

Digital Marketing Tools for Preserving Cultural Heritage in the Context of Sustainable Urban Development

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Abstract: The article is concerned with researching the possibilities of using digital marketing tools in the area of cultural heritage preservation in the context of sustainable urban development. The main focus is on innovative technologies, in particular, on the use of the holographic system “HYPERVSN”, which provides broadcasting of a three-dimensional image with an expressive emotional effect. The methodological basis of the study was general scientific approaches to analysis and systematisation, as well as quantitative methods, including a sociological survey, which made it possible to determine the level of public perception and interest in the use of such technologies in public space. The results indicate the growing openness of consumers to the latest formats of visual communication, as well as the potential of digital media as an effective tool for promoting cultural objects. The research outlines both the advantages, such as innovation, attractiveness, and the ability to create sustainable interest in a city brand, and the risks associated with possible visual overload or inappropriate content of advertising. The originality of the work lies in the integration of a marketing approach to the tasks of cultural heritage protection and in the substantiation of its role in shaping an attractive city image. The practical value lies in the possibility of using the presented findings to develop municipal strategies focused on combining digital technologies, cultural policy and sustainable development.

1 INTRODUCTION

Analysing global challenges and a focus on sustainable development, the preservation of cultural heritage is increasingly seen not only as a matter of historical value, but also as an important factor in social interaction, tourist attractiveness and economic sustainability of the urban environment. Today, there is a change in communication approaches, an increase in the role and relevance of visual technologies in public space, which requires new tools for interaction with society, especially in the context of promoting cultural heritage sites and the need to preserve them.

Recently, digital marketing has become particularly relevant as an effective and efficient tool for sustainable city image management. It creates a vivid, emotionally rich visual context that not only informs but also engages the audience in interaction. It is the younger generations: millennials and

representatives of Generation Z – who determine trends in consumer behaviour, particularly in the perception of advertising and urban space. For them, classical forms of promotion are gradually losing their relevance, while innovative solutions based on interactivity can create lasting impressions and evoke emotional attachment to a brand or place [1,2,3].

Holographic technologies, which until recently were perceived as experimental or decorative, are gradually becoming quite applied [4]. They are successfully used by leading brands, including Coca-Cola, Adidas, Vodafone, Walmart and Puma. Examples of successful campaigns using three-dimensional images in public space demonstrate the ability of these solutions not only to attract attention but also to change consumer practices. “HYPERVSN” technology plays a special role in this process, allowing dynamic holograms to be broadcast

in 3D, creating the effect of presence and engagement.

Unlike traditional advertising media, "HYPERVSN" allows not only to demonstrate visual content, but also to build a holistic communication experience that can be easily integrated into the city environment - on the streets, in tourist areas, near cultural sites. It can be concluded that holographic advertising is not only a commercial tool, but also a means of strengthening the city brand, promoting urban space, visualising historical monuments and stimulating interest in cultural heritage.

The relevance of the study lies in the need to analyse and highlight the significant role of digital marketing tools in preserving and promoting cultural heritage and, as a result, promoting cities and encouraging sustainable urban development. The purpose of this article is to analyse the potential of innovative technologies, in particular the "HYPERVSN" system, for integration into municipal sustainable development strategies, as well as to study the perception of such tools by residents and tourists in the urban environment.

2 RESEARCH METHODOLOGY

The article uses general scientific methods of analysis and systematisation to study the regulations on cultural heritage to prove that the municipal authorities are systematically engaged in the preservation of the city's cultural heritage and the development of cultural tourism. Quantitative methods in the form of a sociological survey among residents and tourists to determine the level of awareness, interest, perception of cultural heritage and the introduction of innovative digital communication tools using "HYPERVSN" technology in the urban context.

