

Factors of the Development of Creative Industries in the Conditions of Digitalization of the Region

I.I. Tsvetkova^a, M.V. Vysochina^b and N.A. Fokina^c

*Department of Management, Crimean Federal University named after V I Vernadsky,
10 Railway Street, Simferopol 295026, Russian Federation
isandra@rambler.ru, vysochina.marina@yandex.com, nataliea@napks.ru*

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Abstract: In the modern era, an awareness that creativity has become the basis and source of economic growth has been growing rapidly. This article highlighted the relationship between the development of creative industries and the process of digitalization in the Republic of Crimea – will be referred later in this article as ‘the region’ -- when digitalization has become one of the key prerequisites for the formation and development of a creative economy. The author formulated a list of factors of the internal and external environment that influence the formation and development of the creative economy of the region, and proposed an algorithm for an accurate assessment. An analysis of the factors of the influence of the environmental factors on the development of creative industries in the Republic of Crimea was implemented. The author concluded that both factors, whether contributing, or hindering the development of a creative economy in the region have been recognized and identified. A conceptual digital model of the region has been developed, including two blocks of modules; regional and specific. It is proposed to develop a block of all-regional modules unified for the purpose of subsequent distribution among all subjects of the Federation and integration into a national digital system. A block of specific modules is formed taking into account the characteristics and development priorities of a particular region. The implementation of the proposed conceptual digital model, taking into account the specifics of the region, will allow the regional authorities to solve a number of economic problems, including those related to the development of creative industries.

1 INTRODUCTION


In the context of digitalization, industries related to creativity, art, intellectual property and digital technologies are increasingly called the main drivers of the 21st century economy. The development of a creative economy is inextricably linked with the digitalization of regions.


The modern development of society is characterized by evolutionary digital transformation; in particular, attempts are being made to move from smart cities to digital regions through the formation and scaling of digital practices. The development of a creative economy requires additional institutional, technical and organizational innovations, as well as the development of professional digital competencies. In the field of regional management,


approaches are being actively developed and individual projects are being implemented to form a digital model of the region. Such a model is necessary for monitoring and adjusting the development of regional creative industries.

The purpose of this study was to form an algorithm for assessing the influence of factors on the development of a creative economy and to propose a conceptual digital model of the region.

Materials and methods: The methodological basis of the article was the scientific works of domestic and foreign scientists in the field of regional development, creative economy. The information base of the study was made up of materials from periodicals and internet resources, as well as the results of their own research.

^a  <https://orcid.org/0000-0003-4655-3391>

^b  <https://orcid.org/0000-0002-0885-9712>

^c  <https://orcid.org/0000-0003-2822-7912>

The work used systematic and integrated approaches, as well as methods of synthesis, generalization and comparison, statistical methods of data processing.

2 RESULTS

Creative industries are formed at the intersection of "art, culture, business and technology", forming their integration, and use human creativity as one of the main resources, and this, in turn, does not always allow us to outline their clear boundaries and study them as a traditional sector. Economy of the region: In connection with the foregoing, we offer the author's vision of the systematization of factors influencing the development of creative industries in the region, according to which the system of factors consists of interrelated and interdependent factors of the external and internal environment of the region.

To maintain the internal potential of the region at the proper level, appropriate resources were needed, the source of which is the external environment. Opportunities for successful socio-economic development of the region are provided through its constant interaction with the external environment. In the structure of the external environment of the region, two blocks were distinguished, that is, the background environment and the business environment.

The author argues that the factors of the background environment that influence the formation of creative industries in the region and are subject to a detailed assessment can be seen as follows:

1. Social factors: The analysis of the social factors of the macro-environment is focused on comprehending the impact on the activities of the creative industries of the region of specific social phenomena, among which are: the purchasing power, the consumer requirements for products, solving problems of inclusiveness, changing "traditional" consumer preferences, electronic devices, the development of artificial intelligence, the growing popularity of audiovisual content, the popularity of social networks.

