

MERITOCENTRIC MODEL OF SPATIAL DEVELOPMENT IN UKRAINE: UPDATING THE GENERAL SCHEME OF PLANNING OF THE STATE TERRITORY

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This paper substantiates the meritocentric model and changes in the methodological tools for spatial development in Ukraine. The proposed meritocentric approach emphasizes the research and evaluation of processes in the state, as well as the qualitative characteristics of its space and spatial transformations, bringing knowledge, values, human potential, creativity, technology, and information to the forefront. The national level in the spatial planning of Ukraine is represented by the General scheme of planning of the territory of the state. The paper assesses the spatial situation in the state, including any challenges and threats that have arisen, and it determines the directions of spatial organization and development in the territory. It also establishes criteria for assessing the spatial situation and changes in space, the main conditions and factors of development of individual territories, and the regulators of development.

Key words: General scheme of planning of the territory of Ukraine, meritocentric model, spatial organization, system development, spatial planning.

INTRODUCTION

Spatial planning is an important activity in the development of modern society and in the substantiation of strategies for the spatial organization and development of cities, regions, and other territories. Spatial development strategies for European countries are part of the overall development strategy of the European Union, enshrined in the guidelines of CEMAT and the directives of the European Parliament (CEMAT, 2000). The focus is on three elements: territorial resources and development conditions; integration measures in institutional systems; and the dynamization of development mechanisms in the zones that form the territory.

The spatial planning of Ukraine is represented by the General scheme of planning of the territory of the state, which was developed in 1999-2000 (*General scheme of planning of the territory of Ukraine*, 2002) and expired in 2020. The General scheme of planning of the territory of Ukraine remains in force, but there is an urgent need to update this

document. The scale of the problem and the complexity of the tasks involved require changes in the theoretical and methodological tools used. The state must find its own effective model of spatial development and identify the tools for its implementation.

The meritocentric model proposed by the authors will be especially relevant after the current war between Russia and Ukraine, namely, in relation to aspects of the social sustainability and integrity of Ukraine's territory as one of the priorities of its future spatial development strategy.

CLARIFICATION OF CONCEPTS AND ANALYSIS OF EXISTING DEVELOPMENTS

Meritocentrism is a concept based on the understanding and awareness of the priority of knowledge, the values of human life, and spatial organization. It is the realization that the safe existence and development of humanity is possible only under the development and effective use of knowledge, and the formation of a new system of social values.

Spatial organization is the structural-parametric and spatial-temporal arrangement and adjustment of spatial elements and links that secure the efficiency of the exploitation and

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development of territorial systems (Habrel, 2004, p. 17). System development means making qualitative changes to the material basis, structure, organization, and functions of a system under the impact of internal and external factors, that should provide the balanced development of human beings and nature in the present and future. Spatial planning and development is the triune process of the forecasting, scientific rationale, and implementation of efficient spatial organization and state (regional) development decisions.

The analysis of research in this subject was divided into three groups:

- current geopolitical processes and their impact on the country;
- the principles of meritocracy; and
- urbanism and territorial (spatial) planning.

Current geopolitical processes, challenges, and ideas. The formation of the theoretical foundations of spatial planning and urban design of large territorial systems in the context of global challenges is influenced by the philosophy of science from the past (Stanford Encyclopedia of Philosophy, 2017; Toynbee, 1955) and present (Scholvin, 2016). American researcher and futurologist Toffler (1980), formulating the theoretical foundations of the transition to a civilization of the “third wave – superindustrial/ postindustrial” society, notes the collapse of all social institutions of the society (production, family, political institutions), the change of direction in political views, the acceleration of social and technological processes, and the gradual absorption of modern society by the crisis of values. The third wave of civilizational development is destroying the principles of the industrial economy (standardization, centralization, specialization, synchronization, concentration, and maximization), consumption opportunities are expanding, as well as other values of individuals and society; in addition, other types of behavior and humanization in the society are being formed.

Meritocracy. (The power of “worthy”, capable and knowledgeable people). It is the principle of governance according to which the leading positions should be held by the most capable people regardless of social background and economic status. The term was first used in a negative sense by Young (1958) in describing a futuristic society, where the social position was determined by IQ. Subsequently, Bell (1972) presented a positive interpretation of this concept – as a system that can eliminate bureaucracy and improve the social structure of society. Brzezinski (1997) held similar views in Western sociology. American scientist, Parsons (1966), considers values to be the highest principles developed by any social system in order to preserve unity and integrity, and to ensure self-regulation and consensus both in different subsystems and in the system as a whole. Meritocracy has been the subject of much research (Knight, 1995; Wilson and Corey, 2008; Tan, 2008; Imbroscio, 2016; Pettit, 2018).

Ukrainian scientists Mamchyn and Yarychevska (2021), Naumenko (2013) and Okhotnikova (2018) pay a lot of attention to meritocracy as a form of government in Ukraine. Despite critical remarks, meritocracy is considered by these Ukrainian scholars to be the perfect form of

government in a post-industrial society.

The idea of the Earth’s noosphere as a sphere of mind by Vernadsky (1988) played an important role in understanding the phenomenon of meritocracy and substantiating the meritocratic model of spatial development in the state. He believed that reason and scientific thought will dominate the planet and intelligently transform it; and he considered that the main cause of crises and contradictions in society is “the eternal conflict of material and spiritual in man”. The scientist argued that moral ideals and values, as well as knowledge of the laws of biosphere development, are the keys to the rational use of nature. In this regard, a statement by the thinker and religious figure Sheptytsky (2009, p. 1057) is also constructive: “Not investment – business – profit, but wisdom – creativity – well-being should become the basis of society.”

