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DIGITAL TOOLS OF CIVIL SOCIETY AND COMMUNITY DEVELOPMENT

ЦИФРОВІ ІНСТРУМЕНТИ ГРОМАДЯНСЬКОГО СУСПІЛЬСТВА ТА РОЗВИТОК ГРОМАД

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Boiko I.M. Цифрові інструменти громадянського суспільства та розвиток громад. Оглядова стаття.

Стаття досліджує роль цифрових інструментів у розвитку громадянського суспільства та місцевих громад в Україні. Розглядаються переваги цифрових технологій, зокрема підвищення прозорості управління, зміцнення громадянської участі у прийнятті рішень, посилення взаємодії між громадянами й владою, а також покращення якості надання публічних послуг. Окремо аналізуються виклики цифровізації: недостатній рівень цифрової грамотності, нерівний доступ до технологій і ризики пов'язані з конфіденційністю даних. У роботі акцентується на важливості інтеграції інноваційних підходів для сталого розвитку громад і підвищення якості життя громадян.

Ключові слова: цифрові технології, громадянська участь, цифрове врядування, міське управління, розвиток громад

Boiko I.M. Digital Tools of Civil Society and Community Development. Review article.

The article explores the role of digital tools in fostering civil society and community development in Ukraine. It outlines the benefits of digital technologies, such as improving governance transparency, enhancing citizen participation in decision-making, strengthening interactions between citizens and authorities, and improving the quality of public services. Challenges of digitalization, including insufficient digital literacy, unequal access to technology, and data privacy risks, are thoroughly examined. The study highlights the importance of integrating innovative approaches to ensure sustainable community development and improve citizens' quality of life.

Keywords: digital technologies, citizen participation, digital governance, community development, smart governance

In a modern changing world and the need to integrate citizens into decision-making processes via using digital tools. This challenge is related to current trends in community development, which should meet the requirements of economic, social and technological progress. An important task is to ensure effective citizen participation in community governance via using information and communication technologies (ICT) and new media. This issue is of considerable scientific and practical interest, as the regions' digital transformation contributes to improving the quality of life, increasing transparency of governance and shaping a sustainable community environment. However, there are challenges, such as insufficient digital literacy of the population, unequal access to the Internet, and data privacy issues, that need to be addressed to achieve these goals. Addressing these challenges and finding ways to overcome them are the central topics of study in the field of community development and digitalization in Ukraine.

Analysis of recent researches and publications

Foreign scholars, such as S. Steinbach, H. Gilman, T. Peixoto, and B. Boynton, have made a significant contribution to understanding how digital technologies transform community development and increase the level of public participation. They study the impact of digital tools on the smart cities formation, where technology not only improves infrastructure but also creates more comfortable living conditions [5-8]. The analysis of recent research and publications shows a growing interest in the relationship between the development of digital technologies and civic participation among both domestic and foreign scholars. In the Ukrainian academic environment, these issues are being brought to the forefront by the significant contribution of such researchers as K. Amelina, O. Kud, and L. Babaieva, who focus on the civic participation models development within the framework of the smart cities concept, especially in the context of Ukraine's post-war recovery [2, 3]. Their study focuses on how digital technologies can increase the interaction effectiveness between citizens and authorities, contributing to the sustainable development of the community environment.

Civic engagement has become a key element of democratic processes, allowing citizens to actively participate in decision-making at the national and local levels. Modern society recognizes that the interconnection between citizen participation, digital technologies and community development plays a crucial role in shaping efficient and integrated community environments. Digital technologies, in turn, provide new opportunities for citizen engagement in decision-making processes, facilitating communication between residents and authorities, and making the process more transparent and accessible.

Thus, digital technology development allows optimizing the work of municipal authorities, providing access to various services and improving the quality of the community environment. This underscores the importance of

research in this area and the need to introduce innovative solutions to improve the interaction between citizens and authorities, which is especially relevant in the context of modern community development.

Unsolved aspects of the problem

Using digital technologies to engage citizens in decision-making processes at the national level is an important area of development for modern cities. Digital tools, such as online forums, interactive mobile applications, and e-surveys, open up new opportunities to increase the effectiveness of public participation and interaction between citizens and authorities. At the same time, the democratic potential of information and communication technologies (ICTs) plays a crucial role in public sector reform and helps to reduce the costs of crowdsourcing and public consultation.

