advisable to put it on a separate address blog.site.com. In this way, you can get to the blog immediately, because the search engine will index its page separately. Then follow fourth, fifth level domains, etc., which are much less common.

All domain names are stored in ASCII (American Standard Code for Information Interchange) characters. These

characters include the English alphabet characters (A–Z, a–z), numbers 0–9, and punctuation.

Classification of domain names [146]:

− general;
− national.

They differ in the requirements for their registration. *General domains* are easier to register. These include .com, .org, .edu, .net, .biz and others. Since 2011, a new category has been added to shared domains – "new shared domains", consisting of whole words, such as .bank, .shop, .website, etc. For the most part, they have no registration restrictions. Any legal or natural person can register them. No documents are required for this.

All *national top-level domains* consist of two letters. These are country-specific domains. For the most part, national top-level domains are based on two-letter country codes. For example, UK - for Great Britain; ua - for Ukraine; de - for Germany; fr - for France and others. It is more challenging to register such domains than general ones. Certain states allow national domains to be registered only to their citizens or official residents. Some domains can be registered in the national language of the state. They are called "internationalized" or "IDN-domains". They introduce to make it easier for Internet users from non-English speaking countries to remember domain names. Internationalized Domain Names (IDNs) are domains that contain one or more non-English characters. Suppose you use this type of URL with Cyrillic characters. In this case, your link will be converted to Punycode according to the ASCII Compatible Encoding standard, which is not supported by all software products.

For this reason, as a result, in a line of a browser it is possible to receive a set of incomprehensible characters. For example, if we copy the address of the Sumy shop "sweet-

son.com.ua" from the browser line to the MS Word editor, we will get the following set of characters: https://xn----7sbmqfeewiwh.com.ua/, which is not convenient for work with software products. At the same time, such an address is easier to remember for Ukrainian and Russian-speaking customers and is directly associated with the goods sold by the store (sleep products).

To obtain the Ukrainian national .ua domain, it is necessary to register a trademark (which is a rather lengthy procedure). In this case, the verbal part of the domain must match the name of the brand that operates in Ukraine. Ua domain registration is a way to stand out from the competition, to show customers your position in the market, but it is not mandatory. If there is no trademark, but you need a Ukrainian domain, you can choose other top-level domains: com.ua, in.ua, ukr. For example, the service imena.ua can provide information about whether a particular domain is occupied or not. If the proposed site address is free, you can register it. An example of a search is shown in Figure 7.1
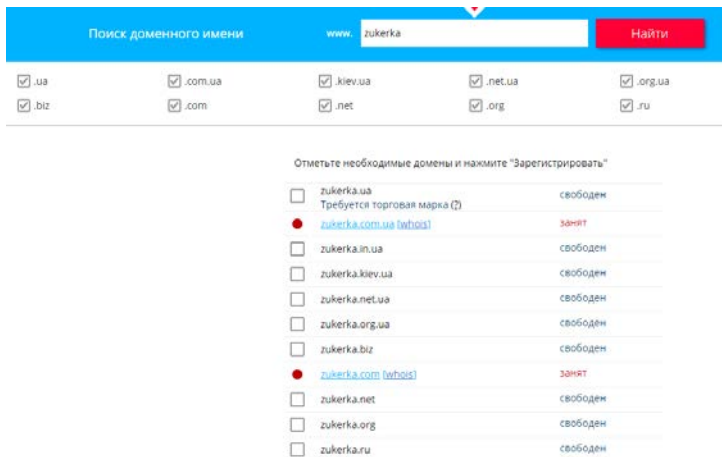
Figure 7.1 – Verification of domain names on the site imena.ua

If the domain zukerka.com.ua is occupied by a confectionery company, the association with the site name is quite clear. If a bag seller occupies the zukerka.com domain, it confuses a potential site visitor during his targeted search, provided that he does not know the address of the bag seller's site.

Domain is required for several reasons [146]:

− to make it easier for potential visitors to find a company. Without a domain name, they will have to remember the IP address of the hosting server to get to the site;

− for parking. Domain parking means that a page with the caption, for example, "Site under development," is placed on it. Such a page is a parking lot because the domain will eventually be needed when the site is ready. It is better to register it earlier so that it is not occupied by someone else;

− for mail. You can set up an email on your domain. For example, if you have a registered domain podaro4ek.com, you need to receive an email from potential customers to the email address info@podaro4ek.com. To make this possible, you need to purchase hosting and set up your email account;

− for redirection. Even if the site is just planned or planned to launch, you can set up redirection on your domain to your Facebook, Instagram, Twitter, or another account.

If the developer is faced with creating a site, he needs to decide on a strategy. There are three ways to design that everyone chooses according to their *skills*:

− writing the desired source code for the site from scratch. The main advantage is variability. Because there are no restrictions, you can implement any functionality but the necessary skills. It is quite a time-consuming process. A well-thought-out site testing period is required to eliminate all possible shortcomings of the developed site;

− use of frameworks. Compared with the previous method has certain limitations. There is a base to which a certain amount of necessary components is added. When choosing this method, you should be aware of the field of programming;

− use of ready CMS. Ideal for developers who have little knowledge in the web development segment. The advantage of this method is the ability to create a site quickly. You can make the necessary adjustments through the admin panel. The main disadvantage is the pattern of the developed sites.

Let's analyze all these ways of developing sites, starting with the latter.

A **Customer Management System** (CMS) is a tool environment for creating and administering a site without programming languages. The modern site development market offers users different CMS types, focused on creating sites of varying complexity.

Types of CMS engines for website design and development:

− *free*. Any of them can be easily downloaded, installed on the hosting by launching the site. They are all different. Most CMS engines do not have an everyday basis in the interface. Approaches to the formation of the structure and functionality of the pages are very different. The most popular free engines: "WordPress" (mainly used for designing personal sites and blogs), "Joomla" (suitable for corporate sites), "Drupal". The OpenCart engine is designed exclusively for creating online stores and contains a wide range of features: visual template editor; no restrictions on the number of goods, categories, manufacturers; supports multilingualism, product ratings, etc. Magento is a solution from Adobe Inc.; this engine has a high monetization level:

templates, modules, developer services, licenses - almost everything is paid. "TYPO3" is suitable for experienced users. Its use requires programming knowledge and experience in website development;

    – *paid*. "Bitrix" is suitable for online stores, has integration with 1C, has flexible settings. "CS-Cart" is a convenient tool for designing web stores. Developers position DataLifeEngine as a tool for creating websites for media and blogs.

    Of course, the above list of CMS engines is not exhaustive. New website development products are constantly appearing in the world, gradually displacing the offers on the market. Technologies are constantly changing, improving; developers are offered more and more new solutions, innovative templates, simplification of work, etc. For example, HTML5 technology has gradually supplanted such popular flash sites in the recent past.

    There are particular services to determine which engine the site is built on. There are online services that are easier to use. An example of a definition on the website of the online service whatcms.org is shown in Figure 7.2.

    With using frameworks. Framework (from the English. Framework - framework) is a software product that creates sites, but does not have ready-made solutions for building a site and performing certain functions. It is at a lower level than CMS engines. The developer must create an interface part, database, algorithms and software solutions, the administrative interface on frames.

    The creating sites on SaaS platforms in a cloud environment. SaaS (from English software as a service) - a model of providing licensed software by subscription. It is a cloud solution hosted on servers on the Internet. The user accesses the service through a browser. At the same time, this

service is supported by the service provider. SaaS solutions have their advantages and disadvantages because each project implements similarly. On SaaS, it makes sense to create simple sites that are not particularly demanding on the design, which do not require future navigation improvements. At the same time, these platforms contain everything necessary for the full operation of the Internet project: you do not need to select, install and configure CMS, order hosting and configure servers, and in the future - to deal with technical support of the project. SaaS solutions support all these processes. Examples of SaaS platforms are "UMI", "WIX", "InSales", "uCoz".
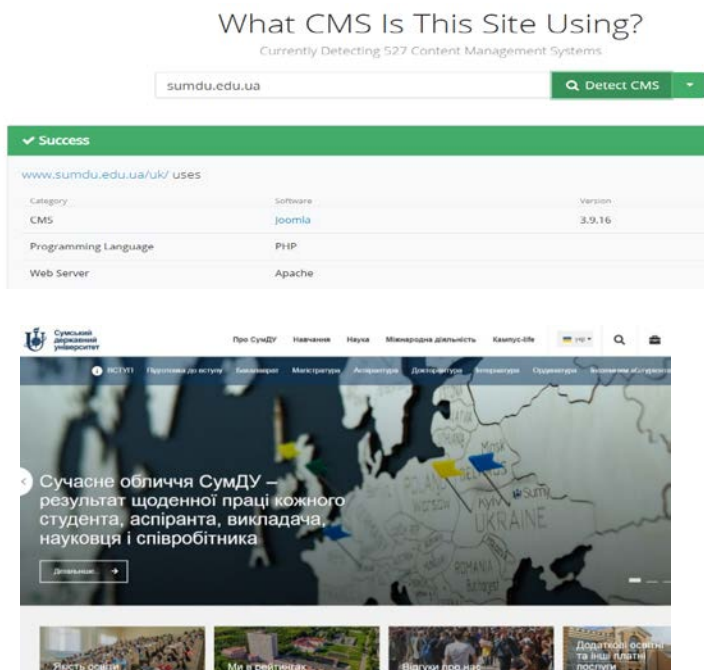
Figure 7.2 – Definition of CMS-engine, which created the site of Sumy State University

Website development using HTML. It is the most challenging way to develop websites. Hypertext Markup Language HTML is the code used to structure a web page's display and its content. Content can contain paragraphs, lists, graphics, tables, etc. This language allows you to present the content better: highlight individual characters in italics, bold; make hyperlinks to another page active, increase or decrease font size, etc. You can learn in detail how to develop sites in this way in web development and design, dedicated to this topic and aimed at different levels of knowledge in this area.

The site's structure comprises sections, subsections and pages, and navigation that provides access to them, various menus, cross-references, and a site map.

All sites are unique in appearance but have standard features (Fig. 7.3). Each site opens from the main page, which is the most important. It should have what the user is looking for. If he finds the necessary information, he reads it and goes to another site. A cap is placed at the top of the site and duplicated on other pages. It is explicitly done to attract the user's attention.
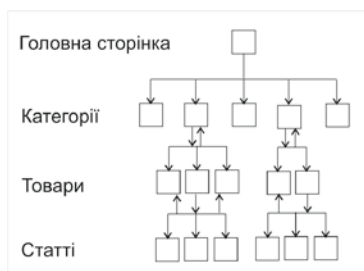
Figure 7.3 – The structure of the website of the online store

To ensure a quick transition to the main thematic sections, develop a site menu - a list of links to the main sections. The menu can be both vertical and horizontal. The

horizontal menu place in the head or sometimes duplicated at the bottom of the page. The vertical menu is mainly on the left, where the visitor begins to view it. The menu is the most critical component of the site. It should be convenient, visible, and understandable, and its points - clearly separated from each other. Hyperlinks placed in text or graphics allow you to link to different pages on a site or even to other sites.

Types of website structures [146]:

− *linear* (traveling through the site, from the main visitor goes to the second page, from it - to the third, etc.);

− *tree-like* (from the main page you can get to one of the pages of the second level, from it - to one of the pages of the third level, etc.);

− a*rbitrary* (such a site seems completely unorganized, but this is the principle of its creation. Traveling through it, the visitor can go from one page to another in different ways. The way back does not have to be the same).

The ease of use of the site is determined by the term **usability**. The first time you get to the site, the visitor understands whether he is ready to continue working with him in a few seconds. This is because some sites have successful elements in their structure, while others, on the contrary, repel their design. Bright illustrations, beautiful photos, unique articles are an integral part of an effective site.

An important component is contact information, which should be varied (several phone numbers, email, location). Contacts should be marked in a prominent place so that you can easily find them. Reviews are very important for online stores, travel agencies, insurance companies, and more. Another essential component of any site is the "call to action" buttons. Visitors to the site should be encouraged to buy, order, placing buttons "Place an order" or "Buy now", etc., in a prominent place. The integration of the site with social

networks is important. Be sure to add "I like", "Tell friends", and other social networking buttons. This will increase the level of interactivity (interactive) sites that are functionally able to "communicate" with their visitors. These include sending messages: feedback, online questionnaires, surveys, registration forms, hit counters, online order forms, etc.).

Rules for site creating:

1 Rule 7 ± 2 (navigation menu should contain no more than nine items, as short-term human memory can cover no more than nine items at a time).

2 The rule of three clicks (the user must receive any necessary information in three clicks, so it is needed to consider site navigation: make it simple and clear).

3 Be sure to have a "Search" button (if the user can't find what they're looking for manually, they'll need a site search feature).

4 Spelling, grammar, and punctuation (there should be no errors in the texts of articles and headings, navigation elements, content, STA-buttons (call to action), forms, etc.).

5 The presence of a site icon (from the English. Favicon - site icon) - an icon that appears in the address bar and browser tabs.

6 Availability of FAQ section (from English frequently asked questions).

7 SEF settings (Search Engine Friendly). This feature is important because it influences search engine optimization and creates a user-friendly URL. The page address is convenient for the perception of users of a site. When creating site pages, most CMS engines assign them a URL consisting of a chaotic set of characters that do not carry any meaningful load for the average user. For example, https://www.rukzak.ua/index.php?cPath=63. They degrade the appearance of the site and negatively affect the ranking in search engines.