Spatial planning of large territorial objects. Schumpeter (1934; 1976) considers inventions and innovations to be the “driving force” of the development of territories; they change the management structure and fill it with new content. Reinert (2007) identifies two types of economic activity: the Schumpeter-type, in which constant innovations contribute to prosperity and development, and the Malthus-type, which keeps a subsistence minimum by depleting resources and creating low added value. Thus, the emergence of fundamental concepts of social and human capital, innovativeness, and creativity in the spatial development of socio-economic systems changes the trajectory from resource dependence to innovative activity. Daly, in “Economics in a Full World” (2005), points out that mankind resides within the “full” world, where everything is limited. The development of systems is not identified with capital but with physical boundaries (the surroundings, the environment).

In Ukraine, such economists and economic geographers as A. and S. Mazur (2014), Mezentsev *et al.* (2017), as well as urban planners Nudelman (2001), Dyomin *et al.* (2020), and Pleshkanovska (2011) have studied the transformation and spatial development of large territorial systems and urban planning processes. The conflicts around land management and construction in Ukraine serve as a sign of the spatial management model crisis, while the situation looks like chaotic and random activity. The existing models of spatial organization and development of large territorial systems in Ukraine are currently inefficient. A new spatial development model must be developed in the country.

To date, the “Comprehensive Plan for Spatial Development of the Community”, which is being developed on the basis of present and previous community activities, has become the main document of spatial and urban planning in Ukraine. At the lower level, master plans of settlements and DPT (detailed plans of territories) have been developed, on the basis of which town planning conditions and restrictions are issued. The problems persist:

- DPTs are still carried out for only small parts of the territories and these documents do not create a systemic integrity, thus bringing chaos to the spatial structure of settlements;
- the practice has been preserved in which lower-level

documents ignore the requirements of or make changes to higher-level documents;

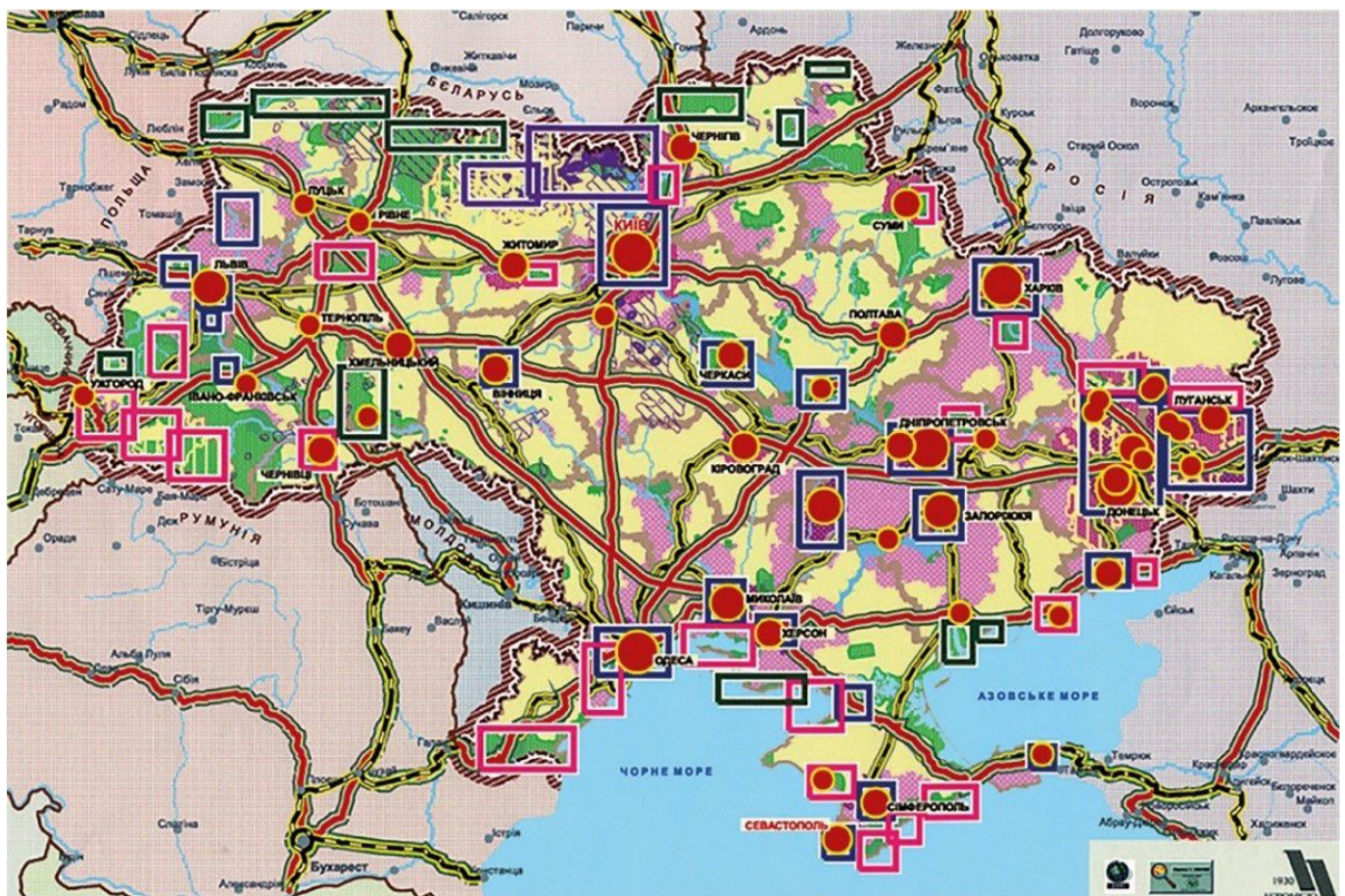
- regional and agglomeration planning is not developing;
- standards and requirements for the management and development of territories are ignored; and
- there are no effective institutional mechanisms to support the development of spatial planning in the state.