Information and communication technologies are becoming the leading sector of the creative industries. Experts contend that now the sphere of culture is "not so much a collection of authors and performers, theater and concert groups, halls, cinemas, exhibitions, libraries, etc., but a collection of devices and technologies, exabytes of information, hundreds of millions of media files, broadcasts and leisure services used by billions of people" (D.

M. Kochetkov, D. B. Vuković, E. A. Kondyurina, 2021).

Experts argue that the trend towards digitalization, recycling and sustainable design, which began before the COVID-19 pandemic, will intensify.

2. Demographic factors: The demographic processes taking place in Russia, as well as the age and sex composition of the population, reduce the pace of development of the creative economy. Based on the Federal State Statistics Service, as of January 01, 2021, the population of Russia amounted to 146.2 million people, clarifying that 0.5 million people less than what it was in 2020. Since 2016, there has been a stable natural population decline; forecasts also reflect a negative trend (V. V. Grigoryeva, 2016). The total number of economically active population in the country has been declining in recent years as well. Meanwhile, the growth of the economically active population in 2021 was associated primarily with the pension reform and migration processes.

Additionally, an important trend in the labor market should be considered as an increase in the number of self-employed. Since the beginning of 2022, the increase in registered self-employed has averaged 30 to 40 percent of the same month of the previous year. Currently, the self-employed can take part in acceleration programs, business missions, exhibitions and fairs, as well as annual all-Russian and interregional competitions.

In the near future, experts expect an increase in demand for self-employed people in the creative industries. The current freelancers will join the ranks of the self-employed: marketers, designers, illustrators, PR-specialists, journalists, HR-specialists, etc. As such, not only self-employed line staff, as it is today ("blue collars"), but more qualified performers will be in demand - "white collar".

3. Technological factors: An analysis of the technological factors of the macro-environment makes it possible to timely recognize the prospects that the development of science opens up to improve the quality of products and services provided, the production technologies used, the opportunity to break away from competitors: the costs of enterprises for technological innovations, the technological globalization of fashion, new forms of regional management (state-private partnership, clusters, integrated business structures, network structures).

Another tool for the development of a creative economy to be considered is creative clusters, which can be created to form an urban cultural environment, platforms for various events, contributing to the formation of new business and cultural products of

the territory. The first art cluster in Russia appeared in 2004, when the Artplay design center was created from the Red Rose Moscow factory. Some of the best art clusters in the country have been formed in Moscow, St. Petersburg, Tula, Nizhny Novgorod, and Ufa.

Modern high-speed information transmission systems and the development of Internet platforms also have a direct impact on the development of the creative economy. The activity of creative businesses in the use of digital platforms is quite high: 32% of entrepreneurs use them to solve various work tasks. Many companies in a number of areas use their own website more often. Every third company from the creative industries uses both offline and online formats for selling their goods and services (39%), of which a fifth (20%) sells goods and services mainly online. At the same time, most representatives of the creative industries (58%) note the high efficiency of combining online and offline promotion methods (Imaeva G. R., Sushko E. Yu., Gildebrandt I. A., Spiridonova L. V., Aimaletdinov T. A, 2021).

4. Economic factors: Analysis of the economic factors of the macro environment provides information on the methods and sources of formation and directions of distribution of resources. The main economic factor favoring the development of a creative economy should adopt the financial support of scientific research and the creation of innovations from the state: the share of costs from federal funds in 2017 amounted to 46.4%; in 2019 - 66.3% (L. Gohbert, 2022).

The economic situation in the whole country at this point in time is such that we can talk about its negative impact on the development of creative industries: the economic condition of the country as a whole due to the sanctions, low incomes of the population, high poverty, high inflation, imperfection of the taxation system, high interest rate of banking institutions, excessive unemployment, increased cost of financial resources for doing business.

