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KANGINA Evgeniya Nikolaevna

**CITIZEN ENGAGEMENT IN THE GOVERNANCE OF A “SMART
CITY”**

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Abstract of the dissertation for the degree of Candidate of Sociological
Sciences

Research supervisor:
Litvintseva Elena Ananievna,
Head of the Department of Organizational Design of Management Systems,
Faculty of Personnel Management and Public Administration,
Institute of Public Administration and Civil Service, RANEPА,
Honorary Worker of Education of the Russian Federation,
Academic Secretary of the Academic Council of the Institute of Public
Administration and Civil Service, RANEPА,
Doctor of Sociological Sciences, Associate Professor

The relevance of the research topic stems from the fact that the transition to the fourth technological revolution has created a new social environment saturated with information technologies, which is being incorporated into society and affects the organization of everyday life in the social environment. “Smart cities” emerge as a concept integrating digital and information technologies and as a stage of technological development of urban infrastructure. However, the isolated development of technological infrastructure does not guarantee the achievement of the key goals of a “smart city”: sustainable development and improving the quality of life of citizens within the framework of socially-oriented, anthropocentric governance. The accumulated international and domestic experience indicates that the technocratic approach, which dominated the early stages of smart city development, leads to an imbalance between technological capabilities and the real needs of the community. Managed engagement makes it possible to identify citizens’ genuine priorities, to focus resources on solutions that are most in demand by the community, and to avoid costly mistakes associated with ignoring the social context. The management of engagement implies the development of inclusive strategies and intelligent infrastructure that ensure access to participation in governance and the use of smart city services for all residents, regardless of age, social status, income level, or digital literacy.

Thus, the relevance of the research is determined by the following circumstances: first, the insufficient implementation of the anthropocentric approach in practice, despite the anthropocentric turn since 2018, where the human being and their needs are the priority and technologies are merely a tool; second, the hybridity of the socio-digital aspects of the modern city, which creates new forms of interaction, communication, and engagement that require specific managerial approaches and technologies; third, the necessity to take into account the factor of citizen engagement when making managerial decisions, considering both the rational-instrumental aspects of involvement (platforms, voting, data collection) and the sensory-emotional component, which is a powerful motivator for sustainable

participation; and fourth, the existence of a set of unresolved theoretical, methodological, and practical problems associated with managing engagement, such as the ambiguity of the conceptual apparatus (“engagement,” “participation,” “participatoriness”), the complexity of interaction among multiple subjects (multi-subjectivity), bureaucratic barriers, digital inequality, and the ineffectiveness of existing motivation models and forms of participation.

The scientific development of the problem is based on a theoretical foundation including sociological, psychological, managerial, and urbanistic approaches. The first group of works consists of general sociological theories, highlighting the works of M. Weber, G. Simmel, T. Parsons, E. Goffman, É. Durkheim, C.H. Cooley, J. Habermas, T. Kemper, T. Scheff, J. Stets and J. Turner, A. Hochschild, R. Park and L. Wirth, C. Willis and C. Nold, J. Homans and P. Blau, O.A. Simonova and V.I. Ilyin. Issues of involvement have also been studied by N.G. Maloshonok, H.M. Blalock, V. Pevnaya, E.A. Shuklina, T.Yu. Bystrova, N.D. Bobkova, I.A. Pavlova, O.P. Nedospasova and G.A. Barysheva, and V.E. Gurinovich. The second group includes research in the field of social psychology, particularly the works of E. Fromm, A. Astin and R. Pace, B.G. Ananiev and A.N. Leontiev. The third group comprises works related to theories of motivation, sociology of management, and urban studies, highlighting the works of A. Maslow, F. Herzberg, Sherry R. Arnstein, R. Rhodes, R. Inglehart, S. Lipset, V. Albino, U. Berardi, R. D’Angelis, T. Nam, T. Pardo, E. Townsend, K. Lynch, B. Cohen, N.I. Lapin, T.M. Dridze, L.B. Kogan, O.N. Yanitsky, A.I. Prigozhin, Zh.T. Toshchenko, V.V. Shcherbina, A.V. Tikhonov, A.A. Merzlyakov, V.S. Bogdanov, A.Ya. Sarna, V.A. Shilova, L.A. Vasilenko, V.V. Zotov, Yu.V. Lyshechikova, L.A. Vidyasova, Ya.D. Tensina and E.Yu. Vidyasov, V.V. Vagin, V.D. Safronova, O. Vorobyeva, E. Manzhula, and A. Yashina, A.N. Raskhodchikov. The fourth group consists of the most recent research from the last five years (2022–2025), which sets the relevant context for analyzing citizen engagement and the development of smart cities. These include works by K.A. Semyachkov, F. Otengrafen et al., R.V. Petukhov, O.Yu. Verpatova, S.V. Shekshuev, N.V. Prokazina, K.M. Osmanov, E.A. Vanieva, O.V.