The existing literature describes the system of spatial planning in European countries and reveals the benefits of applying European experience to the practice in Ukraine. The analysis of the reformation and the spatial planning system developed in Ukraine indicates the use of the experience of Russia, which, in turn, is based on the experience of Germany (Neugebauer, 2021). The experience of Poland is also used, especially in the area of decentralization and spatial planning at the local level (commune) (Djemin et al., 2020). Official spatial planning in Ukraine is characterized by “inertia” and remains under the influence of the Soviet system of spatial planning and urban planning (Gnatiuk and Melnychuk, 2020).

Analysis of the current General scheme of Ukraine and assessment of the effectiveness of its implementation

The General scheme of planning of the territory of Ukraine was developed by the Ukrainian State Research Institute “Dipromisto” and approved by the Law of Ukraine on February 7, 2002 (*General scheme of planning of the territory of Ukraine, 2002*). Its developers (Bilokon, Gubenko, Prsyazhnyuk, Nudelman, Shapovalov, Mukha and Palekh) received the Ukrainian state award in the field of architecture in 2003. The documentation consists of 28 maps, an explanatory note and tabular materials. The cartographic materials were made on the basis of a digital electronic map of Ukraine at a scale of 1: 500,000. This is the urban planning documentation that determines the conceptual solutions for planning and land use. Its main purpose is to establish state priorities for rational types and modes of land use in the country, taking into account socio-economic needs, environmental constraints, resource opportunities and regional differences (Figure 1).

The scheme sets out the prerequisites that contribute to the



Legend:

Functional Areas:

- urbanized areas with a critical level of industrial and urban development
- urbanized areas with a high level of industrial and urban development
- urbanized areas with an average level of industrial and urban development
- landscape protection zones
- agricultural area

Problem Areas:

- areas with the highest level of industrial and urban use
- areas with significant nature reserves, recreational and health and tourist potential
- areas with significant potential and low level of infrastructure
- areas with high levels of radiation pollution

Figure 1. Planning structure and types of land use. The General scheme of planning of the territory of Ukraine. (Source: Urban development platform, 2002)

use of the state's spatial potential, namely:

- the favorable geopolitical position of the country in the center of Europe;
- significant deposits of various mineral resources;
- natural and climatic conditions favorable for human activity;
- the quality and high bio-productivity of the land;
- availability of highly qualified labor resources;
- multi-industry production base;
- developed network of settlements, including cities; and
- well-developed transport and communication infrastructure.

Problems that complicate the use of the potential of Ukraine and its regions have also been identified:

- its unfavorable demographic situation;
- low water supply along with excessive water usage by industry;
- deformed structure of the economy; and
- the presence of areas with ecological imbalance as areas of potential threat to the health and life of the population, etc.

The ratio of favorable conditions, constraints and problems was determined in this research, and the results reveal the real possibilities for the spatial development of Ukraine.

To assess the effectiveness of the implementation of the General scheme, basic monitoring indicators were taken, but only during the first three years after the approval of the document. Accordingly, criteria for evaluating its implementation were selected: efficiency, environmental friendliness, comfort, safety. Analysis of the implementation of the General scheme's provisions and assessment according to the system of defined criteria indicate how inefficient implementation has been, with a lack of compliance with the requirements. One of the reasons for this is the restricted access to the General scheme, since the documents were available only as hard copies for a long time (the graphics were published on the official website of the Ministry in raster format 13 years after their approval). Another disadvantage is the "inertia" of the General scheme: any changes to its decisions are possible only with the adoption of the relevant legislation. A number of changes in Ukraine, covering all spheres of society, are not reflected in the General scheme and are not systemic. There is also a deliberate disregard for the decisions contained in this document by those who are responsible for it.

Construction of a meritocentric model of spatial development of the state

We used the meritocentric approach in the context of spatial planning tasks for large territorial objects (in the state). It differs from the variously applied practices of spatial planning, urban design, functional-economic, socio-institutional, etc. The construction of the meritocentric model is based on two principles: *meritus* (from lat.), which means worthy (related to the concept of meritocracy), and centrism not as a compromise (middle) position, but as something that is at the center of the system and should be

the basis for justifying decisions regarding its development. The term meritocentrism is not widely used in urban and spatial planning and is interpreted by the authors as a system of knowledge, as well as moral and ethical content related to the dignity and system of individual values, the attitude of an individual to him/herself and society to the individual, and the spatial integrity of the state (its geopolitical role, location, history, etc.).

The idea of meritocentrism is also associated with logocentrism (*logos* is a word, thought, reason or law), which is interpreted as an absolute idea, and in Christianity and Eastern philosophies is associated with the idea of the divine.

A model of five-dimensional space was used (Habrel, 2004), which made it possible to organize the indicators and characteristics of the system, to evaluate it and justify the ways of development on the methodological platform of the system approach.

The essence of the approach was to identify the elements of urban space and their interactions to find compatibility and consistency of their characteristics in order to justify urban planning decisions. The spatial model of the state included dimensions: "man M – function F – conditions U – geometry G – time T" (Habrel, 2004, pp. 50-137).

