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THE EDNIPRO COMPANY'S INTEGRATION MARKETING COMMUNICATIONS COMPLEX AIMED AT ENSURING SUSTAINABLE DEVELOPMENT AND ECOLOGICAL SUSTAINABILITY

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The scientific article looked at the experience of Western utilities on the example of the city of Berlin. Berliner Wasserbetriebe (German for "Berlin Water"). Implements comprehensive educational programmes aimed at raising public awareness of the importance of water conservation. If the overall result of the IFAS-analysis for eDnipro is +1.28, this indicates that internal factors generally have a positive impact on the company's operations. The weighted score of the EFAS analysis of EDNIPRO at +1.1 indicates an overall positive impact of external factors on the strategic capabilities of the enterprise. The comparative analysis shows that eDnipro has a successful website and social media design compared to its competitors, but the regularity of publications leaves much to be desired, they publish rarely and without a clear schedule, while Kyiv Digital updates its publications more often, but still without a schedule, and the Berlin utility has regular posts twice a week. When Instagram receives interaction with polls, it identifies this content as interesting and shows it to more users. Grun Berlin publishes the most content on sustainable development. eDnipro can also compete with the above institutions through a number of strategies aimed at improving service quality, innovation and effective communication with customers. Finally, an important strategy is to provide a high level of customer service. This includes prompt support for users, quick response to their queries and problem solving. The effective use of marketing communications helps to inform and engage the population, thereby supporting sustainable development initiatives. Taking into account the identified opportunities and threats, as well as strengths and weaknesses, eDnipro has the potential for further successful development and implementation of its strategic goals. Researched several ways to measure the effectiveness of marketing communications, namely: Return on investment (ROI), Net Promoter Score (NPS). The introduction of artificial intelligence (AI) and machine learning (ML) can significantly improve eDnipro's marketing communications.

Keywords: company, marketing communications, sustainable development, analysis, website, social media.

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Introduction and formulation of the problem

Marketing communications play an important role in the modern world, especially in the context of sustainable development. Sustainable development involves a harmonious combination of economic, social and environmental aspects, which is becoming increasingly important for companies seeking longterm success and a positive contribution to society.

This topic is relevant not only for eDnipro, but also for other organizations that are committed to sustainable development and want to increase their competitiveness through effective marketing

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Kasian Serhii, Shapoval Daniil, Makarova Yelyzaveta, Riabyk Hanna

communications. The study will identify key trends and best practices in this area, as well as propose specific measures for their implementation in the company's activities.

Today, there is a pressing need for Ukrainian companies to develop on the principles of environmental responsibility and sustainability within the framework of the European Green Deal, which is important for attracting foreign investment and postwar recovery. This recovery opens up opportunities for the use of environmentally friendly technologies and infrastructure upgrades.

Analysis and research of publications

The relevance of the study of marketing communications within the framework of sustainable development is due to several factors. First, the growing attention to environmental and social issues by consumers and regulators requires companies to review their strategies and adapt to new conditions. Modelling the behaviour of modern conscious consumers should reflect the trend towards individualisation of service and customisation. Resource provision of the main business processes at global and regional high-tech enterprises is carried out with careful coordination of resource flows within dynamic economic systems.

O.V. Zozulov defines the structure of measures to strengthen the competitiveness of an enterprise, including ways to achieve, sources and carriers of competitive advantages. Among the tools of implementation, the scientist expediently distinguishes the importance of market segmentation, management of trademark assets [9; 10, p. 139-140].

The scientific novelty of the work is the development of methodological approaches to the integration of sustainable development into the marketing communications of a utility company.

The practical significance of the study lies in the possibility of implementing the developed recommendations to improve the effectiveness of marketing communications and support sustainable development of the city.

Purpose of the article

The purpose of the research is to improvement of theoretical and methodological components of marketing communications of the municipal enterprise "eDnipro" aimed at sustainable development of the city.

