

Federal State Budgetary Educational Institution
higher education
"Russian Presidential Academy of National Economy and Public Administration"
Ural Institute of Management

As a manuscript

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**MANAGEMENT OF NUCLEAR CLOSED ADMINISTRATIVE-
TERRITORIAL ENTITIES BASED ON A PROJECT APPROACH**

Specialty 5.4.7. Sociology of Management

Annotation

DISSERTATION FOR THE ACADEMIC DEGREE
DOCTORS OF SOCIOLOGICAL SCIENCES

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Yekaterinburg - 2025

Relevance of the research topic dictated by the need for a more in-depth study of nuclear ZATOs as a special management object, a unique type of city, particularly important territories for the implementation of innovations in general and projects of national scale¹, forming the priorities of state development², which do not have a specific implementation period in the current geopolitical situation, the formation of a new strong and sovereign Russia. Due to the noted functionality of nuclear ZATOs, the formation of a special approach to their management, which would take into account the current moment as much as possible, can be interpreted as a solution to a "scientific problem of important political, socio-economic, cultural or economic significance"³.

The relevance is confirmed by the fact that the project (targeted) nature of the creation and development of an urban community, which is characteristic to one degree or another of any urban settlement, is manifested to the greatest extent in nuclear ZATOs.⁴ These special cities represent a significant object of sociological research, being:

- on the one hand, the territories of the implementation of the "Atomic Project" as a characteristic project of national scale and the placement of project facilities, infrastructure, the place of concentration of project resources, etc.;
- on the other hand, the territory of permanent compact residence of the project participants, the space of their social interaction (for project purposes), the formation

¹For example: DneproGES, Tselina, GOELRO, Transsib, Industrialization, Atomic project, etc.

²National Security Strategy, approved by Decree of the President of the Russian Federation No. 400 of 02.07.2021. Access mode: <http://www.kremlin.ru/acts/bank/47046> (date accessed 09.01.2025)

³On the procedure for awarding academic degrees: RF Government Resolution No. 842 of September 24, 2013 (as amended on October 16, 2024) together with the "Regulations on Awarding Academic Degrees" (as amended and supplemented, effective January 1, 2025). Access mode: https://www.consultant.ru/document/cons_doc_LAW_152458/8af0961a8a1cae81e691dc69dc02108292933253/?ysclid=m5pnzhazq5297395030 (Accessed 05.01.2025).

⁴ZATO – closed administrative-territorial entity.

of a special environment and urban identity⁵, a unique value core of corporate identity.

The issue of determining the proper place of nuclear ZATOs in the existing classification of cities is also relevant: they are often classified as single-industry towns, science cities, special settlements, etc., despite the fact that they obviously constitute a separate group with their own characteristic features. The dissertation problem is formulated as the need to develop a special theoretical concept and a corresponding approach to the management of nuclear closed administrative-territorial entities based on a project approach, taking into account the specifics of the project nature of the creation of nuclear closed administrative-territorial entities, as well as their development at the post-project stage.

The author's conceptual vision of the problem is based on the fact that the nuclear ZATOs were initially created as cities on whose territory the Atomic Project facilities were located. However, each project is ultimately implemented, and the goals have finite boundaries of achievement. The nuclear ZATOs (as territories of the presence of nuclear weapons and nuclear energy complexes within the framework of the Atomic Project) successfully fulfilled their design tasks to maintain parity in the Cold War, provide the USSR with nuclear energy, and develop new branches of science, technology, industry, and medicine. This stage coincided with the global economic crisis and the subsequent collapse of the USSR. As a result, the nuclear ZATOs ceased development and entered a different, post-project phase - the period following the end of the active implementation of the project.

The object of the dissertation research The city management in modern conditions is presented.

The subject of the dissertation research is the management of nuclear closed administrative-territorial entities based on a project approach, as a territory for the

⁵Melnikova, N. V. "Atomic" identity of residents of closed nuclear cities of Russia / N. V. Melnikova // Scientific notes of Oryol State University. - 2019. - No. 3 (84). - P. 15-19. - EDN YENTPY.

placement of national-scale project facilities and permanent residence of project implementation participants.

Target The dissertation research consists in developing a scientific concept and the corresponding author's approach to the management of nuclear ZATOs, which assume the presence of a special logic and priorities for the management of nuclear ZATOs as a result of the analysis of the features of their project organization, on the basis of which alternative post-project development models are proposed (typical management options at the post-project stage of development). This goal involves setting and consistently solving a number of the following tasks:

1. To identify the main characteristics of nuclear closed administrative-territorial entities as objects of social management, to substantiate their peculiarity as a separate type of city in the sociological classification;
2. To form theoretical and methodological foundations and specific features of the management of nuclear closed administrative-territorial entities;
3. To present the grounds for the formation of an original approach to the management of nuclear closed administrative-territorial entities as a result of the analysis of the features of their design organization;
4. To propose the concept of a “value core of corporate identity” as one of the foundations for managing nuclear closed administrative-territorial entities, on the basis of which the managing entity organizes joint activities of project implementation participants and forms an appropriate urban environment;
5. To analyze the experience of creating and managing nuclear closed administrative-territorial entities in the process of their development through a theoretical reconstruction of the relevant stages;
6. To formulate the concept of the “value core of corporateness” based on the analysis of data obtained as a result of the author’s research, and also to identify manifestations of the value core in the relationships of the participants in the project implementation;
7. To identify problems in the development of nuclear closed administrative-territorial entities;

8. Based on the generalization of theoretical and practical results of the author's research, propose models of post-project development of nuclear closed administrative-territorial entities.

Methodological basis of dissertation research. The dissertation is based on the following theoretical and methodological approaches. From the standpoint of the systems approach, nuclear ZATOs are considered as a holistic object of scientific analysis, and their management is interpreted as a system of action formed in accordance with the characteristics of the ZATO and the Atomic Project. The teleological approach is reflected in the formation of an understanding of nuclear ZATOs as a goal-oriented system created and developing in accordance with the needs of the "parent" project of national scale. In the focus of the activity approach, the management of the development of nuclear ZATOs is understood as a process and a result of the interaction of a wide range of participants involved in the project.