In the human dimension M we distinguished the following components: population, spirituality, culture, needs, values, social potential. Certain needs specific to each person or social group are functional characteristics. In the functional dimension F, we distinguished between internal and external functions, and coordination functions: the internal functions of the state relate to the availability of facilities to meet the residents' needs; external functions are related to the profile functions and role of the state at the supranational level; and coordination functions relate to the management and coordination process. The measurement of conditions U characterizes the available resources of life and development: natural, territorial, financial, political and legal, as well as the quality of natural resources and landscapes, territorial reserves, restrictions and requirements for management and development. The geometric dimension G is:

- the geopolitical position;
- the location of elements in the system; territorial features (configuration, structural planning);
- super-system connections;
- forms of structure; and
- planning.

The temporal dimension T takes into account the historical past, the present and the prospects of the state, the age characteristics of urban objects, the functioning and duration of projects, the condition and quality of the environment, the historical potential, etc. (Table 1).

The meritocentric model for the development of spatial systems assumes spatial development of the state on the basis of systematic ideas and new knowledge, which define the priority of new values, innovations, the latest technologies and the uniqueness of Ukraine's space (Figure 2).

The results were achieved by increasing the spatial potential

Table 1. Double interactions of dimensions of state space

Factors	Man M	Function F	Contidions U	Geometry G	Time T
Man M	Population, spirituality and culture social potential	economic activity, humanitarian policy; information policy; functional accessibility	living standard; environmental safety; crime situation	territorial structure; population density; distances in the communication system	time priorities; population dynamics; social development prospects
Function F	efficiency of functions; their complexity; employment; economic potential of the population	economic efficiency; state support of enterprises; foreign economic relations	competitiveness; investment attractiveness; technological conditions	functional structure of the territory; degree of land development; structure of areas	production development; infrastructure development; quality of performance
Contidions U	living conditions, resource opportunities; level of social benefits; political and legal conditions	investment potential, resource dependence of functions; technological impacts on the environment	quality of natural resources; territorial reserves; requirements and restrictions	protected areas recreational areas; contaminated areas	dynamics of conditions; consumption rate natural resources rehabilitation
Geometry G	development of territories and the size of the area	length of highway connections; density of functions; functional structure of territories	length of borders, special regime territory; distribution of conditions on the territory	form structure; development of planning; super-system connection	dynamics of functions on the territory; dynamics of network development; dynamics of territorial changes
Time T	social stability; social structure; migration	functional stability; dynamics of functions; their seasonality	stability of conditions; environmental preservation	territorial stability; network development; structure change	state of the environment; historical potential; dynamics of territorial development