Another challenge is the lack of digital skills among some groups, which prevents them from fully participating in digital processes. Limited access to broadband internet in some regions also limits opportunities for digital participation. In addition, the low efficiency of ICT used by the government and the judiciary affects the overall quality of civic participation.

Despite many advantages of digital tools, several unresolved issues limit their potential. One of the main challenges is the inclusion of politically marginalized groups, which experience shows remains a problem in the digital environment. Expectations that digital innovations will mobilize new groups of citizens and improve dialogue between the city and the community have not yet been realized. Research shows that digital participation often faces the same weaknesses as traditional forms of participation, such as limited two-way communication between citizens and politicians, and limited citizen influence on political decision-making.

These unresolved issues indicate the need for further research and improvement of digital tools to ensure sustainable community development and increase the level of civic engagement. The formation of a modern, transparent and efficient community environment requires an integrated approach to the interaction between citizens, digital technologies and community development, which will effectively meet the needs of modern society.

The main part

J. Macke, S. Moschen J. Sarate and C. Silva identified citizen participation as a critical element of community development, as it reflects the citizens' willingness to actively engage in initiatives and influence the dynamics of the city. This confirms the need to regularly seek public opinion and involvement in decision-making. Studies conducted by various authors [1, 18] analyze citizen participation through the number of actions taken that lead to visits, clicks on websites, or participation in government-public interaction. In particular, participation is only the first step on the way to deeper citizen involvement in the processes of city management.

In their studies on the concept of smart cities, R. Giffinger, C. Fertner, H. Kramar and E. Meijers identify citizen participation as one of the six main axes of development of such cities [16]. M. Marsal-Llacuna emphasizes that smart cities should not be only top-down government initiatives [17]. It is important that citizens are actively involved as stakeholders and not just seen as passive recipients of services [1]. As defined by J. De Guimaraes et al, citizen participation is a process in which citizens are actively involved in decisions that affect their lives. The research shows that this process contributes to improved outcomes for both individuals and communities as a whole [12]. This term refers to a two-way interaction or discussion between government and citizens [1, 11]. The aim of engaging citizens in participation is to ensure that the public voice is heard in the democratic process and to promote civic engagement [18]. Civic participation is not limited to the local level. According to K. Callahan, citizens have the opportunity to influence the shaping of their environment at different levels of government, from local communities to the national government. This allows for a more just and responsible society [15]. These measures promote closer interaction between municipal authorities and city residents, which allows for more effective solutions to local problems and improves the quality of life in cities [19].

Citizen participation is one of the key topics of research in political science and public administration. Studies show that active citizen participation in decision-making processes helps to achieve better results for both individuals and communities in general [10]. In their studies, R. Kummita and N. Crutzen analyse various aspects of modern cities' development, including the concept of «smart cities» and the role of civic participation. They emphasize that residents are the heart of any community, as they are the final users of community services and are most directly affected by changes in the living environment [13]. Modern researchers and practitioners have concluded that effective community governance should necessarily include the participation of citizens who provide important information and participate in decision-making [15].

H. Jain defines citizen participation as individuals' active involvement in decision-making processes, activities and affairs that affect their lives, communities, and society as a whole. He emphasizes citizen participation in governance, policy-making, public services and civic initiatives to promote transparency, accountability and cooperation between government institutions, organizations, and the public [21]. The experience of developed democracies and current challenges show that public participation is a necessary, useful and extremely important mechanism that ensures positive public influence on the activities of the authorities in the interests of citizens. On the other hand, public participation is a source of additional intellectual resources for the public authorities, which makes it also useful for the authorities themselves (provided that officials are aware of this importance). In Ukraine, both the public authorities and civil society institutions still have to go through an evolutionary path to

understanding the mutually beneficial mechanisms effectiveness of public participation that contribute to the implementation of deep systemic reforms for the citizens and territorial communities' benefit [20].

Promoting citizen participation is a key factor for community development and digital governance. It is a form of activity and communication that a citizen can use to contribute to the development of the local living environment at various levels [15]. These activities promote interaction between municipal authorities and citizens living in the city [19]. This is a connection that helps to protect the final user's interests. Previous studies lack a clear goal of implementing citizen participation in the context of digitalization and community development. For example, it has been reported that most citizen participation projects implemented as part of co-creation do not have a specific target goal.

