MANAGING RURAL DEVELOPMENT TOWARDS SMART VILLAGE

DOI: 10.33141/po.2023.03.17

Organization Review, No. 3(998), 2023, pp. 170-177

www.przegladorganizacji.pl

Dominika Mańkowska
Łukasz Szałata
Niki Derlukiewicz

Introduction — the development of smart village

Regional development focuses on improving residents' quality of life by strengthening infrastructure, the economy, the community, and the natural environment within a specific area (Richards, 2009; Capello, 2011). Successful local development relies on the proactive engagement of authorities (Boccella, Salerno, 2016). This holds particular significance, especially in rural areas (Trigilia, 2001). In line with the OECD's recommendations on rural services, effective inclusive management is central to rural development (Szot-Gabryś, 2002). This implies an understanding that actions at the highest level of government should be more strategic and supportive in nature, facilitating the pooling of knowledge and the use of simpler decision-making processes, involving local communities, and promoting the cross-cutting consideration of rural development in policies (Cavaye, 2001). Rural development is particularly important as local communities encounter distinctive challenges (Crescenzi et al., 2022). Effective management of local development requires a strategic framework that nurtures enduring economic advancement, elevates living standards, and attends to the distinct needs and aspirations of particular regions or communities (Anthony, 2021; Capello et al., 2020). Local development and the concept of smart village (SV) are interlinked approaches that aim to improve prosperity, economic opportunity, and overall quality of life in rural areas (Coffey, Polese, 1985; Healey, 2015). While local development focuses on comprehensive and holistic growth within a specific community or region, SV specifically uses technology and innovation to achieve these goals. The article is based on the following findings: firstly, it presents the SV's literature review as a theoretical basis for the connections between the „smart village" concept and rural management (Kucęba et al., 2023). Secondly, it unveils the results of empirical research on factors shaping the potential of the Lower Silesia region for implementing the „smart village" concept based on „The Lower Silesian Village Renewal" programme. The research results facilitate the development of a comprehensive package of recommendations to improve the regional governance framework in the 2021–2027 financial perspective. The best practices identified can not only assess the feasibility of implementing the SV concept at the local level but can also be subsequently scaled to support and enhance collaboration in other regions. Therefore, the research strategy is based on the following stages: literature review, empirical research, data analysis, research conclusions, policy implications, and recommendations. The study contributes to the existing knowledge base and supports decision-making in the field of rural management and smart village development. The research gap in this context stems from the absence of prior research on „The Lower Silesian Rural Renewal" programme,

binding regional authorities with communities (Pike et al., 2016). To date, no analyses that identify the current needs, expectations, and proposed solutions of the local community have been conducted. This signifies an unexplored area, highlighting the need for comprehensive research to address the knowledge deficit regarding the programme's impact and relevance to the immediate requirements and aspirations of the local community.

Smart village concept

Over the past few years, the emergence of SVs has led to the rejuvenation and empowerment of rural communities (Zavratnik et al., 2018). The concept implies the involvement of residents in improving their economic, social, and environmental situation by collaborating with other communities, introducing social innovation, and developing SV strategies. SVs are about finding practical solutions and making the best use of new opportunities through digital solutions, cooperation, and developing new partnerships. As defined, SVs encompass rural communities that implement innovative measures to address local challenges, improve the quality of life, and promote sustainable development, capitalising on inherent local assets and prospects" (Gerli et al., 2022). The key domains for the advancement of smart village initiatives include public services, co-management, the potential of local communities, technological innovation, and environmental protection, with a growing emphasis on alternative energy sources (Wójcik, Jeziorska-Biel, 2023; Satoła, Milewska, 2022).

Consequently, further key features that define SVs include digital connectivity, e-government, agricultural development, sustainable energy adoption, developing local entrepreneurship and micro-enterprises, as well as improved community services. (Viswanadham, Vedula, 2010; Wang et al., 2022). Managing the development of SVs requires a comprehensive and holistic strategy involving a combination of technology, active community engagement, sustainable development practices, and agile governance (Szetey et al., 2021; Roidatua, Purbantara, 2022).