A good URL should logically describe the structure of the site and the path to the page, be short. For example, https://www.rukzak.ua / catalog / books.

8 Setting "bread crumbs".

"Bread crumbs" is one of the types of site navigation. The title accurately reflects the essence: as children in the famous tale of the Brothers Grimm came to their home thanks to bread crumbs scattered along the way. The site visitor can navigate the Internet resources through links that clearly show the path from the page main (Fig. 7.4).
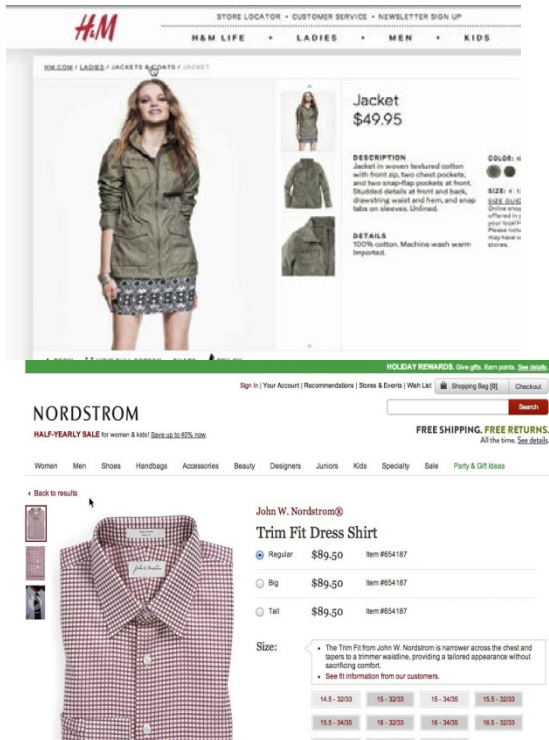
Figure 7.4 – Options for the implementation of "bread crumbs" on the online clothing stores sites

9 Check the footer is the block at the bottom of the site, which contains useful but not primary information; in particular, copyright data means that all materials posted on the site belong to its owner. Their use without permission is prohibited. At the same time, the copyright date should correspond to the current year, so that users do not get the impression that the site has not been updated for a long time), duplication of contacts, names of teams or companies that developed the site (Fig. 7.5).
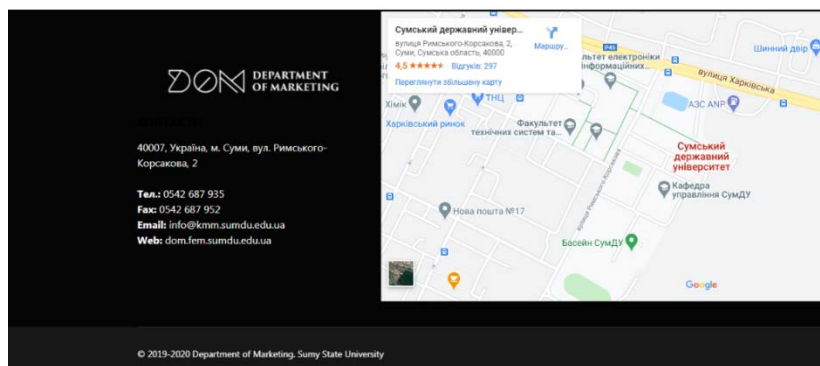
Figure 7.5 – Footer of the site of the Department of Marketing of Sumy State University (screenshot as of 2020)

Therefore, if desired, a developer with any level of knowledge can develop a website using convenient tools for him by the available time, initial skills, goals, business focus, etc.

7.2 Internal optimization of the web resource

Internal site optimization is a list of actions to raise it to the top search engines.

Internal optimization allows you to make the web resource pages as attractive as possible for search engines, which are primarily interested in texts and their "usefulness," as well as tags.

The principle of working within the internal or SEO-optimization (Search Engine Optimization) is based on the fact that millions of Internet users every minute in different geographically remote parts of the world are looking for various information by entering their query in the search bar. Search engines find the best answer to a user's query and display it on the search engine page, so SEO promotion is a set of measures required to a particular site:

a) was displayed on the first page of the search results;

b) was displayed in the top ten sites offered by search engines to the user in response to his request.

The task of SEO optimization is to work with the site so that its content becomes, according to search engines, the best response to the user's request. Search engine optimization is performed, taking into account search algorithms. They are the secret of search engines. It is not possible to define a complete list of parameters covering these algorithms. However, the main parameters are known:

− resource name, its domain zone, and domain level;
− year of resource creation;
− correspondence of the subject of the resource to its name, correspondence of keywords;
− the amount of information posted on the resource, its pages, their number;
− unity of style of all pages of a resource;
− frequency of updating information on the site;
− use of quality content;
− the presence of a robots.txt file;

‒ site depth as the number of conversions that can be made within a particular web resource without visiting the same page twice);

‒ geographical location and language of the resource;

‒ quality of external links to the site, etc.

Internal site optimization involves:

1) audit (status check, detection of technical errors, analysis of competitors);

2) compilation of the semantic core (extended list of queries for which users will find the site in the future);

3) developing a content plan and writing unique texts (SEO-copywriting);

4) writing metatags, structuring content with H1-H6 headings. The site may contain quality content, but if the tags or titles are illiterate, it will reduce site traffic;

5) connection of analytics, with which you can track the further development of the web resource;

6) adaptation of the site for mobile devices and creating AMP pages (AMP is an acronym from the accelerated mobile pages) - technology of displaying site pages for mobile users, which provides maximum download speed.

Stage 1. Internal site optimization begins with an audit - a detailed analysis for internal and external errors, compliance with search engine requirements. This analysis allows you to identify and eliminate possible mistakes that prevent the successful promotion of the web resource on the network. There are a large number of companies and services that allow you to audit the site.

The audit checks a massive number of metrics, including metatags, headings, content, multimedia, indexing, and page load speeds, redirects, links, and more. All indicators are conventionally divided into five groups [147]:

‒ technical audit (search for technical errors);

− SEO-audit (search audit),

− usability audit (convenience and clarity of use);

− content audit (text, graphic, and video content audit);

− marketing audit (analysis of ease and interest in buying from the site).

This stage is the foundation for further optimization.

Stage 2. After the audit, the ***semantic core development*** − a list of keywords distributed on the site, allowing you to promote it on the network. This stage involves finding all possible words and phrases that most accurately describe the company's products, services, and activities on the website. Through these words, consumers search for the necessary information on the Internet.

The semantic core allows you to build an effective structure of the site, form its subject matter, select pages in search engines, and more fully satisfy user requests.

Creating a semantic core involves the following steps [148]:

1) search for keywords that best match the theme of the web resource (using particular services, including keyword planners "Google Ads", "Wordstat");

2) grouping data and deleting unnecessary keywords;

3) expansion of semantics on pages.

There are three types of keywords [148]:

− high-frequency − entered into the search engine more than 1,000 times a month, characterized by the highest level of competition;

− medium frequency − 100-1,000 times a month;

− low frequency − up to 100 times a month (about 65-80 % of all requests)

In the first stages of semantic core development, all types of queries are taken into account. You need *to cluster the semantic core* - to systematize the related keywords offered by

the search engine of the network into groups (clusters). This allows you to form an orderly structure of hundreds and thousands of search queries of network users [148].

The process of identifying clusters is to study the semantic core to refine the user's search phrase. The clarification itself is a sign of grouping, and accordingly, you can choose the relevant page of the site (Table 7.1).

Different services have been developed with several databases that offer various key queries to analyze keywords, so it is desirable to use several of them. The main parameters to pay attention to [148]:

1) the volume of the database of search queries;
2) frequency of data update;
3) selection of synonyms;
4) keyword search sources;
5) databases in all languages and for all countries of the world;
6) the ability to find search tips;
7) display important frequency keys.

Table 7.1 – Selection of the relevant page of the site

Search query	Clarification	Site page
Buy phone	Buy [what]	Category "Phone"
Buy phone Samsung	Buy phone [manufacturer]	Filter (manufacturer) "Phones Samsung"
Buy Samsung a phone	Buy Samsung phone [series]	Filter (series) "Samsung a phones"
Buy Samsung a50 phone	Buy Samsung a phone [model]	Product card "Samsung a50 phone"

Stage 3. The next stage of internal optimization is ***developing a content plan and writing unique texts*** (Chapter 5).

Just publishing a few articles on the site is not enough. First, you need to find out popular topics with your target audience, build a semantic core based on demand, optimize texts and images for search engine requirements (lists, paragraphs, title and description meta tags, H1-H6 headings), and use important keyword phrases. If done correctly, users come from search and other sources, browse content, share links to posts, bookmark the site and advise it. Thanks to the recommendations, the content is gaining popularity and attracting new traffic.

It is worth writing articles for users, but it is necessary to consider search engines, which also need to find them. It is not enough to publish valuable materials on your own website; you should use guest publications on sites popular with a specific target audience [149].

To do this, you need to find blogs and media on suitable topics, find out what resources publish materials for free, and start working with them. For material to be posted for free, it must be helpful and not promotional in nature. Most sites publish only unique texts, so you should not rewrite blog articles. If the article is open to comments, it is necessary to respond to constructive criticism, thank you for the support, answer questions, communicate openly, and be friendly with readers. The article is posted with the author and a link to the site. Even if the link is a closed "nofollow" attribute, there will still be traffic.

With the author's permission, you can publish thematic articles on your own website or translate Western sources. It is desirable to add your own comments, clarifications, observations, summaries, main ideas of the material to the article. With the help of other people's thematic materials, you can make the content diverse and not repeat the already deeply covered topics. You also need to use different content formats:

articles, videos, infographics, research, interviews, surveys, e-books, webinars. Effective repackaging: video can be decoded and converted into an essay, research data can be represented as infographics.

To ensure effective content marketing, it is necessary to develop a ***content plan*** – a publishing content schedule on the web resource. The main advantage of content is that once created and posted material on the site can attract users for a long time. Simultaneously, to strengthen and maintain the position of the web resource on the Internet, you need to regularly update the content.

The components of successful content are [150]:
– exciting and valuable for the consumer texts;
– infographics;
– photos, photo collages;
– screen images and documents;
– video materials;
– feedback, user comments.

The content plan allows you to organize information about the company and its products, facilitates reputation management.

Content by purpose is divided into six groups [150]:
– *useful* – helps to solve a specific consumer problem, covers certain issues (how-to-do articles, life hacks, answers to questions, etc.);
– *for sale* – aimed at increasing sales or increasing the amount of the average check (promotional offers, posts about contests, lotteries, raffles, special offers, etc.);
– *image* – used to form consumer loyalty, increase confidence in the experience and professionalism of the company's employees (news, achievements, information about workshops, cases, consumer feedback, etc.);

− *communicative* – aimed at forming feedback from consumers (discussions, surveys, advice, etc.);

− *news* – notifications about events, changes that have taken place in the company (news, a report from the event, etc.);

− *entertaining* – aimed at increasing user engagement (quotes, memes, a selection of photos or videos, storytelling, etc.).

It can be represented as a table (Table 7.2).

Table 7.2 – Content plan template

Topic	Content type	Keywords	Links to samples	Page for placement	Publication date and time	Status of material	Statistics

It is recommended to combine different types of content for consumer interest.

Creating quality material takes a lot of time to write and promote. Search engine algorithms prefer long grids (texts larger than 1,000 words), so you can use a strategy to develop scalable content to ensure the stability of creation.

Scalable content is a template content, created quickly, with minimal time and money, for which there is always a ready idea. Examples of such content are quotes, memes, consumer feedback, and so on. The main advantage of this type of content is the release of more time for quality writing of long grids (long articles) at the same frequency of publication [151].

Step 4 After creating unique and valuable consumer texts, it is necessary ***to prescribe metatags and attributes***. Consider the most important metatags.

A title is an element of a web page that appears in the window's title in which it opens. It is short (65-80 characters) but as accurate as possible, describes in detail the page's content. An example of a title is shown in Figure 7.6.

planetakino.ua › sumy ▾

Планета Кино в Сумах (Мануфактура) — сеть кинотеатров

Официальный сайт **кинотеатра** Планета **Кино** в Сумах (Мануфактура) (г. **Сумы**, ул. Харьковская, 2/2, ТРЦ «Мануфактура»). Лучшие фильмы — только в ...

planetakino.ua › ... › Расписание ▾

Расписание сеансов: Планета Кино Cinetech+ в Сумах ...

