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Using digital tools in the context of female dominance in the real estate market

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Abstract

For society, women's work is an important reserve necessary for the effective development of production. Negative trends related to female employment have a detrimental effect on the country's demographic situation, as well as on social relations. Statistics show that it is women who experience the most problems in terms of career growth and professional development. The volume of job offers for women is characterized by a much narrower professional range, and the average salary level is lower. In addition, a woman's chances of losing her job are always higher than those of men. However, the digital economy provides new employment opportunities for women. Working in real estate combined with digital tools increases female employment and equalizes income levels between men and women. The purpose of the article is to study the state of use of digital tools in the field of real estate, as an important component of increasing the efficiency of the work of real estate agency personnel.

1. Introduction

In the last few decades, the industry has witnessed a significant increase in the number of women who have joined the workforce and become independent in their careers (Jonsson, 2022). Analyzing global employment trends in the real estate market, according to data, in 2021, 65% of those working in the real estate sector were women (Realtors, 2022). Women are particularly attracted to flexible working hours in real estate and opportunities spend more time with your family. According to Work.ua, excluding the IT sector, the highest levels of average salary in Ukraine are in real estate (Work.ua, 2022). The staff of real estate agencies in Ukraine is dominated by women. This is due to a number of reasons:

- Women are “professional” buyers, which allows better work with arguments in favor of the purchase.
- Women are better emotionally “attuned” to customers, so they work better with customer comments.
- A flexible working schedule in Ukrainian realities encourages women to choose work in the real estate sector.
- The advent of the Internet and digital tools increased the number of women employed in real estate.

Next, we will consider the state and trends in the development of the real estate market in Odessa and the opportunities that the digital economy provides for work in the real estate sector. The Internet is a highly effective communication tool for the promotion of real estate agencies, the task of which is to gain the trust of more customers. Every year, real estate agencies use Internet marketing tools more and more: they conduct advertising campaigns, sell products and services through websites, and develop social networks. The adoption of technologies such as data analytics, artificial intelligence, machine learning, and robotics transform operations (Piazolo and Dogan, 2021, 80). New digital technologies offer new solutions to increase the efficiency and productivity of real estate activities (Ionascu and Anghel, 2020, 372).

2. Study area

The Ukrainian e-commerce market and the Internet sector in general show high growth rates. The number of people who trust the Internet resources is increasing, analysts boldly predict that by 2040, 95% of all purchases in the world will be online.

Figure 1 presents the current situation in the world of e-commerce.

Therefore, the understanding that those companies that actively use the Internet in their activities receive a number of undeniable competitive advantages is becoming increasingly clear and tangible:

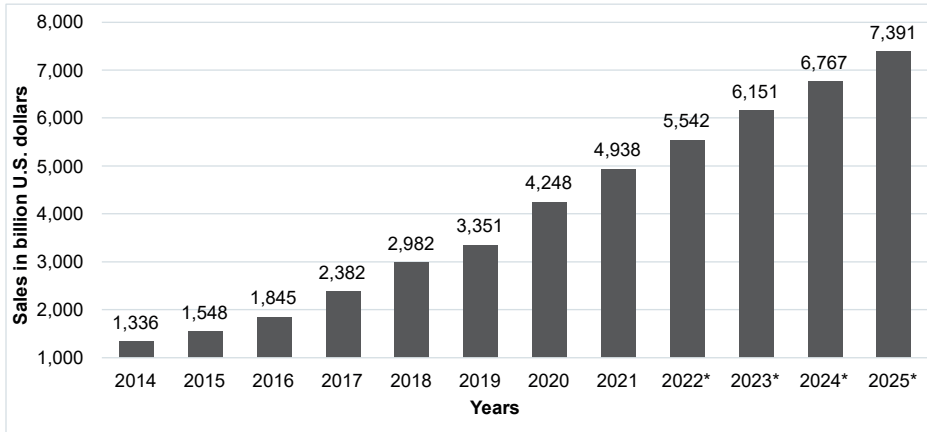


Figure 1. Dynamics of global sales volumes on the Internet for the period 2014–2023. Note: * 2022–2025 – forecast values

Source: Statista, <https://www.statista.com/>.