The concept of SVs is a novel addition to the landscape of EU policy formulation. Enacted in the European Union's rural development programmes for 2014–2020, the policy is progressively gaining momentum in rural development, aligning with the concurrent revision of the Common Agricultural Policy (CAP) (Adesipo et al., 2020). In 2020, the Commission issued recommendations to individual Member States, setting out the trajectory their plans should take to meet the objectives of both the CAP and the European Green Deal. The Commission's assessment highlights areas of deficiency that Member States need to address to achieve the ambitious Green Deal target of 100 percent high-speed broadband coverage in rural regions by 2025. In the current EU programming period, funds have been allocated to rural regions under the Smart Village programme until 2027. So far, the EU has undertaken a series of actions for the implementation of SV. Poland, with its rich rural and evolving technological landscape, serves as an attractive background for the SV concept. The increase in the number of inhabitants of rural areas is not just limited to provincial capitals but also around cities of subregional importance. This trend is more common in the cities of western Poland, determined by historical factors. The smart village concept is seen as a tool for rural revitalisation in Poland, but there are theoretical and methodological dilemmas. (Komorowski, Stanny, 2020). In Poland, a comprehensive framework has been established during the transition period and within the National Strategic Plan of the Common Agricultural Policy (CAP) for the years 2023–2027 to facilitate the development and execution of the SVs concept. The CAP's Strategic Plan for 2023–2027 outlines the following key points:

- leveraging digital technologies and knowledge: focus on the integration of digital and telecommunications technologies to harness knowledge effectively,
- demonstrating local community benefits. The plan underscores the importance of showcasing advantages for the local community (enhancements in quality of life, promotion of local services, safety measures, environmental sustainability, and climate consciousness).

Implementing the SV concept requires the use of an integrated approach rooted in bottom-up initiatives (Renukappa et al., 2022). By integrating technology, sustainable methodologies, and community engagement, the synergy between local development and SVs can play a key role in supporting dynamic, self-reliant, and thriving rural regions (Acar, Runco, 2014; Kalinowski et al., 2022). In agricultural areas, authorities function as organisers of change by designing and implementing development plans tailored to the unique characteristics and needs of the community.

Scope of research, materials, and methods

The subject of the study is the „The Lower Silesian Rural Renewal" programme functions as a tool for influencing local development and regional cooperation in the economic, social, and environmental dimensions. The implementation of the regional programme will serve to assess the feasibility of implementing the SV concept. The subsequent research questions have been formulated to be in line with the aim of the study:

- Could the „The Lower Silesian Rural Renewal" programme be an effective mechanism for the development of a smart village?
- What are the crucial local needs for achieving smart village objectives?
- What potential operational activities should be implemented to effectively adapt the smart village?

To address specific questions, the authors conducted a comprehensive analysis of the SV concept and rural development issues using appropriately selected research

tools. To attain the defined objectives and respond to the research questions, the following research methods were employed:

- an examination of national and international literature,
- a survey addressed to local beneficiaries of the programme – communities and authorities,
- a case study of the self-government regional aid programme,
- a SWOT analysis.

The collected research material was subjected to analysis, facilitating conclusions focused on the following issues:

- evaluation of the self-governmental aid programme as a tool to support management at the regional level,
- assessment of the added value of the programme,
- preparation of a package of recommendations enhancing the regional management model in the 2021–2027 financial perspective.