Presentation of the main material

Marketing communications is a set of actions and strategies aimed at establishing and extending the relationship between a company and its target audience [6; 15]. It is the process of exchanging information about products and services, which is based on their promotion in the market and creating a positive image of the company and its products. When promoting the principles and objectives of the sustainable development concept and the European Green Deal, it is advisable to reduce the environmental impact caused by business activities, introduce climateneutral printing, environmental friendliness by investing in environmentally friendly projects, and introduce innovative energy saving technologies based on the use of alternative energy sources.

Let's look at the experience of Western utilities on the example of the city of Berlin. Berliner Wasserbetriebe (German for "Berlin Water") implements comprehensive educational programmes aimed at raising public awareness of the importance of water conservation (Fig. 1). The company organises excursions to its facilities, interactive exhibitions, and educational programmes for schoolchildren and students. This not only promotes environmental education, but also increases trust in utilities.

Nach dem Spiel ist vor dem Spül.



Fig. 1. Website post about a tour of a water treatment facility during the Euro 2024 football matches in Germany [1; 4; 11]

eDnipro can borrow this practice to create its own educational initiatives aimed at raising environmental awareness and its importance in automating urban processes.

Grun Berlin (German for "green Berlin") uses interactive maps and online services to inform citizens about the condition of city parks, accessibility of green areas, and to receive feedback (Fig. 2). They have introduced a platform where citizens can leave their suggestions and complaints about the condition of urban areas [1; 4; 11].

eDnipro can introduce similar interactive platforms to improve public feedback and monitor the condition of city facilities, which will help to increase the efficiency of urban resource management. Implementation of such cases in the activities of eDnipro will help improve marketing communications

and support sustainable development of the city. The use of digital platforms, social media, educational programmes and interactive services will increase the effectiveness of communication strategies and engage citizens in active participation in the processes of digitalisation and automation of urban processes [3; 12].

An important aspect for achieving success and sustainable development of a company is also the

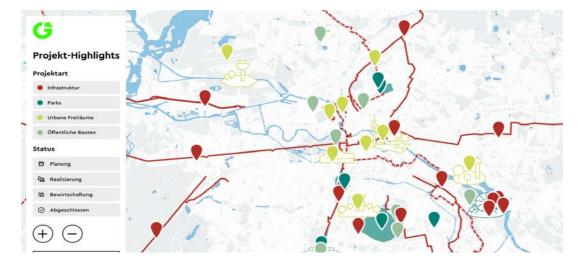


Fig. 2. An interactive map from Grun Berlin that informs about the state of the urban environment and the accessibility of green areas in the city [1; 4; 11]

integration of marketing communications with the overall business strategy [6; 7]. It is important to understand that marketing communications do not exist in isolation, but are closely linked to the company's main goals and objectives.

Reasonable to provide advisory and mentoring assistance to 70 selected companies, 54 representatives of the public and local authorities, to implement the desire to improve the quality of life of employees, partners, customers and their communities by promoting environmentally friendly management, energy saving and climate neutrality [10; 16].

Expedient to conduct a market research among 90 representatives of small and medium-sized businesses, the public and local authorities to identify their behavioural characteristics, needs for sustainable development, and to identify the profile of target segments in terms of environmentally friendly management, circular economy, building renovation, and biodiversity [9; 16].

Conducting an IFAS-analysis is important for a company because it allows it to identify key internal factors that can contribute to or hinder success. Understanding its strengths helps the company to use its resources and competitive advantages efficiently, while awareness of its weaknesses allows it to develop measures to eliminate them or minimise their negative impact. This analysis also contributes to a more accurate determination of strategic priorities and development directions, and was conducted according to the assessments of the city council departments and other partners (Table 1).

