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INNOVATIVE APPROACHES TO THE DEVELOPMENT OF MARKETING IN THE UNIVERSITY ECOSYSTEM IN THE CONTEXT OF MODERN CHALLENGES

The article *explores the concept of university ecosystem marketing development in the context of modern global challenges, including globalization, digitalization, post-pandemic adaptation, and political and economic instability. The main problems affecting the competitiveness and sustainability of universities are identified, among which the outflow of intellectual potential, inequality in access to digital resources, and limited funding are particularly highlighted. The experience of leading world universities is analyzed, in particular the practices of the Massachusetts Institute of Technology and Stanford University, which are actively implementing digital platforms, micro-qualifications, innovative pedagogical approaches, and partnerships with business to ensure the quality of education and its global attractiveness. The article analyzes the role of digital tools in shaping the competitiveness of universities, in particular through the implementation of online platforms that ensure the accessibility of educational programs to a wide audience, reduce the digital divide, and stimulate international cooperation in the university ecosystem. Examples of successful partnerships between universities and businesses that promote investment attraction, development of innovative entrepreneurship and creation of innovative university infrastructure are considered. Strategies are proposed that promote equal access to education for socially vulnerable groups, a strategy for developing the marketing of the university ecosystem, which is formed on the basis of a digital educational environment, the development of adaptive educational programs, active partnership with business and the implementation of marketing campaigns aimed at popularizing the existing university innovation potential, are substantiated. As a result, it is noted that the implementation of these approaches will contribute to the transformation of universities into innovation centers capable of integrating into the global educational space, accumulating intellectual potential and contributing to the innovative sustainable development of society.*

Keywords: *innovative potential; innovation; investment; innovative entrepreneurship; innovation parks; intellectual capital; eco-territory; educational services; educational programs; sustainable development; technology transfer; innovation centers.*

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ІННОВАЦІЙНІ ПІДХОДИ ДО РОЗВИТКУ МАРКЕТИНГУ УНІВЕРСИТЕТСЬКОЇ ЕКОСИСТЕМИ В УМОВАХ СУЧАСНИХ ВИКЛИКІВ

У статті досліджено поняття розвитку маркетингу університетської екосистеми в умовах сучасних глобальних викликів, зокрема глобалізації, цифровізації, постпандемічної адаптації та політично-економічної нестабільності. Визначено основні проблеми, що впливають на конкурентоспроможність і стійкість університетів, серед яких особливо виокремлено відтік інтелектуального потенціалу, нерівність у доступі до цифрових ресурсів і обмежене фінансування. Проаналізовано досвід провідних світових університетів, зокрема практики Массачусетського технологічного інституту та Стенфордського університету,

які активно впроваджують цифрові платформи, мікрокваліфікації, інноваційні педагогічні підходи та партнерство з бізнесом для забезпечення якості освіти та її глобальної привабливості. У статті проаналізовано роль цифрових інструментів у формуванні конкурентоспроможності університетів, зокрема через впровадження онлайн-платформ, які забезпечують доступність освітніх програм для широкої аудиторії, зменшують цифровий розрив і стимулюють міжнародну співпрацю в університетській екосистемі. Розглянуто приклади успішного партнерства університетів із бізнесом, які сприяють залученню інвестицій, розвитку інноваційного підприємництва та створенню інноваційної університетської інфраструктури. Запропоновано стратегії, які сприяють рівному доступу до освіти для соціально вразливих груп, обгрунтовано стратегію розвитку маркетингу університетської екосистеми, яка формується на основі цифрового освітнього середовища, розвитку адаптивних освітніх програм, активному партнерстві з бізнесом і реалізації маркетингових кампаній, спрямованих на популяризацію наявного університетського інноваційного потенціалу. У підсумку зазначено, що впровадження цих підходів сприятиме трансформації університетів у центри інновацій, здатні інтегруватися в глобальний освітній простір, накопичувати інтелектуальний потенціал і сприяти інноваційному сталому розвитку суспільства.