The key role in the development of the theoretical foundations of the dissertation is played by the author's scientific concept of the "value core of corporateness", formed by us within the framework of the axiological approach. The value core regulates the principles of behavior of the participants in the implementation of the project during their joint activities.

Empirical basis of the dissertation research includes:

1. The main regulatory legal acts and normative documents of state authorities and local self-government, the State Corporation Rosatom: On the closed administrative-territorial entity: Federal Law of 14.07.1992 N 3297-1; On the specifics of management and disposal of property and shares of organizations operating in the field of atomic energy, and on amendments to certain legislative acts of the Russian Federation of 05.02.2007 N 13-FZ; On the territories of advanced socio-economic development in the Russian Federation: Federal Law of 29.12.2014 N 473-FZ; Draft Federal Law "On Urban Agglomerations" (prepared by the Ministry of Economic Development of Russia, project ID 01/05/09-20/00107906) (not submitted to the State Duma of the Federal Assembly of the Russian Federation, text as of 04.09.2020); On the status of a science city of the Russian Federation:

Federal Law of 07.04.1999 N 70-FZ; On public-private partnership, municipal-private partnership in the Russian Federation and amendments to certain legislative acts of the Russian Federation: Federal Law of 13.07.2015 N 224-FZ; Draft Decrees of the President of the Russian Federation on the abolition of six closed administrative-territorial entities from 2015: Seversk, Zelenogorsk, Novouralsk, Zarechny, Zvezdny, Lokomotivny; On approval of the list of closed administrative-territorial entities and settlements located on their territories: Resolution of the Government of the Russian Federation of 05.07.2001 N 508 (as amended on 16.02.2021); On approval of the Regulation on the procedure for ensuring a special regime in a closed administrative-territorial entity, on the territory of which the facilities of the State Corporation Rosatom are located (with amendments and additions): Resolution of the Government of the Russian Federation of June 11, 1996 N 693; Tax and Budget Codes of the Russian Federation; Decisions of legislative (representative) bodies of local government (Dumas of the City Council) on the budget of a closed administrative-territorial entity, Duma reports; Strategic plans for the development of closed administrative-territorial entities; Public city reports of the State Corporation Rosatom, enterprises of the State Corporation Rosatom.

2. Results of two author's studies:

- *“Parameters of the corporate model of social management of nuclear closed administrative-territorial entities”*, 2012. Methods of collecting information: questionnaires and expert interviews.

Based on the questionnaire survey data, quantitative indicators of the formation and manifestations of the value core of corporatism were analyzed. Quota sampling by gender and age of residents of nuclear ZATOs was used. The sample size was 844 respondents. Of these, 43% were men, 57% were women; 33.3% were young people (under 30), 42.7% were middle-aged residents (30-59 years old), 24% were elderly citizens (60 years and older).⁶.

⁶According to data from the official website of the Rosstat service www.gks.ru, the population of the closed administrative-territorial entity of Novouralsk in 2012 was: 84.4 thousand residents; age and gender composition: 18-29 years old – 10.1 thousand residents, women – 49.9%;

Based on the data of expert interviews (N=30), the specifics of managing nuclear ZATOs (Sarov, Novouralsk, Lesnoy, Zheleznogorsk, Seversk, Snezhinsk, Ozersk) as special cities were studied, including the features of management at the post-project stage, post-project development models, the composition and assessment of the state of the value core of corporate identity. Representatives of key participants in the implementation of the Atomic Project as a project of national scale were selected as experts. Criteria for expert selection: residence in the territory of the nuclear ZATO for 10 years or more; work experience in an organization whose activities are related to the implementation of the Atomic Project for 10 years or more; position of leading specialist and above; level of education higher; gender and age characteristics - any.

- employees of design facilities (UEKhK, PO Mayak, SKhK, RFNC-VNIIEF);
- municipal employees;
- members of public organizations;
- trade union workers;
- representatives of urban workers and engineering dynasties;
- hereditary residents.

The search for informants was carried out through city trade unions, administrations of nuclear ZATOs, including through the author's personal contacts. When conducting interviews, the author used such information gathering technologies as telephone interviews and personal meetings.

- *“Management at the post-project stage, manifestations of corporate identity and the dynamics of the development of the value core in nuclear closed administrative-territorial entities”, 2022.*

Based on the questionnaire survey data using similar tools (2012 questionnaire), quantitative indicators of the management of nuclear ZATOs were analyzed, including corporate identity and the dynamics of the development of the

30-60 years old – 36.3 thousand residents, women – 53.6%; over 60 years old – 19.5 thousand residents, women – 67.6%.

value core in the assessments of residents. Taking into account the situation related to COVID-19, the sample was formed in two stages: 1) a stream sample for the subsequent implementation of an online survey; 2) recruitment of respondents for a traditional questionnaire survey (at the place of employment) from age and gender groups that were poorly represented in the online survey in order to reproduce the quota parameters of the 2012 study. The sample size was 778 respondents. Of these, 41% were men, 59% were women; 31.1% were young people (under 30), 43.7% were middle-aged residents (30-59 years old), 25.2% were older citizens (60 years and older).⁷.

Based on the data of expert interviews (N=65), the specifics of managing nuclear ZATOs as a special type of city were also studied, including the features of managing at the post-project stage and models of post-project development, and assessing the state of the value core of corporate identity. As in 2012, representatives of key participants in the implementation of the Atomic Project (Sarov, Novouralsk, Lesnoy, Zheleznogorsk, Seversk, Snezhinsk, Ozersk) were selected as experts. Expert selection criteria: residence in the territory of the nuclear ZATO for 10 years or more; work experience in an organization whose activities are related to the implementation of the Atomic Project for 10 years or more; position of leading specialist and above; higher education level; gender and age characteristics - any.

The processing and analysis of statistical data and population survey results were carried out in Vortex.