On the other hand, the listed factors became a driver for the formation and implementation of new creative ideas for doing business using the resource potential of the region.

A positive aspect of the current development of the geopolitical situation was the reduction of pressure on domestic producers from foreign competitors and the development of their own domestic production.

5. Political factors: The analysis of the political factors of the macro environment consists in determining what projects the state is trying to implement in the sphere of activity of the regions,

what changes in legislation and legal regulation are possible as a result of the adoption of new laws and norms.

State support for the development of creative (creative) industries and creative (creative) entrepreneurship was approved by Decree of the Government of the Russian Federation dated September 20, 2021 No. 2613-r in the Concept for the Development of Creative (Creative) Industries and the mechanisms for implementing their state support in large and largest urban agglomerations up to 2030 (Concept for the Development of Creative Industries, 2021).

Work is underway to coordinate with various departments and organizations, directly market participants and the state in the development of creative industries (at the moment, these functions are performed by the Ministry of Culture of the Russian Federation and the creative council of Russia - Land of Opportunity platform), develop mechanisms for their state support in large and largest urban agglomerations. Separate initiatives are also being formed in regions and large cities.

Among political factors, the imperfection of the legislative system has a negative impact on the development of creative industries. The factor of the Russian mentality that prevents the formation of a creative economy is very notable as well. The specific features of the national mentality are manifested in "providing competitive advantages that are mainly can be attributed to substandard economy, "contractual" relations, additional economic risks and increased transaction costs due to bureaucracy and corruption, isolation of Russian management science from actual real problems of economic practice" (R. I. Akmaeva, N. Sh. Epifanova, K. N. Makarov, 2018).

The business environment is the components of the region's immediate environment with which it interacts. A good business environment can attract investment, encourage entrepreneurship and promote economic growth, while a bad business environment can discourage both business and investment. The factors of the business environment that influence the development of creative industries, in the author's belief, are highlighted as follows:

1. Investment climate resources: attraction of domestic and foreign investments; stimulation of entrepreneurship and creation of new enterprises; infrastructure development, including transport, communications and energy systems; development of human capital; stimulating innovation, which can lead to the creation of new industries, products and

services, as well as increasing the competitiveness of the region.

2. Administrative barriers: defined as “a set of formal and informal actions (inaction) of administrative bodies of state (municipal) power using the current or enacted regulatory framework, as well as bypassing it, limiting and constraining the legitimate activities of business structures in various stages of the business life cycle” (R. I. Malikov, K. E. Grishin, 2013).

3. Professional buyers: this term refers to those buyers who can influence the development of a region by creating demand for goods and services produced in the region. This can lead to increased economic activity and job creation. Professional buyers can also influence the development of regions by setting quality standards for goods and services, which can encourage local businesses to improve their products and services to meet such standards. Such actions will lead to improved quality of products and services and increased competitiveness. Buyers can drive innovation in the region by demanding specific, new products and services that are not currently available in the market. This can create new opportunities for local businesses to develop innovative products and services that can lead to the growth of new industries. Additionally, buyers can encourage the development of local supply chains by purchasing materials and services locally; can influence the development of creative industries in the region by prioritizing ethical and sustainable practices in their business operations, which in turn, can encourage local businesses to adopt such practices and contribute to the sustainable development of the region. Buyers can invest in local businesses and contribute to the development of the region.

4. The impact of suppliers: suppliers can have a significant impact on the development of creative industries as well, especially in terms of job creation, innovation, infrastructure development, knowledge transfer and supply chain optimization. By working closely with local businesses, entrepreneurs and institutions, suppliers can contribute to the sustainable development of regions and improve the quality of life for local communities.

5. Competitors: can play a critical role as they drive innovation by introducing new products, technologies, and business models. Competitors can attract investment to a region by demonstrating that it is a competitive market. They can provide employment opportunities for the region residents, contributing to local job creation and economic growth. Competitors can share knowledge and experience with local entrepreneurs, contributing to

the development of the region's human capital. Competitors can also influence the development of regions by setting quality standards for products and services, and can partner with local businesses to share resources and expertise.