На сайте кинотеатра Планета **Кино Сумы** Мануфактура) ты можешь найти актуальное расписание самых громких всемирных и украинских ...

www.kino.sumy.ua ▾ Перевести эту страницу

Кінопалац Дружба - мережа Кінопалац – kino.sumy.ua

Кінопалац Дружба - найбільший **кінотеатр** міста **Суми**, мережа Кінопалац.

www.kino.sumy.ua › price ▾ Перевести эту страницу

Figure 7.6 – Title of the search engine site on request "Cinema in Sumy"

The title can also be seen by hovering the cursor over the tab opened in the browser (Fig. 7.7). It should not match the title of the H1 site but be unique. At the end of the title, you need to write the name of the company. It is indicated after the main characters by a dash, and it must contain the titles of all pages of the site. This will increase the visibility of the company and the brand.
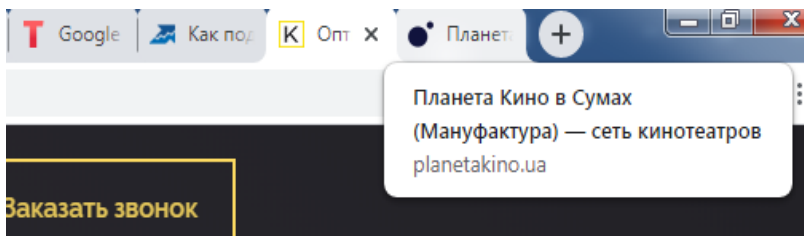
Figure 7.7 – Title when hovering the cursor

The *description* tag is a description of the components of the page. It is placed immediately after the title. From this tag, a snippet is formed, which the search engine shows after linking to a specific web page. This tag indirectly affects how a site will be ranked by search engines. The description should be interesting and attract the attention of users. If the search engine does not like how this tag is filled, the snippet will be formed from parts of phrases that the search engine will find on the page and will consider relevant to the query. The description must be 135–180 characters long, contain a keyword or synonym.

Headings H1–H6 are used to emphasize the most important parts of the text content on the site page. The main title is H1, which is the title of the first level. This is followed by headings H2, H3, etc. The title in the text is needed for structuring. For the most part, three is enough. H4 – H6 level headings are rare. Do not put dots in the headlines. The presence of other punctuation marks is minimized. The text between the <H1> ... </H1> tags is the largest, and between the <H6> ... </H6> tags is the smallest.

The *keywords* tag should contain a list of keywords or phrases that most accurately reflect the page's content. Currently, search engine algorithms do not take it into account when distributing the weight of the site. It has become

secondary, but the addition of keywords from the semantic core also positively affects the promotion of the web resource [152].

The *image name* is the name of the file that you can see when you save it. The correct image name allows you to find the site by search queries and to search for images. Due to the correct name of the site will be able to find visually impaired users. Also, in the case of disabled graphics, the user will understand the content of the image description. Basic requirements for image titles [153]: use of transliteration and keywords; hyphenation with hyphens; you can use the site's name; if there are several images with the same name, indicate the serial numbers at the end (Fig. 7.8).

Image title is the text that is displayed when you hover the mouse over the image. It is not directly involved in promotion but can improve behavioral factors.

The *Alt attribute* is the text that is displayed instead of the image if the display of graphic elements is disabled in the user's browser. It is aimed at an extended description of the image. It is desirable to write in Cyrillic using keywords; you can add the resource name (Fig. 7.9). The alt and title attributes can be the same [153].

| Имя файла: | kompleksnoe-doshkolnoe-obrazovanie_minimalizmlife-home-blog-07.jpg | ∨ |
| Тип файла: | JPEG-рисунок (*.jpg) | ∨ |

▲ Скрыть папки   Сохранить   Отмена
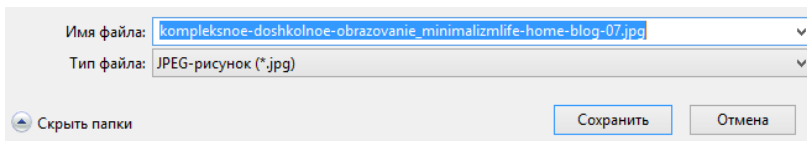
Figure 7.8 – Image name for the web resource

A *page URL* is a form of a unique web resource address on the Internet that helps you find individual pages, files, and images. For SEO, it must be written in transliteration, through a hyphen; search engines do not see lower underscores, they are not recommended to use (Fig. 7.10) [153].

183
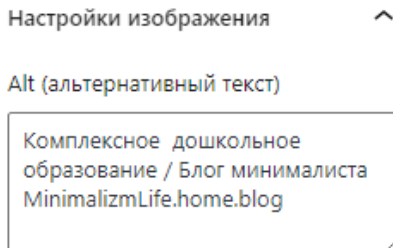
Figure 7.9 – Alt attribute in WordPress

Figure 7.10 – Page URL

Internal linking links the pages of one site with links; it links to other pages of a specific resource with a similar topic. Internal linking allows users to learn more about the information on the site, find additional helpful information, spend more time on the resource, and, consequently, improve behavioral factors. The presence of links indicates the usefulness of the content (in the search engine's eyes) [153].

Links with the tag rel = "nofollow" is used to prevent search engines from navigating to other sites with external links. This does not transfer the weight of your site to someone else. This hides links to external services and standard plug-ins; no weight is transferred through links in comments, etc. [152].

It is also necessary to create a *mirror of the site -* full/partial duplication of the web resource on the content. For example, any web resource opens at two URLs: from www at the beginning of the address and without it. These are entirely different sites for a search engine, although the content of their content is the same.

Site mirror required for [154]:

− collects typed traffic (Users don't always see the exact URL of the site they want in the browser's address bar. They may remember it by ear, but not know how to spell it. A mirror with a configured redirect can solve this problem);

− increases the stability of the resource (if the server hosting the main version of the resource becomes unavailable for any reason, users are automatically redirected to a copy of the site stored on an alternate resource. Copies of the site on different servers allow you to distribute the load at peak times);

− transition to a new domain (creating a mirror helps maintain the credibility of the site to users if for some reason the company decides to change the name and domain);

− domain reservation (is to create a site on a similar domain so that it is not occupied by a competitor).

− for data backup (a copy of the site can help if you have problems with the central resource).

Webmasters use site mirrors to perform the following tasks [154]:

− promotion (if you need to promote the site in different regions, which include different national domain zones or different domains according to industries) (for example, universal domain zone cc as an alternative to the popular domain com);

− removal from under the filter (under certain conditions, the creation of a mirror makes it possible to return the site lost positions after pessimization (loss of site positions in search results or removal from the rankings; search engines pessimize sites that achieve high search engine rankings using black SEO) in the issuance due to search engine sanctions);

− increasing the download speed (reducing the number of failures, which increases behavioral factors).

To be constantly for a site in high positions in the search engine, it is necessary to track changes in search algorithms.

Stage 5 Website optimization involves working with analytics at all levels:

− checking the position of the site in the system on search queries, if necessary - making changes to the promotion strategy;

− analysis of competitors' activities within the chosen topic, their strengths, and weaknesses, testing the hypothesis to gain an advantage over competitors;

− analysis of technical parameters of the web resource, their detection, and configuration: sitemap; robots.txt; server response code; lack of pages; availability of meta tags title, description.

Google's algorithms trust sites that are constantly changing: adding and updating text, images, videos, meta tags, pages, structural elements, and more. You also need to continually analyze the behavior of visitors to the site, regularly check the forms of registration and ordering of the product, order buttons, a menu of the site, the availability of its pages. It is necessary to analyze the obstacles to the order, the reasons for returning to the search at different stages, interactive elements that allow you to detain the user on the site, etc. This data enables you to improve optimization. It becomes more convenient for the visitor to find the necessary information, buy goods, and get acquainted with services; therefore, he returns to such a resource after some time.

Based on these stages, change the code, remove errors, write unique texts, page titles, and increase the web resource's usability. All this improves the reputation of the latter in search engines. Simultaneously, this is not enough, so it is necessary to further carry out external optimization.

7.3 External optimization of the resource on the Internet

The optimization process consists not only of internal but also of external optimization. Generalized ***external site optimization*** is obtaining links to promotional resources from other sources (blogs, forums, various Internet sites, platforms, and thematic directories).

The mechanism is as follows:

− from the point of view of the search service, each website in the index has a specific weight (authority level);

− each link from the donor site, not closed from indexing, transfers part of the weight to the acceptor site;

− as a result, the site-acceptor increases its own weight.

The greater the weight (higher authority) has a site, the better the chances of being in the top ten for the desired query.

With the help of quality links, you can clarify to search engines that the project is attractive to users; it is discussed and recommended. The more links, the higher the authority of the resource in the eyes of search engines. Simultaneously, the links must be high quality: only the quantity does not achieve the desired result.

There are the following main types of links [155]:

− anchor and anchorless;

− open and closed;

− paid and free;

− purchased and natural;

− trusts and spam;

− active and inactive;

− permanent and temporary.

They are all interconnected and do not contradict each other. The main thing is that the links are high quality. And it is desirable, of course, to try to make the link profile as diverse as

possible, to use different types of links. With this approach, external optimization will provide the desired result.

Exceptions are references [155]:

‒ spam (have low quality);

‒ temporary (they need to be renewed every month, and if you forget, they will disappear instantly, so it is better not to use them at all);

‒ closed (do not transfer the weight of the site, so they do not make sense).

It is desirable to refuse the specified links, and other types can be used in any combination.

External SEO optimization of the site will be successful if you consider + [156]:

1) the speed of links;

2) the main parameters of donor sites;

3) work with outbound links;

4) purchase links;

5) obtaining natural quality links;

6) links from social networks;

7) the usefulness of reviews about the site.

Let's consider each of the aspects in more detail.

1 *Link speed*. Search engines track not only the number and quality of links but also how fast they appear. For the site's position to increase in search, it is important to be guided by two principles: to gradually increase the mass and, especially, the approach to young sites.

Smooth build – the number of links should be increased gradually, smoothly. If there are sharp jumps, the links that appeared during the "link explosions" will not only not work but also significantly damage the external SEO optimization in general.

A particular approach to young sites – search engines do not trust young sites, so you need to build links in small

portions and only after three months of operation of the web resource in the search engine index. After a year, you can continue to purchase more actively.

2 Basic parameters of donor sites. In each subject in different conditions of competition requirements to values of parameters differ, but allocate the following basically:

− *trust the donor site*. If the trust is low, the effect will be negative; if the confidence of the donor site is high, search engines will believe that in such a resource, the trust should become high;

− *compliance with the topic* is checked manually. And the closer the donor is to the subject of the selected site, the stronger the link will be;

− *spamming*: a large number of outbound links to low-quality and non-thematic resources on the site, links from spammed sites are harmful, not help to promote;

− *participation in link exchanges*: the donor shouldn't participate in popular exchanges.

You could check these and other donor parameters with the help of special services.

3 *Working with outbound links*. External optimization methods include working with outbound links (in which the promoted site links to third-party web resources).

At the same time, you should control that the site's weight does not go through them. In this case, it is recommended to prescribe the tag rel = nofollow to all of them: so search engine algorithms will understand that you do not need to transfer the weight to external Internet pages.

And "unnecessary" links that could accidentally get to the resource along with plugins or spam must be removed. Certain services will help to find them.

4 *Purchase links*. The easiest and most well-known way is to buy links that are divided into several types:

– with daily payment;
– posts (from blogs);
– from articles;
– permanent.

Popular services for buying links are "Miralinks" (promotion through articles), "Sape" (daily payment), "Gogetlinks" (permanent links).

5 *Obtaining natural quality links*. Incoming natural links appear without the company's participation, so it is challenging to influence this process. Increasing the likelihood of their occurrence, it is important to improve your own site and pay close attention to competent internal optimization, especially unique and valuable content for users.

Another way to get natural (from the point of view of search engines) is to register in directories. This is better done manually than with automated services. It is pretty effective to register in the current "live" catalogs, which are carefully moderated.

6 *Links from social networks*. Often SEO optimizers influence external factors of optimization through links and signals in social networks, transitions on which search engines so appreciate. Their cost is minimal, and the effect is significant, especially if you buy in popular groups or well-known profiles.

Simultaneously, you should distribute the links on the site evenly, not to allow links to only the main page. It is on the page to which they link; the more quality and thematic resources, the higher the chances of being in the top ten.

7 *Useful reviews of the site*. The story of a positive experience of purchasing and using a product affects potential customers many times more than, for example, standard booklets and leaflets.

Nowadays, *crowd marketing* is gaining popularity - a method of sales promotion based on finding thematic resources, which discuss products sold by the company, give advice, recommendations, publish truthful reviews, and links useful to the target audience.

The main difference between crowd marking and spam is that its purpose is to help the user, give an expert recommendation, and only link to your resource.

In this case, content plays an important role. If it is useful, then users link to the company's website on the forums. Such links increase trust in search engines and contribute to additional targeted traffic [157].

Thus, external optimization measures allow the basis for stable site positions and increase in the number of users, and regularly updated content, exciting and valuable for consumers, significantly speeds up this process and is effective for a very long time after its placement on the site.

7.4 Web resource promotion

There are the following main stages of customer promotion from interest to purchase [158]:

1) **acquaintance**. Before offering a proposal to evaluate websites to obtain as detailed information as possible about the owner of goods and services, their analogs. Significance at this stage is SEO-optimization, contextual advertising, and expert blogging;

2) **interest**. Involves drawing attention to the brand. At this stage, dynamic remarketing, video marketing, direct marketing are important;

3) **decision-making**. Before you are ready to make a final purchase decision. At this stage, the quality of the website

is of paramount importance, and it should be aimed at persuading you to buy the product;

4) **purchase**. Provides for purchase on the site. The lowest number of evaluations will come to this stage. In the nearest highest value is the convenience of buying, delivery of goods as well. After completing all the steps, a satisfied appraiser can re-purchase something on a particular resource and eventually turn it into a permanent loyal acquisition.

Compared with the specified stages and the number of users present during them, the sound bottoming, so-called "funnel" sounds.