Table 1

| Factor | Weight | Assessment | A balanced assessment |
|--|--------|------------|-----------------------|
| Strengt | ns | | |
| Innovative technologies | 0.15 | 5 | 0.75 |
| Supporting sustainable development | 0.11 | 4 | 0.44 |
| A wide range of services | 0.2 | 4 | 0.8 |
| Cooperation with state and international organisations | 0.13 | 5 | 0.65 |
| Weaknes | ses | | |
| Limited funding | 0.11 | -3 | -0.33 |
| Low digital literacy of a part of the population | 0.13 | -4 | -0.52 |
| Difficulties in adapting to rapid technological change | 0.17 | -3 | -0.51 |
| TOTAL | 1 | | 1.28 |

Kasian Serhii, Shapoval Daniil, Makarova Yelyzaveta, Riabyk Hanna

If the overall result of the IFAS-analysis for eDnipro is +1.28, this indicates that internal factors generally have a positive impact on the company's operations. A value of +1.28 indicates that the company's strengths significantly outweigh its weaknesses.

Thus, eDnipro has good internal capabilities to achieve its goals and implement its strategic plans. This also means that the company has the potential for further growth and development, provided that it effectively uses its strengths and takes measures to eliminate or minimize the impact of its weaknesses in terms of sustainable development.

Expedient to develop a mentoring programme to support the creation, scaling and promotion of start-up projects in the field of innovative technologies for achieving sustainability of companies, authorities and the public in the context of the European Green Deal

The management problem for eDnipro is insufficient coordination and integration of internal

processes for the effective implementation of sustainable development strategies, which leads to a decrease in the effectiveness of environmental and social responsibility programmes. The marketing problem for eDnipro in the same context can be formulated as follows: low awareness and involvement of city residents in sustainable development programmes due to insufficiently effective marketing communications that do not reach the target audience and do not contribute to strengthening the environmental awareness of the population [12].

EFAS (External Factor Analysis of Strategic Opportunities) is a strategic management tool that allows assessing the external environment of an enterprise. The EFAS-analysis allows identifying key success factors and threats arising in the external environment and assessing their impact on the enterprise's strategy [7; 10], and was conducted based on the assessments of the city council departments and other partners (Table 2).

Table 2

| EFAS-analysis for eDinpro | | | | | | | |
|---------------------------|--------------------------------------|---|--|--|--|--|--|
| Weight | Assessment | A balanced assessment | | | | | |
| Features | | | | | | | |
| 0.3 | 4 | 1.2 | | | | | |
| 0.2 | 3 | 0.6 | | | | | |
| 0.1 | 5 | 0.5 | | | | | |
| Threats | | | | | | | |
| 0.2 | -3 | -0.6 | | | | | |
| 0.1 | -4 | -0.4 | | | | | |
| 0.1 | -2 | -0.2 | | | | | |
| 1 | | 1.1 | | | | | |
| | WeightFeatures0.30.20.1Threats0.20.1 | Weight Assessment Features 0.3 4 0.2 3 0 0.1 5 5 Threats 0.2 -3 0.1 -4 -4 | | | | | |

EFAS-analysis for eDnipro

Source: compiled by the authors on the basis [3; 12; 13]

The weighted score of the EFAS analysis of EDNIPRO at +1.1 indicates an overall positive impact of external factors on the strategic capabilities of the enterprise. This means that positive opportunities currently prevail over threats in the external environment, which may create favorable conditions for the development and success of the enterprise.

In the field of digitalization and information updating of the city, eDnipro faces different types of competition. It is important to understand who the potential competitors are. Private technology companies that specialize in software and information technology development can be potential competitors in areas such as providing electronic textbooks for students and platforms for teachers. For example, a company that develops specialized mobile applications or web-based learning platforms could compete with eDnipro in these areas. Other utilities and municipal enterprises may also become competitors. For example, municipal educational institutions, such as schools, colleges and universities, may provide alternative electronic textbooks and information resources for students. Also, a local library may establish an electronic database containing educational materials. These resources can compete with the e-textbooks and databases offered by eDnipro.

It is appropriate to create constructive networking within the framework of partnership business interaction of 100 companies with a focus on international activities in the field of sustainable development, climate neutrality. In particular, municipal institutions that specialise in providing and maintaining information services for the city may also be competitors. For example, a municipal utility department or a city's information technology department may provide similar digitalisation and information update services for city

residents [12; 15; 16].

