



UNIVERSITY OF LIFE SCIENCES "KING MIHAI I" FROM
TIMISOARA
"YOUNG PEOPLE AND MULTIDISCIPLINARY RESEARCH
IN APPLIED LIFE SCIENCES"



"Young people and multidisciplinary
research in applied life sciences"

16-17 November 2023

SMART VILLAGES: A GLOBAL PERSPECTIVE ON RURAL DEVELOPMENT

ANDREI RUSU¹, IOANA COLF¹, IONUȚ GHEORGHESCU¹, OANA MARIA SICOE-MURG¹,
NICOLETA MATEOC-SÎRB^{1*}

¹University of Life Sciences "King Mihai I of Romania" from Timisoara, Faculty of Management and Rural Tourism, Romania

Abstract: The transformation of rural areas and the broadly understood problems of their development have been the subject of scientific analyses and lively public debate for many years. This paper focuses on the concept of "Smart Villages" and their impact on rural development through digital innovation. Through a comprehensive study, it explores how digital technologies and smart initiatives can transform rural communities, improving the quality of life, access to essential services, and economic opportunities. The abstract underscores the significance of policies and strategies that support these initiatives, emphasizing that digital innovation plays a pivotal role in rural development. It concludes by emphasizing the potential of Smart Villages to drive sustainable rural growth, making them a promising model for connected and prosperous rural communities.

• Introduction

In the modern age, achieving sustainable and equitable development in rural areas has become a global priority. Rural regions, however, grapple with numerous challenges such as depopulation, limited access to essential services, and a lower quality of life compared to their urban counterparts. Nevertheless, in recent decades, digital technologies have revolutionized how communication, production, healthcare, and education are managed in rural communities. The purpose of Smart Village projects is to provide rural residents with the benefits of a higher and more modern standard of living while simultaneously preserving the values, traditions, and customs of rural communities, recognizing the advantages of a sustainable and healthy lifestyle.

• Material and method

To study the concept of "Smart Village" and its development, we employed a multidisciplinary approach and gathered relevant data from various sources. The materials used included the identification of the potential of smart villages as the object of study, socioeconomic and demographic data, specialized literature, and analysis of official sources and websites.

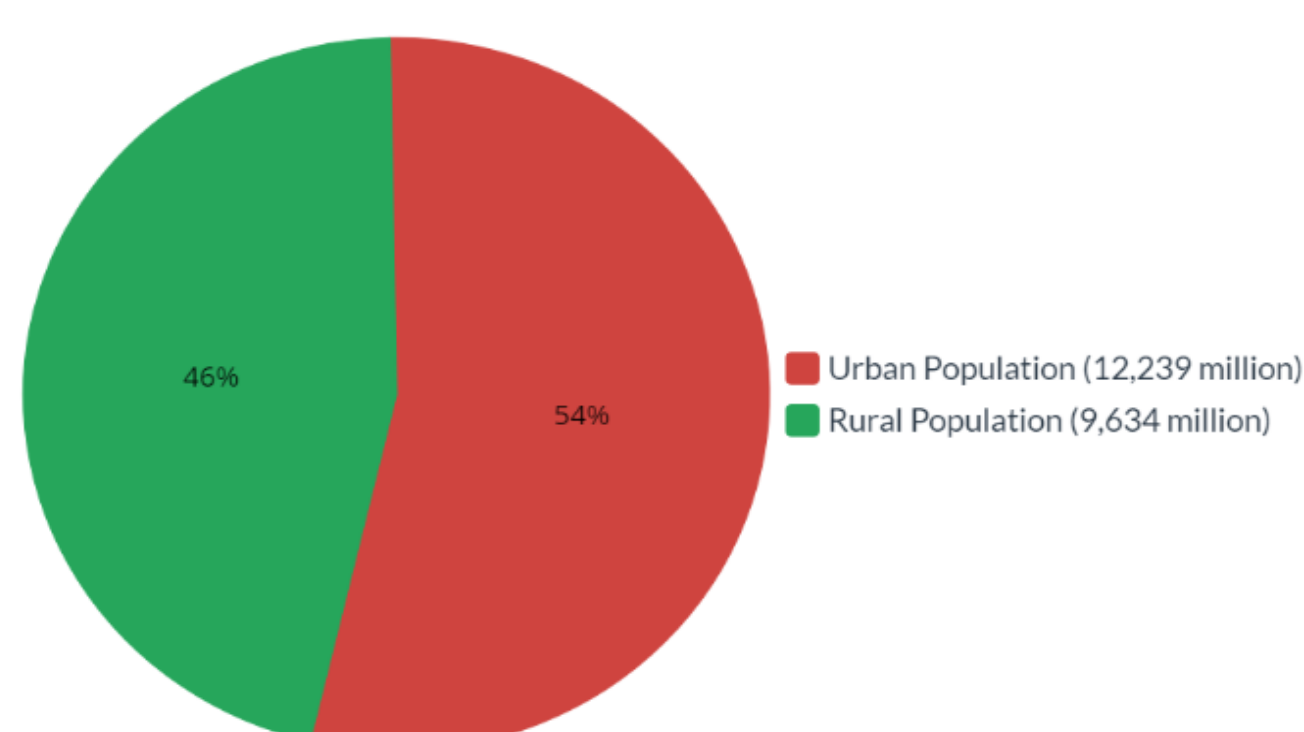


Figure 2. Number of people living in urban and rural areas, Romania (2023)