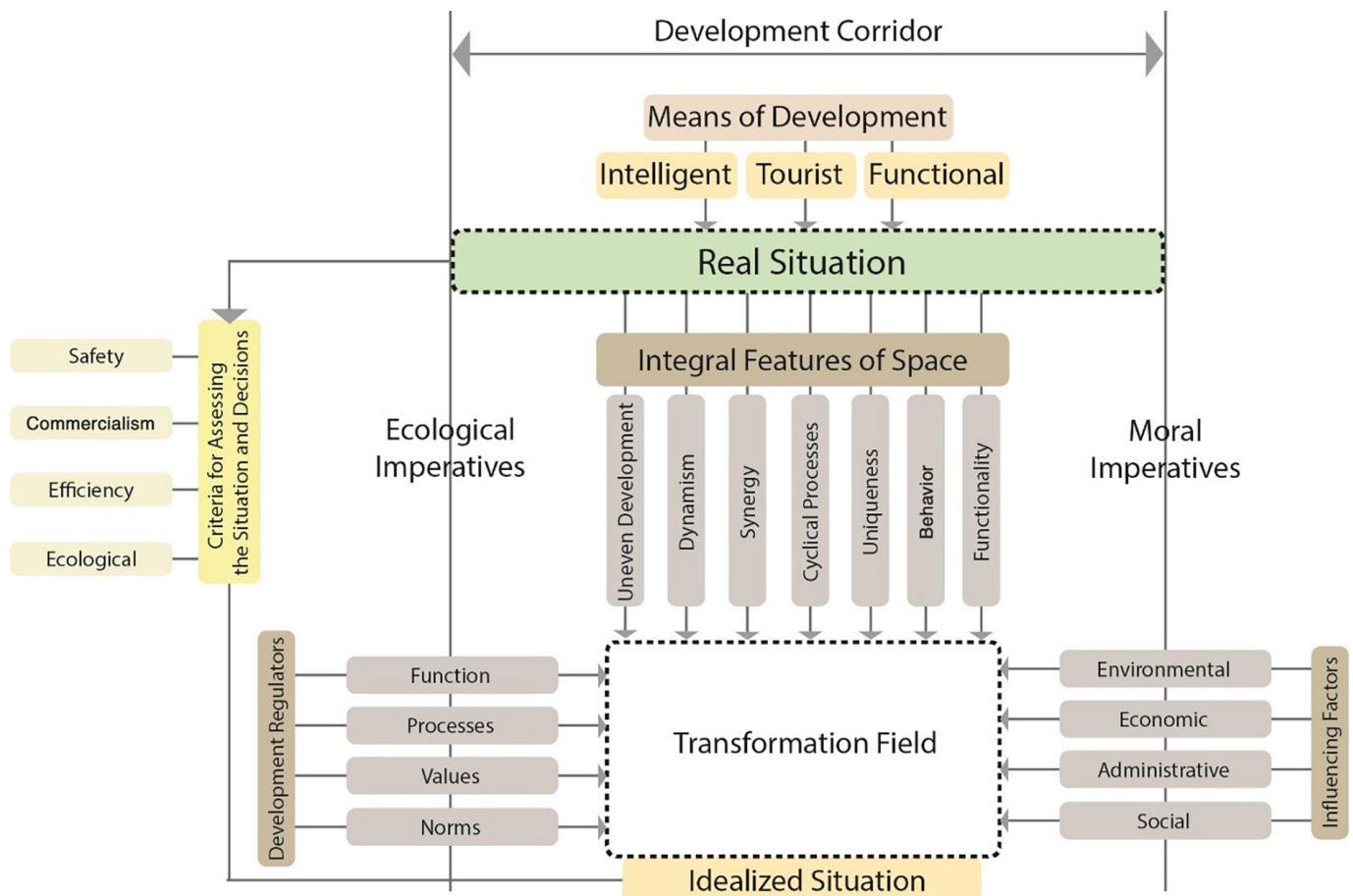


Figure 2. Meritocentric model of spatial development of Ukraine. (Source: Authors, 2021)

utilization factor, knowledge intensity, and knowledge in substantiation of their organization and development, as well as the information component. The meritocentric model covers the systems of different hierarchical levels in the state, and different components of development. Accordingly, it is a matter of constructing a multitude of models that reveal different facets of spatial reality in the state at different hierarchical levels. For example, the System Spatial Harmony Index is related to the Human Development Index, but is significantly complemented by the use of resources, and the functional, historical and geometric potential, not just the human dimension. The spatial organization of cities, regions and states and their development is influenced by a set of factors (political, natural, landscape, economic, social, religious and ideological), safety requirements, efficiency, comfort, environmental friendliness, and aesthetics, but in practice we have fundamentally different cities and settlement systems. According to the authors, much of this phenomenon is due to the intangible in the architecture and city space. One of the key ideas is the development of territorial systems through disclosing the unique, exceptional, and rare properties of the space.

Spatial conditions, processes and phenomena in Ukraine

The system of indicators and method of collecting initial data are of fundamental importance for the assessment of the state's space. The sources used in this study were Ukrainian statistical publications, project materials, updated strategies and programs for the development of regions and the state (General scheme of planning of the territory of Ukraine, Regional scheme of planning of the territory of Ukraine, Strategy of sustainable development of Ukraine until 2030, and annual statistical publications). The measurement indicators introduced and their spatial interactions, classified according to homogeneous properties, made it possible to distinguish the integral characteristics of the spatial situation in order to substantiate the meritocentric principles of the state's spatial development. These are seven spatial properties: functionality, system behavior, uniqueness, dynamism, cyclical processes, synergy, and uneven development. In a generalized way, the assessment of the spatial situation is revealed by groups of indicators such as comfort, efficiency, environmental friendliness and safety.

Philosophical and geopolitical conditions include the analysis of:

- dichotomies (tangible – intangible in development, universalism – individualism, regulation – self-organization and free market, industrialization – deindustrialization, totalitarianism – democracy, faith – disbelief; integration – differentiation; leap – evolution; openness – closed systems); and
- the latest challenges and factors of influence (geopolitical imbalance; failure of global governance and leadership; populism; information falsifications; corruption and deepening of social differentiation, injustice and the reduction of cooperation). Global processes and changes determine three global trends that should be taken into account when justifying the

spatial development of Ukraine: interdependence, dynamization, and complexity, which are determined by the increase in the amount of information available and the number of components in the system.

Ukraine is geopolitically at a high level of importance: its position is favorable and at the same time difficult; it is one of the largest states in Europe – an area of 603.7 thousand km², located at approximately equal distances from non-European centers of world politics (Washington and Tokyo), relatively close to the capitals of Europe and the capitals of neighboring countries. The population of Ukraine has significantly declined: in 1993 it was 52.2 million people, in 2020 (according to the UN) - 43.7 million people together with the Autonomous Republic of Crimea. In terms of centralization and concentration of industrial production, Ukraine occupied a leading position in the world in the early 1990s, significantly surpassing all post-socialist countries, including Russia (there were about 40,000 state-owned medium-sized and 6,000 large enterprises, which accounted for 75% of total production; small businesses were insignificant in volume and role). Today, small and medium-sized businesses in Ukraine bring 55% of GDP to the country's economy. In the spatial development of the state, we substantiate an alternative philosophical and ideological platform that includes: harmonious development; partial departure from the principles of globalism, the disclosure of individualism and the uniqueness of the system; post-industrialism; and digitalization.

Socio-mental and spiritual processes include social conditions, relationships, and needs; demographic processes; values, identity, and national solidarity; psychology and mentality. The causes and sources of development are the needs of the population, demographic potential and spatial potential. Weber (1978) emphasized that values are the foundation of motivating people's behavior, and the basis of the integrity of the social system.

Modern Ukrainian society is an example of a value system crisis:

- the landmarks and values of the previous historical period are a thing of the past, new ones have not become established, and they are only declared;
- there is a value nihilism of a large part of society; and
- the expansion of needs and consumption is not accompanied by the creation of conditions for the increase of social and spiritual values, the spiritual is replaced by the material.

A priority for modern Ukrainian society should be knowledge and values that would unite the polyethnic community, for example: civil rights and freedoms, a common civic position on the development of the state and society, tolerance for all parts of society, respect for the nation, and equality of all nationalities. The primary priority is the formation of spiritual heritage, the harmonious combination of values of scientific, artistic, cultural and political activity on the basis of universal standards, which should become a factor of social progress and national consolidation. Priorities related to behavior as the ability of the system to respond to change should be the basis of the state's spatial development.

New economic conditions and activities are centered around:

- general economic principles of the economic system;
- social responsibility of business, powers and participation of the state; and
- oligarchy and profit-making mechanisms.