6. Financial institutions: can play a critical role in regional development by providing investment, access to finance, risk management, infrastructure development, financial inclusion and capacity building.

7. Reference groups impact: These groups can also have tangible influence on the development of regions through adopting honest purchasing behavior, social norms, innovation, cooperation and reputation. By understanding the role of reference groups in the region, entrepreneurs can work to use their influence and contribution to the sustainable development of the region.

The internal environment of the region includes a wide range of factors that can have a significant impact on its development. By understanding and managing these factors, stakeholders can work towards a sustainable, prosperous and inclusive region. The elements of the internal environment that influence the formation of the creative economy of the region are:

1. Mission: The mission of the region may vary depending on its specific goals and objectives. However, in general, the region's mission is to promote economic, social and cultural development while conserving its natural resources and promoting sustainable development. By fulfilling this mission, the region can create a prosperous and sustainable future for its residents and stakeholders.

2. Structure: The number and composition of municipalities in a region will vary depending on the particular region and country in question. However, municipalities play an important role in providing local government and services to their residents and represent an important component of the overall governance structure in the region.

3. Tasks of the region: The objectives of the region may vary, but typically include promoting economic development, providing social services, protecting the environment, preserving cultural heritage, and ensuring good governance. In doing so, regions can work to create a sustainable, prosperous and inclusive future for their residents (M. Bykova, S. Grachev, O. Donichev, 2021).

4. Technology: The technologies used in a region will depend on its particular economic, social and cultural context, as well as its level of development and access to resources. However, regions that adopt

advanced technologies can increase their competition.

5. Human resources: The region's human resources include its population, labor force, and educational institutions. The population of the region is an important factor in its economic and social development. A growing population can create a wider consumer market and a larger pool of potential workers, while a declining population can lead to economic stagnation and social problems. The quality and size of the labor force in a region can greatly influence its economic competitiveness. Regions with skilled workers and a wide range of occupations are more likely to attract investment and generate economic growth. Educational institutions such as schools, universities and vocational training centers are needed to develop a skilled workforce. Migration patterns can greatly influence a region's human resources. Internal migration can bring new skills and ideas to the region, while external migration can lead to brain drain and loss of talents (T. V. Abankina, E. Nikolaenko, V. Romanova, I. Shcherbakova, 2021).

6. Culture of the region: The culture of a region is a complex and dynamic aspect of its social and economic development. A region with a rich cultural heritage and strong creative industries may be better placed to attract investment, spur innovation, and spur economic growth. In the Russian Federation, a multinational and multi-confessional community of peoples has historically developed. The polyethnicity and ethnoconfessionality of the population contribute to the development of creative industries.

7. Creative capital: The region's creative capital is the most important factor in its economic and social development. A region with a strong creative economy, diverse and skilled creative talent, a supportive infrastructure for creative professionals, and a vibrant arts and culture scene may be better positioned to attract investment, spur innovation, and drive economic growth. It should be noted the presence in the state and the openness of a creative space that allow creative individuals to generate new ideas (D. Rodnyansky, R. Abramov, G. Valeeva, 2021).

However, some factors proved to have a positive, stimulating effect and contribute to the formation of a creative economy in the region; while some others have a negative impact and hinder the development of creative industries in the Russian Federation.