The analysis was based on the results of a field customised survey conducted on a purposely selected sample of representatives of local authorities and residents (beneficiaries). The territorial scope of the study comprised 119 Lower Silesian rural and urban-rural municipalities benefiting from financial support under „The Lower Silesian Rural Renewal" programme. The study involved 255 inhabitants of the communes of Dzierżoniów, Osiecznica, Czarny Bór, Świerzawa, Pieszyce, and Strzelin (a purposive sample of 6 municipalities from the Lower Silesian Voivodeship, representing the highest, medium, and lowest implementation rates of the programme). The survey was conducted using the PAPI technique – with a traditional paper version of the questionnaire filled in by respondents in person. In the participation sample, individuals were chosen for the survey through non-random selection, specifically without adherence to a predetermined quota system for allocating participants within a given municipality.

The criterion was the number of inhabitants in the municipality. The largest number of questionnaires was completed in the municipality of Dzierżoniów (109), the smallest in the municipality of Świerzawa (12). The overall survey return rate was about 70%.

The beneficiaries' opinions constituted a highly significant source of information regarding the programme's operational aspects in the context of local development, assessment of added value, as well as diagnosis of the current needs of residents in small territorial units. Based on the gathered research material, the identification of programme strengths, weaknesses, opportunities, and threats (SWOT analysis) within both the immediate and broader environment was conducted. The analysis of opportunities and barriers in programme implementation was derived from the perspectives of residents and local authorities. Within the domain of rural renewal, the SWOT analysis serves a pioneering role. This widely employed heuristic technique finds broad application, including as an initial step in crafting strategies (management models) across numerous research domains.

Rural renewal for the smart village concept — The Lower Silesian Rural Renewal programme case study

The „Rural Renewal" is considered the most important innovative tool implemented in Poland. The overarching aim of the concept is to comprehensively improve living conditions in rural areas and ensure their economic autonomy. At the core of the programme are the activation of the local community and its involvement in initiatives concerning its village. Therefore, it can be seen as the backbone of the SV concept. As in the case of the SV, the proposed mechanisms have the potential to become an excellent illustration of development policymaking at local, regional, national, and European levels.

The primary source of information regarding the operations of „The Lower Silesian Rural Renewal" programme, in the context of socio-economic effectiveness, was based on the opinions of three research groups: municipalities and village representatives (local authorities), as well as communities of six selected municipalities involved in the programme's implementation. The representatives of local authorities involved 6 mayors (100% purposively selected group) and 52 village leaders (65% purposively selected group). Municipal authorities rated the following factors as the most positive in „The Lower Silesian Rural Renewal" programme: heightened level of resident integration, enhanced attractiveness of the municipality, identification of local leaders, and improvement of interpersonal relationships. On the other hand, the least positively rated aspects were the amount of support, application procedures, and impact on the municipality's innovativeness.

Regarding the benefits of „The Lower Silesian Rural Renewal" programme, the local authorities mainly highlighted the following aspects: strengthening relationships with local government authorities (54%), increased attractiveness of the localities (46%), and the preservation of local traditions (32%). On the other hand, the programme's impact on fostering innovation (10%), entrepreneurship (4%), and the expansion of opportunities to apply for projects under other development programmes (2%) were rated the lowest.

Local authorities also indicated the added value of the programme. These include strengthening local relationships (56%), opportunities to collaborate with local leaders (32%), and multi-generational cooperation (26%).

In summary, local authorities have a relatively positive assessment of „The Lower Silesian Rural Renewal" programme. The projects are intended to be effective and beneficial to the community in the long term. Beneficiaries also recognise the desirability and effectiveness of direct cooperation with the self-government as the entity responsible for shaping regional development policy in rural areas. Local leaders also expressed their biggest reservations about administrative and procedural issues, namely the low level of funding and administrative procedures.

A total of 255 residents from the municipalities of Dzierżoniów, Osiecznica, Czarny Bór, Świerzawa, Pieszyce,

and Strzelin participated in the study. The starting point was the assumption that the sample would be a miniature representation of the population in terms of characteristics. A two-path approach to collecting surveys was applied: part of the surveys was conducted in person, while another part was sent by mail. The criterion used was the population size of each municipality.