– New channels of interaction with consumers, the use of which is directly related to successful functioning in the future.

– Obtaining information about the target audience. An increase in the audience, including from other regions.

– Access to consumers who can only be found on the Internet (who did not notice offline advertising or saw it, but contacted the company only after studying the website).

– Increasing brand recognition.

– Reduction of customer service and retention costs.

Running a large-scale business in today's environment is difficult. After the full-scale invasion of Ukraine by the Russian Federation and the declaration of martial law, the real estate market fell by almost 80%. The demand dropped a lot, and the registers were closed. Gradually, this trend changed. Ukrainians are still interested in buying housing, but the requirements have changed a lot now.

Nowadays, the main requirement of apartment buyers is that the housing is located far from military infrastructure, airports, etc. The number of requests for housing outside the city also increased.

At the beginning of May, construction companies began to return to work. Experts have already observed the resumption of work at more than 400 residential complexes in the country: 65 construction sites were working in Kiev, and 45 in Odessa. In addition, work has restarted in Cherkasy, Dnipro, Zaporizhzhia, Poltava, Kremenchuk, and Uman.

3. Research methodology

The methodological and theoretical basis of research on the state of use of digital tools in the field of real estate was made by marketing research. In particular, the following was conducted:

- Research on the state of e-commerce in the world.
- Overview of price dynamics in the real estate sector.
- Analysis of the proportion of women in the staff of real estate agencies.
- Analysis of the main indicators of activity and formation of the rating of real estate agencies using the Google Maps service.
- Carrying out a technical audit of websites using the Marketing Grader service based on the following indicators: website and individual pages loading speed, performance, security, and usability of websites.
- Assessment of real estate agency activity in social networks.

4. Analysis of research results or scientific problem

4.1. Introduction to the research objects

For buyers, the choice of a real estate agency is a responsible step, which may affect the success of the purchase agreement or the search for an object. To analyze the use of digital tools in the work of real estate agencies in Odessa in 2022, we selected four agencies. The main selection criterion was the number of female agency employees. Those agencies where the share of female employees was higher than 80% were selected. The rating of these agencies was compiled according to the following criteria:

- Date of foundation of real estate agency.
- Work experience of realtors.
- Customer feedback and Google Maps rating.
- Real estate objects in the company's database.
- Informativeness of the site.
- Availability of additional services.

On the basis of these criteria, the agencies of Odessa were rated in the following order:

1. Real Estate Agency “First Realtor Company”.
2. Real Estate Agency “Premier”.
3. Real Estate Agency “Pivdenny-Zakhid”.
4. Real Estate Agency “Oleksandr-N”.

Agency “First Realtor Company” – the proportion of female employees is 91%. It is one of the oldest on the Odessa market, was founded in the fall of 2002 and since then has been continuously providing real estate services to its clients

at a highly professional level. The company is improving its business by focusing on the needs of the client and the changes taking place in the market and society. During its existence, “First Realtor Company” has mastered the specifics of work in all segments of the real estate market.

From the list of objects in the agency’s database for purchase and rent, you can find: apartments, industrial premises, offices, cafes, restaurants, plots of agricultural land, and many other types of real estate. They provide services for identifying investment opportunities, preparing investment proposals, and expert evaluation of any assets.

Agency “Premier” – the share of female employees is 82%. The company has also established itself as a successful real estate agency on the Odessa market. The date of establishment is considered to be January 12, 2009, since then many branches of the company were opened in all districts of Odessa, as well as near Chornomorsk. In this way, any client can access the office in a short time, which is also an advantage.

The company employs a large staff of female professionals with many years of experience in real estate. Specialists will be able to quickly solve the tasks of both the real estate direction (searching and offering a real estate object) and the legal one (verifying property documents and their history, preparing property documents for sale, preparing documents for a transaction, etc.).