Ключові слова: *інноваційний потенціал; інновації; інвестиції; інноваційне підприємництво; інноваційні парки; інтелектульний капітал; екотериторія; освітні послуги; освітні програми; сталий розвиток; трансфер технологій; центри інновацій.*

Problem Statement. Under the influence of globalization, digitalization, and in the conditions of post-pandemic adaptation and global political crisis, universities face a number of challenges that affect their competitiveness and sustainability. Existing marketing strategies do not meet modern realities, which creates significant challenges for universities that strive for competitiveness and economic sustainability. In addition, post-pandemic adaptation, economic and military-political crises significantly affect the functioning of educational institutions, setting them the task of ensuring the conditions for the country's development through education. For Ukraine, the main challenge today is to preserve youth as the future of the country. Mass migration of students and graduates due to war and economic instability threatens the loss of the nation's intellectual potential. Universities, destroyed physically and financially, must not only restore infrastructure, but also find ways to return young people, creating attractive conditions for learning and professional growth. Ukraine has a strategic goal: to preserve and develop human capital through quality education that meets modern global challenges. To do this, it is important to return young people to the country and involve them in the processes of economic and social recovery. Solving these tasks requires rethinking the marketing strategies of universities. Without an emphasis on innovation, digitalization and internationalization of education, universities risk losing a key role in the country's development, which will affect not only the education sector, but also the economy as a whole.

Analysis of modern literary sources. The issue of innovative approaches to the development of marketing in the university ecosystem in the face of modern challenges is actively studied by a wide range of scholars. In particular, the issues of digitalization and the introduction of artificial intelligence into marketing were considered by Wilson, Johnson, and Brown [5], as well as De la Croix de Castries [6], who studied the personalization of marketing strategies using artificial intelligence technologies. Global approaches to the adaptation of universities to modern challenges were highlighted by Mohrman, Ma, and Baker [13], Marginson [15], and Dalmarco, Hulsink, and Blois [16]. The entrepreneurial approach to university management was studied by Etzkowitz [12] and Lenoir, Rosenberg, and Rowen [11], Etzkowitz [12] and Lenoir, Rosenberg, and Rowen [11]

consider the entrepreneurial approach as a tool for transforming universities into centers of innovation and economic development. The specifics of university-industry cooperation in creating innovation ecosystems were studied by Frølund, Murray and Riedel [27], Addanki [29]. A significant contribution to the development of university innovation activities was made by Abelson and Long [19], who analyzed university strategies.

Purpose of the article. The purpose of the article is to study innovative approaches to the development of university ecosystem marketing aimed at solving modern challenges arising from globalization, digitalization, post-pandemic adaptation, and political and economic instability.

Key findings of the study International organizations are actively investigating the level of development of higher education and the impact of marketing decisions on the sustainability of universities in different countries of the world. The United Nations Educational, Scientific and Cultural Organization (UNESCO) in its study "Global Education Monitoring Report 2023: Technology in Education" draws attention to the role of digitalization as a key factor in the transformation of higher education. According to UNESCO research, digitalization allows for expanded access to educational resources, which is especially important for students from remote regions and socially vulnerable groups of the population [1]. The UNESCO study also emphasizes the fact that there is a problem of uneven access to technology, since a significant part of open educational resources (OER) is created by European and North American countries in English. In addition, according to UNESCO experts, universities should take into account the socio-economic dimension of their activities, implementing innovative marketing strategies focused on sustainability. In particular, the development of inclusive digital platforms that allow students from different social groups to be involved and the digital divide to be minimized is important. The study states that special attention should be paid to the preparation of teachers for work in a digital environment.

The Organization for Economic Cooperation and Development (hereinafter OECD), which is authoritative due to its thorough analytical studies of the implementation of innovations and sustainable development in the field of education systems of different countries, in the report “Education at a Glance 2024” provided data on global trends and national achievements in this area.

Accordingly, “Education at a Glance 2024” [2]:

1. The use of online platforms, artificial intelligence technologies (hereinafter AI) and personalized learning systems contributes to increasing the accessibility of educational services and improving their quality.

2. One of the challenges is ensuring the inclusiveness of education, as socio-economic differences continue to limit access to resources for vulnerable groups of the population. The report highlights that universities in developing countries face particular challenges due to unequal access to modern educational technologies.

3. Gender equality is an important trend. Women demonstrate higher educational achievements, but face significant barriers in the labor market, including lower employment and wages.

4. Lifelong learning and the introduction of flexible forms of education, such as certificate programs, micro-qualifications and distance learning, play a significant role.

5. Financing education remains a challenge for many countries where public resources are limited. Attracting private investment, international donors and developing public-private partnerships (PPPs) are effective solutions to ensure the financial sustainability of the education system.