3 ANALYSIS OF RESEARCH RESULTS OR SCIENTIFIC PROBLEM

3.1 Cultural Heritage Management and Urban Branding Strategies

Odesa is the tourist capital of Ukraine and is called the "pearl by the sea". It is a major European city with an architectural, cultural, balneological and

recreational industry. The concept of city construction in the late 18th century was developed by representatives of many European countries and embodied the best European achievements in urban planning. The Spaniard O. Deribas, the Frenchmen E. Richelieu and A. Langeron supervised the construction, and the Dutchman F. de Volan developed the city's project. The architecture embodies many classical European architectural styles. The historic center of the city is a cultural heritage. On January 25, 2023, the World Heritage Committee decided to inscribe the historic center of Odesa on the World Heritage List.

Audrey Azoulay, Director-General of UNESCO, said: "Odesa, a free city, a world city, a legendary port that has left its mark on cinema, literature and art, is now under increased protection by the international community. As the war continues, the inscription of this site on the World Heritage List embodies our collective determination to protect this city, which has always withstood global upheaval, from further destruction" [5].

The Odesa City Council systematically preserves cultural heritage. The Department of Culture, International Cooperation and European Integration is in charge of this within the Executive Committee. Within the structure of this department, there are the Department of Culture, the Department of Tourism, the Department of International Relations, the Department for Work with UNESCO and the Protection of Cultural Heritage.

Currently, the Department of Culture, International Cooperation and European Integration of the Odesa City Council is developing a project "Support for the Implementation of the Odesa Cultural Development Strategy" to preserve cultural heritage and develop tourism in Odesa. The project is funded by the EU under the EU4Culture project, implemented by the Goethe Institute in partnership with the Danish Institute of Culture, Czech Centers, and the French Institute in Georgia. The project for the implementation of the city's Cultural Development Strategy is to be developed in the fall of 2024. "The issue of preserving historical heritage has become particularly relevant against the backdrop of Russian aggression against Ukraine and, as a result, damage to cultural and historical monuments, as well as the receipt of the status of a UNESCO World Heritage Site by the historic center of Odesa," - notes Ivan Liptuga, Director of the Department of Culture, International Cooperation and European Integration of the Odesa City Council [6].

Odesa City Council adopted the investment strategy of the city “Odesa 5T”.

“Odesa 5T” is an investment brand of the city that unites five main vectors of the city's development:

- Transportation.
- Trade.
- Technology (construction, IT, medicine).
- Tourism.
- Trust (transparent economy, trust, financial services market).

Investment Agency “Odesa 5T” was created for effective meetings of domestic and foreign investors and entrepreneurs. Tourism, transport, technology, trade, and trust - the five main areas of promising and effective investment in one of the main economic centers of Ukraine. Investment Agency “Odesa 5T” was established as a one-stop shop to facilitate investment attraction, promotion and implementation of priority projects for cities. The team analyzes the economic and legal conditions of projects, taking into account the interests of cities and investors, monitors and controls the implementation of initiatives that have already been launched, introduces systemic measures by improving the investment climate, cooperation with executive authorities, and entrepreneurial responsibility.

In addition, the municipal institution “Odesa 5T Grant Office” operates. It became the legal successor of the municipal enterprise “Agency for Development Programs of the City of Odesa” already operating under the mayor's office. The municipal institution makes extensive use of digital marketing tools.

To create conditions for the effective functioning of the city's economic complex and for a decent life for people, it is necessary to skillfully combine the efforts of various municipalities. A system of marketing activities is needed to attract new economic investments to the city through the distribution of information and materials about the city, targeted visits by city leaders, and meetings with potential investors. The goals of municipal marketing are to improve (preserve) the competitiveness of industrial and service enterprises in the region; to attract new businesses to the region and, as a result, to obtain funds for the preservation of cultural heritage. An extremely crucial component is the city brand, which is an integral set of features that contain unique original characteristics of the city and imagery and perception that allow identifying this city among others in the eyes of target groups. City brand gives a first impression of the value promised in terms of the

experience a potential user can receive [7]. The brand should perform the following functions [8]:

- 1) identify the city among others;
- 2) to form a sense of attachment to the city and identity with it among target audiences;
- 3) to be a guarantor of the city's quality.

Municipal marketing is actively developing in the city, which has become the basis for shaping the city's brand and image. At the initiative of the local authorities, competitions were held to create a tourist slogan, symbols and logo for the city, which were later used as elements of the city's identity.