Successfully solving the diverse tasks of clients, the company’s employees have already won a strong reputation among the residents of Odessa and other regions. In the company’s offices, the client is provided with many photo materials of the objects, their planning, and legal documents for the objects, which allow the client to choose a high-quality object while saving time. The “Premier” company cooperates with various state and private organizations whose activities are related to real estate.

Agency “Pivdenny-Zakhid” – the share of female employees is 87%. The company has 25 branches in the city of Odessa and the region, the website presents more than 37,000 real estate objects of various types (residential and commercial premises), more than 1,800 successful deals on the purchase and sale of real estate have been conducted. Over a long period of work, “Pivdenny-Zakhid” has established itself as a proven and reliable company in the market and rightfully entered the selection of real estate agencies.

A wide range of services is provided, including assistance in selling, buying, renting real estate, advertising residential complexes, legal advice, cost estimates, and many others.

“Oleksandr-N” – the share of female employees is 84%. The agency is one of the veterans of the Odessa market – it has been operating since 1994. In 2011, the company updated its logo, which is now designed in the form of a crystal, symbolizing purity (honesty), multifacetedness, and stability. Among the proposed

objects you can find: apartments, houses, new buildings, commercial real estate, and land plots for various uses.

4.2. Analysis of a digital tool – website

The paper analyzed the usability of selected real estate agencies' websites. We suggest starting the usability analysis with "First Realtor Company". Based on 86 customer reviews on the Google Maps service, the agency has a rating of 4.9 out of a maximum 5, not including many positive reviews on other resources. In fact, it indicates the high trust and successful deals concluded with the help of "First Realtor Company".

With the help of Marketing Grader service we will perform a technical audit of the website of the real estate agency "First Realtor Company", which aims setting measures to improve the performance of the web resource, promotion, and the sales increase.

The lowest indicator of the technical audit of the website "First Realtor Company" is productivity. Optimizing the website performance is critical to increase traffic, conversion rates, leads, and revenue. It is possible to make pages lighter by removing or compressing heavy content such as images and videos.

The next indicator in the technical audit is security. Users and search engines prefer secure websites. A secure website should be equipped with an SSL certificate and be free from threats. It would be appropriate to remove JavaScript libraries or update them with a security patch.

The optimal time for loading a website is 2–3 seconds, and the speed of loading the "First Realtor Company" website is 29.2 seconds. This error must be corrected quickly, because if the number of errors exceeds a certain threshold, there is a high probability that the search engine will apply a filter to the site, which will cause its position in search engines to deteriorate.

It is recommended to improve a website mobility by optimizing interactive elements (such as links and buttons) to be at least 8 pixels apart, at least 48 pixels wide and 48 pixels high so that mobile users can click on them.

Although the Internet speed of most providers in Ukraine exceeds 100 Mbit/s, and mobile operators are developing 5G, the issue of site loading speed remains relevant. This parameter has a significant impact on conversion, bounce rate, attendance, and other important business performance indicators. Because, other things being equal, users will choose the website that loads faster and does not make them wait. The design of the website is inextricably linked to the concepts of UX – the degree of ease of working with the site and UI – visual design. The design of the "First Realtor Company" website conveys information to users in the most pleasant and convenient way. Simple and clear design and structure of the website, the images containing a single proposal with high resolution and contrasting colors.

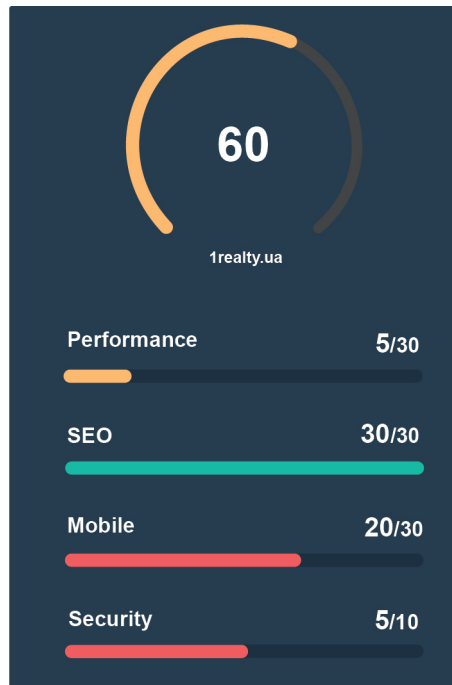


Figure 2. The results of checking the site of Real Estate Agency “First Realtor Company” using Marketing Grader

Source: authors’ review based on Marketing Grader service.