6. International cooperation is one of the key areas for increasing the competitiveness of universities, in particular through participation in the Erasmus+ and Horizon Europe programs.

Thus, the recommendations of the OECD report are aimed at investing in digital infrastructure, improving the skills of teachers, creating inclusive support programs for students and developing international partnerships.

According to the analysis of the state of higher education in Ukraine conducted by the National Agency for Quality Assurance in Higher Education (NAQAHE), the key challenge remains the adaptation of the education system to modern conditions, in particular in the context of war and global trends [3].

NAQAHE, as an independent regulator, plays a leading role in the development and monitoring of quality standards in higher education, contributing to the integration of Ukraine into the European educational space in order to ensure the competitiveness of its educational institutions.

Among the main challenges facing the Ukrainian higher education system, NAQAHE identifies the following [3]:

1. The process of digital transformation is complicated by the difference in the level of implementation of these processes in different regions of the country and the lack of qualified personnel for the effective use of these technologies.

2. The outflow and migration of intellectual potential, caused by military actions, is one of the most serious challenges for the higher education system of Ukraine. A significant outflow of students and scientists abroad, as well as mobilization to the ranks of the armed forces, create a threat of loss of human capital, which is critically important for the post-war recovery of the country. The reduction in the number of highly qualified specialists and educators leads to a deepening shortage of personnel in key sectors necessary for the economic and social development of the country.

3. Equality and accessibility of education is complicated by the presence of regional inequality in access to higher education, especially for students from remote and rural areas, which creates additional barriers for socially vulnerable groups of the population.

4. Financing of higher education remains insufficient, which creates significant challenges for its development. Modernization of infrastructure and implementation of innovative educational programs require active involvement of the private sector

The analysis of the results of research by UNESCO, OECD and NAZAVO shows that the higher education system of Ukraine faces the same global challenges as most countries in the world, but its condition is additionally complicated by the consequences of the ongoing war. The problem of the outflow of intellectual potential and the need to modernize the educational infrastructure through the involvement of innovative solutions and international partnerships is especially acute. Overcoming these challenges requires the implementation of innovative approaches to the development of university ecosystem marketing.

According to the authors, the experience of the world's leading universities, which are flagships of sustainable development, will allow us to find out which innovative approaches to the development of the university ecosystem are effective in the face of modern global challenges. Stanford University (hereinafter SU) and the Massachusetts Institute of Technology (MIT) were selected for the analysis.

The editorial part of the special issue of the Journal of Educators Online, dedicated to the results of research in the field of online learning after COVID-19, Special Edition: Post-COVID Online Teaching and Learning Research Outcomes Sherri Restauri (hereinafter the Restauri report), highlighted the results of the digital transformation of education that took place at SU through the integrated platform for distance learning Stanford Online. Thus, Stanford Online during the COVID-19 pandemic was significantly strengthened in order to support the continuous educational process. Thanks to the use of advanced digital technologies, the Stanford Online platform created conditions for expanding access to education and improving its quality. Significant achievements of

SU digitalization were: the creation of new innovative pedagogical approaches, high quality of online education results, achieving global leadership positions [4].

Innovative pedagogical approaches at SU. The use of gamification, adaptive learning, and mobile technologies allowed the university not only to support the quality of education, but also to increase student engagement. As noted in the Restauri report, these approaches have created a sense of community even in a distance format [4, p. 11].

High quality of online education at SU. Thanks to the introduction of quality standards for online courses, the university has managed to maintain its reputation as an institution providing world-class education. Students noted satisfaction with the new format: 85% reported that they felt full participants in the university community even during distance learning [4, p. 13].

Global leadership at S. The speed of implementation of digital innovations has allowed the university to become a model for other educational institutions that have adapted its practices to their conditions. The Restauri report highlights how SU's experience has been actively disseminated through international educational forums and conferences [4, p. 15].

SU is actively undergoing a process of digital transformation of marketing through the use of AI in CRM systems, which has created conditions for increasing the efficiency of interaction with applicants and students. AI is used to analyze large amounts of data, including demographic information, academic interests, and behavioral patterns of potential students, which allows for the development of personalized communication strategies [5, p. 15]. The use of automated tools, such as chatbots, provides quick access to information for applicants and helps coordinate their interaction with university administration [6, p. 12]. CRM systems are integrated with social media and video platforms, which allows SU to effectively distribute content about educational programs and attract new audiences [7, p. 18]. These approaches create a more transparent and interactive system for attracting students, while reducing the burden on administrative staff [5, p. 20].