After all, the general strategy of gradual movement through the "funnel" of sales can be implemented to the *main five tasks*:

1) attract the attention of users who are not yet familiar with your business;

2) involve evaluators who already know about the product;

3) provide information for those interested in buying;

4) "convert" interested users from buyers;

5) re-engage the core audience - those who have already become a client.

In the comprehensive promotion of the website, the number, and synergy of selected marketing tools.

Today, the success of a website requires its complete promotion - work on internal and external factors that affect search rankings. More multichannel can provide a sufficient level of efficiency. The organization and optimization of websites provide a set of works to increase its visibility in search engines for each user search for organized search for keywords targeted to thematic sites and businesses. There is a need for comprehensive promotion in social networking

groups, monthly channels, publications on thematic resources, etc.

The main channels of site promotion [159]:

‒ contextual advertising (showing advertisements to users interested in a particular topic);

‒ media advertising (display of advertising banners on other sites);

‒ branch and price aggregators (platforms with catalogs of goods from various companies);

‒ targeted advertising on social networks (allows you to show ads according to demographic characteristics and personal interests of users);

‒ video advertising and mobile advertising;

‒ email-marketing (sending links by e-mail to users who have agreed to receive such correspondence);

‒ SMM (creating a loyal audience on social networks by publishing helpful information and communicating with potential buyers);

‒ classic remarketing (a tool that allows you to track users who have been on the site and re-remind yourself through ad serving);

‒ dynamic remarketing (showing the advertising of a particular product (service) to a user who visited the page with this product or added it to the cart);

‒ maintaining an expert blog (exciting and helpful material for users, posted on the site or other resources with the ability to go to the leading site of the company);

‒ affiliate programs (forming agreements with portals that place information on their pages, particularly about other web resources, receiving some benefit for themselves. Referral link - a unique address provided to the partner to place information on it. This link determines from which service was made the transition);

– SEO promotion - search engine optimization;

– promotion through the visual search engine "Pinterest".

"Pinterest" is a search engine that is effective if you have a site with regularly updated content (online store, company website with an updated blog, etc.). "Pinterest" functions primarily as a search engine with elements of social networks, in which search engine optimization and search terms are important. The strategy of working with "Pinterest" involves two stages: the promotion of the account in "Pinterest" and the optimization of the resource under "Pinterest".

Pinterest account promotion includes [159]:

– account design;

– transition to business format from the standard;

– design of boards and covers to them;

– ranking boards by keywords and promotion of account;

– integration of web resource content into thematic boards.

Resource optimization for Pinterest requires [159]: the use of vertical or square images, title images, transliteration image names, and Pin it icons on the web resource. Promotion through "Pinterest" allows you to increase the organic traffic of the web resource several times (discussed in more detail in the workshop).

Search engines collect information about visitors from many resources and display the output in the search engine so that it is most relevant to a particular query. Recently, a significant role in analyzing consumer behavior during the transition to a site is played by the behavioral factors of the web resource.

Behavioral factors of a web resource are a set of indicators of site users' behavior that allow search engines to draw conclusions about its quality. Such indicators include:

– actions of users when they analyze the results of search results, covering the analyzed resource;

– their behavior after the transition to the web resource;

– user actions after visiting the analyzed web resource.

The first parameter is CTR (click-through rate, or clickability of the snippet) in the search results. The snippet is a small text block displayed on the pages of the search engine. The main purpose of the snippet is to convey the essence of the page, attracting the user's attention and motivation to move to a particular page (Figure 7.11).

CTR is calculated as the ratio of clicks on the site to all impressions in the issue, multiplied by 100%. Search engines improve the position of Internet projects with a high CTR so that other users can also get the information they need.

Search engines track the average time spent by users on the pages, the depth of views, the bounce rate (the number of page closures without action). The site owner himself can check such performance indicators with the help of specialized software developments, such as "Netpeak Spider." It systematizes behavioral indicators from Google services in a single table for analysis (for this application to work, a Google Analytics account must be activated). Consider the percentage of users who returned to the site, the number of page views, and the resource to bookmarks. After the user closes the site, search engines monitor whether he returned to the results of the issue. If the user, in this case, goes to other resources on the same request, it indicates that he did not find the information he needed on the previous site.
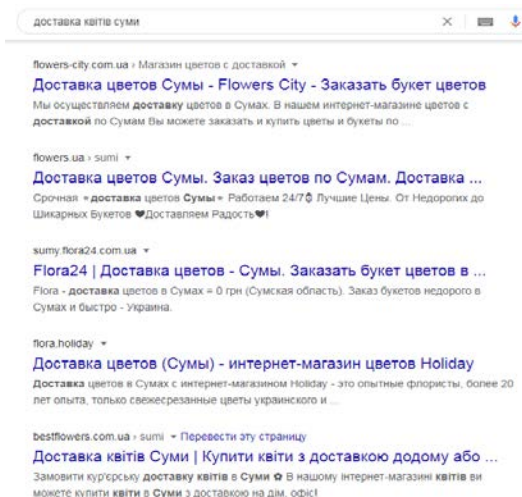
Figure 7.11 – Snippets of flower delivery sites in Sumy in the search issue, as a result of entering the query "delivery of flowers to Sumy"

A web resource is a company's business card that can help form the image it needs. To be seen by target consumers, it is necessary to create a user-friendly web resource, conduct internal and external optimization to strengthen and strengthen the position in search engines, and develop an effective strategy for its promotion on the Internet.

WORKSHOP

Case 1: Promotion of business in the health domain using the social network "Facebook"

Own website gives industrial companies unique opportunities for globalization and transition from "mass" marketing to customized marketing. The site is better than other tools provides qualitative information, supplementing it with interesting illustrative content. In addition to 24/7 accessibility, another advantage of the site is integrating all elements of the marketing mix). In this regard, we argue that the online marketing of bioproducts must always start with the site. It is appropriate to focus a large portion of your financial and time resources on it. Social networks support the promotion of a corporate site. Interactive communication with consumers is facilitated by the existing registration process on a site, conducting surveys among clients, organizing email newsletters, implementing loyalty programs, etc. The site allows to solve such issues:

–   negative demand for biological products when a significant proportion of potential consumers refuse a specific product type (due to lack of sufficient information). Site is the instrument of conversion marketing in this case;

–   low demand when serving as an incentive marketing tool site distributes necessary information about biological preparations increasing interest in buying among potential consumers.

Veterinary businesses have complex products, so it is more appropriate to choose a site for online business. All information on site should be structured and understandable to potential customers. Most of those who know the effect of the

products are veterinarians, but the site needs to be designed so that individuals without special education could understand the information

We compare the sites of the main competitors in biological vaccine production in Ukraine: SE "Sumy Biological Factory", SE "Kherson Biological Factory" and LLC "BioTestLab" (Kyiv). Consider the essential criteria for competitive site analysis:

1 Usability.

2 Site structure.

3 Site indexing.

4 A number of external pages.

5 Total traffic.

6 Behavioral factors: refusals, page depth, time spent on site.

7 Traffic sources: direct, referrals, SEO, SMM, Email Marketing and banner advertising.

8 Adaptability to the mobile version.

Usability criteria for veterinary business websites are color gamma, font, image placement, site load speed and identity. Usability for biological product manufacturers is the primary indicator of keeping comparability between colors of a site and corporate style. SE "Sumy Biological Factory" uses a pastel-blue color scheme. Pictures posted on the site are long-loaded, but all of the excellent quality. Different fonts are difficult to perceive. SE "Kherson Biological Factory" has a very simplistic landing page. The color scheme is unattractive. Too much green is present. Pictures are different in form and format. Almost 50 % of photos are downloaded from the Internet. The fonts on the site are different. The site of LLC "BioTestLab" differs from competitors. It is the most organized. There is a fast and continuous playback video screensaver on the homepage. The site is made in the same

style. There is a variety of colors, but the most part site is presented in light green.

The site structure shows how convenient the main tabs on site are and how easy it is to find the information you need. It should be ergonomic. The website of SE "Sumy Biological Factory" has an easy structure. It consists of the following tabs: "About the company", "Product catalog", "Cooperation", "Contract production", "Prices" and "Contacts". The structure of the site of SE "Kherson Biological Factory" includes such tabs: "Main", "Products", "About us", "Contacts". The structure is concise. There is not enough information to make a decision. There is no price tab. The main page contains news dating back to 2017. If the company was presented as a landing, then it was necessary to provide the following basic information to potential customers: "Information about product and its application", "Prices", "Company" and "Contacts". Site of LLC "BioTestLab" has the following structure: "Company", "Infocenter", "Production", "Products" and "Contacts". It is concise and understandable. The price tab is missing. New information about products is presented in the tab "Infocenter".

Site indexing reflects the number of pages in the search engine. Google was chosen as the leading search engine for the study. The more pages, the more traffic we can get to a page on the Internet.

External links are all sources that link to a specific site. In other words, they are called donors. The prominent donors may be suppliers of raw materials, resellers, potential customers and clients. The more companies we can engage with online, the more potential customers will go to a particular site. You can interact and be a barter donor.

Total traffic shows the number of visitors to a specific site over a given selected period. One user can visit the site several times, so the total traffic does not match the number of

people who saw it. Consider the listed characteristics for competing sites in Table 8.1.

Table 8.1 – Comparison of the sites of biological products manufacturers by page count, external links and total traffic

Enterprise	Domain	Number of pages in Google	Number of external links	Total traffic
SE "Sumy Biological Factory"	http://biofabrika.sumy.ua/	155	24	172
SE "Kherson Biological Factory"	http://khersonbiofabrika.com/	59	5	420
LLC "BioTest Lab"	https://www.biotestlab.ua/	692	26	11,540

The leader by the number of pages and total traffic is LLC "BioTestLab". A large amount of traffic depends on the city where the enterprise is located (the capital of Ukraine), the number of registered farms nearby, the effectiveness of sales managers, etc.

There are three parameters to characterize behavioral factors: refusals, page depth and time spent on the site (Table 8.2). A site refusal occurs when a user logs in to a site and visits only the homepage without taking any action, that is, a click. Page depth displays the number of pages a user navigates. The users' refusals on the sites of surveyed enterprises are quite positive for the veterinary field as they do not have a direct "Buy" or "Order" buttons. The depth of site is

the best in SE "Sumy Biological Factory", which can be explained by the fact that the necessary information for consumer is many steps, or the consumer is interested in learning more about the factory. The best behavioral factor that shows how much a site is liked by a potential customer is their time spent. The most competitive by this parameter is LLC "BioTestLab". Such statistics is caused by the interest of international counterparties who have visited the site and spent a long time on it. Not a deep site can indicate that all the necessary information is located in the least number of steps. Consider all traffic sources for surveyed companies in Table 8.3.

Table 8.2 – Comparison of visitor behavior on competitors' sites

Enterprise	Behavior factors		
	Refusals	Depth	Time
SE "Sumy Biological Factory"	68 %	3.1	34″
SE "Kherson Biological Factory"	66 %	2.5	32″
LLC "BioTestLab"	59 %	1.88	2′06″

Table 8.3. – Sources of traffic to competing sites

Enterprise	Sources of traffic, %					
	Direct entries	Referrals	SEO	SMM	Email	Banner advertising
SE "Sumy Biological Factory"	37.94	0	56.11	5.96	0	0
SE "Kherson Biological Factory"	0	25.85	48.3	25.85	0	0
LLC "BioTestLab"	14.72	0.22	84.36	0.7	2	0

The Sumy and Kherson factories use only half of the capabilities of a website's promotion tools to attract traffic. Direct actions can be an indicator of how loyal customers are to a particular business. All analyzed sites have an optimization that helps users to find them quickly.

Concerning SMM, the best efficiency is observed in SE "Kherson Biological Factory". The referrals are often from social networking sites and resellers who post factory information on their social accounts. The close relationship is shown in the referral statistics. It shows the good relationships the factory has with its employees, resellers, suppliers and customers. SE "Sumy Biological Factory" has no representation on social networks, although it has a high percentage of traffic sources. This situation can be triggered by discussions of targeted product customers on various social media pages.

The simplest of the elements of traffic sources is email marketing. It is aimed at legal entities present in the veterinary field. Email addresses of farms and veterinary pharmacies are not difficult to find and send out with a sales offer. Different messages should be made for each target buyer, depending on the species and the number of animals in the holding. Under the conditions of administrative reform and creation of integrated territorial communities in rural areas (it is estimated that at the completion of the reforms in Ukraine, there will be about two thousand communities farmers should actively develop. Today, there are more than 26 thousand farms in Ukraine, which is less than 10 % of their possible number. The most efficient farming is focused on livestock products, the production and export of which is more stable in line with crop production. The dairy cluster and the pig-breeding cluster are powerful here, and the lamb cluster is also promising.

Effective use of the Internet to promote products is in LLC "BioTestLab", which uses the maximum number of indicators. This company uses direct actions, referrals, SEO, SMM and email marketing.

Developed sites generally contain all six traffic source metrics in their activity. The modern trend is that the use of smartphones to access the Internet is gaining in popularity. Mobile phones account for almost half of the time people spend on the Internet. It is important for site of a biological products manufacturer to be customized for the mobile version.