• Results and discussions

Rural Development has become a priority for U.E. programs and is increasingly becoming a key factor in global development. Sustainable development requires a revision of current lifestyles: economic security, food, education, freedom, political representation, nature contact, without compromising the possibilities of future generations by reducing the depletion and pollution, protecting natural systems. The new concept of rural space states that rural space in Europe constitutes a valuable landscape space, the result of a long history, and its preservation is a vital concern for society. The urban-rural relationship worldwide continues to evolve with social, economic, and technological changes. Finding solutions that ensure sustainable development in both urban and rural environments is essential to create a balance and prosperity for all residents.

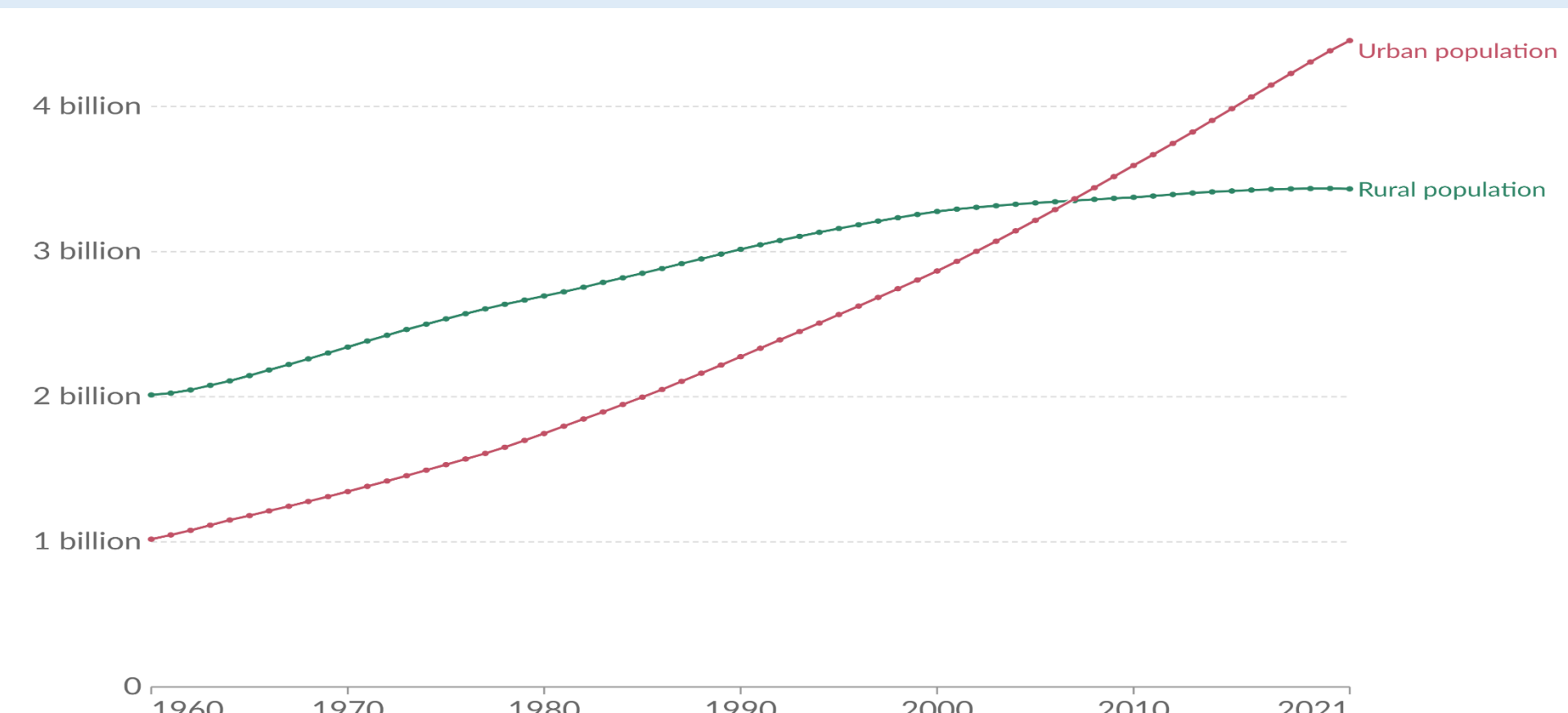


Figure 1. The evolution of urban and rural population worldwide (1960-2021)

The development of the smart village concept is seen as an opportunity for a more comfortable and easier life for rural inhabitants. At the same time, there is a recognized need to address issues related to an aging population and the decline of public services. The indispensable elements of the concept include smart initiatives, smart communities, smart services, smart governance, smart institutions, and smart infrastructure. The concept of "smart villages" is appearing in an increasing number of European and national initiatives, implying that it will be an important element of the EU's future action plan in the financial perspective for 2023-2027. Various "places" with different socio-economic and geographical characteristics will benefit from smart solutions.