SU actively promotes the development of startups by integrating research projects with real business needs. Through the StartX program, the university supports student startups by providing access to experts, funding, and mentoring, which allows projects to quickly move from concept to implementation [9, p. 15].

In addition, SU actively collaborates with Silicon Valley companies, involving students and faculty in joint research projects focused on solving current business problems [9, p. 20]. The university's innovative laboratories, such as the Center for Integrated Systems, create a platform for joint work on new technologies, which subsequently become the basis for startups [10, p. 18]. This approach not only increases the level of commercialization of research, but also provides students with practical experience in a real business environment [11, p. 25].

SU actively develops global cooperation, in particular through participation in Erasmus+ programs and the implementation of joint research projects with other universities and corporations. For example, the university participates in the Erasmus Mundus program, which promotes international academic exchange and intercultural cooperation [12, p. 15–18]. In addition, SU collaborates with corporations to implement projects focused on solving global challenges, including innovative technologies and social inclusion [13, p. 23]. The university also supports joint research initiatives through partnerships with European institutions, which allows it to integrate into the international educational ecosystem [14, p. 35–38]. Such approaches provide SU not only with a competitive advantage, but also contribute to the creation of innovative models of cooperation at the global level [15, p. 10–13]. The following analysis of scientific sources revealed that SU actively practices microqualifications as a tool for ensuring quality education and adaptation to the needs of the modern labor market.

T. Staubitz, C. Resei & C. Friedl in their study "Micro-credentials in EU and Global" note that educational courses developed by SU according to the principles of micro-credentials are used

to ensure trust in the quality of education. Micro-credentials are aimed at providing practical skills that meet modern professional standards [16, p. 12–13].

T.N. Jentsch in the study "Creating an Inclusive Community of Practice with Microcredentials" examines the implementation of micro-credentials by leading universities, including SU. The author defines micro-credentials as short-term educational programs focused on providing specific skills and competencies that are in high demand on the labor market and emphasizes that such programs are aimed at increasing the accessibility of education and adapting to the individual needs of students [17, p. 26]. T.N. Jentsch argues that microqualifications are one of the key innovative marketing approaches aimed at transforming the university ecosystem in the face of modern challenges because these programs provide universities with competitive advantages by adapting the educational process to the requirements of the digital society and the global market. In particular, microqualifications take into account regional characteristics and professional demands, which makes them more relevant. The flexibility of the microqualifications format allows students to adapt their studies to their own schedule, which is critically important in the digital era. In addition, microqualifications form the basis for the development of additional education programs, certification and online courses, which expands the target audience of universities and creates new sources of income. This format is especially attractive for professionals seeking to update or change their qualifications, and students interested in highly specialized knowledge.

The Massachusetts Institute of Technology (MIT) is also one of the leaders in the implementation of innovative educational technologies. One of the key tools is the MIT OpenCourseWare (OCW) platform, which provides open access to educational materials from more than 2,000 courses. This provides global audience reach and strengthens MIT's reputation as a leading educational institution, adapting marketing strategies to the requirements of the digital age [18, p. 15]. In addition, the institute is actively implementing Augmented Reality (AR) and Virtual Reality (VR) technologies, which allow students to immerse themselves in realistic educational simulations. Such tools are important for the promotion of the university, as they demonstrate its readiness for innovation and adaptation to the needs of modern society [19, p. 22]. For example, the use of AR and VR in medical or engineering courses allows you to create unique educational products that become an important component marketing strategies of the university [20, p. 18].

MIT's innovative approaches, in particular the integration of open resources such as OCW and the intensive use of the latest technologies, not only improve the quality of education, but also form a strong brand of the university in the international market. These actions provide the university with competitive advantages, attracting a wide audience of students and partners, adapting the educational ecosystem to the new challenges of globalization and digitalization [21, p. 12].

The Massachusetts Institute of Technology (MIT) is actively using research initiatives as an innovative approach to developing the university's marketing ecosystem. One of the key projects is the "MIT Solve" initiative, which involves global experts in solving socially important problems in the areas of climate change, health care, education, and economic development. This project builds MIT's image as a center for innovative solutions and helps attract investors, students, and scientists [22, p. 12].