Veterinary business can be targeted on social networks for sale, but this is the next step after creating a friendly atmosphere between seller and buyer. Social networks have different target audiences. To orient business in the social space, you should first determine the target audience that will most successfully promote your product. Currently, in Ukraine, there are such popular social networks: Facebook (used by about 44 % of respondents), Instagram (used by 18 % of respondents), Twitter (used by 5 % of respondents). Other social networks account for 33 % of respondents' answers [161].

Facebook is the leading social network for the promotion of Biological Factories as the target audience is over 25 years old. This audience is already educated and can decide independently on the purchase of such a complex product.

The stage of creating a page in a social network goes through the following steps: gathering information, choosing the way of presenting information (creating a page, group or account), creating a page/account/group under a company name, adding relevant information and contacts, creating and filling a page with content, inviting potential customers. We compare the advantages and disadvantages of accounts, groups and pages (Table 8.4). For industrial companies, it's better to

create a social networking page because it has the best functionality for doing business.

The quality of images on a page requires specific parameters. Different types of photos fit into different geometric shapes, so you need to follow the rules of expansion. For example, the main photo of a page is contained in a circle. The cover fits in a rectangle. To provide better image quality to profile pictures, you should save them in PNG format.

Table 8.4 – The difference between presenting enterprises on Facebook social network

Way of bringing information	Advantages	Disadvantages
Account	1.The ability to invite an audience in one step. 2. Easy of use. 3. New posts cover all friends. 4. Visibility in the news feed	1. Lack of statistics control. 2. Only 5,000 people can be added to friends. 3. Administration may not allow an account with a suspicious name. 4. Advertising and sales are blocked by the administration
Group	1. Group posts are visible in the group members' news feed. 2. Personal messaging (up to 5,000) is possible. 3. The ability to make a group "closed" (for VIP clients only)	1. Two steps are required to invite a potential audience (Add to friends – Invite to a group). 2. Groups cannot be advertised. 3. Visible only to those users who are invited or intentionally searches for a group

Way of bringing information	Advantages	Disadvantages
Page	1. Ability to create an event and invite the target audience. 2. More functionality for visitors. 3. Ability to promote the page (targeting). 4. Statistics available. 5. Unlimited audience 6. Option to set the mode "not online"	1. Two steps are required to invite potential audiences (Add to friends – Invite to page). 2. Complex interface for use

You can use the following resources to create the content yourself: https://www.canva.com and https://crello.com. These resources include free templates but also available paid content. Some ideas for a veterinary business can be found in such tabs as "Animals" and "Medicine".

One of the key tools on a page in a social network is a survey. It helps to focus issue under consideration. It seems that the client's opinion is important and influences the voting. For veterinary businesses, the following survey topics are possible: about farm animals, about pets, about vaccination and revaccination, about the weight of animals and others.

Searching for clients of veterinary businesses is not complicated. Engaging consumers on Facebook social network page is possible by searching for similar groups or livestock accounts where a target audience is located. There are many veterinary referral pages on Facebook. A company can join other pages and groups and post on its behalf. The benefits of this search:

– publications are related to topics;

– consumers are interested in such information;

– page administration does not need to make additional posts a day to keep the audience engaged.

Practical application of targeting advertising. All Facebook advertising is done through the Ads Manager. It allows you to view, edit, and track all of your Facebook advertising campaigns, groups, and individual ads. First, you need to determine the purpose of creating a Facebook advertising campaign. Topics for advertising a business page for organic products can be: driving people to a website, increasing conversions on a website, promoting posts and promoting a page. The main categories of choice for advertising campaigns for animal health companies are Awareness (brand awareness and audience reach) and Views (traffic and audience engagement) (Figure 8.1).

Depending on the purpose, you need to choose where your potential audience will go: site views or messenger (Figure 8.2). A more effective parameter for optimizing your ad campaign is "Clicks on the tab". Parameter "Shows" is less effective but has a larger audience. Optimization for displaying manufacturers' ads is better targeted at "Clicks on the link".

You can install or not install the deadline for ads. In this case, the advertisement will be valid until the lack of funds in the account (Figure 8.3). It is essential to choose the duration of the ad, either daytime or full time.

For such a parameter as "Location" we choose the whole Ukraine or choose a segment we would like to enter. If a business fully covers a particular locality, it may exclude it from the list. Delivery of the vaccine of studied enterprises can be made to any corner of Ukraine.
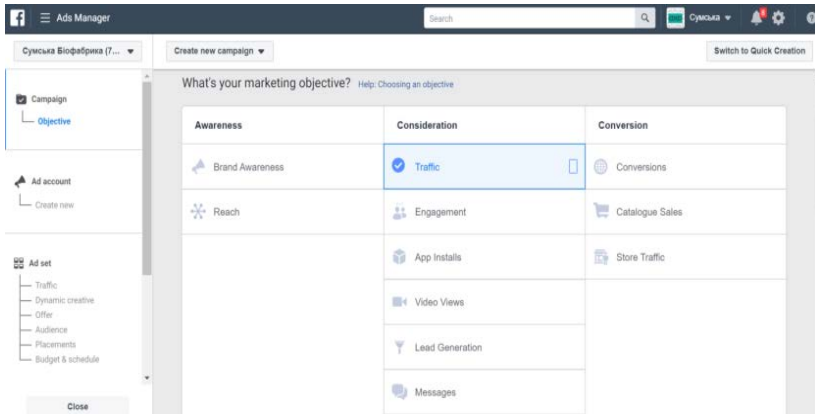
Figure 8.1 – The first phase of a Facebook social networking campaign
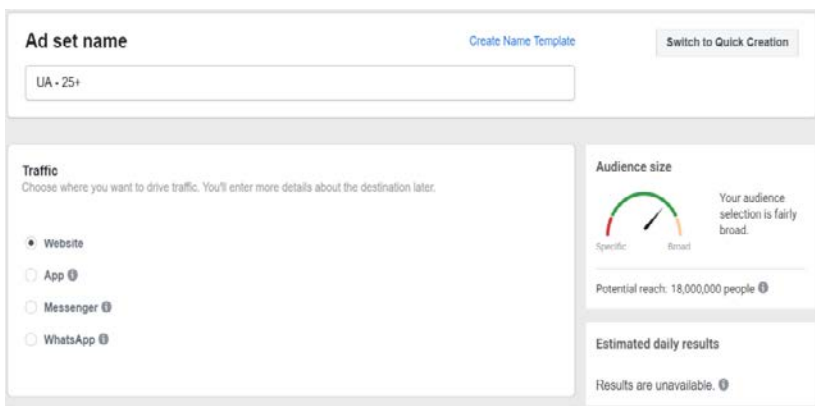
Figure 8.2 – Choosing a traffic destination

Budgeting and evaluating the performance of targeting ads.
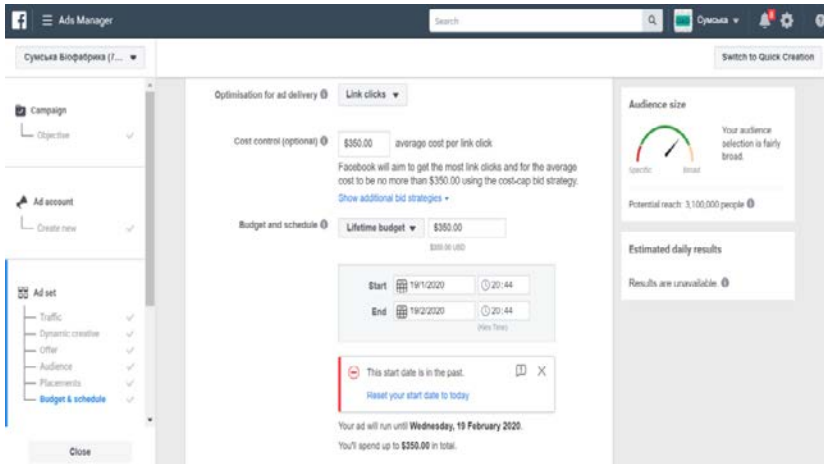
Figure 8.3 – Targeted advertising budget

Therefore, it is not appropriate to use the location tool. The best age to target ad campaign of biological products manufacturer is 30 years. When choosing a gender, we select the parameter "All" since both men and women can be buyers of products (Figure 8.4).

Figure 8.4 – Targeting of audience

Interests that are most relevant to the target audience: farm animals, animal welfare, farming, rabbits and more. For example, Figure 8.5.
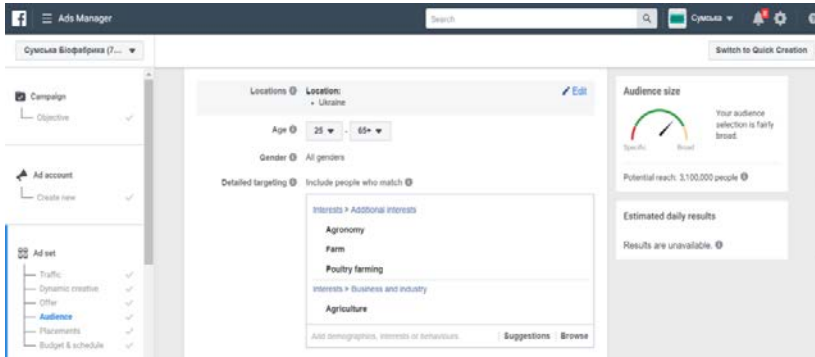
Figure 8.5 – Interests of a target audience

Communication is a unique and essential component. Depending on the subject matter of the advertising campaign, it can be distributed to people who have liked a company page, friends of people who have liked the business page, all except for subscribers. The last one is targeted when the purpose of an advertising campaign is to raise the awareness of a potential group of people about the manufacturer.

Next is *creating advertising*. The ad format is selected (image or video). It is difficult for vaccine companies to develop informative videos and attract viewing, so it is best to use a product picture. It is essential to place the company logo on the image for better identification among competitors. Next, we upload the image and stick to its format. We add the main text, title and description of the advertisement. We check text and add the URL of a site. The call-to-action for animal vaccine manufacturers can be: if product advertising is "Contact us", "Get a unique offer", if traffic attraction is "Subscribe" and "Learn more". Then we click "Review and publish" after that advertising campaign starts. Further, you need to monitor performance and analyze statistics. The considered steps are unified to create an advertising campaign

for any industrial enterprise in Ukraine. Targeted advertising opens up new opportunities for the Ukrainian biological preparations market. It focuses more on individuals and helps attract new target audiences to collaborate with businesses. Such advertising is costly but has a positive economic impact.

Case 2: Goods and services promotion through Pinterest

Pinterest is a forward-thinking visual search engine. And the content has to be adapted first and foremost to the search engine. At the same time, there is a social component: you can view your friends' boards and show your material. Like any other social network, Pinterest allows you to like, share and add friends. It can be effective for blog owners and sites with constantly updated content or online stores. Search engine optimization and keywords are important for promotion, which can be ignored on social networks.

Pinterest audience [163; 164]. Pinterest's statistics are as follows: 30 % of the audience are users at the age of 25 to 34 years, 25 % - at the age of 35-44 years, 22 % - up to 24 years, 16% - 45-54 years, 7% - over 55 years. At the same time, 34 % of users have a special secondary education, 40 % - at least a high school education, which is twice more than among those who have completed or incomplete secondary education; 34 % live in the suburbs, 30 % are city dwellers, and 25 % are rural residents. In addition, 3 % of users use Pinterest to plan purchases, 96% - to research and gather information, and 87 % - to help decide what to buy.

The Pinterest promotion covers two areas [165]:

1) promotion of the account, the attraction of followers, and introduction of the content on the boards;

2) site or blog optimization under Pinterest.

The main components of Pinterest promotion are [166]:

1) *pin* – images that users find in the Internet and save in their accounts. Each pin have a link to the website and some information;

2) *board* – a group of saved pins at the account owner request;

3) *tape* – a list of user pins, which are signed and that may be interested in the topic;

4) *account*.

Effective promotion with Pinterest involves the following steps:

1) account creation and decoration;

2) board decor;

3) board ranking from most important to least important;

4) using keywords;

5) working with pins;

6) account promotion.

Consider in more detail each of the stages [165]:

1 ***Account creating and decor.*** First of all, you need to create a business account on Pinterest, fill in the information about the company, confirm the rights to your own resources (website). By linking your site and other platforms to your business account, analytics will show traffic to your site from Pinterest and other channels, such as demographics, your audience's interests, and help you track your campaign performance.

Account decor provides

– detailed *description* in the profile with keywords, a clear name (for example, the blog "MinimalizmLife". Advices and ideas about minimalism, simple life, cozy home, style searching and wardrobe organization, healthy food, hobbies and interests);

– the use of attractive *photography* for the avatar (desirable the same as in other social networks);

– *link* to the site (for example, MinimalizmLife.home.blog);

– convert a personal account to a *business account* (for an existing account). It gives access to statistics to optimize the pins from the site (rich pin), mailing with promotion advices.

2 **Boards decor**. All boards in Pinterest can be in formats: open, secret, and group.

Open boards are visible to all users. They should be related to the main company's business and attractive to the target audience. It is required a minimum of 25 pins on the open-access board.

Secret boards can only be viewed by account owners or users who have been granted access to them. Secret boards are created on the business subject until they reach 25 pins and then transferred to open access. Secret boards can also store pins that are not related to the business or are not interested to the company's target audience.

Group boards are boards that have two or more owners. The main one is creating it, selected keywords, optimized the title, made a description, and created a cover according to all the rules of SEO promotion on the platform. Thus, in one place gathers the target audience is interested in specific information on a particular topic.