One of the reasons why “visually light” websites are considered more beautiful is because low complexity doesn’t require our eyes and brains to work as hard to decode, store, and process information. Real Estate Agency “First Realtor Company” does not have accounts (pages) in social networks. This is a significant miscalculation in the company’s activities, since no Internet resource can match the popularity of social networks. With a competent approach, networks can be the most effective advertising field and the best assistant while promoting the services.

With the help of social networks, it is possible not only to strengthen the position of the company, but also to build it anew. This agency uses Viber, Telegram, WhatsApp to communicate with the audience.

Subsequently, with the help of the Marketing Grader service, a technical audit of other researched real estate agencies was carried out. The maximum positive assessment of the first three indicators is 30 units, the last one is 10, and the technical audit is 100 in total. The results of the technical audit are presented in Figure 3.

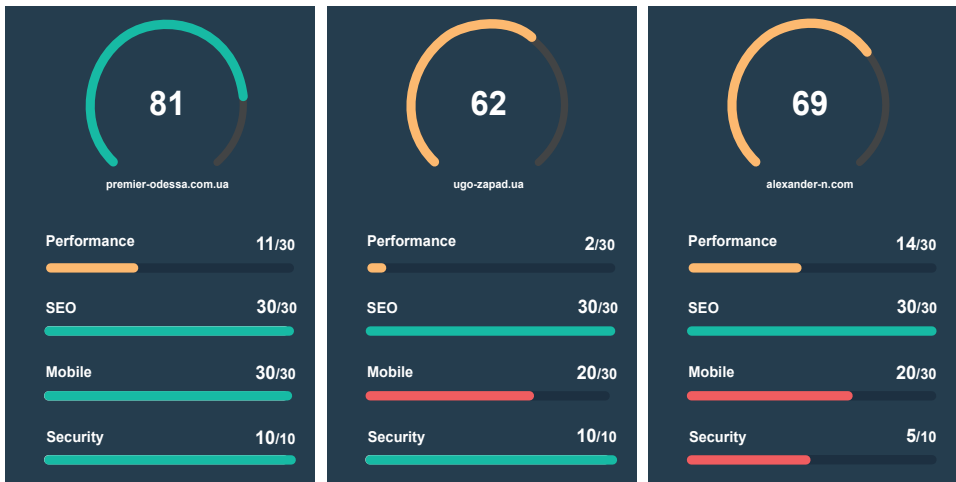


Figure 3. Results of the technical audit of Real Estate Agency “Premier”, “Pivdennyy-Zakhid”, “Oleksandr-N” in Odessa for 2022

Source: authors’ review based on Marketing Grader service.

One of the key indicators of the technical audit is safety, the lowest in the company – “Oleksandr-N”. This indicator is important for the real estate business, since the activity of the company depends quite significantly on information technologies (Oklander, 2018, 87). Hacking, data leakage, and failure of key systems lead to both financial and reputational costs. It is necessary to reduce risks by implementing basic information security processes in development, testing, and system administration.

The next low-rated indicator is productivity. We can assume that the low rate is related to the use of media content of the same format without optimization for different screen sizes (Figure 4).

In the next figure, we will check the loading speed of the websites and their individual pages using the Pingdom Website Speed Test service.