Pozdnyakova, T.V. Noskova on constructing “the right to the city,” L.V. Sharakhina, I.A. Vershinina, A.V. Lyadova, E.Yu. Tikhaleva, G.L. Tulchinsky, N.A. Kolodiy, V.S. Ivanova, D.A. Chernova, S.G. Rudnev et al., and E.Yu. Roslova.

The object of the research is the governance of a “smart city”.

The subject of the research is citizen engagement in the governance of a “smart city.”

The aim is to identify the socio-managerial mechanisms that contribute to increasing citizen engagement in the development of a “smart city.”

The objectives are as follows:

- 1) to study conceptual sociological approaches to researching the “smart city”;
- 2) to consider citizen engagement in the governance of a “smart city” as an active social activity;
- 3) to identify the mechanisms of engagement in smart city governance and the role of subjectness;
- 4) to analyze the socio-managerial technologies and mechanisms of citizen engagement in the governance of a “smart city”;
- 5) to characterize sensory-emotional empathy as a mechanism of participation in the governance of a “smart city”;
- 6) to identify the types and levels of citizen engagement in the governance of a “smart city.”

The hypothesis of the research is the assumption that citizen engagement as an active social activity is an important factor in the governance of a “smart city,” while the use of the sensory-emotional component in management activities serves as a social mechanism based on trust, solidarity, and readiness for co-governance and is especially significant.

The scientific novelty and results of the research are as follows.

- An authorial concept of a “social smart city” is introduced, understood as a stage of urban development that integrates technological innovations, managerial strategies, and social inclusiveness, where a high degree of citizen

engagement is a fundamental component. A periodization of smart city development is presented: the technocratic stage, the managerial stage, the anthropocentric stage, and the social stage, based on the author's analysis of the approaches of D. Cohen, Yu.V. Lyshchikova, and O.N. Yanitsky, with the degree of citizen participation in smart city governance as the criterion for periodization.

- A synthesis of classical sociological theories (M. Weber, G.H. Mead, E. Goffman) with contemporary concepts of smart cities, emotional engagement, and digital participation is carried out, providing a theoretical demarcation and clear differentiation of the concepts of “participation,” “participation,” and “engagement” through a system of criteria (focus, goal, evaluative context) presented in tabular form. An authorial definition of engagement as social initiative and active activity is proposed.

- The role of a multi-subject environment with an emphasis on the self-organization of citizens as a key factor in managing engagement is substantiated, where citizens, business, the scientific community, and the government interact as equal subjects within the framework of the post-nonclassical governance paradigm.

- A structured system of involvement mechanisms is developed, classified by type (institutional, stratificational, sociocultural, socio-organizational) and by their orientation toward the target subject (sociological surveys, public events, scientific sessions, formation of initiative groups, feedback mechanisms, creation of a comfortable environment).

- The existence of a managerial imbalance is revealed—a gap between the declared importance of engagement in managerial documents and its real low level in practical activities, caused by technocratic bias and formalism. It is established that there is no direct correlation between the level of digitalization (IQ rating of cities, Smart City Index) and the level of citizen engagement (Spearman's coefficient -0.42). Systemic barriers to the implementation of managerial engagement technologies are identified: social, cultural-contextual, communication-informational, psychological, and organizational. The necessity

of synthesizing rational and sensory-emotional mechanisms of smart city governance is proven, where emotional empathy serves as a significant factor of engagement.

– The key role of the sensory-emotional component as a significant mechanism of engagement is substantiated. Micro- and macro-levels of emotional regulation are distinguished. The concept of a rational-affective continuum is developed, demonstrating the complementarity and necessity of a dual legitimation of engagement—through practical results (rational) and through public recognition/emotional response (affective).

– A multi-level structure of citizen engagement in smart city governance is revealed, closely linked to the hierarchy of decision-making levels. A comprehensive authorial typology of engagement is developed and verified, including four forms of participation: expert-technological, administrative-managerial, civic-initiative, and emotional-motivational, and four levels of influence: strategic (federal/regional government), tactical (municipalities, business, science), operational (IT specialists, activists), and consumer (ordinary citizens).