Advantages of group boards:

– company pin see all participants of the group board;

– increases the target audience;

– it is possible to increase the subscribers number and repins many times over (saving pins to another account).

You should use keywords in the board names (for example, for a blog about minimalism – minimalism,

minimalist food, minimalist fashion, minimalist lifestyle, minimalism wardrobe, minimalicticky chic etc.).

Each board must have a description. For example, the Ideas for a Blog board might have a description that reads: "Blogging for beginners. How to blog step by step, how to promote blog posts, how to blog for money, what to write in a blog. Advice on blog promotion and how to make money blogging".

You must select a cover for each board. *Basic requirements for covers:*

− use images without captions;
− images must be selected in the brand style;
− a uniform color scheme in the board design.

The company's pins can be stored on both the main and other relevant boards.

3 *Boards ranking*. Boards should be placed in order from key to less important.

In the profile, in the first place must be the motherboard. The topic is related to the name of the business (for example, in the blog about minimalism - MinimalizmLife). The mainboard should contain pin from articles only from your own site. If there is a lot of content, it can be divided into several boards. In addition to the main, there should be 5–10 accompanying boards with less popular key queries (for example, for a blog about minimalism: minimalism lifestyle, minimalism fashion, minimalism food, healthy food, healthy eating, healthy recipes, style search, simple life, minimalist fashion, minimalist lifestyle, style minimalist, etc.).

At the top of the profile must be the most relevant boards that related to the essence of the business (for example, minimalism and minimalism, minimalist fashion, style search, declutter flat). Seasonal boards can also be placed at the top (for example, New Year and Christmas in winter, Halloween,

Black Friday, 8 March, and Easter in spring). It is advisable to place the least relevant boards (spring, autumn, and summer in winter) and secret.

4 *Use keywords*. First, analyze the queries in Pinterest . To do this, make a list of keywords that appear below the search bar.

For example, keywords for the word "minimalism" (query "minimal*"): minimalism aesthetic, minimalism wallpaper, minimalism interior, minimalist tattoo, minimalist nails, minimalism, etc.). Phrases are also displayed: minimalist wardrobe, minimalist cosmetic bag, minimalist apartment.

You must select at least five queries and enter them in the appropriate places, as well as add your own options. Pinterest is a search engine, so using keywords in exact matches will allow you to get more organic traffic.

Keywords should be used in places like:

− pictures name and their description, attributes Alt, Title to each image in the article;

− account name (up to 30 symbols);

− Pinterest profile "About you" (up to 160 symbols);

− pin description that involves keywords and #hashtags;

− board name;

− board description (up to 500 symbols).

5 *Working with pins*. Pins in Pinterest are ideas, visual bookmarks, user-designed content that users all over the world store or upload to their boards from the ideas catalog.

Each pin contains a link to the website (URL) from which it was saved on the Pinterest board. Today, the online service Pinterest supports downloading and storing pins in several graphic formats.

1 Image pins in JPG, PNG-8, PNG-24, and GIF format. These types of visual bookmarks are represented in raster graphics.

2 Video pins from YouTube, Vimeo, and TED.

3 *Rich pins* are extended pins that provide Pinterest and users of the global ideas catalog with additional information from the source site. Using detailed pins, the system picks up the pins description from the site and thus better indexes.

There are the following types of detailed pins [166]:

1) *pins with the goods*. Promote products and make shopping easier because they contain a price and a direct link to the product website. They show the most up-to-date information about the product, as well as its price and availability;

2) *article pins* are used by media and bloggers to advertise their services and promote articles. Each pin contains a title field, author, and a brief description of the publicized article;

3) *pins with a prescription*. Best suited for publishing recipes and all the necessary information about them. In them, for example, you can add a link to buy ingredients;

4) *pins with the application*. Pinterest is a worthy competitor to application stores because this feature includes an installation button.

Reach pins for articles and recipes are updated every time the site changes. Reach pins create a context for the advertised product or service. They use metadata and allow users to pins products directly from the company's website.

It is recommended to use different images for one article to increase traffic to the site. Pins can be developed in various graphic editors, most often using "Canva".

6 ***Promoting your account***. You need to save 10-15 pins per day, preferably 5-7 pins for 2-3 posts during the day to promote

your account. It is necessary to save both pins of the articles and pins of other people in thematic boards. It is recommended to have 1 own pin for 10 other people's pins.

It is necessary to subscribe to other popular Pinterest accounts on the company's topic, which are most interesting for the target audience, and save them to the company's account. You can also leave comments under other people's pins (up to 500 characters). You need to verify your page. Next, you will need to place the Pinterest icon on the sidebar of your website. You can also post links to your Pinterest boards in specific articles on the site.

Pinterest tools to help promote your business. Advertising is one of the effective ways to increase brand awareness, and Pinterest provides its users with a variety of formats for this tool [166]:

1) *advertising pins*. Although these pins look normal, they significantly affect brand awareness, increase engagement, and increase traffic. They work on the principle of promoting posts on Instagram – they allow more users to see the content;

2) *advertising videos*. Photos and infographics on Pinterest also include videos. Business account holders can upload videos directly to the platform. Promotional videos are an effective way to attract the attention of users who watch the feed. Such content stands out from other publications and allows you to attract users, as well as receive helpful information, track saves, views, and clicks on the website;

3) *carousel* - another tool similar to advertising on Instagram. Carousel is an image gallery that can be used for advertising. This tool allows you to tell a story or share with the audience several blocks of content;

4) *pins for mobile applications*. Since 80 % of Pinterest users come from mobile devices, it is not surprising that the platform can offer advertising applications. This format turns

the platform into a real competitor to online stores because it allows users to download applications directly from Pinterest.

Therefore, the use of the described techniques will significantly increase the traffic of the company's site. The primary condition - the content on the site must be updated regularly. Today, it is one of the most effective free tools for obtaining organic traffic from search engines.

Website optimization for Pinterest promotion. Preparing the site for [159]:

1) selection of a successful site template;

2) availability of at least 25 articles (posts);

3) establishment of an analytics system;

4) the use of vertical pictures;

5) attractive and exciting headlines;

6) correct names of pictures;

7) Pin it button in the picture.

Consider each of these points in more detail.

1 *Selection of a successful site template*. The basis of Pinterest – a visual component that users value, so the site's design should be modern, professional, and straightforward.

A site with a design of the early 2000s with a lot of text, small photos from other people's sites, bright banners is not suitable for Pinterest. Users can access it but will not stay long. Most of them come to Pinterest from smartphones, so it is better to immediately choose a site template adapted for mobile devices and Pinterest.

2 *Availability of at least 25 articles (posts).* The more content to promote on Pinterest, the better. If there are several posts on the site, you should not expect significant traffic from the pins. It is also recommended to use affiliate links, free material for subscription to mailings, sale of a cheap online product, or recommendation of products and services of the company for the greater interest of potential customers.

3 **Installing the analytics system**. To quickly analyze site data and traffic requires an analytics system.

4 *Using vertical pictures*. One of the most important things to promote your site on Pinterest is vertical images. Recommended image sizes: 600 pixels × 900 pixels (recommended by Pinterest) or 735 pixels × 1102 pixels (Canva size). The optimal image size is 735 pixels × 1102 pixels. It will be vertical, which is better viewed directly on Pinterest. The height of the image can be any height: if it is too high, then Pinterest will "collapse" it.

Image size for different networks [167]:

− 1280 pixels × 720 pixels – YouTube, Twitter, Facebook, LinkedIn, PowerPoint (images of this size can be placed at the top of the article;

− 600 pixels × 900 pixels – Pinterest (images of this size can be placed at the end of the article);

− 900 pixels × 900 pixels – Instagram.

The success of image repins depends on the design of the image, the readability of the font used. You should also check how the pin looks on the smartphone screen.

General recommendations for pictures adapted for Pinterest:

− the image must be vertical;

− the image must be of high quality;

− it is desirable to use bright colors (pink, purple, and red);

− it is better to avoid photos of the face;

− you need to use branded fonts for the pin title;

− the title should be large, easy to read, and fascinating;

− the title must be placed inside or at the top of the pin;

− URL of your site is better to indicate in the picture pin;

− you should set a watermark/logo on the pin image.

Therefore, vertical images are the best option for creating pins. It is convenient to use specialized online services that contain templates for creating images for Pinterest to edit pictures.

5 *Attractive and exciting headlines*. The whole point of headlines is to get users to read your article or look at your product. Thus, an intriguing title is a right way to get more savings of your own pins and reviews [168–170].

It is important to put a title on the vertical picture, which will explain the essence of the article. As a result, the pin will be clicked and follow the link, and not just save a good picture. If the post has additional material to download, this should be indicated in the image. For example, "List of the way to the minimalist + checklist".

The image should clearly make it clear to the user that:

a) you need to click on it to go to the site and find out the details;

b) according to the link, it is not only the text waiting for it but also a free guide, checklist, master class, or something else useful.

If you place the title at the top of the pin image, even if the reader wants to share the article on Instagram or Facebook, the title will be noticeable.

6 *Correct names for pictures*. Pinterest is a search engine, so an apt description of the image containing keywords will help the image later appear in the search Pinterest and find new customers. The image must be displayed in the title if the user flips it to the board.

The picture title should highlight the article's essence; captions of images like "qwe123.jpg" should not be.

Before uploading images to the site, they must be renamed using keywords transliterated through a hyphen in the

title. If there are several pictures in the article, their number is indicated at the end. For example, spysok-v-dorogu-minimalista-i-chek-list-01.jpg. The description of images is set in the alt and title fields. It is advisable to make a description to display the essence, keyword, source (site). For example, "Minimalist's way list + checklist / Minimalist's blog MinimalizmLife.home.blog". This will help not only in Pinterest but also in search engine optimization in general.

7 ***Pin it button in the pictures***. You will need to place a Pin it icon on your site that will appear when the mouse hovers over the image. The button reminds the user who already has an account and boards in Pinterest that it is necessary to save the article for the future. This motivates the visitor to share the image through their board.

The settings set the image dimming when hovering over it with the mouse (this helps the user to pay attention to the change and appearance of the icon). In the place where the icon appears, you can upload your design that will match the visual brand of the company.

This button can be part of a template for a specific site. If the icon is not specified in the template, the task is performed using a plugin, such as jQuery Pin It Button For Images. This plugin has many features. In particular, it allows you to change the design of the icon to match the overall style of the site design.

You can use free sites to create pin images:

1) "*Piktochart*" – a free web application that helps create high-quality infographics without knowledge of graphic design. It allows you to make as many graphics as you need to run a business, with thousands of exciting icons and templates inside;

2) "*Canva*" – a tool for creating social media and images for articles. Very easy to use. Contains templates and fonts that you can use to create your own images;

3) "*Picmonkey*" – another site for editing images, photos and creating infographics, images for the site and social networks;

4) "*Pixlr*" – online version of Photoshop. This site makes it very easy to remove backgrounds from images using layers. It provides many tools such as fonts, graphics, borders, and more.

Case 3: Comparative analysis of the use of different digital tools

Based on the data given in item 6.5 there are five the most effective digital tools for industrial enterprises nowadays. The five most essential tools are:
- website,
- an online platform,
- online store,
- electronic order table,
- electronic auction.

Given the need to develop a unique advertising campaign, we suggest to determine the importance coefficient of Digital tools by the formula:

$$W_I = 1 + I_i, \qquad (8.1)$$

where W_i – the coefficient of importance of the i-th Digital Tool;

I_i – a relative measure of the weight of the *i*-th Digital Tool.

Thus, the coefficient of importance of the above instruments will be, respectively, 1.16: 1.15; 1.13; 1.12 and 1.11.

Minimizing costs is not an end in itself for a business that produces tangible results in both natural and value measurements. The comparison of the latter with the costs is an argument when deciding on the implementation of new measures. However, not all activities at once (usually within a reporting period, usually a year) provide a target profit. Yes, creating your own website for the manufacturer (electronic storefronts, web pages, etc.) is an investment in the future.

At the stage of investment we suggest to introduce the coefficients of importance of Internet funds from the perspective of their prospects (formula 1). For example, long-term billboard rental is less important for the manufacturer than any form of information dissemination on the Internet.

Therefore, when calculating the economic efficiency of using a particular digital tool, we suggest taking into account its importance and adjusting it by an appropriate factor:

$$Ef_i = \frac{E_i}{V_i} \cdot W_i, \qquad (8.2)$$

where Ef_i – the economic efficiency of using the i-th digital marketing tool;

E_i – the economic effect of using the i-th digital marketing tool;

V_i – an estimate of the cost of using the i-th tool during the billing period;

W_i – the importance factor of the i-th digital marketing tool.

The results of this study can be the basis for the selection of digital tools by specific industrial enterprises.

Let's carry out a comparative analysis of the use of different Digital-tools (video-informer, static banner, carousel advertising). Consider, for example, a conditional Facebook advertising campaign with the following initial conditions for the middle industrial Ukrainian enterprise:

− geography of location (cities): Kyiv, Odessa, Lviv, Kharkiv, Dnipro, Cherkasy, Kryvyi Rih;

− the target audience: 22-45 years; positions: company director, commercial director, marketer, FEA manager, chief engineer, enonomy area: engineering industry;

− period: 5 weeks;

− quantity: const = 250000 (to allow comparison).