The worst indicator of the speed of loading the website and individual pages is the real estate agency “Pivdennyy-Zakhid” – 29.6 seconds, because according to Google, 53% of users leave the website if it does not load within 3 seconds. Also, the loading speed has been a ranking factor since 2010. The best, but not optimal, download result at “Oleksandr-N” was 10.1 seconds; “Premier” – 10.1 seconds. The general assessment of the technical audit in real estate agencies is almost the same – 60–70 units. The best indicator in “Premier” is 81.

At the stage of visual analysis of the site, we will pay attention to practicality, modernity, navigation and the use of emotional techniques.

Information on the web resources of the companies “Southern Zahid” and “Alexandr-N” is presented in Russian. Since on July 16, 2022, the next norms of the law “On ensuring the functioning of the Ukrainian language as a state” came



Figure 4. Loading speed of the website and individual pages of Real Estate Agency “Premier”, “Pivdenny-Zakhid”, “Oleksandr-N” in Odessa for 2022

Source: authors’ review based on Pingdom Website Speed Test.

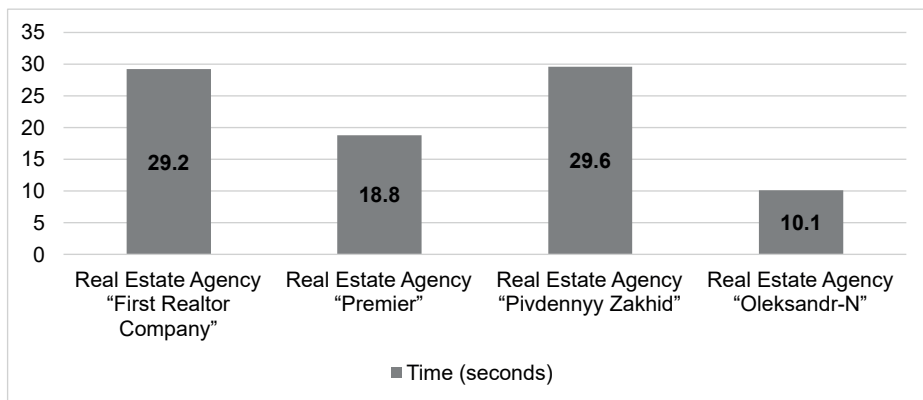


Figure 5. Summary diagram of site loading speed and individual pages of selected real estate agencies in Odessa for 2022

Source: authors’ representation.

into force, which relate to the use of the language on the Internet and the language of computer program interfaces, the Ukrainian version should be the main one. Many Ukrainian companies have left the Russian-language version with the possibility of switching to it, but it is not a priority, as before. In this regard, it is necessary to instruct the programmer of these companies to make the Ukrainian version of the website the main one. This way, all users who visit the website will get to the Ukrainian version. The most important thing is to correctly translate the content and all blocks of the website, as well as to provide search engines with links to alternative versions of the pages. It is worth noting that only the website

of real estate agency “First Realtor Company” has an English version, which is a very useful advantage.

The websites of “Pivdenny-Zakhid” and “Oleksandr-N” are similar in design. They both use a lot of “empty space” to avoid cluttering pages and posts. Empty white and light blue spaces help create open areas of the site and are not confusing to visitors. Overall, a cleaner aesthetic helps users easily find what they’re looking for as soon as they land on the site. Only “Pivdenny-Zakhid” uses this design strategy to their advantage by directing users to the “Subscribe” or “Buy Now” buttons using white space.

The content of the web resources of “Pivdenny-Zakhid” and “Oleksandr-N” is filled only with advertising texts that do not inspire trust in visitors. It is advisable to use reliable expert content, which fully presents all advantages and disadvantages of the company, encouraging cooperation. Google ranks high the websites with the highest quality content.

There is no navigation on the website of the company “Olexandr-N”, which creates a negative impression on the behavioral factors of visitors. The web resource of the real estate agency “Premier” is quite modern and convenient. The header and footer of the website are consistent to increase the company’s level of recognition. Consistently using the same headers and footers on your website is a great way to make an impression on your users. This is especially useful when the company logo is included in one or both of the site’s content areas. This important element of the project’s identity is key to creating brand recognition.