The financial and banking type of economy, formed at the end of the twentieth century, is in contradictory relations with the new economy. With regard to the selected conditions and factors in Ukraine, the phenomenon of oligarchy – the formation of an oligarchic economy and an oligarchic form of government with its consequences and problems – needs special analysis. The question of technological singularity in the spatial development of the state has arisen due such factors as a rapid increase in the volume of information, uncertainty and unpredictable new conditions, man-made and biological threats, a reduction in the number and objectivity of measurable criteria, etc., which all together have made socio-economic forecasts impractical nowadays. What was based on human authority is rejected, and expert methods become irrelevant because usually experts tend to show subjectivity. It is important for Ukraine to find the optimal combination of urban and agricultural subsystems, to prevent parasitism of one system over the other, and to reveal and take into account the uniqueness of conditions and the heterogeneity of economic activity.

The natural resource potential and ecological condition of the state are considered through these characteristics: resource potential and use; non-renewable resources; territorial potential; challenges and threats (food security, environmental issues). The fundamental position is the uniqueness of the space. Analysis of the spatial resource structure and natural wealth of Ukraine gives grounds to say:

- almost every region of the country has key components of natural wealth, which indicates the potential for creating conditions to increase the competitiveness of the regional economy; and
- the spatial concentration of natural resources shows a significant differentiation in their parameters in the regional context. The regions with the highest spatial concentration of natural potential (over UAH 3 million/km²) include the Dnieper (3.84 million); with an indicator from 2 to 3 million – Kyiv (2.98), Lviv (2.61), Transcarpathian (2.52), Chernivtsi (2.51) regions; average indicators in Kharkiv (1.56 million), Poltava (1.46), Odesa (1.12), Zhytomyr (1.09), Zaporizhia (1.01), Vinnytsia (1.03), Ivano-Frankivsk oblasts (1.85), Rivne (1.23), Volyn (1.05) and Ternopil (1.42); other regions of Ukraine are among the oblasts (regions) with the lowest indicators.

Land as the national wealth and unique resource of Ukraine works inefficiently for the state, due to the destruction of local flora and whole ecosystems of forests (10 million hectares), while more than 20 million hectares of fertile arable land has been intensively exploited by the agricultural industry without any observable advantage for the state budget. Losses caused by environmental, economic and bureaucratic actions such as problems with water, nature reserves, recreational, health, etc. amount to more than 140

billion USD annually. Land cannot be treated as a commodity and the orthodox laws of the market cannot be applied, because it is a non-renewable resource with a huge value for the nation.

Institutional and legal processes and conditions of development. The state policy is implemented in the direction of improving and developing: national security; basic values, economic interests, the humanitarian sphere and the environmental situation. The major institutions are the administrative system, international law, and the systems of national law, including on spatial planning. In general, the institutional environment and the implementation of administrative and legal policy in Ukraine is a rather complex, branched, and sometimes even contradictory multilevel system. On the one hand, the system is characterized by a single general direction of a functional basis, but on the other it is distributed into separate areas of state regulation taking into account the specifics of its components and to make matters worse, those departments sometimes duplicate each others' functional authority.

Settlement and spatial planning of Ukraine. The geopolitical location in the supersystem, urban and rural resettlement and the system of roads and communications. Most urban settlements in Ukraine have lost their city-forming functions and are searching for new ways (functions, powers) of spatial development. Some cities have reached the threshold of their capabilities, and are now stagnating or even degrading. The state has not developed a unified urban policy of urban development and urban settlements; the ideas of new urbanism have not been accepted. The dynamic growth of housing construction in Ukraine's large cities, due to the desire to make a quick profit, has created an increase in the spatial chaos and disorder due to ignoring the master plans for settlements, and urban planning legislation in general. Image of cities are homogenized while their uncontrolled spread take place, which together causes the alienation of residents from the environment. The state policy on infrastructure and transport development (implementation of large infrastructure projects) and an effective regional policy are important in order to substantiate an effective spatial policy for cities.

Technological and innovative processes and factors include:

- the structure of the state network;
- the development infrastructure; and
- the digitization of different aspects of human life.

The innovative factor in the processes of the spatial development of the state directs the economy and social sphere from resource to innovation, and it gives impetus to the development of human and social capital related to knowledge, information, technology, ideas, abilities, and more. In Ukraine, centers of scientific research and new technologies that produce inventions and innovations have been preserved. However, these proposals do not appear on the market in the form of new products and processes, and today they do not result in any changes in the state. The creativity and ability of Ukrainians to offer new ideas is indicated by the contribution of a number of Ukrainians to world science and technology, and the presence in the country of a large number of IT companies

working for global companies. The Ukrainian IT industry currently employs approximately 200,000 professionals and the contribution of IT to the country's economy is 4% of Ukraine's GDP, against 0.8% in 2012. Basic infrastructure is being developed, including high-speed communications, and digital technologies being introduced in all spheres of life, and in addition, access to information technology is improving.

Let us summarize the assessment of losses, conflicts and inconsistencies in the national space. The insufficient efficiency of systems is mainly due to the irrational use of space and the loss of resources (labor, energy, materials, information, time). For the specifics of territorial and urban planning tasks, it is advisable to use the dimensions of space and its functional components. The main idea of constructing a table of losses and conflicts is to use algorithmic procedures for forming a list of their possible sources and causes, as well as a scale for estimating the size of the losses. The loss of potential and conflicts are possible in every dimension of the national space in various forms: human, functional, conditions, and geometric and temporal characteristics. Each of the measurements includes a set of components that relate to the quantitative indicators of the measurement, its qualitative properties, and the level of use of available opportunities. Thus, an arbitrary number of components is possible for five dimensions, but, according to the authors, the number of those influencing the situation does not exceed ten in each of the dimensions.