Volume and structure of dissertation research. The work consists of an introduction, four chapters, eight paragraphs, a conclusion, a list of references containing 315 sources, appendices 1-5. The total volume of the dissertation is 371 pages.

⁷According to www.gks.ru, the population of the closed administrative-territorial entity of Novouralsk in 2022 was: 77.8 thousand residents; age and gender composition: 18-29 years old – 9.6 thousand residents, women – 49.7%; 30-60 years old – 34.5 thousand residents, women – 53.5%; over 60 years old – 18.6 thousand residents, women – 67.9%.

In **introduction** the relevance of the research is substantiated, the research problem, object and subject, goals, objectives, and research methodology are defined.

In **first chapter** theoretical and methodological foundations for studying the process of managing nuclear ZATOs have been formed. In particular, The main characteristics of nuclear ZATOs as objects of social management were identified, and their peculiarity as a separate type of cities in the sociological classification was substantiated. The theoretical and methodological foundations for studying and specific features of management of nuclear ZATOs were also formed.

Based on the conducted theoretical and methodological analysis, a concept of ZATO management is proposed based on a project approach, within the framework of which ZATO is considered as a territory for the placement of objects of a national-scale project, and the project itself is interpreted as a target image of changes developed by the subject of management and assuming the organization of joint activities of participants for its implementation based on the formation of a value core of corporate identity.

The concept of ZATO management, based on a project approach to creation and development, is as follows:

- the city is formed in accordance with the project as its integral part;
- a location is selected in advance according to certain criteria as the territory for the placement of national-scale project facilities;
- the development of the city is planned in a goal-oriented manner, that is, also “for the purpose”;
- typical models of urban development, infrastructure, municipal management systems, settlement, and safety systems (duplicate cities) are developed in advance and implemented in practice;
- the management entity carries out centralized management and controls key processes within the framework of the project implementation;

- in management, the project and post-project stages are clearly separated, related to the finality of the set goal, since the moment inevitably comes when the goal is either achieved or is no longer relevant;

- management is built taking into account the special status (issues of resource provision of infrastructure, subordination, interaction with management entities, including the division of powers of city management, a special regime of secrecy and protection of the perimeter of Rosatom State Corporation facilities and the city, the formation and maintenance of a closed urban social environment, etc.).

As compensation for the efforts invested, as a reward for the implementation of a large-scale goal that requires dedication, concentration of efforts, competencies, patience with restrictions and the regime, participants in the implementation of a national-scale project receive a number of social benefits and social status, and are given the opportunity to identify themselves as a special community.

The second chapter conceptualizes and reveals the author's project approach to the management of nuclear ZATOs. For this purpose, the foundations of the management of nuclear ZATOs are identified as a result of the analysis of the features of their project organization. In addition, the concept of the "value core of corporateness" is proposed as one of the foundations of the management of nuclear ZATOs, on the basis of which the managing entity organizes the joint activities of the participants in the project implementation and forms an appropriate urban environment.

The concept of "project" is defined as a complex target image of changes, which is developed by the managing entity. Upon implementation of the national-scale project, the managing entity organizes joint activities of the project participants in this direction.

Design is defined as a type of management (informational, prescriptive) activity aimed at developing and subsequently adjusting the target (informational) image of changes, which includes an advantage and/or provides for a solution to a particular problem of national scale.

From this position, the management of nuclear ZATOs based on a project approach is seen as the implementation of city development primarily in line with the implementation of the project goal, through the organization of joint activities of the participants in its implementation, including the formation by the managing entity of the corresponding value core of corporate identity, as well as the urban environment, as a set of conditions consistent with the implementation of the project goal.

The peculiarity of the Atomic Project as a national-scale project is that the goal does not have a clear deadline for implementation, although it is feasible and final. In line with the project approach, the management of nuclear ZATOs,

- firstly, it involves working with the value core of corporate identity as a basis for organizing participants around the goal of the project;

- secondly, it takes into account the specifics of management at the post-project stage of city development, when the project goal has been achieved or is no longer relevant.

The concept of "value" should be defined as a guideline for action, the basis for the formation of behavior, the organization of joint (co-directed) activities; an important phenomenon for a person or group in the spiritual or material sphere, which is assessed by the subject as a norm, ideal, good, benefit or advantage. "Corporateness" is defined in the work as a generalizing value characteristic, quality, property, which is manifested in cohesion, involvement in the process of joint implementation of a large-scale undertaking, which is one of the national priorities of the state's development. If we consider the relations of the participants in the implementation of the project, then the signs of corporateness are manifested, first of all, in their willingness to unite around implementation of a national-scale project goal, a sense of involvement in this important social undertaking, responsibility for success/failure, etc.

In the context of developing theoretical foundations for organizing the management of nuclear ZATOs based on the project approach, we will understand the "value core of corporateness" as a set of fundamental values, through which the

readiness and desire of participants to implement a national-scale project on principles close to family and ancestral ones are laid at the foundation of nuclear ZATOs. It has been empirically established that the activation of the value core of corporateness in the urban environment of nuclear ZATOs presupposes the actualization of the project goal (paragraph 2.2.).

The characteristic features of the “core value of corporateness” include:

- artificiality (the presence of a voluntaristic subject of management, conventionality, controlled involvement participants in the implementation of a national-scale project, their orientation (interaction, cooperation);
- specificity (project orientation, “greenhouse”, focus on innovation);

Based on the data obtained as a result of a survey of experts, it was established that the value core of the corporate identity of nuclear closed administrative-territorial entities is formed from 8 values (the full composition of 18 value-goals was verified by M. Rokich).

It is obvious that the value core of corporate identity contains the potential for involving participants in the implementation of the project, and not only the Atomic Project (which has been completed), but also other projects of a national scale that are suitable for the specifics of nuclear closed administrative-territorial entities.

Corporativity as a general value characteristic is based on the initial community of interests of the project participants and places emphasis on the authenticity of the social community of a particular national-scale project, linked by a single duty, the implementation of the project goal.