As part of the survey, inhabitants assessed the effectiveness of „The Lower Silesian Rural Renewal" programme in terms of its functionality. Most of them emphasised the effects related to increased recognition of their locality, enhanced cooperation with the local government, a heightened level of local identity and utilisation of project outcomes. The degree of collaboration among residents, the standard of living, and the level of innovation within the community were appraised as acceptable. According to the residents' opinions, the programme has had a moderate impact on the development of their skills and qualifications. According to the residents' evaluation, the programme brings added value in the form of strengthening local relationships (52%), intergenerational cooperation (38%), and increasing residents' autonomy (29%).

Both beneficiaries, including local authorities and communities, underscored the programme's values, highlighting its versatile character that offers an array of development-support tools for their respective territories. These tools encompass social, educational, advisory, inspirational, ecological, and sports-recreational aspects.

The research material was used to develop a SWOT analysis of „The Lower Silesian Rural Renewal" programme, categorised into four groups based on socio-economic and procedural-administrative factors. The outcomes of this analysis have been presented in Table 1.

It should be emphasised that the authors conducted a detailed analysis of key factors and their weights, considering the timeline for the upcoming years 2023–2027. During the conducted research, a strategic analysis of weights and the dynamics of the total weights of factors in individual categories was developed, as presented below: (own elaboration).

Table 1. SWOT analysis of „The Lower Silesian Rural Renewal" programme

STRENGTHS		**WEAKNESSES**	
S1	streamlined formal procedures during project application and implementation	W1	considering only financial contributions (omitting the residents' labour input)
S2	contribution to the development of local development strategies	W2	lack of competition fostering social entrepreneurship
S3	exchange of best practices between regions	W3	lack of reporting requirements for conducted activities
S4	well-functioning counselling available within the programme	W4	lack of a programme monitoring system – no opportunity for current needs assessment
S5	cooperation of local authorities with self-government		
S6	additional scoring for entities implementing a project for the first time (motivational incentive)		
OPPORTUNITIES		**THREATS**	
O1	high awareness of residents' and municipal authorities' needs	T1	underdeveloped technical, transportation, sports, and recreational, and socio-cultural infrastructure
O2	awareness of the necessity for modernisation and innovation in the local environment	T2	migration of young, skilled individuals
O3	mobilisation of residents to improve their qualifications	T3	lack of economic utilisation of local products
O4	interest of the local community in building the village's image and preserving traditions	T4	low municipal own-source revenues
O5	the social potential of residents	T5	gradual „burnout" of experienced, long-term local leaders
O6	increasing awareness of obtaining EU funds	T6	directing municipal authorities towards investment competitions related to meeting current needs
O7	expansion of local services, digitalisation of services (e-services)	T7	weak bond between investors and the region
O8	enhanced knowledge transfer	T8	lack of new job opportunities
O9	local sustainable bioeconomy and circular economy	T9	lack of a support programme strengthening institutional collaboration with local entrepreneurs
O10	energy self-sufficiency		
O11	fundraising for environmental protection		

Source: own elaboration

Strategic weight analysis

Through the verification of strategic factor weight analysis indicators, it was possible to determine the strategic position for the upcoming years:

In summary, it is crucial to foreground that the result of the developed analysis assumes a targeted strategic position in the MAXI-MAXI quadrant for the upcoming years. This position involves strong expansion and development, making the utmost use of strengths and opportunities, including the full utilisation of the synergies existing between the organisation's strengths and the opportunities generated by the environment. This aligns with the positive dimension described in the

Table 2. The sum of factor weight in categories across successive periods

Name/Period	2023	2024	2025	2026	2027	Weights total
Strengths	39	41	42	49	53	224
Weaknesses	31	31	29	29	26	146
Opportunities	21	22	23	26	26	118
Threats in the environment	30	29	24	23	21	127