Along with the assessment of individual components of space, it is important to assess its quality as a whole system. Expert and sociological methods were used to assess the problems and conflicts in the country. The parameters measuring the importance of quality indicators play an important role in assessing the impact on the final result. When determining the parameters of the severity of problems and conflicts, the methods of ranks (advantages) and comparisons (pairwise and sequential comparisons) were used. The assessment was performed on a 10-point scale. Higher indicator values show a more significant impact of this characteristic on spatial problems. The biggest conflicts, problems and inconsistencies are most closely related to the characteristics of training, knowledge, values, quality processes and intangible components of space.

Conceptual principles of spatial development of the state (to update the General scheme of planning of the territory of Ukraine)

The concept of spatial development in Ukraine provides substantiation of basic ideas, principles and macrocharacteristics, and it is based on a model of spatial harmonization and development using a meritocentric approach. An important component of the concept is the disclosure and consideration of the spatial properties: functionality, behavior, cyclical development, uniqueness, dynamism, synergy and uneven growth.

That is, the needs of humanity and society, which are inseparable from values, should be the center of developing a concept. We consider meeting the needs of the community to be the main vector of spatial development. Having a multilevel nature needs the following properties:

- reproduction – satisfaction in a certain period of time does not mean the non-appearance of needs in the future;
- cyclicity – manifested in periodicity;
- motivation – needs act as a pathogen;
- individualization for an individual or social group. Needs can be real and virtual; short-, long-term or permanent (depending on the time of manifestation); and
- they may depend on economic and financial aspects, organizational and managerial possibilities, urban planning tools and the means of their implementation.

The implementation of the main vector of development requires the substantiation of priority areas in the development of certain elements regarding the interaction between the dimensions of the state space and clarification of such issues as:

- “urbanization – deurbanization” of the region;
- the “monofunctional – multifunctional” structure;
- “concentration – deconcentration” of economic functions;
- the “monocentric – polycentric structure of support centers as centers of development;
- “closed” centers or “open” centers and how they fit into the external environment; and
- the integration – isolation of protected natural objects.

Selected dichotomies, their analysis, comparison and evaluation make it possible to set priorities. We specify some of the priority areas: the degree of openness of the state's spatial structure of the environment, and coordinated development that is determined by geopolitical location. Comparison of mono- and multifunctional concepts of development involves the expansion and flexibility of functions.

Ukraine has been developing as an industrial state for a long time, with both industrial facilities and production infrastructure and nowadays advanced industries are developing rapidly. When searching for priority areas of spatial development, it is necessary to predict the dynamics of changes in the scenario of urbanization/deurbanization. The future must be connected with the intensification of urbanization, the spread of the urban way of life, and support for the development of small towns and villages.

The concept of the spatial development of Ukraine on the basis of meritocentrism provides a justification for the integrated principles of development. We highlight the principles of unity, harmony and individuality. The principle of unity is associated with the function of transit and the change of intrasystem connections. Throughout the history of the state, interactions have not been characterized by unity, and this has been influenced by the specifics of its conditions (especially political) and resources. The principle of unity requires space dynamization, transport development, engineering and information communications. The principle of individuality has not changed throughout the whole history of Ukraine and the development of its regions and individual subsystems; individuality is emphasized by the uniqueness of regions and agglomerations, as well

as the presence of local ethnic groups and their mentality and spirituality. The principle of harmony is based on the principles of integrated development of the center and the “periphery”, ensuring balanced connections between territorial systems of different levels. The basis of this is the idea of decentralization, the characteristic features of which are: ensuring comparative living conditions in all partial spaces; sustainable development; and providing conditions for living and self-development.

The macrocharacteristics in outlining the prospects for the state’s spatial development should include functionality, density, dynamism of space, and development of the structure. It is expedient to substantiate the criteria for evaluating the options, the main characteristics of which should be: the usefulness of the proposal, cost-effectiveness, safety for people and the environment, and the duration of implementation. The main vector and priority directions, integral principles of organization and spatial development of the state together with many macrocharacteristics of space make it possible to achieve a meritocentric model of spatial development concerning Ukraine and to substantiate certain decisions. Below are some observations in this regard.

Strengthening the integrity of the spatial system covering the settlements and functional-planning structure of the territory includes the integration of its recreational, agricultural and other functions. In Ukraine, the practice of the Soviet period of division of the territory into zones of different functional content has been preserved. The war currently being waged on the territory of Ukraine by the Russian invasion has become a point of transition from the “Russian-Soviet Middle Ages” to modern times. Important for the future General Scheme of Spatial Organization and Development of Ukraine is its development from the scratch and with complete rejection of the rudiments of the Soviet era. Religious, behavioral and psychological differences that exist between the regions of Ukraine are insignificant, not due to their ethnogenetic features, but because they are formed by the social conditions of the inhabitants. The approach proposed by the authors is to return to the integrity of the spatial structure and increase the multifunctionality of land use. In terms of the social aspect, such rapprochement will solve many rural problems and return remote settlements that are degrading to active life.

Development of the domestic planning framework of local areas should consider the structure of international transport corridors. The general scheme envisages the development of transport corridors, which are integrated into the European TIN network: 3rd, 5th and 9th Cretan, Baltic - Black Sea, Europe-Asia, North-South and Eurasian. The domestic road network, the system of main railways and the development of port infrastructure need to be reorganized. It is important to align the linear elements of the planning framework with the system of growth poles. When developing the General Scheme, it is necessary to identify the boundaries of the main functional types of regions (Azov-Black Sea coast, Ukrainian Carpathians, border regions, areas of influence of international transport corridors, urban agglomerations, etc.) and identify conceptual directions for their further development.