Based on sociological understanding, we will interpret the urban environment of nuclear ZATOs as a set of conditions implemented on the territory of cities, creating opportunities for the implementation of certain types of activities by project participants, facilitating the achievement of the goal and hindering the reproduction of inappropriate relations, development in a non-project direction, etc.

The activity on formation of the urban environment in nuclear ZATOs by the managing entity, consistent with the implementation of the project goal, is focused on the creation of "potential opportunities" for all participants in the direction of

implementing the project goal. The first important feature of the urban environment of nuclear ZATOs is its artificial, centralized nature of formation. The second feature is that the environment of nuclear ZATOs objectifies, reproduces and disseminates the value core of corporativity, stereotypes of group behavior in specific situations, forms social and communicative skills and abilities, teamwork, and social management skills. Third feature. The urban environment of nuclear ZATOs, due to the value core underlying it, has significant potential for motivating project participants, on the one hand, to actively, involvedly participate in the life of the city, and on the other hand, to be ready to carry out various instructions and orders of the management.

The third chapter presents the genesis of the management of nuclear ZATOs at the post-project stage and an empirical study of the value core of corporate identity. In this regard, a theoretical reconstruction of the management of a nuclear ZATO at the post-project stage is carried out; the results of the author's empirical study on the topic of "the value core of corporate identity in the assessments of project implementation participants" are presented.

As evidenced by the phased reconstruction of the creation and operation of nuclear closed administrative-territorial entities at the design stage⁸ and post-project stages, the project effectiveness (achievement of the project goal on a national scale) was ensured through the formalization and standardization of project indicators, when a unified concept, program and development plan were developed for all nuclear closed administrative-territorial entities as territories for the placement of Atomic Project facilities.

The development of cities as territories for the placement of national-scale project objects occurs cyclically, and we consider it as an alternation of the main and transitional stages. Accordingly, the logic of managing a nuclear ZATO should also be based on the specifics of a particular stage.

⁸The materials are presented in detail, for example, in our work Karachkov, S.M. Closed "atomic city". The spirit of corporate identity and the management model [Text] / Karachkov S.M., Zverev A.I. - Moscow: Geoinform; Yekaterinburg: [b. i.], 2017. - 229 p.

Using the example of reconstructing the development process of nuclear closed administrative-territorial entities from the moment of their foundation to the present day, the cyclical nature of the dynamics of processes associated with the implementation of the Atomic Project can be clearly traced.

The conception is the initial pre-project stage and, according to its key features, is suitable for the transitional stage. At this stage, a place for the construction of a city is selected as a territory for the placement of one of the project objects and permanent residence of specialists who ensure the functioning of the object both directly and indirectly. The managing entity forms the primary and then the permanent project group, which in turn develops and subsequently implements the program and plan for the implementation of the project. Then, in accordance with the plan, the construction of cities and related infrastructure (energy, communications, etc.) and subsequent settlement takes place.

The development of nuclear ZATOs within the framework of the implementation of the Atomic Project during the entire period when the goal is relevant is the main - project stage of the cycle. This stage is characterized by rapid progressive growth of the city, stable resource provision (personnel, finance, technology, opportunities for implementing initiatives, etc.), the formation of the main functional areas, urban environment, identity, activation of the value core of corporate identity (a set of values ensuring the cohesion of the participants in the implementation of a national-scale project). The main criterion for the development of the city for the managing entity at this stage is the effectiveness of the city in the implementation of its functionality as a territory for the placement of the facility and residence of the participants in the implementation of the project. For the urban community, the criterion for the development of nuclear ZATOs is the degree of satisfaction of key interests, compliance with expectations (climate, security, status compliance, availability of opportunities for implementation).

When the project goal is realized or has lost its relevance, nuclear ZATOs are again at a transitional stage of development. There is a need for redesign or dedesign in the conditions of the post-project stage, i.e. the project "reboot". At this stage, the

managing entity develops a new goal within the framework of a particular national-scale project, or a local goal outside the national-scale project, based on the intra-city interests and functional features of the city (infrastructure, human resources, technologies, stable relationships, etc.).

The value core of corporate identity forms the framework for regulating the joint activities of participants in the implementation of a national-scale project. Since the goal of such projects is resource-intensive, maximum involvement and motivation of participants in joint activities is required. The value core of corporate identity is based on a mutually beneficial exchange between the managing entity and the participants involved in the project, who, being involved in an important state undertaking, receive the opportunity for professional and status growth, identification as a member of a special community, etc.

The value core of corporate identity is aimed at realizing the goal of a national-scale project, forms a community of nuclear closed administrative-territorial entities, turns residents into participants, thereby maximally involving them in the implementation of the project.

Surveys and interviews confirm that today nuclear ZATOs are experiencing a post-project stage of development, and that the absence of a project-based approach to management at this stage leads to a decrease in the effectiveness of urban development (increased social tension, expectation of stagnation and desire for radical changes, demand for city rejuvenation, project reboot).

Surveys in 2012 and 2022 showed that the value core of the nuclear ZATOs' corporate identity is in an inactive state. This is due to external factors:

- completion of the Soviet Atomic Project;
- a radical transformation of the Soviet management system (central subordination, full provision of necessary resources, actual management of the city-forming enterprise Rosatom by the city-forming enterprise of the city's social sphere, the "triumvirate Moscow - Plant Director - Head of the City Administration", special budgeting);

- a crisis of management and social sphere of nuclear closed administrative-territorial entities that arose during the course of post-project changes, significant in its manifestations.

As a result of the growth of social tension in the last 30 years, the value core of corporatism has turned out to be much less in demand than before, and its reproduction (transmission from the older generation to the younger generation as important principles for organizing life) has significantly decreased.

Taking into account these circumstances, the managing entity has the opportunity to “project reboot” nuclear ZATOs, as their reorientation to a new project of national scale with the organization of management based on a project approach (managing entity, project group, plan, resource provision, value core), or to ensure de-projecting (management of the city according to a local goal).

The fourth chapter presents the results of the development of models for the post-project development of nuclear ZATOs in the current situation. In particular, an assessment of the experience of the "post-project reboot of nuclear ZATOs" is implemented, and the conditions of the external environment are studied.