It is crucial to emphasise that the core of any city is its inhabitants who live on or near the heritage site, while other facilitators such as authorities, experts and economic actors are considered to be the wider community [9,10]. Local communities can share responsibility for integrating heritage conservation into sustainable urban development through cooperation and community empowerment [11,12,13].

3.2 Introduction to the Research Objects

Digital marketing is a model of 21st century marketing, mass individualization marketing, which allows targeted interaction with target market segments in virtual and real environments through digital channels using digital methods. Digital marketing could offer a crucial platform that is community - based for sustainable and holistic heritage conservation [14]. Municipal authorities use the following tools:

- 1) Local networks of enterprises or districts, which are self-sufficient information systems. Now, local networks are gradually being integrated with the Internet.
- 2) Mobile devices with branded applications or organization of WOW-calls to the phone (WOW-call is a platform that combines the Internet and telephony).
- 3) Interactive screens, POS-terminals located in stores and on the streets. They are gradually replacing standard outdoor advertising, as they allow for closer interaction with the consumer, delivering messages or helping to make purchases through a POS-terminal.
- 4) Digital art is an art form in which a computer is used to create or reproduce an artistic work: drawing, sound, animation, video, games, website, performance, installation.

Trigger of preservation of cultural heritage is the effective functioning and development of the recreational complex of the city [15]. This complex is part of ensuring stable and dynamic economic growth [16]. It is worth noting that the recreational complex is an integral part of the national economy, the role of which is to ensure the production and sale of socially useful products, the object of which is tourist and recreational services [17]. World experience shows that the recreational complex is becoming increasingly important in stimulating urban development. Consumers of recreational services overcome distances in order to meet the demand. After that, the country experiences what is called “primary” economic revitalization in the form of utilizing the available potential of the recreational complex. Next, a multiplier effect occurs. There is a “secondary” revitalization, but already in other sectors of the economy. The total revitalization due to the multiplicative effect, as it can be seen from Fig. 1, can give a strong revitalizing result.

3.3 Analysis of Tools for the Development of the City's Recreational Complex

To advertise tourist attractions, it is proposed to use “HYPERVSN” to visualize three-dimensional images. The technology based on the use of holographic images is revolutionary for outdoor

advertising. A three-dimensional diorama uses diodes to reproduce a full-fledged and realistic 3D image. The hologram displays all sides of the observed object, conveys its volume, relief, and depth. The advanced solution allows you to first create and display unique three-dimensional photo or video content, and then manage it.

The WOW-effect of a hologram promotes deep memorization of information about a product, including on an emotional level, and from the technical side, it gives a potential buyer much more information about the advertised product than “flat” advertising. The consumer can see everything from all sides. This inspires trust.

“HYPERVSN” technology is a cost-effective alternative that will make it possible to use small and medium-sized holograms. The effect of a 3D hologram is created by blades with LEDs placed on them, which rotate at high speed. This is how the effect of image visualization is achieved.

Marketing research is another tool for the development of the city's recreational complex. It is worth noting that the organised system of marketing tools forms an effective comprehensive tool for implementing the strategy for the development of the city's recreational complex [18]. A survey was conducted to assess the effectiveness of the proposed innovative advertising technology. This method of marketing research was chosen to identify the perception of the city residents of the use of