The attitude to urbanization and the formation of urban policy in the state and its agglomerations should acquire special significance. Reforms in society outline a new direction for the development of urban settlements – the restart of urban growth on new principles rooted in pre-socialism, which was characterized by the significant role of small towns and cities in Ukraine. The intensive development of small-sized urban settlements and an increase in the dispersion of urban settlement structure through the development of small elements should take place under the current conditions in Ukraine.

The idea of creating refugee settlements seems wrong to us. It is perceived more correct that the distribution of the population, which will decide to stay in the western regions of Ukraine will proceed at small towns and villages. There are significant reserves of inefficient housing in the region, which can be transferred to the use of migrants under appropriate social and legal conditions.

The main focus should be on job creation, creating conditions for companies that are willing to move to these areas. This will ensure the efficient use of existing infrastructure, activate the development of settlements and avoid possible social tensions. The relationship coefficient should be taken into account, as three generations of one family are moved together, as a rule, and so on. In this regard, the provisions of meritocentrism will be effective in justifying decisions of spatial organization, reconstruction and development in post-war Ukraine.

The strengthening of the multifactorial differentiation of the state’s spatial structure according to the criteria of efficiency and role of the territory in the settlement system, taking into account the specifics of natural and landscape conditions, the nature of settlement and management, historical and cultural features. The development of new types and forms of management and expansion of the functional and typological diversity of spatial elements of the state is offered.

In particular, this includes the improvement of tourism and recreation in the relevant areas, especially along the Azov-Black Sea coast due to growing demand after the annexation of Crimea. Halasiuk (2019) ranks the following among the most promising ten industries in Ukraine: agricultural machinery and food industry, infrastructure, aerospace industry, chemical, car production, pharmaceuticals and medicine, IT technologies, “green” industries, and transport, tourism. It is necessary to develop rural green tourism with the support of the state, to create a network of specialized tourist infrastructure facilities located near the national network of international transport corridors, tourist routes and historical and cultural centers.

Improving the efficiency of the use of spatial potential and development is associated with the systematization of problems and removal of those that are artificially introduced and self-eliminated over time. A special place is occupied by the development of engineering infrastructure, alternative energy sources (bio-resources, wind and solar energy), and the development of its own oil and natural gas fields on the Black Sea shelf, as well as energy-saving technologies. The social infrastructure will receive dynamic

development taking into account the transformation of the population's demand for these services and facilities, which is due to the rapid development of information technology and the formation of new values in society. Special attention needs to be paid to eliminating regional disparities in the population's access to social, communal, administrative, transport, information and other services.

Ukraine's spatial potential is linked to land resources – land structure is being transformed. It is a question of essential growth of the area of settlements, first of all rural.

Preservation and development of ecosystem diversity and wholeness in the state. The environmental component in the new General Scheme will relate to the implementation of the principles of landscape planning and environmentally-oriented planning decisions. This is especially relevant for Ukraine in connection with the exclusion territory formed as a result of the accident at the Chernobyl nuclear power plant in 1986. The General Scheme should also provide for the formation of a system of landscape and recreational areas by establishing legal boundaries for existing zones, as well as their use and the development of inter-park territories, bringing their total area to the normative indicator. The reduction of harmful emissions is associated with the shutdown of many industrial enterprises, and hence a reduction in the share of freight transport, and the mass replacement of obsolete cars. The trend of increasing harmful emissions from vehicles is obvious due to the increasing level of motorization.

CONCLUSIONS

The meritocentric model and changes in the methodological tools of spatial development in Ukraine are substantiated taking into account the in-depth analysis of new conditions, processes and phenomena at different levels such as: settlement and planning, administrative and legal and innovation processes, economic and natural resources, social, philosophical and spiritual human needs.

Without rejecting the analysis of official statistical information and traditional indicators and characteristics, attention has been paid to the factors and characteristics that today affect the justification of decisions. The proposed meritocentric approach includes analysis of the functional component, but shifts the emphasis to researching and evaluating processes in the state, the qualitative characteristics of its space, spatial transformations, and bringing to the forefront knowledge, values, human potential, creativity, technology and information.

Using the meritocentric model, the spatial situation was assessed, as well as challenges and threats that arise, and the current spatial organization and development of Ukraine were identified. The integral properties of space were substantiated: functionality, behavior, uniqueness, dynamism, cyclicity of processes, synergy and uneven development. In addition, criteria for assessing the spatial situation were established – comfort, efficiency, environmental friendliness, and safety. The main conditions and factors of development regimes of separate territories were determined: environmental, economic, social, administrative, etc., as well as the development regulators –

functions, processes, values, norms.

Ukraine's spatial development is formed on a hierarchically balanced network of growth poles, which is able to stimulate and support the socio-economic development of territories of all levels, increase the number of dynamic elements, and improve their quality characteristics. This applies primarily to the acquisition of the poles of development of interregional and metropolitan features, as well as its importance for social development functions that ensure interaction with the global system thus strengthening innovation in the spatial development of the state.

By substantiating the conceptual provisions of spatial development in Ukraine, it was possible to make the following specific practical proposals: the reservation of territories for urban development needs; the development of a transport network and transport systems; the development of engineering infrastructure and life support facilities; the placement of investments objects in the spatial structure of the state; and the preservation and development of ecosystem diversity and wholeness.

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