According to the OGP's (Open Government Partnership) Article of Governanc governance article, citizen participation occurs when "governments seek to mobilise citizens to engage in public debate, provide input and make contributions that lead to more responsive, innovative and effective governance". When citizens are engaged, governments are more responsive, innovative and effective. Citizen participation is one of the three OGP's values, along with transparency and public accountability. Ukraine's Action Plan for 2023-2025 within the framework of the OGP's Initiative "Open Government Partnership" is focused on increasing transparency, public participation and EU legislation integration. Key commitments include using digital tools for recovery management, a geographic information system for monitoring regional development, and restoring access to open data. These efforts are vital to reduce corruption and improve governance. The plan is heavily influenced by Ukraine's integration into the EU, and it has received strong support from international donors and civil society, despite the challenges posed by the ongoing conflict [23]. Howell S. Baum defines «citizen participation» as individuals' active involvement in public decision-making processes that affect their personal and collective interests. This is important for creating inclusive and representative decision-making structures where all participants have equal power and act on the basis of common knowledge [29].

Thus, "citizen participation" can be defined as a multi-level process of active involvement of citizens in socially important decisions, which covers not only their direct participation in local affairs but also provides an opportunity to influence governance processes at all levels. Given the development of digital technologies, citizen participation also includes interactive forms of cooperation through digital platforms, making the process more inclusive and adaptive to the current challenges of community development. This definition emphasizes the importance of citizen engagement in creating transparent, efficient and innovative community communities.

The cities cooperate with the private sector to implement innovative projects. Experimental zones and incubators are being set up to test new technologies, which fosters start-ups and innovation. This diagram shows a complex system of interconnections, where each element interacts with the others, creating a dynamic environment for sustainable community development and active citizen participation.

A comprehensive framework for digital tools, citizen engagement, and territorial community development provides a detailed analysis of the complex interconnections between citizen participation, digital technologies, innovation, and the development of territorial communities. This framework illustrates how each component plays a critical role in shaping a dynamic environment that fosters sustainable community development and active civic engagement (Figure 1).

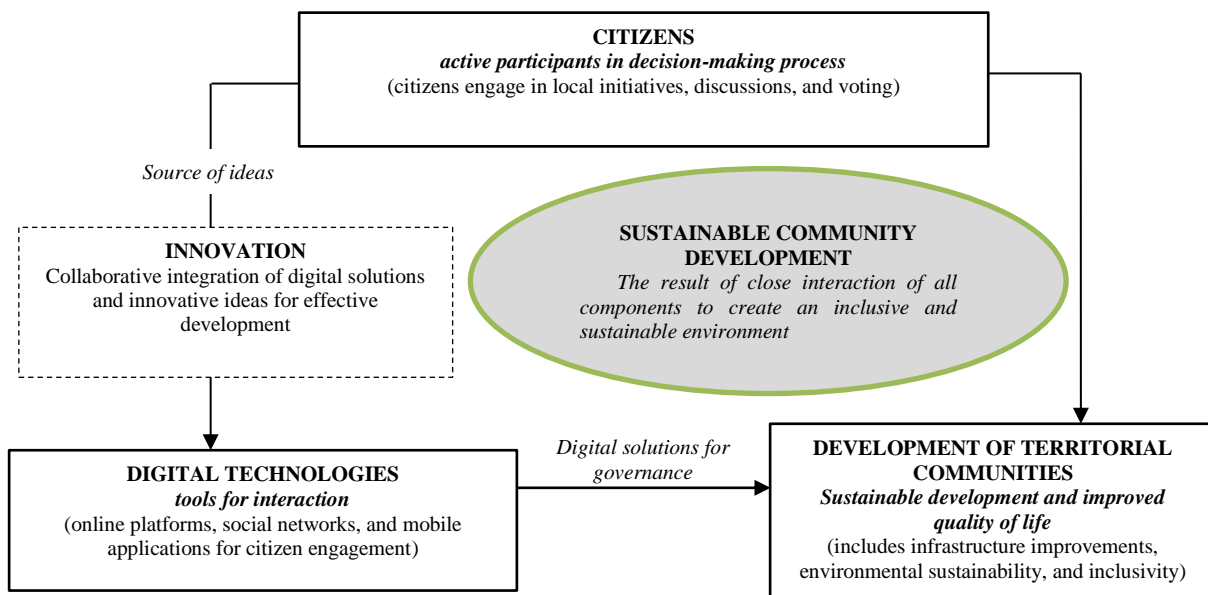


Figure 1. A Comprehensive Framework for Digital Tools, Citizen Engagement, and Territorial Community Development