Source: own elaboration

Table 3. Dynamics of total factor weight sums in categories

Name/Period	2023/2024	2024/2025	2025/2026	2026/2027
Strengths	4.88	2.38	14.28	7.55
Weaknesses	0.00	-6.89	0.00	-11.53
Opportunities	4.54	4.35	11.53	0.00
Threats in the environment	-3.45	-20.82	-4.35	-9.52

Source: own elaboration

Table 4. The sum of factor weight in categories across successive periods

Name/Period	2023	2024	2025	2026	2027	Average
Market Position	0.56	0.57	0.59	0.63	0.67	0.61
Market Attractiveness	0.41	0.43	0.49	0.53	0.55	0.48
Probability of Strategic Success	0.48	0.5	0.54	0.58	0.61	0.54

Source: own elaboration

Table 5. Average values of factors

Name/Period	2023	2024	2025	2026	2027
Strengths	3.25	3.42	3.5	4.08	4.42
Weaknesses	3.44	3.44	3.22	3.22	2.89
Threats	3.75	3.64	3	2.88	2.63
Opportunities	3.5	3.67	3.83	4.33	4.33

Source: own elaboration

Table 6. Strategic position

2023	2024	2025	2026	2027
conservative strategy	conservative strategy	conservative strategy	aggressive strategy	aggressive strategy
MAXI-mini	MAXI-mini	MAXI-mini	MAXI-MAXI	MAXI-MAXI

Source: own elaboration

author's local collaboration model. In the context of „The Lower Silesian Village Renewal" programme, the MAXI-MAXI strategy should be based on the following critical factors: its notable strengths, which encompass robust connections and well-established collaborations with local authorities, the formulation of highly effective local development strategies, and the increasing demand for additional EU funding.

Certainly, by capitalising on these strengths, a multitude of opportunities presents themselves, including heightened motivation and an irresistible drive for local development, the cultivation of skills and qualifications, and the effective application of the strong social capital of community residents.

Conclusions

The role of authorities in supporting local development and SV development is crucial. They function as enablers of economic diversification, infrastructure enhancement, social welfare, and environmental sustainability. Through their strategic vision, policy formulation, and resource allocation, authorities have the capacity to transform rural landscapes into thriving and resilient communities that contribute meaningfully to regional and national progress (Kiełtyka, 2016; Somwanshi et al., 2016). The comprehensive responses to the research questions are based on the extended interviews with local authorities and communities, underscoring several key insights. Both confirm that a regional aid programme tailored to specific local needs can be considered an effective mechanism for the development of a smart village. The programme's investments in small-scale infrastructure, knowledge exchange, and cooperation initiatives provide a solid foundation for creating an environment conducive to smart village development and an effective tool for coordinating regional management (Rahoveanu et al., 2022).

The conducted research has successfully identified critical local needs integral to the development of smart villages. These include targeted investments in digital infrastructure, education, and business training to bridge the skills gap. Moreover, the areas requiring special attention include addressing basic infrastructure requirements, using local resources, building a sustainable bioeconomy system, limiting poverty and exclusion, improving the quality of life, and actively involving local stakeholders in the process of managing rural areas. To effectively adapt the SV concept, the set of operational activities should be considered. These include:

- knowledge exchange to keep communities informed about technological advancements and best practices in smart village development.
- capacity building: implementing initiatives that enhance the skills and capabilities of residents, ensuring they are well-equipped to participate in and benefit from smart village initiatives.
- pilot projects to evaluate and refine smart technologies and approaches tailored to the specific needs of the region.
- cooperation platforms: establishing and supporting cooperation hubs that bring together various stakeholders, fostering collaboration between local communities, businesses, and government entities.
- strategic planning: setting clear targets, allocating budgets, and implementing programmes that address the unique local needs, taking into consideration the lessons learned from the regional initiatives like „The Lower Silesian Rural Renewal" programme.