Within the framework of the concept of development management based on a project approach, and also taking into account external and internal factors, three models of post-project development are distinguished at the present stage:

- hot redesign / hot reboot (without changing direction), which is more suitable for nuclear closed-type administrative-territorial entities from the nuclear weapons group;

- cold redesign / cold reboot (with a change of direction), which is acceptable for nuclear closed administrative-territorial entities of the YaEK group;

- de-design/reset (with exit from the national-scale project), applicable to those nuclear closed administrative-territorial entities that are not suitable for redesign and must be reformatted into small towns.

From the position of the author's approach to the study of the management of a nuclear ZATO, it can be stated that the subject of management does not fully take into account the features of the project specifics of the development of nuclear

ZATOs, the features of the urban community, the environment, the presence of a special value core of corporate identity, while their management is possible in line with the project approach proposed in this work. As a result, in the conditions of post-project development of nuclear ZATOs, all the necessary conditions for their redesign within the framework of the urban environment, the management system, the value core of corporate identity were not created.

Conclusion contains conclusions based on the results of the study and the author's proposals and recommendations, as well as some important promising directions for future scientific developments

Appendices 1-5 contain supporting materials that supplement certain important provisions and conclusions of the dissertation research.

The results of the study that have scientific novelty:

1. 1. The sociological classification of cities has been supplemented, the essence of which is to distinguish between project and non-project cities. The purpose of creating and developing a project city is to implement a specific project of various scales (national, regional, etc.). Nuclear ZATOs are cities implementing the Atomic Project as a special project of national scale - paragraph 15 of the passport "Problems of Social Forecasting, Social Planning and Social Design in the Context of Changing Reality".

2. The characteristic features of nuclear ZATOs are highlighted: centralized management and support; development determined by the goal of the national-scale project; special organizational and legal ("regime") status; the presence of a "value core of corporate identity"; a special way of life and a pronounced urban identity of the city's residents – participants in the implementation of the Atomic Project – paragraph 15 of the passport "Problems of social forecasting, social planning and social design in the context of changing reality".

3. The concept of the "value core of corporateness" is proposed as a set of fundamental values, by means of which the management entity organizes the joint activities of the project participants, forms their readiness to implement a national-scale project. The characteristic features of the "value core of corporateness" are

highlighted: the target nature of its creation, the controlled involvement of the project implementation participants, their focus on cooperation, focus on innovation - paragraph 17 of the passport "The Problem of Motivation and Forms of Citizen Participation in Management".

4. The concept of "management of nuclear ZATOs based on a project approach" is defined as a normative information-prescriptive activity of the management entity aimed at organizing joint activities of people to implement the project goal. It is revealed that management is carried out on the basis of the "value core of corporateness" formed by the management entity and the necessary conditions of the urban environment - paragraph 15 of the passport "Problems of social forecasting, social planning and social design in the context of changing reality".

5. The following features of the existing management system of nuclear ZATOs are identified and theoretically substantiated: special subject composition of management; increased role of public and professional associations in decision-making; special nature of the group managed subject; presence of a special "value core of corporateness" – paragraph 15 of the passport "Problems of social forecasting, social planning and social design in the context of changing reality".

6. As a result of conducting sociological research in nuclear ZATOs, it was established that the "value core of corporateness" has been preserved there, despite the crisis of the post-project stage of development. However, the "value core of corporateness" is in an inactive state - paragraph 17 of the passport "The problem of motivation and forms of participation of citizens in management".

7. Based on the analysis of the external and internal environment, the following models of post-project development are proposed: "cold/hot redesign" and dedesign. "Hot redesign" - without changing the direction. It involves a targeted reboot, reorientation of cities to the implementation of a new national-scale project to replace the Atomic Project, taking into account the current interests and needs of the state in the "nuclear" sphere, for which there are a number of prerequisites and potential directions of development. Within the framework of the "cold reboot",

nuclear ZATOs are included in a national-scale project of a different focus under the management of another entity, including another state corporation (for example, Rostec State Corporation, etc.). "Dedesign" implies the development of a local goal outside the national-scale project, taking into account the functional role and features of a specific nuclear ZATO with the adjustment of the status, management system, parameters of the urban environment, infrastructure, as well as urban identity - clause 12 of the passport "Social Technologies in the Management System".

8. The cause of the crisis phenomena in nuclear ZATOs at the present stage has been established: the management entity does not implement any of the post-project development models ("hot/cold project reboot" or "deprojecting") associated with setting a new goal for the development of the city – paragraph 17 of the passport "The problem of motivation and forms of citizen participation in management".

Provisions submitted for defense

1. Analysis of the existing sociological classification of cities has shown that there are no grounds to determine the place of nuclear ZATOs among other urban settlements. To solve this scientific problem, the existing classification must be supplemented with at least two typologies with the following grounds: the normative and legal status of the city, based on the implementation of a significant social function by it and enshrined in a normative act. According to this basis, nuclear ZATOs are closed administrative-territorial entities, the features of which are clearly defined by the framework law and sufficiently reflect their specificity. As a second basis, cities should be divided according to their involvement in the implementation of the project: project city - a city that is the territory of the project implementation and permanent residence of the participants involved in this process, whose joint activities are organized by the governing entity. Nuclear ZATOs are cities on the territory of which the objects of a national-scale project are located - the Atomic Project; the initial goal has been achieved, therefore they are at the post-project stage, which implies the implementation of one of the post-project development models by the governing entity.

2. If we consider the emergence and development of a city through the prism of social engineering, then the urban environment and human relations are transformed into products of social and production cycles, with a characteristic set of values and urban lifestyle. The specific features of nuclear ZATOs as cities are the following: direct subject management, development within the boundaries of the goal of a national-scale project; special normatively established "regime" status; a unique value core (corporatism), inherent only to cities of this (project) type; a special way of life and urban identity, as a consequence of the activity of the value core.