Source: author's own elaboration

The intersections between these elements highlight the interactions and synergies that occur when they are integrated, emphasizing their collective impact on creating innovative, inclusive, and sustainable communities:

- The citizens and the city, innovations in community governance that take into account citizen engagement allow cities to better respond to the needs of their population;
- The citizens and digital technologies, digital citizenship, which includes the use of digital tools to influence the community environment, is a key aspect of modern community life;
- City and digital technologies, smart technologies introduction in community management contribute to the creation of more transparent and efficient processes in community life;
- The central intersection where all three elements converge symbolizes the synergistic effect of their interaction, i.e. co-creation and technology. This illustrates the maximum potential that arises when civic engagement, innovation and digital technologies are used together to develop cities.

Thus, the integration of public participation and digital technologies is a driving force for creating an community environment that meets modern needs and challenges, ensuring sustainable development and improving the citizens' life quality.

The relationship between citizen participation, adoption and implementation of digital innovations, and city and system characteristics (see Figure 2 for these relationships illustration). Multilateral links between the model elements are identified. However, this model focuses on the impact of these elements on civic participation, rather than the other way around. The illustrative model visualizes the key elements of the system: citizens, city, innovation and digital technologies, and their interactions. The citizens play an active role in the city's development by participating in public discussions, voting, and initiating local projects. They interact with the city by expressing their needs and monitoring the fulfillment of promises by local authorities. Digital technologies provide the citizens with tools to participate in community governance. Online platforms, social media, and mobile apps help citizens to collect data, share opinions, and initiate change. The citizens can also be a source of innovation. They create start-ups and participate in new technologies and solutions development that improve the quality of life in the city. Digital technologies allow cities to become "smart" by introducing intelligent management systems, such as smart lighting, transport and energy consumption. The city provides access to open data, which stimulates innovation and citizen engagement.

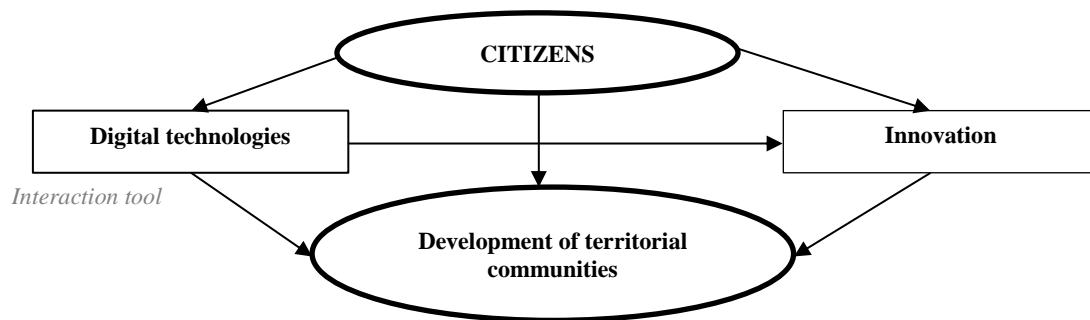


Figure 2. The Illustrative Conceptual Model of Relationships between Citizen Participation, Digital Technologies, and Innovation in Territorial Community Development

Source: author's own elaboration

A. Fung and Mark E. Warren argued that participation beyond elections can contribute to solving crucial issues of democratic governance. Most assessments focus on three functions: inclusiveness, deliberation and public control, although other formulations are sometimes used [25].

A. Fung views civic participation as a three-dimensional concept including:

- 1) Breadth of stakeholder engagement, i.e. to what extent are different stakeholder groups involved?
- 2) Type of information exchange and communication, i.e. to what extent is communication a one-way exchange of information or a two-way dialogue?
- 3) Influence or impact on community planning, i.e. to what extent does the information and arguments that citizens bring to participatory arenas and channels influence the content or background of decisions made by city authorities? Whether e-participation promotes inclusiveness, deliberation and public control depends on the role that digital tools play in each of these three dimensions.