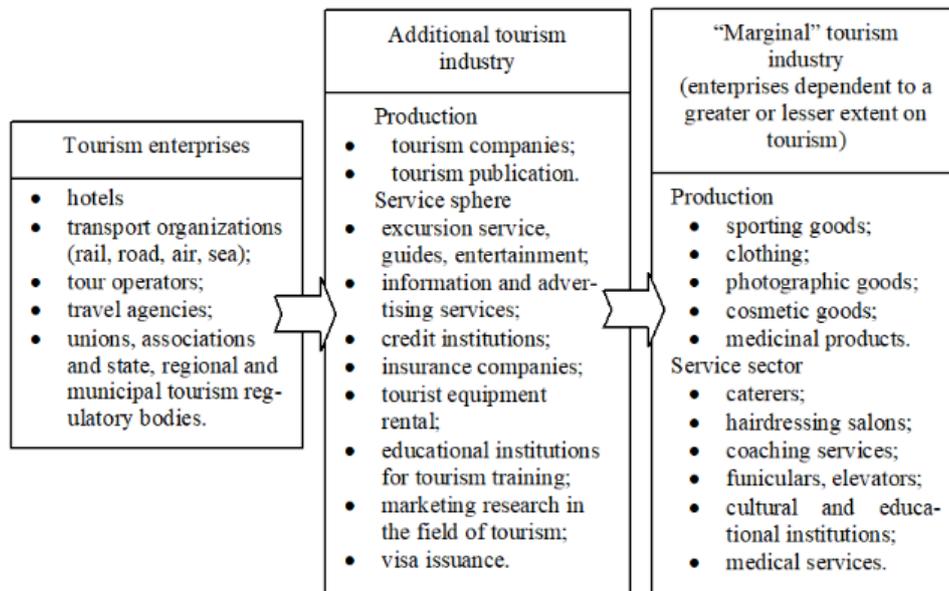


Figure 1: Scheme of multiplier effect as a result of the development of recreational complex of the city.

advertising in the historic part of the city. The respondents who took part in the survey were also offered a questionnaire to survey the use of a new type of advertising in the urban space. It contained the following questions:

- 1) Will you be interested in this technology and why?
- 2) To what extent is the technology noticeable among other types of advertising media in the historic part of the city (banners, billboards)?
- 3) What negative aspects of this technology can you name?
- 4) What positive aspects of this technology can you name?
- 5) Would you make a video of the “HYPERVSN” and share it with your friends?
- 6) What would you like to see from the goods/services/brands on a 3D hologram of the “HYPERVSN”?
- 7) Do you think that your attitude towards the product/service/brand that will be advertised on this technology has changed? Why?
- 8) Where would you like to see this technology in action? (In supermarkets, on the street, near the advertised product, etc.).

The answers of the respondents are shown in Figure 2, Figure 3, Figure 4.

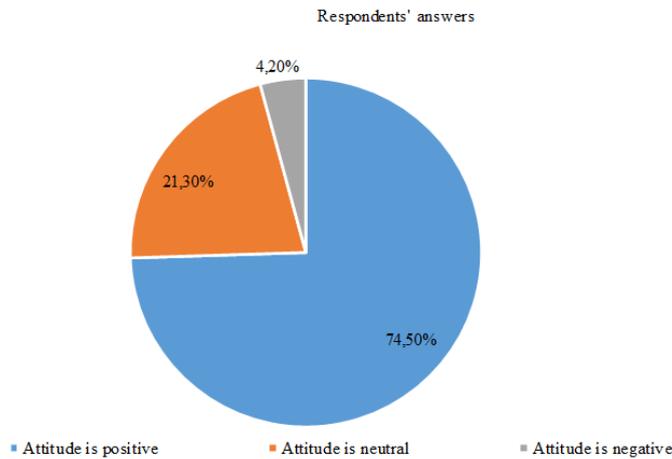


Figure 2: Respondents' interest in “HYPERVSN” technology.

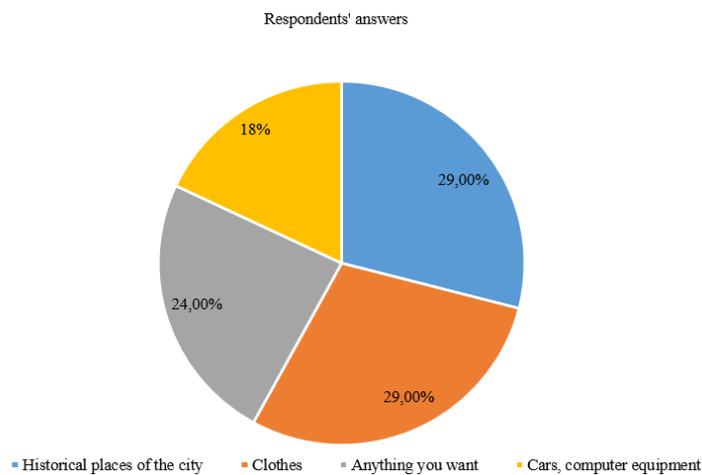


Figure 3: Respondents' attitudes towards the use of “HYPERVSN” technology.