The proposed operational actions outlined above pave the way for future research on the environmental impact of the Smart Village (SV) process, positioning it for implementation on a broader scale by 2027. The research undertaken has so far delivered significant findings, beginning a discourse leading to the following further exploration:

- engagement of the local community, even in small projects, leads to gaining experience and, therefore, contributes to the realisation of SV objectives at the local level, to scale it up,
- the SV implementation process should be based on a diversity of projects, including both infrastructure and investment in cultural events, traditions, and local promotion,
- mechanisms for involving local stakeholders in identifying local needs and co-creating solutions need to be adopted,
- serving as catalysts for positive transformations in the local community, social innovations have the potential to enhance the successful integration of technological advancements.

Summarising the opinions of the surveyed residents, „The Lower Silesian Rural Renewal" programme contributes to strengthening regional cooperation in the Lower Silesian voivodeship. Furthermore, the programme, owing to its evident social dimension results, triggers a transformation of agricultural areas on the economic front. Even with a modest base of social activities and financial resources, projects are generated that can lead to economic and financial independence. Awareness of intangible development factors can be used effectively in economic progress. The economic benefits of rural renewal can be linked to the revival of local production, the promotion of rural tourism, the establishment of village specialisation, and the creation of branded local products.

The study concludes that in the Lower Silesian region, the local community and municipalities demonstrate significant potential for intelligent development within the concept of a smart village (Alhari, at al., 2022). This potential is primarily shaped by economic, social, and environmental dimensions (Pérez-delHoyo, Mora, 2019). The development of local projects has the potential to contribute to larger initiatives that require the implementation of innovative technologies, digitization, and economic activity (i.e., smart farms-driverless tractor, automatic watering, and irrigation, planting from the air, etc.) (Patnaik et al., 2020).

Dominika Mańkowska, Ph.D.
Eko-Biegły Association
ORCID: 0000-0002-9977-1379
e-mail: d.mankowska@gmail.com

Łukasz Szałata, Ph.D., Eng.
Wroclaw University of Science and Technology
Faculty of Environmental Engineering
ORCID: 0000-0001-8307-6331
e-mail: lukasz.szalata@pwr.edu.pl

Niki Derlukiewicz, Ph.D.
Wroclaw University of Economics and Business
Department of Economics and Finance
ORCID: 0000-0002-3967-3048
e-mail: niki.derlukiewicz@ue.wroc.pl

References

[1] Acar S., Runco M.A. (2014), *Assessing Associative Distance among Ideas Elicited by Tests of Divergent Thinking*, „Creativity Research Journal", Vol. 26, No. 2, pp. 229–238.

[2] Adesipo A., Fadeyi O., Kuca K., Krejcar O., Maresova P., Selamat A., Adenola M. (2020), *Smart and Climate-smart Agricultural Trends as Core Aspects of Smart Village Functions*, „Sensors", Vol. 20, No. 21, art. 5977.

[3] Alhari M.I., Witarsyah D., Nugraha R.A., Nuraliza H., Azzahra S.F., Rismadewi K.A. (2022), *Developing IT Strategic Transformation of Smart Village Concept for Indonesian Village Model*, 2022 International Conference Advancement in Data Science, E-learning, and Information Systems (ICADEIS), IEEE, Bandung, pp. 1–6.

[4] Anthony B. (2021), *Managing Digital Transformation of Smart Cities through Enterprise Architecture – A Review and Research Agenda*, „Enterprise Information Systems", Vol. 15, No. 3, pp. 299–331.

[5] Boccella N., Salerno I. (2016), *Creative Economy, Cultural Industries, and Local Development*, „Procedia-Social and Behavioral Sciences", Vol. 223, pp. 291–296.

[6] Capello R. (2011), *Location, Regional Growth, and Local Development Theories*, „Aestimum", Vol. 58, pp. 1–25.

[7] Capello R., Cerisola S., Perucca G. (2020), *Cultural Heritage, Creativity, and Local Development: A Scientific Research Program*, [in:] S. Della Torre, S. Cattaneo, C. Lenzi, A. Zanelli (Eds.), *Regeneration of the Built Environment from a Circular Economy Perspective*, Springer, Cham, pp. 11–19.