Inclusiveness requires the involvement of those potentially affected by a collective decision to "have the power to speak, vote, represent and dissent"). Equal opportunities for participation are therefore fundamental. ICTs and new media introduction, and its impact on civic participation in community development processes in gentrifying community areas. Such community development processes often face difficulties in engaging disadvantaged groups such as youth, refugees, and other immigrants [25], i.e. groups that are heavily affected by gentrification. However, the effects of the introduction of digital participation channels are controversial. Some studies show that ICTs and new media facilitate political participation and dialogue [26]. Others conclude that it deepens existing

participation gaps [32]. These participation gaps, also known as the digital divide, separate those who have access to and use digital technologies from those who do not, relegating the "not" group to secondary digital citizens. According to the research by the Ministry of Digital Transformation of Ukraine, in 2019, one of the strategic goals was to engage 6 million citizens in digital literacy programs. This improves Ukrainians' digital skills and promotes using online tools for both work and personal development. Digital literacy has become a priority for the state, and The Concept of Digital Competencies Development at the national and regional levels was approved, in line with the European DigiComp 2.1 and 2.21 frameworks. During Diiia Summit 2023, the Minister of Digital Transformation Mykhailo Fedorov announced that the goal of engaging more than 6 million people in digital literacy programs had been achieved. According to a sociological survey, almost 60% of Ukrainians have basic and advanced digital skills, which has led to a 12.6% increase in their share over four years. This figure now reaches the level of the European Union [30].

The adoption and implementation of innovations by city governments can have a significant impact on citizen participation and serve as a key factor for the inclusion or exclusion of certain groups. In this context, innovations are seen as new value-based procedures, technological solutions and services designed to increase citizen participation in local government. The main goal of such digital solutions is to improve the interaction between city authorities and citizens. However, the effectiveness of participatory innovations depends on the availability of technology and resource constraints. In addition, the city authorities' decisions are also determined by their goals and strategies for public participation. Public policy theories suggest that government goals and strategies influence policy formulation and the political climate. In particular, J. Astrom notes that low levels of trust in public institutions and the complexity of political problems increase the likelihood of introducing the so-called "elitist challenge" in the form of e-participation [24]. Public policy theories also emphasize the role of change agents (or political entrepreneurs), who can be crucial in connecting political problems with (technological) solutions [28]. City governments use different strategies to adopt and implement innovations in the field of civic participation. Digital channels introduction can either layer, replace, or complement existing channels. For example, a city may choose to add an online consultation platform to an existing non-digital channel. Alternatively, physical paper petitions may be replaced by an online petition site, and paper "suggestion boxes" may be complemented by online surveys or social media designed to collect citizen feedback on public systems or services. There is reason to believe that introducing and using digital technologies that facilitate participation affect whether and how citizens use participation channels. The citizens' choices about which city and citizen-initiated channels to use are not consistent or rational. The citizens combine the use of participatory channels, and their choices are heavily influenced by a variety of social, environmental and behavioural factors. Therefore, the decision to use one channel over another is dynamic and responds to individual beliefs and perceptions that exist at a given time.

Discussion is marked by an active dialogue between the citizens and the authorities, as well as among the citizens themselves. It involves the exchange of opinions, ideas and arguments, which helps to make more informed decisions. It also contributes to transparency and public opinion formation, affecting decisions effectiveness and legitimacy. Civic control refers to the extent to which participants in these spaces can influence the decisions made by the government and the importance of these decisions for the lives of citizens. However, participation is often limited to providing information to the city government, which gives citizens little opportunity to influence community planning [25]. Digital innovations can bring the citizens closer to the government and bypass intermediaries such as political parties, bureaucracy or traditional media [27]. Some cities have also introduced multifunctional digital platforms to facilitate citizen engagement in e-decision-making. However, digital participation is mostly consultative, leaving the final decision to the city authorities. ICTs and new media can create tension between opportunities for change and the risk of deepening existing inequalities. Therefore, the role of digital technologies is seen as a multidimensional concept in civic participation. New media and digital participation channels often complement and combine with traditional media and participation channels. However, there is little information on how citizens and city authorities integrate these channels into their interactions [29]. However, the integration of digital and traditional channels can have different and even opposite effects on citizen participation in community development. On the one hand, it can increase opportunities for active groups of residents to dominate discussions on community development and engage those who have not previously participated. On the other hand, this combination can increase the effectiveness of traditional measures by digitizing existing channels or opening up new opportunities for communication between the city and citizens, as well as among citizens themselves. Different channels integration can also increase opportunities for consultation and shared decision-making.