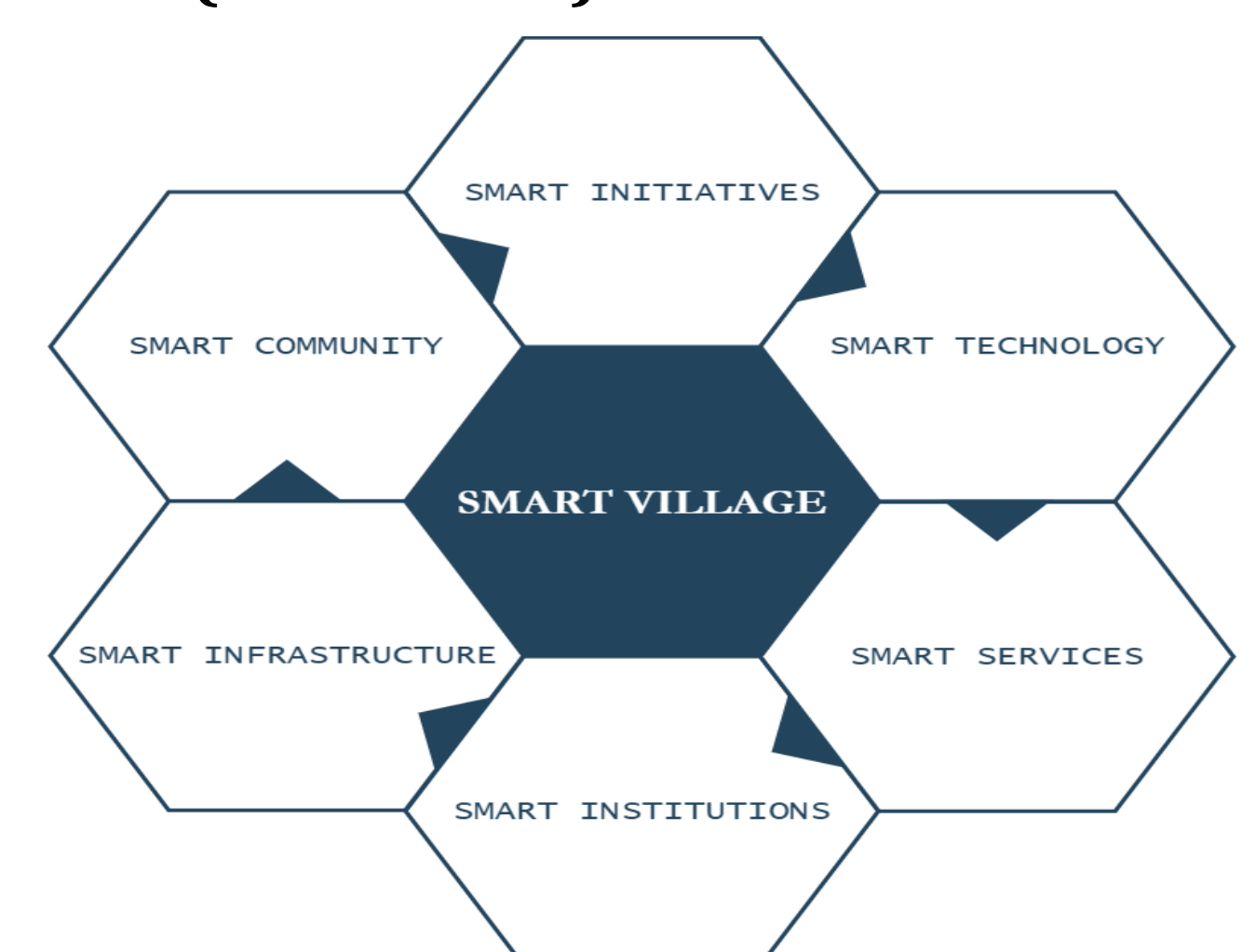


Figure 3. Diagram of key elements of smart villages

Conclusions

In this comprehensive study of Smart Villages from a global standpoint, our research has shed light on the diverse nature of these rural development initiatives and their potential to transform communities worldwide. We have found that Smart Villages, while a concept with universal appeal, manifest in various forms, addressing unique local challenges and opportunities. Across different regions and countries, Smart Villages have demonstrated their capacity to enhance rural livelihoods, foster economic growth, and bridge the digital divide. However, the success of these initiatives heavily depends on community engagement, technological infrastructure, and supportive policy frameworks, which vary significantly from one location to another. As we look to the future, it is evident that Smart Villages will continue to play a pivotal role in addressing rural development challenges globally. Further research and collaborative efforts are required to harness the full potential of these initiatives, creating a more sustainable and equitable future for rural communities around the world.