[8] Cavaye J. (2001), *Rural Community Development: New Challenges and Enduring Dilemmas*, Journal of Regional Analysis & Policy, Vol. 31, No. 1, pp. 109–124.

[9] Coffey W.J., Polese M. (1985), *Local Development: Conceptual Bases and Policy Implications*, „Regional Studies", Vol. 19, No. 2, pp. 85–93.

[10] Crescenzi R., De Filippis F., Giua M., Vaquero-Piñeiro C. (2022), *Geographical Indications and Local Development: The Strength of Territorial Embeddedness*, „Regional Studies", Vol. 56, No. 3, pp. 381–393.

[11] European CAP Network (2018), *EU Rural Review*, No. 26, Smart Villages: Revitalising Rural Services, https://ec.europa.eu/enrd/sites/default/files/enrd_publications/publi-enrd-rr-26–2018-en.pdf, access date: 10.10.2023.

[12] European Parliament, *Smart Villages: Concept, Issues, and Prospects for EU Rural Areas*, https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/689349/EPRS_BRI(2021)689349_EN.pdf, access date: 12.10.2023.

[13] Gerli P., Navio Marco J., Whalley J. (2022), *What Makes a Smart Village Smart? A Review of the Literature*, „Transforming Government: People, Process, and Policy", Vol. 16, No. 3, pp. 292–304.

[14] Healey P. (2015), *Civil Society Enterprise and Local Development*, „Planning Theory & Practice", Vol. 16, No. 1, pp. 11–27.

[15] Kalinowski S., Komorowski Ł., Rosa A. (2022), *The Smart Village Concept: Examples from Poland*, Instytut Rozwoju Wsi i Rolnictwa PAN, Warszawa.

[16] Kiełtyka L. (2016), *Rola menedżera we współczesnych organizacjach*, „Przegląd Organizacji", Nr 8, s. 4–10.

[17] Komorowski Ł., Stanny M. (2020), *Smart Villages: Where Can They Happen? Sustainable Rural Development: Strategies, Good Practices and Opportunities*, „Land", Vol. 9, No. 5, art. 151.

[18] Kucęba R., Jędrzejczyk W., Smoląg K. (red.), (2023), *Multimedia w biznesie i zarządzaniu. Dokąd zmierzamy?* TNOiK „Dom Organizatora", Toruń.

[19] Marks-Bielska R. (2017), *The Role of Local Authorities in Creating Conditions for the Development of Economic Activities: A Case Study of Rural Municipalities in Poland*, International Scientific Conference Rural Development, Vytautas Magnus University Agriculture Academy, Kaunas, pp. 1179–1183.

[20] Patnaik S., Sen S., Mahmoud M.S. (2020), *Smart Village Technology, Concepts and Developments*, Springer, Cham, pp. 181–189.

[21] Pérez-delHoyo R., Mora H. (2019), *Toward a New Sustainable Development Model for Smart Villages*, [in:] A. Visvizi, N.D. Lytras, G. Mudri (Eds), *Smart Villages in the EU and beyond*, Emerald Publishing, Bingley, pp. 49–62.

[22] Pike A., Rodríguez-Pose A., Tomaney J. (2016), *Local and Regional Development*, Routledge, London.

[23] Rahoveanu M.M.T., Serban V., Zugravu A.G., Rahoveanu A.T., Cristea D.S., Nechita P., Simionescu C.S. (2022), *Perspectives on Smart Villages from a Bibliometric Approach*, „Sustainability", Vol. 14, No. 17, art. 10723.

[24] Renukappa S., Suresh S., Abdalla W., Shetty N., Yabbati N., Hiremath R. (2022), *Evaluation of Smart Village Strategies and Challenges*, „Smart and Sustainable Built Environment", Vol. ahead-of-print No. ahead-of-print, https://doi.org/10.1108/SASBE-03-2022-0060, access date: 13.10.2022.