The theoretical and methodological basis of the dissertation research includes the foundational theoretical positions and conclusions of Russian and foreign scholars, as well as empirical studies investigating the phenomenon of engagement in the smart city context. The author draws on phenomenology (E. Husserl, A. Schütz, P. Berger, T. Luckmann), interpretive sociology (M. Weber) and the theory of social action (T. Parsons), symbolic interactionism (G.H. Mead, E. Goffman, C. Cooley), the eco-anthropocentric paradigm of sociology (T.M. Dridze), the theory of emotions (J. Turner, J. Stets, T. Kemper, T. Scheff), and engagement theories (D. Hume, G. Simmel, H. Spencer, M. Weber, É. Durkheim, M. Scheler).

The empirical base of the dissertation consists of an expert survey, in-depth interviews, content analysis (Yandex Wordstat), and the analysis of sociological research data. The empirical base also includes open-access data (projects, strategies, reports, news), materials from sociological studies, and data from social

networks and interest groups on the research topic. Research conducted directly by the author includes the expert survey “Social Diagnostics of Smart Cities” (N=67) in 2023–2024 (Stage 1, index in the dissertation SDUG-2024), and “Citizen Engagement in a Smart City” (N=55) (Stage 2, index in the dissertation VGUG-2025). The research supervisors were researchers from the Federal Center of Theoretical and Applied Sociology of the Russian Academy of Sciences: V.S. Bogdanov, leading researcher at the Center for Sociology of Management and Social Technologies, Candidate of Sociological Sciences, and V.A. Shilova, head of the Laboratory of Infosocial Technologies, Candidate of Sociological Sciences, leading researcher. The first stage “Social Diagnostics of Smart Cities” (SDUG-2024) was an expert survey (N=67) with a purposive (non-random) sample representing key stakeholder groups involved in the development and implementation of smart city projects in Russia. The sample included: state and municipal employees (72.9%) from federal, regional, and city authorities and local self-government bodies; researchers and experts (16.4%) from the academic community studying smart city issues, urban studies, and digitalization; and IT specialists and developers (23.9%) from the commercial sector directly involved in creating software and technological solutions for smart cities. The second stage “Citizen Engagement in a Smart City” (VGUG-2025) (N=55) aimed at an in-depth study of motivation and participation practices. Experts from cities actively implementing smart city policies participated, including Moscow, St. Petersburg, Yekaterinburg, Novosibirsk, Saratov, Ryazan, Kursk, Magnitogorsk, Saransk, Obninsk, Balashikha, Nizhny Novgorod, Krasnogorsk, and others; 86.5% of SDUG-2024 respondents and 96.4% of VGUG-2025 respondents reside in a smart city. The study “Engagement in a Smart City” (VUG-2025) was conducted from June to August 2025 using in-depth interviews (N=15) with civil servants and employees of relevant ministries (Ministry of Construction, Moscow City Government), IT specialists, architects, local project implementers (deputies, district administrations), academic researchers, journalists, and businesspeople. The research was supervised by Yu.V. Druzhinina, Candidate of Sociological Sciences. For the analysis of consumer-level engagement of ordinary

citizens as opposed to expert assessments, secondary analysis materials from the following studies were used: the Russian Public Opinion Research Center (VCIOM) study “Smart City. Russian Version,” based on a nationwide survey of 1,600 Russians aged 18 and over conducted by stratified random telephone interview, and the HSE University monitoring study “Civil Practices on the Internet” (2022), a representative survey of the Russian population aged 14 and over conducted by the Institute for Statistical Studies and Economics of Knowledge in August–September 2022 with a sample of 10,021 respondents, among whom 8,308 had used the Internet in the previous three months.

The main provisions of the dissertation research submitted for defense are as follows.

1) It is established that the current stage of smart city development is characterized by a transition to the “social smart city” model, defined as a stage of urban development that integrates technological innovations, managerial strategies, and social inclusiveness, where a high degree of citizen engagement is a fundamental component. Based on an analysis of smart city development concepts, an authorial periodization of their evolution (technocratic, managerial, anthropocentric, and social stages) has been developed, with the degree of citizen participation in governance as the criterion for transition between stages.

2) It is revealed that improving the manageability of citizen engagement is ensured through the formation of a multi-subject governance environment, within which state structures, business, the scientific community, and civic initiatives interact. A system of engagement management mechanisms has been developed, including institutional, stratificational, sociocultural, and socio-organizational mechanisms that ensure the coordination of subject interactions and the expansion of citizen participation in smart city governance.