3. "Project" is a complex target image of changes, which is developed by the subject of management. Upon implementation of the project, the subject organizes joint activities of people in this direction. Thus, design is defined as a type of management (information, prescriptive) activity aimed at developing and subsequently adjusting the target (information) image of changes in a particular community, in which the subject of design lays down an advantage and/or provides for a solution to a particular problem. The author proposes his own approach to the management of nuclear ZATOs. It consists in identifying and subsequently substantiating the special logic and priorities of managing nuclear ZATOs as a result of analyzing the features of their project organization, on the basis of which alternative models of post-project development are developed (typical management options at the post-project stage of development). Nuclear ZATOs are considered as cities on the territory of which the objects of a national-scale project - the Atomic Project - are located. The peculiarity of this kind of projects is the absence of deadlines for the implementation of the goal. Briefly, the theoretical concept underlying the author's approach to managing nuclear ZATOs is as follows: nuclear ZATOs as cities are formed on a project principle, as selected territories for the placement of national-scale project facilities - the Atomic Project, the development of which is carried out in the direction of the project goal; in the creation and subsequent development of nuclear ZATOs, typical models and schemes of organization and management developed specifically for this project are used; the

subject of management identifies the project and post-project stages of city development, which is associated with the finality of the set goal. That is, at different stages, the dominants of management change, various models of post-project development are implemented (typical complex options for organizing management). At the project stage, the dominant is the implementation of the goal, at the post-project stage - target reboot and system adaptation; management contours are formed taking into account the special regulatory and legal status (issues of resource provision of infrastructure, subordination, interaction with participants in the implementation of the project, including the division of city management powers, a special secrecy regime and protection of the perimeter of project facilities and urban infrastructure, the formation and maintenance of a separate urban social environment⁹etc.).

4. The management system that has developed in nuclear closed administrative-territorial entities has a number of characteristic features, including:

- the uniqueness of the managing entity, namely the inclusion in the composition of the entity of the management of the State Corporation Rosatom and its structural divisions, subordinate (city-forming) organizations;

- active participation in the management of nuclear closed administrative-territorial entities of professional and social associations that regulated and built relationships between residents, employees of the project facility, and auxiliary organizations;

- the special character of the participants in the implementation of the Atomic Project, as a project of national scale, determined by the specifics of its origin and functionality: a) the status of the professional and cultural elite (including those who studied at the best universities in the country), b) loyalty to the state and political system, c) social, public activity, d) motivation for a “labor feat” for the good of the

⁹The residents of the nuclear ZATOs themselves and their neighbors call such conditions and the ZATOs themselves “hothouse” cities, which reflects its characteristic features: a special target microclimate, isolation, regime and control.

Motherland, d) unity around the idea of the project: the formation of the country's strategic nuclear potential to protect the state from external aggression.

- the presence of a special value core of corporate identity, the basis of which is the understanding of the special importance of realizing the goal of a national-scale project, as one of the priorities of the state's development, and the willingness to unite for its implementation, to put group values above individual needs and interests, to "endure hardships" and restrictions of "regime" life for the sake of a "high goal";

- coexistence and interrelation of vertical and horizontal relations, unity of external management and self-government with a significant increase in the share of self-organization and self-government in the implementation of the project goal in relation to the motivation of the participants.

5. "Value" can be considered as a certain guideline in the activity of an individual, his idea of the goal and rules of his behavior. The concept of "corporateness" was introduced into the work to analyze the specifics of nuclear ZATOs and is understood by the author as a generalizing value characteristic, quality, property, manifested in cohesion, involvement in the process of joint implementation of a large-scale state task, an undertaking that is of primary importance for the state and society. Corporativeness comes from the initial community of interests of the participants in the implementation of a national-scale project and emphasizes the presence of a social community linked by a single duty, an important state task. If we consider the relations of the participants in the implementation of the project, then the signs of corporativeness in this case will be the desire/readiness/understanding that everyone is implementing an important undertaking within the framework of one of the national priorities of the state's development.

6. The urban environment of nuclear ZATOs is understood as a set of conditions implemented on their territory, creating opportunities for the implementation of certain types of activities by project participants, facilitating (targeted) or, on the contrary, hindering the achievement of their expected results

(non-targeted). Thus, the formation of the urban environment in nuclear ZATOs by the management entity turns out to be associated with the concept of "potential capabilities" of all participants in the implementation of a national-scale project, mutual consideration, and synergy of such capabilities. The specific features of the urban environment of nuclear ZATOs include the artificial (subjective), centralized nature of formation; corporate-value character (stereotypes of group behavior in specific situations are formed, social and communicative skills and abilities, teamwork are formed); project orientation (the environment provides participants with opportunities for implementation through active participation in a national-scale project).

7. By the "value core of corporate identity" (VCC) we shall mean a set of fundamental values, by means of which the readiness and desire of participants to implement a project of exceptional importance on principles close to family and ancestral ones are laid at the basis of nuclear ZATOs, as cities on whose territory the objects of a national-scale project - the Atomic Project - are located. It is obvious that VCC contains the potential for involving interested participants in interaction processes, including in the formation of the urban environment. The characteristic features of the value core of corporate identity include:

- artificiality (the presence of a voluntaristic subject of management, conventionality, controlled involvement);
- specificity (project orientation, "greenhouse", focus on innovation).