[25] Richards G. (2009), *Creative Tourism and Local Development*, [in:] R. Wurzburger, A. Pattakos, S. Pratt (Eds.), *Creative Tourism: A Global Conversation*, Sunstone Press, Santa Fe, pp. 78–90.

[26] Roidatua M.R., Purbantara A. (2022), *Collaborative Governance in Developing Smart Village*, RUSET 2021: Proceedings of the 2nd International Conference on *Rural Socio-Economic Transformation: Agrarian, Ecology, Communication and Community Development Perspec-*

tives, RUSET 2021, European Alliance for Innovation, Bogor.

[27] Satoła Ł., Milewska A. (2022), *The Concept of a Smart Village as an Innovative Way of Implementing Public Tasks in the Era of Instability on the Energy Market – Examples from Poland*, „Energies", Vol. 15, No. 14, art. 5175.

[28] Somwanshi R., Shindepatil U., Tule D., Mankar A., Ingle N., Rajamanya G. B. D. V., Deshmukh A. (2016), *Study and Development of the Village as a Smart Village*, „International Journal of Scientific & Engineering Research", Vol. 7, No. 6, pp. 395–408.

[29] Szetey K., Moallemi E. A., Ashton E., Butcher M., Sprunt B., Bryan B. A. (2021), *Co-Creating Local Socioeconomic Pathways for Achieving Sustainable Development Goals*, „Sustainability Science", Vol. 16, pp. 1251–1268.

[30] Szot-Gabryś T. (2002), *Zarządzanie strategiczne przedsiębiorstwem i gminą: analiza porównawcza*, „Przegląd Organizacji", Nr 10, s. 19–23.

[31] Trigilia C. (2001), *Social Capital and Local Development*, „European Journal of Social Theory", Vol. 4, No. 4, pp. 427–442.

[32] Viswanadham N., Vedula S. (2010), *Design of Smart Villages*, Indian School of Business, Hyderabad.

[33] Wang Q., Luo S., Zhang J., Furuya K. (2022), *Increased Attention to Smart Development in Rural Areas: A Scientometric Analysis of Smart Village Research*, „Land", Vol. 11, No. 8, art. 1362.

[34] Wójcik M., Jeziorska-Biel P. (2023), *Badania z zakresu odnowy wsi prowadzone na Uniwersytecie Łódzkim – próba syntezy*, „Wieś i Rolnictwo", Nr 3, s. 139–152.

[35] Zavratnik V., Kos A., Stojmenova Duh E. (2018), *Smart Villages: Comprehensive Review of Initiatives and Practices*, „Sustainability", Vol. 10, No. 7, art. 2559.

Zarządzanie rozwojem obszarów wiejskich w kierunku inteligentnej wsi

Streszczenie

Artykuł przedstawia kompleksowe podejście do zarządzania rozwojem obszarów wiejskich, obejmujące technologię, zaangażowanie społeczności wiejskich oraz planowanie strategiczne. Identyfikuje najistotniejsze lokalne potrzeby, takie jak wykorzystanie inteligentnych technologii w celu poprawy infrastruktury, wdrożenie inicjatyw prowadzonych przez społeczność oraz znaczenie elastycznych strategii. Ostatecznie przeprowadzone badania przyczyniają się do dyskursu na temat skutecznych praktyk zarządzania rozwojem obszarów wiejskich, które mogą być wykorzystane do kształtowania polityk i inicjatyw mających na celu tworzenie bardziej inteligentnych i zrównoważonych wsi. Kwestia ta jest szczególnie istotna w kontekście Wspólnej Polityki Rolnej (WPR) na lata 2021–2027, wspierającej rozwój lokalnych społeczności oraz proces wdrażania inteligentnych strategii wiejskich.

Słowa kluczowe

współpraca regionalna, inteligentna wieś, rozwój lokalny