The initial data are presented in Tables 8.6 and 8.7.

According to the calculations of a static banner and carousel advertising using on all site's pages with video content have the highest economic efficiency (i.e., provide maximum coverage of CA representatives at minimal cost). Following this approach, other digital tools will not be selected and used. But it is a mistake because while developing a unique advertising campaign, the adjustment factor will justify using necessary and promising tools (in our example, a video informer in the user's news feed). This analysis can be used as a methodological basis for developing an effective communication enterprise's policy in the Internet space, especially for forming a system of instrumental support for its implementation.

Table 8.6 – Output data of the digital tools on the Facebook network

Location	Digital Tool	Price per Unit	Quantity	Units Cost, UAH	Cost of 1000 impressions, UAH	Link cost, UAH	Cost coverage 1000 unique users, UAH
User News Feed	Video informer	0.6 UAH / 15 sec. browsing	250,000	150,000	600	240	1,200
All pages of a video content site	Static banner	30 UAH / 1000 views	250,000	7,500	30	12	60
	Carousel advertising	25 UAH / 1000 views	250,000	6,250	7.58	3,03	50

Table 8.7 – Comparative analysis of the predicted values of indicators for different digital tools

Location	Digital Tool	Predicted values					
		Coverage	Part of the target audience, %	Coverage of the target audience, persons	Demonstration, number of times	CTR, %	Clicks, number of times
User news feed	Video informer	125,000	72.2	90,250	250,000	0.25	625
All video content site pages	Static banner	125,000	66.1	82,625	250,000	0.25	625
	Carousel advertising	125,000	95	118,750	825,000	0.25	2,062

Case 4: Evaluation of the quality of the website about health

The authors chose sites with Ukrainian domain names that provide health information. The relevance of the information posted on the site was taken into account. The information in the footer of the site marked © – 2023, which indicates that the site's developers timely correct the text on the pages of the site, was taken into account. The sites are:

− zdorovia.com.ua (news site with sections on health, beauty, cosmetology, medicine with articles on human health, treatment and healthy eating);

− ukrhealth.net (a site with articles and news about health, with expert opinions from specialized specialists);

− medicina.ua (portal-catalog with a list of medical institutions and articles about health);

− health-ua.com (a specialized site in the field of health care, designed for professionals with medical education);

− jazdorov.com.ua (health information portal with thematic articles).

The list of sites also includes, for comparison, the government's recently launched internet project znaimo.gov.ua, which is a site about healthy eating which focuses on such a target audience as students of Ukrainian schools and their parents. This portal results from a memorandum signed between UNICEF, the Embassy of the Swiss Confederation in Ukraine and the Ministry of Education and Science of Ukraine. This web resource is part of the country's information and communication strategy of school nutrition reform. The portal contains information about a balanced diet. There are categories of articles for parents, educators, founders of educational institutions, business representatives who want, for example, to join the organization of food in educational institutions, etc. The list of sites was also supplemented by a

pilot internet project on mental health mh4u.in.ua. This resource includes articles, training courses and webinars on mental health. Table 8.8 presents the ranking positions of sites according to the version of the resource Similarweb (for those that are displayed by the resource).

Table 8.8 – Comparison of selected health sites by Similarweb rankings

Site	Global ranking	Rating in Ukraine	Rating in the category "Health"
zdorovia.com.ua	209,468	3,046	45
ukrhealth.net	246,886	3,767	82
medicina.ua	631,711	18,074	293
health-ua.com	224,307	8,907	31

The metrics in Table 8.8 with rankings by category show the actual positions of sites by traffic among users in a particular region or category. Based on these data, one could conclude about the leading positions of the site zdorovia.com.ua among competitors both in the global ranking and sites within Ukraine. However, in ranking sites in the category "Health" that interests the researchers, the undisputed leader is another web resource – health-ua.com. It almost catches up with the site zdorovia.com.ua in the global ranking. However, such rankings are not very informative for understanding the future development potential of the web resource, changes in its popularity among users and qualified health professionals. The authors of this research propose evaluating health sites according to the methodology, which contains three components: technical, content and marketing. It is convenient to use a structured questionnaire with parameters with the scale (Table 8.9). Indicators 1-12 in Table 8.9 have a scale from 1 to 3, which is explained by three possible choices for a particular site.

Table 8.9 – Scoring map to determine the quality of the health site

Parameter	Answer options	Points
1. Site domain name	The domain name is related to health. The national domain	3
	The domain name is related to health. The domain is common	2
	The domain name is not related to health	1
2. Number of site languages	Three and more	3
	Two	2
	One	1
3. The number of pages of the site in the Google index	Eleven and more	3
	From six to ten	2
	Up to years	1
4. Date of the site creation	More than ten years ago	3
	From five to ten years	2
	Up to five years	1
5. PageSpeedInsights mobile gadget performance	90-100	3
	50-89	2
	0-49	1
6. Site uptime level (web resource continuity)	→≈100%	3
	From 98 to 99%	2
	Below 98%	1
7. Availability of essential sections of the site	There are sections Contacts, Privacy Policy, FAQ	3
	One of the above sections is missing	2
	Two or more of the above sections are missing	1
8. Site interactivity	Availability of a form for sending messages, online questionnaires, registration form	3
	One of the above sections is missing	2
	Two or more of the above sections are missing	1
9. The quality of outbound links on the site	Outbound links are directly related to the topic of the resource	3
	Outbound links are indirectly related to the topic of the resource	2
	Outbound links are not associated with the topic of the resource	1
10. Ease of use of the site	The transition between the pages is logical, the elements of the site are easy to find	3
	Some of the above parameters are missing	2
	Both of these parameters are not typical for the site	1

Parameter	Answer options	Points
11. Success of site design	Thematic graphics and images, appropriate range of colors	3
	Some of the above parameters do not meet the requirement	2
	Both of these parameters on the site do not meet the requirements	1
12. Ability to easily share information from the site	Availability and easy search for buttons "Share on social networks" and other web resources	3
	Availability of "Share" buttons, but it is difficult to find them	2
	Lack of such function buttons	1
13. Errors in the text of the site	No errors	2
	There are errors	1
14. The accuracy of the information	The information is reliable	2
	The information is inaccurate	1
15. Informativeness according to the topic	The site is informative	2
	The site is uninformative	1
16. Relevance	The site contains current information	2
	The information is out of date	1
17. Emotional nuances of site content	The emotional tone is restrained	2
	The emotional tone is negative	1
18. Ability to provide advice on visiting the site by medical professionals	A recommendation to visit the site is appropriate	2
	A recommendation to visit the site is inappropriate	1
19. Authorship of site articles	Most of the articles are authored by specialists, experts or regular authors of the sections of the site	2
	The authors are impersonal	1
20. Availability of permanent sections of the site	The material is structured with permanent sections	2
	The material tends to chaos without highlighting sections	1

Indicators 13-20 have a scale from 1 to 2 and are dichotomous. The number of site pages in the Google index is determined by the search query "site: … ". The date of creation of the site can be determined using various resources. The

authors used the online resource WHOIS. The continuity of the web resource is an essential indicator of its reputation and loyalty among users. The uptime of the resource can be determined by various services, for example, Uptime Robot. As for the availability of certain sections of the site, in the absence of the Contacts section, its visitors lose confidence in it. The privacy policy has become a mandatory attribute of sites that care about their reputation in the online space. The FAQ section (with frequently asked questions) establishes communication with potential and regular site visitors. Sites can be designed using various technologies, the most common of which are HTML and the use of SMS engines. It is noteworthy that the first of these technologies sites are mostly more dynamic, with a unique design, but, however, if such a site needs to change in the Menu section at least one word that is on all pages of the site, you have to edit all pages at once. Due to the multifaceted nature of the development of health websites and the importance of constantly updating information on such portals, it is more appropriate and resource-efficient to use CMS engine technology. If for entertainment sites, quiz sites, promotional sites, the use of individual HTML technology in development is a significant competitive advantage, then for sites in the field of health, the technology used to design is not crucial and will not be taken into account when building a site quality scoring map.

The parameters in Table 8.9 are grouped by individual questions. The weight of three groups of variables is determined, Table 8.10.

The resulting indicators are as follows:

- from 17.2 to 15 – health site of high quality; - from 14.99 to 10 – a health site of medium quality; - below 10 – health site of low quality.

Table 8.11 summarizes the types of health sites based on combinations of defined values of their quality assessment components.

Table 8.10 – Structuring the score map questions to assess the quality of the health site

Group of parameters	Numbers	Coefficient of weight
Technical	1-6	0.3
Marketing	7-12	0.3
Content	13-20	0.4
Total number of points	17.2	

The combination of the site's components reflects the "ideal" state of the web resource when the technical, content and marketing components receive high marks during the evaluation. It indicates the balance of the functioning of the site. It shows that developers take into account and, if necessary, improve the various components of the success of the web resource. Table 8.12 shows the results of the evaluation of health sites by 20 parameters. According to the analysis results in table 8.12, the best positions are estimated at the site health-ua.com with a score of 13.8. This site has high rating scores for all three components. It should be noted that none of the analyzed sites, according to the results of calculations, weren't included in the group of high-quality sites. All sites were included in the group of medium quality, except for the site medicina.ua, which was included in the group of low-quality sites. Experts evaluated the indicators of the content component. Two experts are involved in assessing the content component of the analyzed sites. So it is necessary to check the degree of consistency of their opinions when providing positive and negative assessments of the state of a particular indicator.

Table 8.11 – Typology of health sites depending on combinations of quality assessment components

Composition of components	Features of the health site
Full imbalance	The site has poorly developed all the components. Developers do not consider and correct the technical component. The content and marketing attractiveness of the web resource are low too
Shifting the balance to the content	The site has interesting content in the field of health care but not refined to achieve high marketing attractiveness and has weaknesses in technical parameters
Shifting the balance to the technical component	Technically well-designed site that has weaknesses related to the content and visualization of information within the marketing component
Shifting the balance to emotional and visual content	Marketing-attractive site is poorly supported by content and with weak technical parameters
Technical imbalance	The site has a well-thought-out information content and visual design but lags behind competitors in technical parameters

Composition of components	Features of the health site
 Emotional imbalance	The site is well thought out for technical aspects and content but visually unattractive
 Content imbalance	The site, developed at a technically high level, marketing attractive but has weak content

Table 8.12 – The score of health sites based on the parameters of the proposed scoring map

Parameter	1*	2	3	4	5	6	7
1. Site domain name	3	2	3	3	3	2	1
2. Number of languages	1	1	1	2	1	1	1
3. The number of pages in the Google index	1	2	1	1	1	1	1
4. Date of creation	2	3	3	3	2	1	1
5. Mobile gadget performance	1	1	1	1	2	1	1
6. Uptime	2	2	1	3	2	3	2
Total for technical component	10	11	10	13	11	9	7
7. Availability of essential sections	1	2	1	2	1	1	2
8. Interactivity	1	1	1	2	2	1	2
9. The quality of outbound links	1	3	1	3	2	3	3
10. Ease of use	3	3	2	2	2	3	3
11. Design	2	2	1	3	2	3	2
12. Ability to share information	1	1	1	1	1	2	3
Total for marketing component	9	12	7	13	10	13	15
13. Errors in the text	2	2	1	2	1	2	1
14. The accuracy of the information	2	1	1	2	1	2	1
15. Informativeness	2	2	2	2	2	2	1
16. Relevance	2	2	2	2	1	2	2
17. Emotional nuances	2	2	2	2	2	2	1
18. Ability to provide advice	1	1	1	2	1	2	2
19. Authorship	1	1	1	1	1	2	2
20. Permanent sections	2	2	2	2	2	1	1
Total for content component	14	13	12	15	11	15	11
Total score for all components, taking into account their weights	11.3	12.1	9.9	13.8	10.7	12.6	11

* 1 – zdorovia.com.ua; 2 – ukrhealth.net; 3 – medicina.ua; 4 – health-ua.com; 5 – jazdorov.com.ua; 6 – znaimo.gov.ua; 7 – mh4u.in.ua

According to the analysis results in table 8.12, the best positions are estimated at the site health-ua.com with a score of 13.8. This site has high rating scores for all three components. It should be noted that none of the analyzed sites, according to the results of calculations, weren't included in the group of high-quality sites. All sites were included in the group of medium quality, except for the site medicina.ua, which was included in the group of low-quality sites.

Experts evaluated the indicators of the content component. Two experts are involved in assessing the content component of the analyzed sites. So it is necessary to check the degree of consistency of their opinions when providing positive and negative assessments of the state of a particular indicator. The best values of the parameter were taken from each of the experts if they did not match. The auhors analyzed the consistency of opinions by the weighted Kappa method, Table 8. Researchers use reliability analysis by the Kappa Fleis method to investigate the coincidence of several expert assessments on an alternative basis. It makes it possible to determine the scale's reliability through the consistency of inter-expert assessment. The value of the criterion could reach a value of 1.0 with the complete concordance of results, and its minimum possible value is zero with the complete mismatch. According to the scale of the Kappa coefficient, one could talk about the following measures of agreement of experts' opinions: from -1 to 0 – there is no agreement of opinions; from 0 to 0.2 – consistency is very weak; from 0.2 to 0.4 – good consistency of opinions; from 0.4 to 0.6 – moderate consistency of opinions; from 0.6 to 0.8 – a significant degree of agreement; from 0.8 to 1.0 – full agreement, table 8.13.