8. The value core of corporate identity is formed from 8 terminal values (the full composition of 18 value-goals was verified by M. Rokich). The composition of the CVC was determined as a result of interviews with residents of nuclear closed administrative-territorial entities. The value core of corporate identity of nuclear closed administrative-territorial entities is made up of the following values: Exciting (active, stimulating) life: the management entity attracts professionals from various fields with an active life position to participate; a sense of accomplishment (long-term contribution): a national-scale project immanently implies the need for accomplishment, a long-term contribution to the development of society and the

state; peace in the world (absence of wars and conflicts): the nuclear project was aimed at ensuring parity in the military-strategic confrontation between the USSR and the USA; family security (caring for family and loved ones): state security is actually reduced to ensuring the safety of each citizen of their loved ones, family; national security (security from attack): the nuclear project as a national-scale project is aimed at ensuring national security, its participants are defenders of the fatherland; Self-respect: without self-respect it is impossible to set big goals and achieve them; recognition in society (respect, admiration): is the basis of motivation for a potential participant in the implementation of the project with ambitions, an active life position; genuine friendship, a friend's shoulder (close comradely relations): a value that ensures the greatest possible cohesion of the participants in the implementation of a national-scale project in joint activities. Research has shown that for more than 10 years the value core of the corporate identity of nuclear ZATOs has not been active, which is due to external factors: the completion of the Atomic Project; the transformation of the Soviet system of project stage management (central subordination, resource provision, symbiosis of municipal and enterprise management systems); a systemic crisis of management and the social sphere of nuclear ZATOs due to the post-project stage of development. The CNC has become less in demand, its reproduction has significantly decreased. However, surveys and interviews indicate that although it is not active, it continues to be reproduced at a minimum acceptable level. This is evidenced by the presence of markers of the corporate spirit of involvement in the implementation of a large-scale state goal, a special “project” identity, etc. among residents of nuclear closed administrative-territorial entities.

9. Within the framework of the author's approach to the management of nuclear closed administrative-territorial entities, taking into account external and internal factors, several models of post-project development are identified.

Hot redesign - without changing the direction (hot reboot). It involves a targeted reboot, reorientation of cities to implement a new national-scale project to replace the Atomic Project, taking into account the current interests and needs of the

state in the "nuclear" sphere, for which there are a number of prerequisites and potential development directions. When implementing such a model of post-project development, the managing entity of the State Corporation Rosatom is retained, the costs of modernizing the existing infrastructure, management system, value core of corporate identity, activation of the urban environment (rejuvenation of the city, saturation with specialists ready to produce results, work in a coordinated manner, show initiative in implementing the goal of the national-scale project) are calculated. Emphasis is placed on the development of a new research direction within the framework of the updated, updated Atomic Project.

In the case of the cities of the NEC, the model of post-project development of the cold reboot can be applied, within the framework of which the nuclear ZATOs are included in a national-scale project of a different focus under the management of another entity, including another state corporation (for example, the Rostec State Corporation, etc.). This will allow the city to be filled with participants in the implementation of a new project with other features, "inject fresh blood", including making the city attractive to young specialists, that is, "rejuvenate the city". Thus, the nuclear ZATOs will significantly adjust the directions of target development within the framework of a parallel national-scale project. In this case, the urban environment acquires all the characteristics of a competitive one, since a different community of interests and management entities is formed in the city. For this, it is possible to create campuses on the basis of the National Research Nuclear University MEPhI in the nuclear ZATOs of the NEC group (although over the past 35 years, both the network itself and the funds allocated for its maintenance have been significantly reduced¹⁰, including in connection with the reduction of the status of the institutes themselves in the cities, today Rosatom, within the framework of the

¹⁰Analysis of the Balance Sheet Item for 2018 shows that despite the introduction of fixed assets in 2018 in the total amount of RUB 323,113.78 thousand at MEPhI, the residual value of fixed assets decreased from RUB 5,208,532.7 thousand to RUB 5,008,434,434.6 million. In other words, the dynamics of receipts is less than the accrued depreciation, which clearly indicates the aging of fixed assets. Source: MEPhI Self-Assessment Report for 2018, p.46. Access mode: https://mephi.ru/content/public/uploads/files/education/docs/Samoobsled/otchet_o_samoobsledovanii_niyau_mifi_za_2018_g.pdf?ysclid=m5wdm5b1mu393966390 (Accessed 12.01.2025).

relevant state program¹¹ launches a number of initiatives aimed at “rebooting” MEPhI and its branches in the cities where it operates in accordance with current tasks¹²). Candidates for the implementation of a “cold reboot” as a model of post-project development are the cities of Novouralsk, Zheleznogorsk, and others.

De-designing or resetting implies the development of a local goal outside of a national-scale project, taking into account the functional role and characteristics of a specific nuclear ZATO with adjustments to the status, management system, parameters of the urban environment, infrastructure, and urban identity.

Theoretical significance consists in solving the scientific problem of increasing the efficiency of management of nuclear ZATOs in modern conditions, which has important political, socio-economic, cultural, and economic significance. The dissertation proposes an original approach to the management of nuclear ZATOs: consists in identifying and subsequently substantiating the special logic and priorities of management of nuclear ZATOs as a result of analyzing the features of their project organization, on the basis of which alternative models of post-project development are proposed (typical management options at the post-project stage of development).

Practical significance make up author's recommendations on the management of nuclear closed administrative-territorial entities from the YAOK and YAEK groups, based on their specifics (connection with a national-scale project), as well as external and internal factors (the state of affairs in the nuclear industry, as well as the current geopolitical situation).

¹¹Order of the Government of the Russian Federation of July 13, 2009 No. 915-r "On approval of the Program for the creation and development of the federal state budgetary educational institution of higher professional education "National Research Nuclear University MEPhI" for 2009-2017". Access mode: <https://base.garant.ru/6726016/?ysclid=m5y7ygif3112026575> (Accessed 12.01.2025)

¹²For example, based on a comparison of accounting data for 2018 and 2023 for NRNU MEPhI as a whole, a significant increase in fixed assets can be noted from 2018 to 2023 inclusive, from 5,008,434.6 thousand rubles to 8,930,665.4 thousand rubles. Source: NRNU MEPhI report on the results of self-assessment for 2023, p. 46. Access mode: https://mephi.ru/content/public/uploads/files/education/docs/Samoobsled/otchet_o_samoobsledovanii_niyau_mifi_za_2023_g.pdf?ysclid=m5wg3w6h6t262204781 (Accessed 12.01.2025).

The dissertation materials can be used in the preparation of manuals and programs for the courses “Sociology of Management”, “Urban Management”, “Integrated Development of the Territory”, etc.