Assessing and analyzing the influence of internal and external environmental factors on the formation and development of a creative economy in a region is a complex and important task and requires a comprehensive understanding of the various factors

that contribute to the development of a creative economy, as well as the ways by which they interact with each other. The author proposes the following algorithm for assessing the influence of external and internal environment factors that affect the formation and development of a creative economy:

1. Statement of the problem and drawing up a research program,

2. Data collection about the external and internal environment of the region,

3. Formation of a database of environmental factors,

4. Data analysis processing,

- 4.1. Assessment of the current impact of external and internal environment factor,

- 4.2. Forecast of the influence of external and internal environment factors,

5. Interpretation of the results of the assessment of factors of influence,

- 5.1. Determination of factors that have the maximum positive impact,

- 5.2. Determination of the factors that have the maximum negative impact, and

6. Development of a strategy for the formation of a creative economy in the region.

Based on the proposed algorithm, an assessment has been made of the factors of the external and internal environment that influence the formation of a creative economy in the Republic of Crimea. Each factor was analyzed by experts, first individually, and then through group discussion.

The significance of each factor was assessed by means of a five-point scale - from 1 to 5 points with a "step" of one (for example, 1 point interpreted as 'very weak', 2 points as 'weak', 3 points as 'medium', 4 points as 'high', and 5 points as 'very high'). The strength of the impact of environmental factors was assessed from 0 to 10 with a "step" of 2 points (0 refers to 'no impact', 2 refers to 'minimal impact', 4 refers to 'insufficient', 6 refers to 'sufficient', 8 refers to 'excessive', and 10 refers to 'marginal').

The assessment impact is defined as the product of the significance of the factor and the significance of its influence, taking into account the direction of influence – whether negative or positive. During the evaluation, the consistency of experts' opinions was checked using the concordance coefficient and the 'Margolin' scale. The calculations showed that the concordance coefficient was 0.96. This value indicates a high level of agreement among experts.

The assessment results are shown in Figure 1. The green color indicates factors that have a positive impact on the formation of a creative economy in the

region, the red color indicates negative factors, the mix of red and green colors indicates a group of factors, including those aspects that contribute to and hinder the formation of a creative economy.

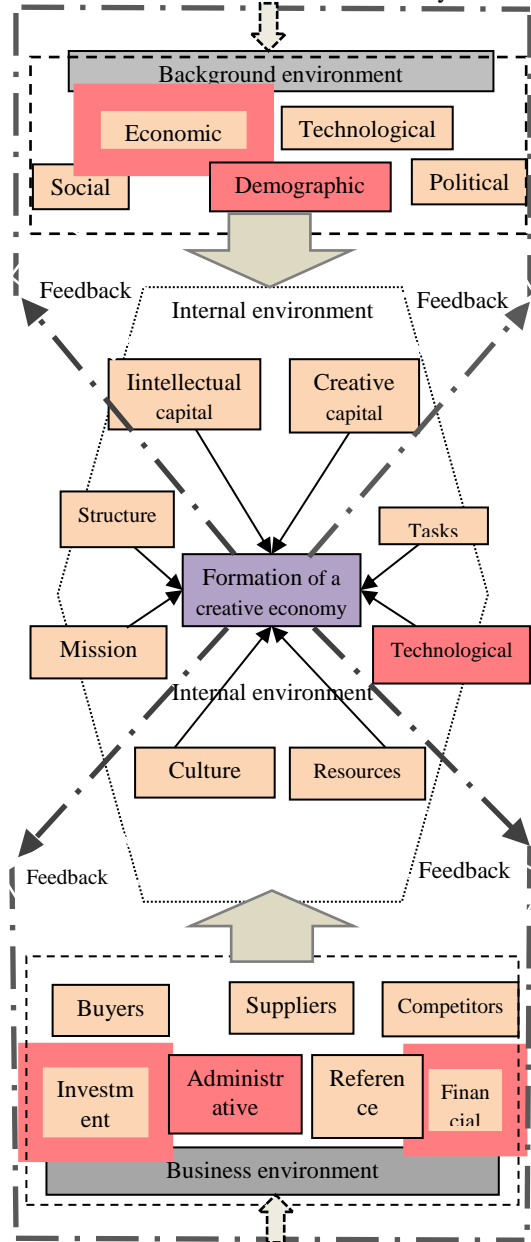


Figure 1: Influence of external and internal environment factors on the formation of the creative economy of the Republic of Crimea.