Let's compare eDnipro with other companies – Kyiv Digital, with its website kyiv.digital [8] and

Instagram page @kyiv.digital [8], and Grun Berlin, with its website at gruen-berlin.de [4] and Instagram page @gruenberlin [11] (Table 3).

Table 3

| Indicator | KP eDnipro | Kyiv Digital Municipal Enterprise | "Grun Berlin" |
|---|------------|-----------------------------------|---------------|
| Website design/social media design | 5 | 5 | 4 |
| Frequency of publications and information updates | 3 | 4 | 5 |
| User interaction with content | 4 | 5 | 4 |
| Content dedicated to sustainable development | 4 | 4 | 5 |
| Implementation of sustainable development ideas | 4 | 4 | 5 |
| Level of digitalization and use of AI tools | 3 | 4 | 5 |

Comparative analysis of eDnipro, Kyiv Digital and Grun Berlin

Source: compiled by the authors on the basis [3; 4; 11; 12; 13; 14]

The analysis shows that eDnipro has a successful website and social media design compared to its competitors, but the regularity of publications leaves much to be desired, they publish rarely and without a clear schedule, while Kyiv Digital updates its publications more often, but still without a schedule, and the Berlin utility has regular posts twice a week. Kyiv Digital has the best user engagement on its Instagram page, which we attribute to the fact that they publish posts more often, add interactive activities and polls.

When Instagram receives interaction with polls, it identifies this content as interesting and shows it to more users. Grbn Berlin publishes the most content on sustainable development. They have developed an interactive map where you can assess the state of the environment in real time. Based on this, their employees go to pollution zones and clean up green areas and city neighbourhoods together with activists, and then publish the results [4; 11].

This approach is the most effective in the context of sustainable development, as everyone who cares can get involved. Hence, the leadership of the Berlin Public Utilities Company in the next parameter - the implementation of sustainable development ideas. The level of digitalisation of all companies is quite high, but not all of them use artificial intelligence. Ukrainian utilities are announcing the development of their own chatbots (Kyiv Digital is already using it in its app), and GFbn Berlin has both a chatbot and an interactive map that is updated in real time, so their position is the most advantageous.

Therefore, we suggest that eDnipro take advantage of the experience of other companies, make its posts more regular and encourage support for sustainable development ideas, and pay attention to AI tools. eDnipro can also compete with the above institutions through a number of strategies aimed at improving service quality, innovation and effective communication with customers. Firstly, eDnipro should constantly introduce new technologies and improve the quality of its services. For example, the latest developments in educational technology, such as interactive textbooks with multimedia content that provide an interactive and individualised approach to learning, can be used to provide e-textbooks and platforms for teachers.

Secondly, it is important to focus on creating user-friendly and accessible e-platforms. This may include the development of mobile applications and web platforms with simple and intuitive interfaces that facilitate access to e-textbooks, databases and other services. An important aspect is to ensure uninterrupted access to services, which will increase user confidence and satisfaction.

Thirdly, eDnipro should actively cooperate with local educational institutions and NGOs. This will allow it to take into account the needs and wishes of consumers, as well as to ensure wider use of its services. In addition, it should actively promote its services through various communication channels, such as social media, websites, and information campaigns in schools and other educational institutions. This will help raise awareness of the new opportunities and services offered by eDnipro.

Finally, an important strategy is to provide a high level of customer service. This includes prompt support for users, quick response to their queries and problem solving. A high level of service will help to maintain customer loyalty and ensure a positive reputation for the organization. In fact, the company has limited working hours, which can be indicated on the website in the same section to provide users with up-to-date information. We suggest using the experience of the Berlin utility Berliner Wasserbetriebe (analysed on their website bwb.de) (Fig. 3).