MIT is also actively researching the application of AI in biotechnology and healthcare, which increases its reputation among technology startups and partners. For example, AI research in the field of drug development allows to reduce the time and cost of creating new drugs, which strengthens the university's position as a leading research center [23, p. 18].

In the field of climate change, MIT is exploring the use of biotechnology to reduce its impact on the environment. For example, the institute is implementing projects to use

bioengineering to develop sustainable agricultural practices that reduce carbon emissions [24, p. 22]. Such initiatives help MIT position itself as a leader in addressing environmental challenges.

In addition, MIT uses digital technologies and AI to analyze the market and integrate innovations into global economic processes, creating unique opportunities for commercializing research and attracting investment [25, p. 10]. All these actions contribute to creating a strong MIT brand at the international level, strengthening its position in the academic and business environment.

MIT uses the joint funding system as a key innovative approach to the development of university ecosystem marketing, involving technology corporations, including Google and Microsoft. One of the foundations of such partnerships is the creation of research laboratories that combine the resources of the university and corporations for the joint development of innovations. MIT publishes Sloan Management Review, which is considered a leading journal that, focused on covering new ideas and practices in the field of management and business, describes how partnerships provide access to the latest technologies and joint funding of research, contributing to the development of educational programs and increasing. Sloan Management Review creates a bridge between theoretical research and real business practices, in particular, in such areas as innovation, strategy, organizational management, technology and leadership. the reputation of the university among global companies [26, p. 12]. This model helps attract leading researchers and teachers who are eager to participate in large-scale projects to address pressing societal challenges, particularly in the areas of artificial intelligence, biotechnology, and engineering [27, p. 15].

Thanks to the support of corporations, the university is building a modern infrastructure and offering students unique internship and employment opportunities in leading technology companies [28, p. 18].

This approach ensures the integration of research with market needs, increasing the efficiency of the university ecosystem. Attracting the resources of large corporations not only strengthens the financial sustainability of the university, but also creates a competitive advantage in attracting the best students and faculty who seek to work in an advanced scientific environment. In addition, MIT actively uses research initiatives as one of the key innovative approaches to the development of marketing of the university ecosystem. MIT forms innovation ecosystems by combining the resources of the university, startups and corporations. For example, MIT provides a platform for cooperation between researchers and technology companies, allowing the transformation of laboratory discoveries into marketable products [29, p. 928]. One of the prominent initiatives is the support of the entrepreneurial ecosystem among students, which allows a wide range of participants to be involved in projects, including students, faculty and corporate partners. This significantly increases the efficiency of interaction within the university [30, p. 22].

MIT also introduces training courses for students aimed at the practical implementation of innovations in business models, which help transfer technologies from laboratories to the market [31, p. 65]. The approach to creating startups and acceleration programs is an important component that provides support for new entrepreneurial initiatives [32, p. 26].

In addition, MIT has developed its own innovation policy ecosystem, which ensures the involvement of international partners and the integration of their technologies into the educational process, which contributes to the globalization of research initiatives [33, p. 14]. In order to calculate the effectiveness of approaches to the development of marketing of the university ecosystem in the face of modern challenges, it is important to use tools that allow you to assess both qualitative and quantitative changes. Such tools are international rankings, in particular, QS World University Rankings, which is one of the most common standards in the world. This rating makes it possible to objectively assess the impact of implemented marketing innovations on the competitiveness of the university. The practical effect is measured using the following key

indicators: reputation in the academic environment, citation rate of scientific publications of university representatives, the ratio of the number of teachers and students, the attitude of employers to graduates, the relative number of foreign teachers and students.

Table 1

Change in the number of international students at MIT and SU

Category	2018	2023	Absolute change	Relative change (%)
MIT International Students	3,120 (27%)	3,440 (29%)	+320	+10%
SU International Students	3,725 (22%)	4,065 (24%)	+340	+9%

Source: developed by the authors based on sources [34; 35].