The expert assessments of analyzed sites for the majority (six out of seven) showed that the degree of agreement of experts' opinions is quite high.

Table 8.13 – Assessment of the consistency of experts' opinions on the evaluation of the content component of the analyzed health sites by the weighted Kappa method

Site	Degree of Kappa consistency	Asymptotic standard error	Approximate significance
zdorovia.com.ua	0.333	0.000	0.064
ukrhealth.net	0.6	0.343	0.064
medicina.ua	1.0	0.000	0.05
health-ua.com	1.0	0.000	0.05
jazdorov.com.ua	0.6	0.343	0.064
znaimo.gov.ua	1.0	0.000	0.05
mh4u.in.ua	1.0	0.000	0.05

The value of the Kappa indicator is at the level of 0.333 for zdorovia.com.ua site, which indicates a good consistency of opinions, but indicates that experts have given quite different estimates of this site, which is one of the leaders of web sites in the category "Health" among other competing sites. The most balanced on the components' development level are the sites marked with a diamond – ukrhealth.net and health-ua.com. All analysis components are at a sufficiently high level of development, and they are comparable, i.e., not significantly different. Such sites need further support and constant monitoring of the pages for the relevance of the content. The site medicina.ua, has the weakest position in the marketing component, and to compete and don't lose positions in search results and grow a loyal audience, it needs work on its design, SEO, review links, etc. Website mh4u.in.ua has the weakest position in a technical component. Despite the excellent marketing attractiveness, the site will not win a leading position in the presence of a significant number of technical errors, downtime, disregard for its productivity for the search engine.

Practical tasks

Task 1: Description of the e-shop
1 E-commerce enterprises of the B2C sector.
1.1 According to the option number, select the appropriate type of goods or services of e-commerce enterprises of the B2C sector from Table 8.8.

Table 8.8 - Types of goods/services of e-commerce of the B2C sector in health domain

Option number	Product group
1	Drugstore
2	Clothing for medical personal
3	Sporting goods
4	Medical tourism
5	Software for health businesses
6	Healthy food
7	Sleeping goods
8	Fitness center

1.2 Using Internet search engines, find four Ukrainian e-shops that sell relevant goods (services). Get acquainted with the work of the e-shop in detail. Enter the names and web addresses of the shops in Table 8.9.
1.3 Make a comparative analysis of the considered e-shops. Record the result of the analysis in Table 8.10 (you can add your own evaluation criteria).

Table 8.9 – Name of the goods and services

No.	Commodity group	Store name	Web store address	Name of the goods and services

1.4 Analyze the results of table 8.10:

− place these criteria to reduce their importance to the buyer;

− to place e-shops according to the degree of compliance with the specified criteria. Identify the "best" and "worst" stores.

Table 8.10 – Comparison of e-shops

No.	Evaluation criteria	E-shops		
		1	2	3
1	Site download speed			
2	Completeness of product information			
3	The convenience of the site menu			
4	Content quality			
5	Ease of order formation			
6	Site feedback settings			
7	The convenience of the registration system			
8	Additional Services			
9	Possibility of payment for different groups of consumers			
10	The number of steps to find the right products			
11	Payment systems are provided			
12	Delivery methods are provided			

Task 2: Structure and decrypt the domain names of such entities:

1) http://www.acad.edu.ua;
2) https://l-a-b-a.com;
3) http://www.cukiernya.pro.pl;
4) http://www.rada.gov.ua;
5) http://www.norfolkunivers.edu.uk;
6) http://www.travel.kyiv.org/map;
7) www.poehalisnami.ua;
8) http://www.bambook.com.ua;
9) https://www.vector-usa.biz;
10) http://www.ukr.net.

Record the results in table 8.11.

Table 8.11 – Decryption of domains

№	Level 3 domain (machine functional name)	Level 2 domain (proper domain name)	Level 1 domain	
			organizational	geographical

Task 3: Based on the data in Table 8.12, comprehensively evaluate the effectiveness of Internet advertising and the website of the company "Painted Fox" for the current month, knowing that

1) the web server of the company was visited by (a) visitor(s);

2) information from the specified server was used by (a) visitor(s);

3) the page with the company's contact information was visited by (c) visitor(s) and the page where the banner is placed was visited by (d) visitor(s);

4) only (e %) visitors who used the information from the server took active steps to purchase goods and (f %) visitors to the page where the banner is placed "clicked" on it;

5) the number of repeated visits to the server is (g).

The results should be analyzed in detail and reasonable conclusions should be drawn.

Indicators for assessing the effectiveness of the site to choose yourself (there should be at least four) (the optimal number – 5 or 6).

Table 8.12 – Task options

Option	a	b	c	d	e	f	g
1	25,000	12,300	7,600	5,550	12	16	15,500
2	78,000	38,000	27,800	15,800	35	34	46,850
3	10,000	5,600	3,200	2,000	8	6	4,600
4	15,000	5,000	3,700	2,400	11	17	11,000
5	27,000	18,600	6,800	1,500	20	13	10,300
6	43,000	33,000	27,600	13,000	14	10	15,000
7	57,800	45,000	30,700	26,000	20	15	25,100
8	64,000	43,050	35,000	21,000	11	14	34,000
9	70,300	60,000	53,000	40,030	14	17	50,000
10	85,000	68,880	56,800	30,000	9	7	47,800
11	90,000	65,000	55,000	26,000	10	8	24,000
12	95,000	60,000	45,000	30,000	12	13	21,000

Task 4: Analyze the website of the Internet project by the following parameters: content (structure), color scheme; implementation technology (HTML-site or CMS-engine (the latter can be determined using the resource https://whatcms.org/); domain characteristics (by levels); usability; availability of key sections, etc. The parameters can

be supplemented as desired. It is perfect if the site of the analyzed project will be on a helpful resource: https://archive.org/, where it is possible to track how the site's appearance has changed over the years of operation.

Task 5: It is necessary to develop a step-by-step promotion strategy for the online store of children's wooden toys.

Incoming data:
– a wide range of toys;
– for children from 2 to 5 years;
– all orders are sent by mail across Ukraine;
– it is possible to send abroad;
– large capacity of the store - up to 1,000 shipments per day.

Step 1: Define the target audience of the online store and its distribution network. Describe the consumer in as much detail as possible according to key, informal features.

For example, the audience of the online lingerie store:
– women aged 19-39, living in cities;
– subscribed to Instagram clothing and lingerie stores;
– are interested in novelties of the fashion industry;
– regularly watch lingerie advertising on Instagram;
– well dressed;
– love to be photographed.

Stage 2: In which social networks is it better to promote an online children's toys store and why?

For example, it is better to promote an interior design agency on Youtube because it is necessary to show in detail each completed project and demonstrate expertise to inspire trust among users.

Stage 3: Which of the advertising tools offered are better to use and why:

– targeted advertising;
– posts in thematic profiles;
– advertising for millionaire bloggers;
– advertising for microbloggers;
– spam, oil making, mass following?

For example, it is better to promote the services of a travel agency through targeted advertising because you can clearly tailor the advertising to the needs of users who travel regularly and live in the city where the travel agency is located.

Step 4: Which format of online advertising is better to use:
– one photo;
– gallery, carousel photo;
– video;
– an animated picture?
*You can combine options.

For example, it is better to advertise online training with one photo with the image of its author. This inspires confidence in the consumer.

Step 5: What is better to portray in advertising creatives and why:
– goods, toys;
– goods and text;
– a child playing with toys;
– a mother and her child playing with toys?
*You can combine options.

For example, diaper advertising shows children playing and smiling so that the consumer understands that diapers are comfortable.

Stage 6: Which action is better to implement to increase the impact of promotion:
– free delivery;

- 1 + 1 = 3;
- a gift for each order?

For example, it is better to use a gift to promote your eyewear store online. Consumers do not need three pairs of glasses at once, and most competitors already offer delivery.

Test tasks for self-examination

1   17.144.28.53 is:
a) URL;
b) IP;
c) operator code;
d) there is no correct answer.

2   The delivery of advertising and information to a clearly defined Internet audience is:
a) targeting;
b) tracking;
c) delivery;
d) conversion.

3   SEO in digital marketing decipher as:
a) sales environment organization;
b) search engine optimization;
c) system equipment option;
d) standard evaluation operation.

4   Lidogeneration assumes that the user:
a) visited the required web page or sequence of pages;
b) fulfilled a query for specific keywords;
c) filled in the form or left the application;
d) viewed the required number of pages.

5 The *gov* domain indicates that the organization belongs to:

a) government;

b) military;

c) educational;

d) commercial.

6 In what year was the first world's website created:

a) 1964;

b) 1970;

c) 1990;

d) 1995?

7 Which of the following users are "citizens of the Internet":

a) critics;

b) followers;

c) creators;

d) collectors?

8 Which of the following statements is correct:

a) e-commerce is a broader concept than e-business;

b) e-business covers e-commerce and e-trading;

c) the concepts of "e-business" and "Internet business" are identical;

d) e-commerce is a narrower concept than e-trading,

e) the concepts of "e-commerce" and "e-trading" are identical?

9 Type of traffic to the site, consisting of visitors who go to the Internet resource directly and not from other channels:

a) direct;

b) social;

c) referral;
d) there is no correct answer.

10 What is the conversion rate if the total number of visitors to the resource for the month was 2,500 people and the number of people registered on the site for the same period was 550 people:
a) 15 %;
b) 5 %;
c) 22 %;
d) 12 %?

11 Contextual advertising is:
a) target audience search tool;
b) ads placed in search engine results that match the subject of the search query or on web pages that match the subject of the ad;
c) integration of an advertising product or brand into the gameplay;
d) ads that appear when viewing articles, movies, etc.

12 What features does Google Analytics provide:
a) track user actions;
b) determine conversion;
c) analyze the effectiveness of different advertising channels;
d) all answers are correct?

13 Internet banking is:
a) creating a bank website on the Internet;
b) provision of banking services via the Internet;
c) online game using virtual banks;
d) association of sellers of goods with the help of banks.

14 The component of an online store that allows potential buyers to easily and quickly find, learn about, order, pay for, and receive the product they need:

a) online store website design;

b) usability of the online store site;

c) content of the online store site;

d) all answers are correct.

15 Choose from the specified website development technology:

a) framework;

b) SMS;

c) CMS;

d) hosting;

e) DNS.

16 Technology that allows paying for goods / services with bank cards over the network is the Internet ...:

a) acquiring;

b) trading;

c) site;

d) fundraising.

17 What is the CTR for an advertising message if the number of clicks on it is ten and the number of impressions is 200:

a) 4 %;

b) 5 %;

c) 7 %;

d) 12 %?

18 Select general domains from the list:

a) com.ua;

b) uk;

c) com;

d) shop.

19 What information about the product is provided in the e-shop:

a) consumer and technical properties, photography, price;

b) chemical composition, nutritional value, layout;

c) description of production technology, expiration date, cost of goods;

d) commodity classification, wholesale and retail price?

20 You have held the position of a marketer in a company that produces clothing for young people. One of the leading sales channels is sales through the online store. Your first task is to identify and eliminate the cause of the gradual decline in sales (falling sales and rising bounce rates on the site were discovered two years ago). Which of the following can be the reason for this:

a) the counter is installed on the site;

b) the site uses an online consultant's chat script;

c) the site is not adapted for mobile devices;

d) the site is advertised on social networks?

21 What is a CTA button on the site (transcript of the CTA):

a) click-through action;

b) cost to action;

c) call to action;

d) come to action?

22 Blog is:

a) a website whose main components are regularly added recordings, images and multimedia;

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b) a website whose main component is advertising information;

c) corporate website;

d) a website designed to search for information.

23 What error code can be used if the site is temporarily unavailable:

a) 692;

b) 401;

c) 404;

d) 202?

24 What is a shopping basket in an online store:

a) icon in the form of a basket in the upper right corner of the e-shop website;

b) a web page on which images and characteristics of the goods chosen by the buyer are represented;

c) a list of goods selected by the buyer for further purchase;

d) a list of goods that the site visitor has canceled in the process of buying?

25 Tool, using a simplified description of new information that appears on a particular website, with reference to its full version:

a) tal;

b) lin;

c) rss channel;

d) follower.

26 Technology that allows communication between devices at a distance (widely used for payment through the terminal in supermarkets):

a) PMG;

b) NFC;
c) SGF;
d) FMG.

27   Which of the following products of health sector is the most difficult to sell via the Internet (from the standpoint of ease of delivery to the end consumer:
a) cardiac pacemaker;
b) medical guide;
c) the vaccine, which is stored in refrigerator;
d) software.

28   What does the concept of omnichannel in   e-commerce cover:
a) the same experience from visiting both a physical store and an online store;
b) the store is equally well represented both offline and online;
c) the same representation of the store on any gadget;
d) all of the above?

29 Warehousing + acceptance and processing of orders and packaging of orders + receipt of payment from the buyer + delivery + work with returns =
a) fulfillment for an online store;
b) outreach for an online store;
c) outsourcing for an online store;
d) leasing for an online store.

30 Bulk emailing of advertisements with the consent of the recipients:
a) spam;
b) email;
c) blog;
d) news on social networks.

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Маркетинг
у цифровому середовищі

Підручник

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