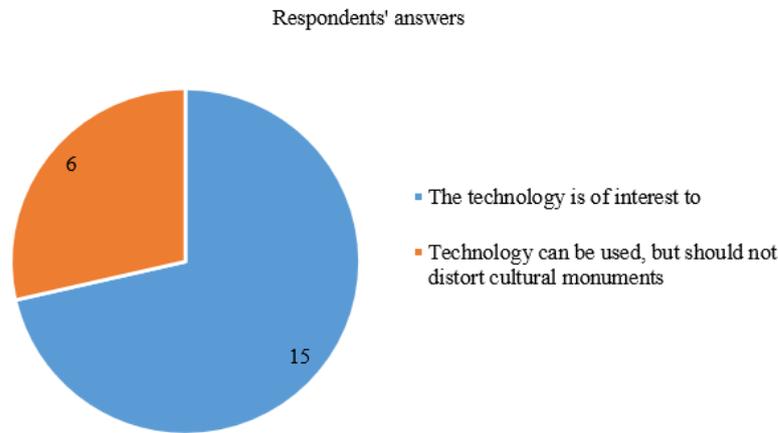


Figure 4: What goods and services would respondents like to see advertised with 3D holograms of the “HYPERVSN” technology?

A total of 47 respondents took part in the survey, including 23.4% of men and 76.6% of women. Age range of respondents: 59.6% of respondents were under 20 years old, 38.3% were aged 21-35, and the rest were over 35. 74.5% of respondents have a positive attitude towards new technologies, 21.3% are neutral and 4.3% are negative. All respondents said they would definitely share a video with such technology with their friends.

“HYPERVSN” continues to evolve. In 2023, Michael Blackman, Managing Director of Integrated Systems Europe, joined the Talent Congress in Barcelona in the form of a 3D hologram from 4,000 miles away in Oman, thanks to “HYPERVSN”. The demo version of this innovative solution at ISE 2023b demonstrated the difference between the required "human contact" and visualisation from traditional flat-screen calls and live broadcasts. This real-time streaming solution ensured maximum realism and impact on the audience. Interactivity is an important new factor in increasing the impact on consumers.

4 CONCLUSIONS

The research shows the feasibility of using digital marketing tools, in particular HYPERVSN holographic technology, in the process of preserving and promoting cultural heritage in the context of sustainable urban development. The obtained results confirm the high level of audience interest in innovative forms of visual communication, which opens up new opportunities for increasing public and tourist awareness of cultural sites.

The scientific novelty of the study lies in the integration of the concepts of municipal marketing, city branding and digital communications in the context of cultural heritage preservation. For the first time, holographic technology is considered not only as a commercial advertising tool, but also as a potential mechanism for forming an emotional connection between citizens and the historical and cultural environment. The use of innovative visual solutions allows us to rethink traditional approaches to the promotion of urban spaces and heritage values.

The practical significance of the results obtained lies in the possibility of their use by local governments, city departments of culture, tourism and marketing to develop modern strategies for communication with the public. The proposed technologies can be effectively integrated into the information and cultural infrastructure of the city, contributing to the growth of tourist attractiveness, strengthening the brand of the territory and more active participation of citizens in the processes of preserving cultural heritage.

Taking this into account, the advantage of the study is its novelty and interdisciplinary approach: the topic of using marketing tools to preserve cultural heritage in the context of sustainable urban development is still poorly understood. The paper reveals the potential of the latest digital technologies for promoting intangible and cultural factors of the urban environment in the tourism market, which creates the basis for a new model of communication between the city and target audiences.

The limitations of the study include the insufficient amount of statistical material due to the

staged nature of the article. In view of this, the use of mathematical and statistical methods for an in-depth analysis of the factual base is planned in further empirical research.

Further research will be related to the study of the possibility of using such marketing tools as virtual reality, augmented reality, mixed reality in the preservation of cultural heritage.

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