Table 1 shows the significant growth in the number of international students at MIT and SU over the period 2018–2023, coinciding with the universities' active implementation of digital strategies. In 2018, the share of international students was 27% of the total at MIT and 22% at SU. By 2023, these figures had increased to 29% at MIT and 24% at SU, reflecting the effectiveness of initiatives such as OpenCourseWare (MIT) and Stanford Online (SU). The absolute increase was 320 students for MIT and 340 students for SU, corresponding to relative growth of 10% and 9%, respectively. The period 2018–2023 was marked by the large-scale implementation of digital technologies, including Big Data, AI, CRM systems, and flexible learning models such as micro-qualifications. These achievements confirm the importance of digitalization in increasing the international attractiveness and competitiveness of universities.

Table 2

Зміни у цитованості MIT та SU (2018–2023)

Category	2018 average citations per lecturer	2013 average citations per lecturer	Absolute change	Relative change (%)
MIT	~85 citations	~96 citations	+11	+13%
SU	~82 citations	~93 citations	+11	+13%

Source: developed by the authors based on sources [36–38].

Table 2 illustrates the growth in average faculty citations at MIT and SU over the period 2018–2023. In 2018, the average number of citations per faculty member was ~85 for MIT and ~82 for SU, reflecting their active research activities. By 2023, these figures had increased to ~96 for MIT and ~93 for SU, showing a 13% increase for both universities. The absolute change was 11 additional citations per faculty member over 5 years, which is the result of the effective use of open education platforms such as OpenCourseWare at MIT and Stanford Online at SU. This also confirms the importance of international collaboration and active dissemination of research to enhance the academic reputation of universities.

Table 3

Рівень зростання репутації та працевлаштованості (2018–2023)

Indicator	MIT (2018)	MIT (2023)	Growth MIT (%)	SU (2018)	SU (2023)	Growth SU (%)
Reputation among employers (%)	94%	98%	+4%	92%	96%	+4%
Graduate employment rate (%)	89%	93%	+4%	87%	91%	+4%

Source: developed by the authors based on sources [39–42].

Table 3 shows similar growth rates in employer reputation and graduate employability for the Massachusetts Institute of Technology (MIT) and Stanford University (SU) over the period 2018–2023. Employer reputation increased from 94% to 98% at MIT and from 92% to 96% at SU, confirming the effectiveness of their strategies for collaborating with leading companies.

Graduate employability increased from 89% to 93% at MIT and from 87% to 91% at SU. This demonstrates the successful adaptation of educational programs to the needs of the modern labor market. The table highlights the relationship between the growth of employer reputation and the improvement of graduate career opportunities, which is the result of innovative educational approaches and the expansion of university partnerships.

Conclusions. In the process of analyzing innovative approaches to the development of university ecosystem marketing in the face of modern challenges, the successful strategies of leading universities, in particular the Massachusetts Institute of Technology and Stanford University, were considered. It was found that these universities actively use digital platforms, micro-qualifications, partnerships with international corporations, and adaptation of educational programs to market requirements.

The use of digital tools, such as online educational platforms (MIT OpenCourseWare, Stanford Online), allows universities to significantly expand the number of students, including foreign ones, and increase the level of citation of teachers.

Cooperation with business through the creation of corporate laboratories, funding of scientific research, and launching internship programs has proven its effectiveness in increasing the employment rate of graduates and the growth of key indicators of reputation among employers.

Adaptation of educational programs to modern challenges, such as the development of STEM disciplines, environmental and technological innovations, contributes to the formation of highly qualified personnel who meet the demands of the labor market.

The use of marketing campaigns that emphasize alumni success stories, partnerships with business, and innovative research increases the international prestige of universities.

Suggestions:

Analysis of innovative approaches to the development of university ecosystem marketing used by flagship universities can become the basis for developing a strategy for the development of Ukrainian universities as a single university ecosystem. The main elements of the strategy include:

Development of the digital environment: implementation of online educational platforms, digital libraries, and learning management systems to increase the global competitiveness of universities.

Deepening cooperation with business: creation of partnership programs to finance scientific research, internships, and modernization of university infrastructure.

Implementation of adaptive educational programs: integration of courses focused on modern challenges, such as digital innovation, environmental sustainability, and entrepreneurship.

Promotion of university brands: implementation of marketing campaigns aimed at popularizing universities, their achievements, and alumni success stories.

In general, the proposed approaches will ensure not only the adaptation of universities to modern challenges, but also their transformation into centers of innovation and entrepreneurship that stimulate the sustainable development of the economy, science, and education. This strategy will allow creating a strong university ecosystem focused on integration with the global scientific and educational space.

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