The total current assessment of environmental factors was 38 points. The scale for interpreting the results is presented in Table 1.

Table 1: Scale for interpreting the results of assessing environmental factors that influence the formation of a creative economy in the Republic of Crimea.

point value	1 zone from -650 to -390	2 zone from -391 to -131	3 zone from -130 to +130	4 zone from +131 to +390	5 zone from +391 to +650
level of influence	significantly negative	moderately negative	the average	moderately positive	substantially positive

Thus, in the current situation, environmental factors have an average impact on the formation of a creative economy in the Republic of Crimea (+38). Meanwhile, in the next 3-5 years, the author predicts an increase in their positive impact to +169 points.

The total current assessment of the factors of the internal environment influencing the formation of a creative economy in the Republic of Crimea was 244 points, and the forecast - 362 points. To interpret this assessment, the scale presented in Table 2 was used.

Table 2: The scale of interpretation of the results of assessing the factors of the internal environment that influence the formation of a creative economy in the Republic of Crimea.

point value	1 zone from -400 to -240	2 zone from -239 to -79	3 zone from -78 to +80	4 zone from +81 to +400	5 zone from +401 to +650
level of influence	significantly negative	moderately negative	the average	moderately positive	substantially positive

Interpretation of the results of assessing the factors of the internal environment showed that these factors have a greater influence on the formation of a creative economy in the Crimean region and fall into the “significantly positive” zone. Accordingly, the author can shed a light on the preservation of such influence in the future.

Taking into consideration the factors influencing the development of the creative economy, it is necessary to separately highlight the factor of digitalization of the region (based on the author's systematization proposed in this paper, it is included in the group of external political factors). The author classified the digitalization of the region as a group of political factors, since the formation of a digital model is a priority for state development. In this

respect, the author will clarify this factor in more details.

Various national projects are currently being implemented in the Russian Federation, the purpose of which is to create an accessible digital environment for users, develop modern digital competencies, support digital services and create social platforms such as "Digital Economy of the Russian Federation", "Digital Russia", "Smart City" and other programs. As part of the Digital Economy of the Russian Federation program, it is crucial to refer to the nine subprograms which have been implemented since 2022 including "the digital public administration" aiming at forming a digital model of the region.

The digital model of the region is a product that allows creating a single information space through functionality with the purpose of collecting, storing, transmitting and processing data on the main areas of the region's activities for timely management decisions based on comprehensive and relevant information.

Specialized studies contend that while the regions of the Russian Federation are not equally involved in the use of digital technologies, yet they have different levels of development of digital infrastructure and related competencies. At the same time, almost every single region has its own experience in implementing digital initiatives and has developed its own approach to the implementation of digital processes. The task of the current stage of the formation of a digital model of the region is to supplement and combine the existing information subsystems (modules) into a single integrated system that will support the capability of extracting the necessary data, data analysis that will professionally guide management decision makers to make and implement the sound decisions in various regional areas of activity (Figure 2).

The stages of formation of a digital model of the region to be considered:

1. Determination of priority areas of digitalization of the region by the following groups:

1.1. All-regional spheres: regional management, financial system, transport and logistics, housing and communal services, health care, education, communications, energy, ecology and nature management.

1.2. Specific areas are important for this particular region.

2. Analysis of solutions already existing in the region for the implementation of digital technologies and benchmarking of the best practices of other regions.

3. Analysis of potential users of the system modules: their requirements for information and data presentation.

4. Analysis of information providers: the possibility of providing information, the frequency of its updating, the form of submission, etc.