It’s important to have clear navigation and search features to help visitors find what they need. This site has dozens of pages, but it is easy for users to find what they need. Visitors come to the site for a reason, and if they can’t find what they came for, in most cases they simply leave the website. That is why clear navigation is necessary. In addition, the website search function can help you quickly find messages or pages anywhere on the site. Real estate agency “Premier” shares the history, mission and values of the brand to create a sense of trust and loyalty among users. This can give them an edge over the competition, as people are more likely to stick with brands that share their values.

Another great feature of the “Premier” website is easy access to the company’s contact information, such as address, phone number, and email. However, there is also a contact form that allows users to contact the company by filling out a short form.

This form is displayed in the sidebar of the website for quick access. In order to increase the number of conversions, the company simplified user conversion as much as possible. On every page of the site there are buttons: “Subscribe”, “Register” or “Buy now”. Buttons were added to the block editor without the need for a plugin or user code. It makes it easy to add actionable and converting elements for your mailing list, subscription.

During the research, it was found that the semantic core of web resources of Odessa real estate agencies has two features:

- Agencies work in the same region. This allows to localize and gather interested users. Supplement the core with relevant geo-dependent queries.
- There is a very high level of competition in this industry, so low- and medium-frequency queries are used as the basis of the semantic core.

4.3. Analysis of a digital tool – social networks

We will conduct a detailed review and analyze the level of activity of publications to determine the best in terms of content and usability of real estate agencies in social networks according to the following scale:

- 10 (high) – daily or several times a week.
- 5 (medium) – once a week.
- 1 (low) – once a month.

Table 1. Activity in social networks of real estate agencies in Odessa in 2022

Real estate agency name	Facebook		Instagram	
	Publications	Active	Subscribers	Active
Real Estate Agency “First Realtor Company”	–	–	–	–
Real Estate Agency “Premier”	375	1	215	5
Real Estate Agency “Pivdennyy-Zakhid”	1,900	10	300	5
Real Estate Agency “Oleksandr-N”	237	5	21,400	5
Average value	838		7,305	

Source: authors’ review.

The largest number of subscribers at “Oleksandr-N” is 21,400. There is a high activity of publications of the studied companies on the Facebook social network, on average the largest number of subscribers on the Instagram network. As mentioned above, “First Realtor Company” ignores social networks, we consider this a mistake, because it is in social networks that the target audience spends several hours a day. It is appropriate to consider that social networks have gone beyond the limits of a local trend and turned into an essential item. The main reason lies primarily in the constantly growing number of social networks and their effectiveness.

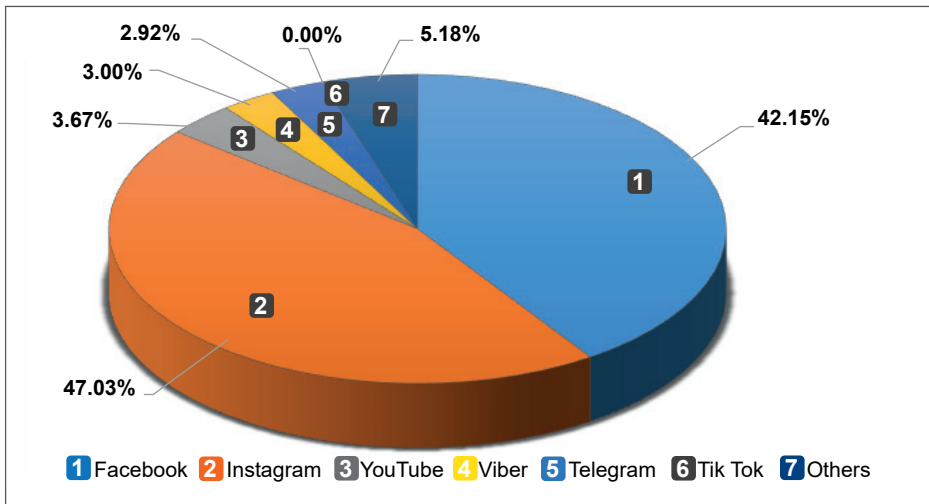
With the help of the online tool (SimilarWeb), an analysis of traffic in social networks was carried out to determine the best in terms of content and usability of real estate agencies (Table 2).