This multidimensional layering of channels and opportunities for participation changes over time. It also changes as the citizens navigate and switch between traditional and digital forms of participation [31]. The mechanisms that facilitate this change include new digital skills acquisition, access to new technologies, introducing new channels of participation, and changes in community and government leadership [26].

Based on the research by G. Baiocchi, e-participation technologies, despite the wide variety of such tools, have two common coordinating principles. The first is individual participation. E-participation technologies focus on connecting individual users to platforms via desktop or mobile devices. These technologies are typically private in nature, as users vote, rank, click and add comments in a setting with limited interaction with other users. Second, it is direct and immediate interaction. Citizen data and input are directly transmitted to administrative or political

authorities in the city, without the involvement of intermediary organizations that could negotiate outcomes with the government [31].

ICT design influences how users interact with and perceive digital products, systems or services. Therefore, the intentional and unintentional choices made by project managers, developers, programmers and others affect how the users access and apply e-government platforms. The UN and national governments have attempted to introduce various policy tools focused on the universal design of ICTs to influence the design of digital platforms so that the widest possible part of the population can access and use them.

Over time, it has become increasingly clear that most large cities in democratic and even autocratic countries have begun to use e-participation technologies as part of their strategy to engage citizens. The UN survey of one hundred major cities around the world found that two-thirds had introduced digital tools that allow residents to share their views with the government. Almost half of them had web portals with discussion functions, about a third conducted online land use planning and participatory budgeting, and 17% opened up for electronic voting on policy issues [33].

In summary, e-participation technologies have fundamental characteristics that may be more compatible with certain political relationships in certain contexts. The main concept of this section is that individualized, direct and indirect civic engagement contrasts with the mediated participation that characterizes traditional forms of civic engagement in many representative democracies.

Conclusions

The research findings show that citizen participation is a key element of effective community governance. It promotes democratic processes, increases transparency, and ensures an active public voice in decision-making. Digital innovations can improve civic participation by providing greater access to information, ease of interaction, and citizen engagement in decision-making processes. The prospect of further research in this area is to analyze the difference between citizen engagement and citizen participation and the impact on community development. The study should consider different methods of citizen engagement, such as public consultations, focus groups, online platforms, and other tools. In further research, it is important to evaluate these methods effectiveness and the role of digital technologies in facilitating active citizen participation.

Abstract

Citizen participation is a critical issue in political science and public administration, demonstrating that active citizen involvement in decision-making processes leads to better outcomes for individuals and communities. Scholars R. Kummitha and N. Crutzen emphasize citizens' importance in community development, particularly within the framework of "smart cities", where residents are seen as the core of community communities and directly affected by changes in their living environment. Effective community governance should include citizen participation, which provides essential information and contributes to decision-making processes.

This study investigates the relationship between citizen participation, digital technologies, and community development. The concept of "smart cities" includes citizen engagement as one of its six main axes. The article explores the necessity of citizen involvement not only as passive service recipients but as active stakeholders influencing community governance. Citizen participation is defined as a process where the citizens are actively engaged in decision-making that affects their lives, promoting better outcomes for both individuals and communities. This study employs a multidimensional model to analyze the interaction between citizen participation, digital innovation, and community development. It focuses on how these elements influence each other, with a particular emphasis on the role of digital technologies in facilitating inclusive, deliberative, and transparent governance. The methodology includes a review of existing literature, case studies, and the analysis of community governance practices in developed democracies.

The results highlight the crucial role of citizen engagement in community development and digital governance. Effective citizen participation strengthens democratic processes, enhances transparency, and ensures that public voices are heard in decision-making. The findings also indicate that in Ukraine, both public authorities and civil society institutions must evolve to realise the potential of citizen participation fully.

The conclusion emphasizes the importance of citizen participation as a dynamic element in community development influenced by digital technologies. The study calls for a more integrated approach where the citizens are actively involved in shaping the community environment at different levels of government, thereby fostering more efficient and responsive cities. This abstract encapsulates the article structure, including the introduction, objectives, methods, results, and conclusions, highlighting the intricate relationship between citizen participation, digital technologies, and community development.

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