5. Formation of separate terms of reference for each digital model project.

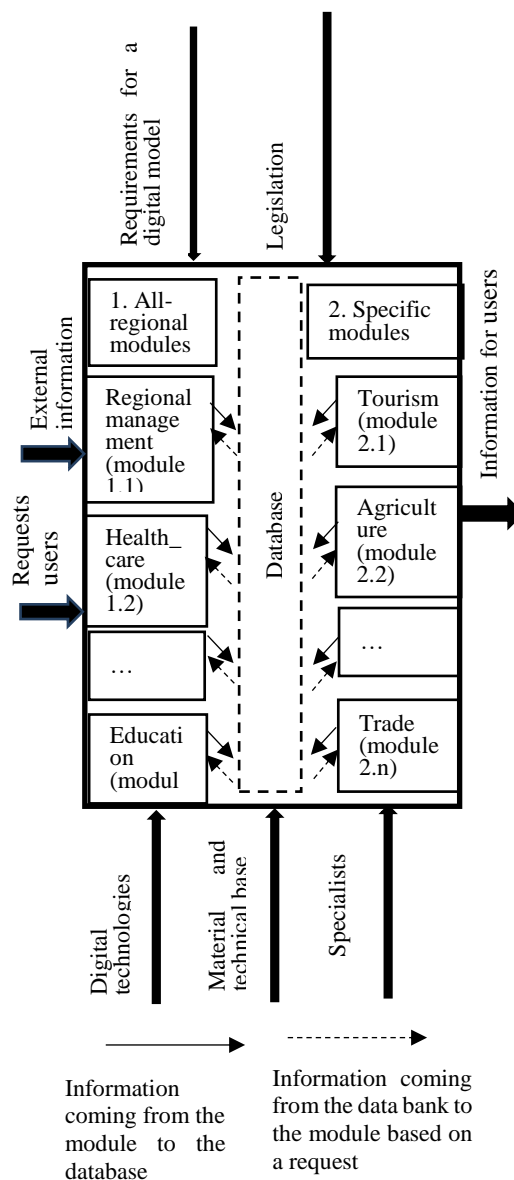


Figure 2: Digital model of the region.

6. Attraction of the required resources and formation of a software and hardware infrastructure that allows the implementation of platform solutions aimed at collecting data and implementing predictive

analytics, introducing services for involving citizens in solving regional problems, providing electronic access to public services provided, and providing the possibility of direct contact citizens of the region to the authorities, to model and design objects, processes, databases and knowledge, to solve other emerging problems.

7. Definition of working groups and responsible persons for the implementation of digital model projects.

8. Implementation of direct work on digital model projects: obtaining work permits, conducting aerial photography and geodetic work, working with earth remote sensing data, building orthophotomaps and 3D models, analysis, formation of databases and knowledge.

9. Testing the operation of ready-made modules with their subsequent gradual integration into a single digital model of the region.

10. Appointment of persons responsible for maintaining the modules and the system itself in working order, for filling it with up-to-date information.

11. Training of specialists to work with the system and its individual modules.

12. Putting the digital model of the region into operation.

An important step towards creating a digital model of the region is the formation of the National Spatial Data System, approved by Decree of the Government of the Russian Federation of December 1, 2021 No. 2148.

4 CONCLUSIONS

The study made it possible to draw a number of conclusions and obtain the following results.

It has been established that digitalization is one of the key prerequisites for the formation and development of a creative economy, which is typical for most regions of Russia. At the same time, the formation of a development strategy for the creative sector of the region's economy should be based on the results of an analysis of the factors of its external and internal environment.

The systematization of factors influencing the development of creative industries in the region is presented, according to which the system of factors consists of interrelated and interdependent factors of the external and internal environment of the region.

An algorithm for assessing the influence of factors of the external and internal environment influencing

the formation and development of a creative economy is proposed, consisting of six main steps;

The results of assessing the factors of the external and internal environment that influence the formation of a creative economy in the Republic of Crimea are presented.

A conceptual digital model of the region is proposed, which includes two blocks of modules - regional and specific. Since the regions have different levels of development of digital competencies, it is advisable to develop a "general" block unified for the purpose of subsequent distribution among all subjects of the Federation and integration into a national digital system.

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