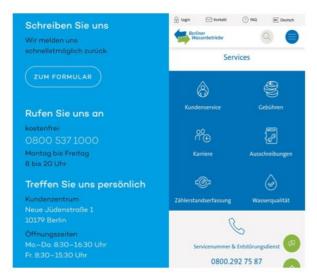


Fig. 3. Examples of the design of websites of municipal enterprises in Berlin [1; 3; 4; 11]

As you can see, the example on the left shows the working hours, business address, phone number (it is indicated that calls are free), and a form has been added where you can contact us right now and there is a call to action "write to us".

The website of another Berlin utility is shown in Fig. 3 on the right. From this photo, I would like to emphasize the successful grouping of the main activities of the utility company, the small but capacious menu, the ability to find out what the user needs, and the contact phone number (on the eDnipro website, it is provided at the bottom of the page, meaning that you need to look through all projects, partners, employees, and only then the phone numbers).

Another advantage of the German website is the presence of an invitation button to chat with the company's employees. Initially, a bot responds to the chat, but from the very first interaction, you can choose to communicate with a real person and continue to ask your questions.

In general, the results of the analysis confirm that eDnipro plays an important role in the process of digitalization and sustainable development of the city of Dnipro. The effective use of marketing communications helps to inform and engage the population, thereby supporting sustainable development initiatives. Taking into account the identified opportunities and threats, as well as strengths and weaknesses, eDnipro has the potential for further successful development and implementation of its strategic goals.

In order to provide advisory, mentoring, marketing and organizational support for the development of environmental sustainability of Ukrainian companies, the project envisages a set of effective measures to be implemented in several stages

There are several ways to measure the effectiveness of marketing communications, namely:

- Return on investment (ROI) - determining the profit received from each monetary unit invested in marketing. It is determined by the following analytical formula [7; 9]:

ROI=(Profit-Costs)÷Costs×100%

- Loyalty is often measured using the Net Promoter Score (NPS). This is a metric that measures the willingness of customers to recommend a company or its products to others. The formula for calculating NPS is as follows:

NPS=%Promoters-%Detractors,

where promoters are customers who rated the campaign at 9 or 10 on a scale of 0 to 10 and are ready to recommend the company/product in a positive way;

detractors are customers who rated the campaign from 0 to 6 points [6; 10].

It is advisable to create an interactive information platform with 115 information, communication and presentation materials promoting and explaining the achievement of sustainable development goals, including environmental sustainability of companies and climate neutrality, which will accelerate recycling logistics by 11.4%.

The introduction of artificial intelligence (AI) and machine learning (ML) can significantly improve eDnipro's marketing communications. These technologies allow analysing large amounts of data and gaining insights into user behavior and preferences. The use of AI and ML helps to segment the audience, predict trends, and personalize communications [16]. For example, AI can analyse user feedback and identify common problems or preferences, which allows for more targeted and effective marketing campaigns. Implementation of analytical models that reflect the temporal component of economic systems development will allow for more accurate forecasting of the size and vector of resource flows and increase the value of supply and customer service in target markets.

Conclusions

Our research describes theoretical foundations of enterprise marketing communications and the concept of sustainable development marketing. The entrepreneurial activity is described and the external and internal environment of the ME "Digital Transformation and Automation of Information Processes of the city "eDnipro" is studied in terms of sustainable development.

An analysis of the complex of marketing communications of the Municipal Enterprise "Digital Transformation and Automation of Information Processes of the City of eDnipro" is carried out. A strategic analysis was carried out and recommendations for further development of the enterprise ME "Digital Transformation and Automation of Information Processes of the City of eDnipro" in the field of sustainable development were developed.

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КОМПЛЕКС ІНТЕГРОВАНИХ МАРКЕТИНГОВИХ КОМУНІКАЦІЙ ПІДПРИЄМСТВА EDNIPRO, СПРЯМОВАНИХ НА ЗАБЕЗПЕЧЕННЯ СТАЛОГО РОЗВИТКУ ТА ЕКОЛОГІЧНУ СТІЙКІСТЬ

Касян С.Я., Шаповал Д.Е., Макарова Є.О., Рябик Г.Е.