3) A managerial imbalance in the development of smart cities is identified, consisting of a gap between the declared importance of citizen engagement in strategic documents and its low level of practical implementation. The absence of a direct relationship between the level of city digitalization and the level of citizen

engagement is established, indicating insufficient use of social management technologies. The main barriers to engagement are identified: bureaucratic formalization of participation, digital and social inequality, and communication and psychological barriers.

4) It is proven that sensory-emotional empathy constitutes an independent mechanism for managing engagement. Emotions such as satisfaction, confidence, and disappointment directly influence the motivation to participate and the legitimacy of managerial decisions. Ignoring this component undermines the solution of citizen motivation problems in governance under subject-subject relations, which is confirmed by extending A. Hochschild's theory of emotional labor.

5) A multi-level structure of citizen engagement has been developed, requiring differentiated managerial interventions. The developed typology (4 forms of participation and 4 levels of influence) serves as a tool for diagnosing the real depth of involvement and for designing targeted managerial decisions, and it allows for the differentiation of managerial interventions considering the socio-stratificational and sociocultural characteristics of population groups. The identified "engagement paradox" (an unrealized desire to participate due to bureaucratic barriers) points to the need to reform organizational procedures to increase inclusiveness.

6) It is determined that improving the manageability of a "smart city" is achieved by applying a set of socio-managerial engagement technologies aimed at forming a multi-subject environment, developing horizontal interactions, and aligning the interests of government, business, and civil society.

The theoretical and practical significance of the dissertation research consists in advancing sociological knowledge about engagement as an active social activity that has several mechanisms, including an emotional component. The author's proposed conclusions and recommendations contribute to distinguishing the concepts of engagement, participation, and participatoriness, as well as proposing an expansion of the stages of smart city development and substantiating

the inclusion of the new concept of the “social smart city.” The conducted research extends existing theoretical frameworks regarding the study of factors in the development of the urban environment and urban space. The practical significance of the work is directly linked to the developed recommendations that will be useful in improving federal and regional programs for the digitalization of urban space. The research topic corresponds to the requirements of the passport of the scientific specialty 5.4.7 “Sociology of Management,” field of science: 5. Social and Humanitarian Sciences, group of specialties: 5.4. Sociology, research areas: 3. Problems of interaction between subjects and objects of management, 17. The problem of motivation and forms of citizen participation in governance, 8. Social strategies and practices in the management of regions and municipalities, 12. Social technologies in the management system, and 6. Mechanisms of social regulation: institutional, socio-stratificational, sociocultural, socio-organizational.

The approbation of the research results was carried out through presentations at methodological seminars of the Department of Organizational Design of Management Systems of the Institute of Public Administration and Civil Service of RANEPА, as well as at various conferences. The materials of the dissertation research were also aprobated in the following forms: 13 scientific articles with the main provisions and conclusions of the dissertation were published in peer-reviewed scientific journals, including four (with a total volume of 4.6 printed sheets) in leading journals recommended by the Higher Attestation Commission (VAK).

The VAK-listed publications include:

- Kangina E.N. “The ‘Smart City’ Concept in the Russian Federation as a Socio-Managerial System,” *Theory and Practice of Social Development*, 2025, no. 4, pp. 163–169;
- Kangina E.N. “Comparative Analysis of the Concepts of ‘Engagement,’ ‘Participation,’ and ‘Participatoriness’ in the Sociology of Management,” *Mission Confessions*, vol. 14, part 2, 2025, pp. 65–73;
- Kangina E.N. “Prospects for Research on Managing Citizens’ Emotions

in a ‘Smart City’: A Sociological Discourse,” *Public Administration*, 2023, no. 5 (145).

– Kangina, E. N. Affective turn in the sociological study of involvement in the “smart city” / E. N. Kangina // *Public service*. - 2025. - Vol. 27, No. 5 (157). - P. 92-97. - EDN KRLXKU.

In addition, the author participated in the research project “The Affective Turn in Sociology: Models for Studying Collective Emotions in Social Groups and Professional Communities” (supervisor Anastasia S. Astakhova) at the Research Center for Sociological Studies of the Faculty of Social Sciences, Institute of Social Sciences, RANEPA, from February 7 to December 31, 2023, within the framework of a state assignment.

The structure of the dissertation consists of an introduction, two chapters comprising six sections, a conclusion, and appendices.