Table 2. Comparison of social network traffic of real estate agencies in Odessa for 2022

Name	Traffic	Facebook	Instagram	You Tube	Viber	Telegram	Tik Tok	Others
Real Estate Agency “First Realtor Company”	4.1K	–	–	–	2.17%	1.89%	–	–
Real Estate Agency “Premier”	110.5K	41.85%	35.01%	2.91%	0.07%	1.11%	–	8.05%
Real Estate Agency “Pivdennyi-Zakhid”	60.0K	19.70%	67.42%	8.07%	4.70%	2.39%	–	4.30%
Real Estate Agency “Oleksandr-N”	75.9K	64.90%	38.67%	–	5.09%	6.31%	–	3.19%
Average value		42.15%	47.03%	3.67%	3.00%	2.92%	–	5.18%

Source: authors’ representation based on SimilarWeb.

The distribution of average traffic values in the form of a diagram is presented in Figure 6.

**Figure 6.** The distribution of average traffic values in social networks

Source: authors’ representation.

5. Conclusions

Real estate agencies are a significant source of employment for women. The use of digital tools increases the efficiency of such companies and expands women's employment opportunities. Optimizing the digital toolset is therefore an important challenge for entrepreneurship in this sector.

Real estate agencies use a mixed ratio format of 50% commercial information and 50% useful content, which in turn almost equally divides the average traffic of effective published information between Facebook and Instagram social networks. It is also advisable to develop YouTube and Tik Tok for more engagement.

The direction of the content of social networks differs in terms of content from web pages, as it has a different format for presenting information. If the uniqueness of the text, its volume, presentation style plays a big role for the site, then for social networks the visual design comes to the fore. Graphical content is a priority here. In the same way as on websites, social networks use informative, entertaining and selling content. But the design format is shifted to visual and graphic features of perception.

It can be noted that we observe regular placement of publications in the Real Estate Agency "Pivdennyi-Zakhid" on the Facebook social network. Real Estate Agency "Premier" uses an outdated style of design of visual content, which has very poor engagement and activity of subscribers. The Real Estate Agency "Oleksandr-N" Instagram page attracts attention with high-quality content and professional photos.

The topic of real estate is very large and diverse, but the investigated companies are limited to thematic news columns and reviews of ready-made objects. It is necessary to increase the engagement of content using storytelling and pay special attention to video content.

So, first of all, modern conditions of the real estate market are globalizing and intensifying competition, and in order to maintain positions, companies need to use innovative information business technologies, in particular, effective Internet marketing. Secondly, the analysis of the usability of web resources and social networks made it possible to identify and evaluate the convenience of interaction with behavioral factors of users of Internet resources. It will be easier and more pleasant for the client to interact with those sites that take into account all current rules and standards of usability.

Communication with customers in social networks is a powerful tool for marketing research, namely working with reviews, studying purchasing demand and audience. Marketing research conducted online allows you to characterize the external environment, understand how the market is developing, evaluate consumer behavior and competitor strategies. In the process of research, it was found that some companies neglect this tool, although in order to effectively promote their

business in their space, it is necessary to constantly analyze the received information.

Online communication channels make it possible to be closer to the client, to satisfy the needs of the audience faster, to convey information in a convenient and understandable form. Today, this is the most effective medium of communication: through a PC, social networks or a smartphone. Such a portal will be intuitive, easy to use, and, accordingly, will contribute to the growth of the number of users, increase the level of search results, etc. All user factors work to improve the site, gradually bringing the fruits of success to its owners.

Therefore, trusted real estate agencies conduct and develop effective online advertising, regularly update and maintain it. This contributes not only to an increase in the company's profit, but also increases brand recognition and the stability of the company's operation.

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