У науковій статті розглянуто досвід західних комунальних підприємств на прикладі міста Берлін. Berliner Wasserbetriebe (нім. «Берлінська вода»). Реалізує комплексні освітні програми, спрямовані на підвищення обізнаності населення про важливість збереження води. Якщо загальний результат IFAS-аналізу для «еДніпро» становить +1,28, це свідчить про те, що внутрішні фактори загалом позитивно впливають на діяльність компанії. Зважене оцінювання EFASаналізу «єДніпро» на рівні +1,1 свідчить про загальний позитивний вплив зовнішніх факторів на стратегічні можливості підприємства. Порівняльний аналіз показує, що еДніпро має вдалий дизайн сайту та соціальних мереж порівняно з конкурентами, але регулярність публікацій залишає бажати кращого, вони публікуються рідко і без чіткого графіка, тоді як Київ Цифровий оновлює свої публікації частіше, але все ще без графіка, а берлінське комунальне підприємство має регулярні пости двічі на тиждень. Коли Instagram отримує взаємодію з опитуваннями, він визначає цей контент як цікавий і показує його більшій кількості користувачів. Grьn Berlin публікує найбільше контенту на тему сталого розвитку. еДніпро також може конкурувати з вищезазначеними установами завдяки низці стратегій, спрямованих на покрашення якості послуг, інновацій та ефективної комунікації з клієнтами. Нарешті, важливою стратегією є забезпечення високого рівня обслуговування клієнтів. Це містить оперативну підтримку користувачів, швидке реагування на їхні запити та вирішення проблем. Ефективне використання маркетингових комунікацій допомагає інформувати та залучати населення, тим самим підтримуючи ініціативи сталого розвитку. Враховуючи виявлені можливості та загрози, а також сильні та слабкі сторони, еДніпро має потенціал для подальшого успішного розвитку та реалізації своїх стратегічних цілей. Досліджено декілька способів вимірювання ефективності маркетингових комунікацій, а саме: Рентабельність інвестицій (ROI), Net Promoter Score (NPS). Впровадження штучного інтелекту (AI) та машинного навчання (ML) може значно покращити маркетингові комунікації еДніпро.

Ключові слова: компанія, маркетингові комунікації, сталий розвиток, аналіз, веб-сайт, соціальні медіа.

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The scientific article looked at the experience of Western utilities on the example of the city of Berlin. Berliner Wasserbetriebe (German for "Berlin Water"). Implements comprehensive educational programmes aimed at raising public awareness of the importance of water conservation. If the overall result of the IFASanalysis for eDnipro is +1.28, this indicates that internal factors generally have a positive impact on the company's operations. The weighted score of the EFAS analysis of EDNIPRO at +1.1 indicates an overall positive impact of external factors on the strategic capabilities of the enterprise. The comparative analysis shows that eDnipro has a successful website and social media design compared to its competitors, but the regularity of publications leaves much to be desired, they publish rarely and without a clear schedule, while Kyiv Digital updates its publications more often, but still without a schedule, and the Berlin utility has regular posts twice a week. When Instagram receives interaction with polls, it identifies this content as interesting and shows it to more users. Grun Berlin publishes the most content on sustainable development. eDnipro can also compete with the above institutions through a number of strategies aimed at improving service quality, innovation and effective communication with customers. Finally, an important strategy is to provide a high level of customer service. This includes prompt support for users, quick response to their queries and problem solving. The effective use of marketing communications helps to inform and engage the population, thereby supporting sustainable development initiatives. Taking into account the identified opportunities and threats, as well as strengths and weaknesses, eDnipro has the potential for further successful development and implementation of its strategic goals. Researched several ways to measure the effectiveness of marketing communications, namely: Return on investment (ROI), Net Promoter Score (NPS). The introduction of artificial intelligence (AI) and machine learning (ML) can significantly improve eDnipro's marketing communications.

Keywords: company, marketing communications, sustainable development, analysis, website, social media.

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