Reliability and reliability of the results obtained

Key findings and scientific results are presented in six publications peer-reviewed in the Scopus/Web of Science scientific database:

1. Duran T., Zverev A., Karachkov S. and Kostina N. The Importance of Corporatism of Subjects and Management Actors for the Functioning of the Socio-transport Environment of Catu. Proceedings of the 1st International Scientific and Practical Conference on Transport: Logistics, Construction, Maintenance, Management (TLC2M). TLC2M, pages 207-215; DOI: 10.5220/0000165000003527
2. Aleshina, E., Zverev, A. and Karachkov, S. (2022). Theory and Practice of Designing a Social Environment for Sustainable Development. In Proceedings of the 1st International Scientific Forum on Sustainable Development of Socio-economic Systems - WFSDS, ISBN 978-989-758-597-5, pages 400-405. DOI: 10.5220/0010669300003223
3. Zverev A., Karachkov S., Vatoropin A., Duran T. To the issue of applying the corporate-design approach to ensuring the development of closed atomic cities at the modern stage: Problems of the post-design period. AIP Conference Proceedings 2657, 020042 (2022);<https://doi.org/10.1063/5.0113094>
4. Zverev A., Karachkov S., Vatoropin A., Duran T. Features of the social environment of closed atomic cities. AIP Conference Proceedings 2657, 020041 (2022);<https://doi.org/10.1063/5.0113093>
5. Aleshina, E., Zverev, A. and Karachkov, S. (2021). Areas of application of the design approach: the practice of social environmental design in the mirror of sociological research // SHS Web Conf., 128 (2021) 03006 DOI:<https://doi.org/10.1051/shsconf/202112803006>

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including in scientific journals reviewed by the Higher Attestation Commission:

7. Karachkov, S. M. Conceptual Foundations of Nuclear Closed Administrative Territorial Entity Management // *Bulletin of the Nizhny Novgorod University named after N.I. Lobachevsky. Series: Social Sciences*, 2024, No. 3 (75), pp. 133–143. DOI 10.52452/18115942_2024_3_133

8. Karachkov, S. M. ZATO as a project city: a sociologist's view / S. M. Karachkov // *Issues of Management.* - 2023. - No. 5 (84). - P. 5-17. - DOI 10.22394/2304-3369-2023-5-5-17. - EDN NHHOES.

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10. Karachkov, S. M. Specificity of the Russian Nuclear ZATO as a city: problems of developing a theory and methodology for sociological classification / S. M. Karachkov, A. I. Zverev // *Scientific notes of the Crimean Federal University named after V. I. Vernadsky. Sociology. Pedagogy. Psychology.* - 2023. - Vol. 9 (75), No. 3. - P. 27-38. - EDN LJYFMS.

11. Karachkov, S. M. Design space of a nuclear closed administrative-territorial entity: manifestations of the value core of corporatism in social identity based on the results of an empirical study / S. M. Karachkov // *Economy: yesterday, today, tomorrow.* - 2022. - Vol. 12. - No. 3-1. - P. 213-222. - DOI 10.34670/AR.2022.29.12.025. - EDN ULGIWB.

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16. Karachkov S. M. Nuclear ZATO as a special type of single-industry town: development prospects and problems / A. I. Zverev, S. M. Karachkov // Bulletin of the Saratov University. New series. Series: Sociology. Political Science. - 2021. - Vol. 21. - No. 2. - Pp. 156-161. - DOI 10.18500/1818-9601-2021-21-2-156-161. - EDN MHIIDP.

17. Karachkov, S. M. Development of the model of social management of the Ural "nuclear" closed administrative-territorial entity at the present stage / S. M. Karachkov // Theory and practice of social development. - 2013. - No. 12. - P. 26. - EDN RRUCML.

18. S. M. Karachkov Ural closed cities on the way out of the crisis: the search for social roots of the problem / A. I. Zverev, S. M. Karachkov // Historical and social-educational thought. - 2012. - No. 3. - P. 198-201. - EDN PARILD.

including in monographs, as well as other sources indexed in the Russian Science Citation Index:

19. Karachkov, S. M. Conceptual foundations of the management of the "project" city / S. M. Karachkov, A. I. Zverev // Problems of the activities of scientists and research teams. International Yearbook of the Kugel School of St. Petersburg. - 2023. - No. 9 (39). DOI: 10.24412/2414-9241-2023-9-103-109

20. Karachkov, S. M. Repair of special equipment in Russia. Backstage or a look from the inside [Text] / S. M. Karachkov, A. I. Zverev. - Moscow: Gornaya kniga, 2019. - 90, [2] p. : tab.; 22 cm. ; ISBN 978-5-98672-496-6 : 500 copies

21. Karachkov, S. M. Closed "atomic" city. The spirit of corporate identity and the management model / S. M. Karachkov, A. I. Zverev. - Moscow: Geoinform, 2017. - 232 p. - ISBN 978-5-98877-067-1. - EDN ALJQDY.

Testing the research results was carried out in scientific reports and presentations at the VI International Conference "Kazan Sociological Readings", May 7-18, 2023: XXXVII session of the International School of Sociology of Science and Technology named after S.A. Kugel, Ural Sociological Forum dedicated to the 100th anniversary of Professor L.N. Kogan: Culture, Personality, Society in the Era of Change: New Challenges, Problems, Prospects (2023), XXIII Ural Sociological Readings. Personality, Culture, Society (2023); XIX All-Russian Scientific and Practical Conference with International Participation "State, Politics, Society: Challenges and Strategic Priorities for Development", 2023 (Ural Institute of Management - Branch of RANEPA, presentation of a report at the plenary session), meetings of the departments of Theory and Sociology of Management, Personnel Management and Sociology of the Ural Institute of Management of the Russian Presidential Academy of National Economy and Public Administration (Yekaterinburg).

A certificate was received on the implementation of the practical results of the doctoral dissertation in the activities of the Administration of the Novouralsk urban district dated 13.01.2025 No. 1, which states that "the practical results of the author's doctoral dissertation were taken into account as additional materials for the formation of a strategic policy and the development of a master plan for the economic development of the Novouralsk urban district."

 / Karachkov S. M. /