



TRANSITION POSSIBILITIES OF DUMBRAVIȚA LOCATION IN TIMIȘ COUNTY TOWARDS SMART VILLAGE

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Abstract: The article presents the identification of the potential and possibilities for the transition to a smart village of the Dumbrăvița commune in Timiș county, by using all existing digital solutions and technologies. Digital evolution represents one of the most important elements for the sustainable development of rural areas, contributing to the modernization of infrastructure, increasing the quality of life of citizens and reducing the differences between urban and rural areas.

The transition to smart village represents an opportunity to redefine rural life, creating communities that combine tradition and innovation, and Dumbrăvița, by implementing all the proposed projects and transitioning to smart village, can become a source of inspiration for other communes in Romania.

• Introduction

Currently, rural areas are undergoing rapid changes, and in order not to create a very big difference compared to the urban environment, the transition to smart villages is a response to the current problems we encounter in rural areas. Demographic changes based on the aging population and an exodus of young people to urban areas or to other countries, fewer and fewer jobs and an insufficient and decreasing range of services in rural areas are just some of the problems we encounter in Romanian villages[6].

The transition to smart villages is an essential solution and process in the context of the sustainable development of rural communities. This transition involves the implementation of digital and innovative technologies to improve the quality of life and stimulate economic growth in rural environments[12].

Romania has the potential to become one of the most digitalized countries in the region, with 50% of villages expected to become smart by 2030, according to estimates by the Romanian Association for Smart Cities (ARSC). However, the rate of digitalization depends on several factors, such as the level of involvement of local authorities, access to financing and the level of technology adoption in rural areas, including the development of the necessary digital skills[16].

• Material and method

To carry out scientific work, we conducted several case studies that involve a detailed research of information about identifying the transition possibilities of the Dumbrăvița locality in Timiș County to a smart village. The research includes study data, analysis and presentation of data.

• Conclusions

Smart villages represent an opportunity to redefine rural life, creating communities that combine tradition with innovation. With the support of technology and European funding, these villages become hubs of sustainable development, offering a better life for their inhabitants and a model of success for the future.

The proposed projects represent solutions that highlight the potential for the transition of the Dumbrăvița commune to a smart village, these being the intelligent concepts that can be implemented to transform the locality into a sustainable, connected and prosperous one.

The benefits of transforming the commune into a smart village are primarily a better quality of life through access to essential services and modern facilities, development of the local economy by stimulating small businesses and creating jobs, friendly environment by reducing carbon emissions and protecting biodiversity, digital integration through increased connectivity and equal access to resources and social inclusion by reducing the gap between rural and urban areas.

Smart villages must be built through collaboration between public institutions, the private sector, residents, and academia.

• Results and discussions

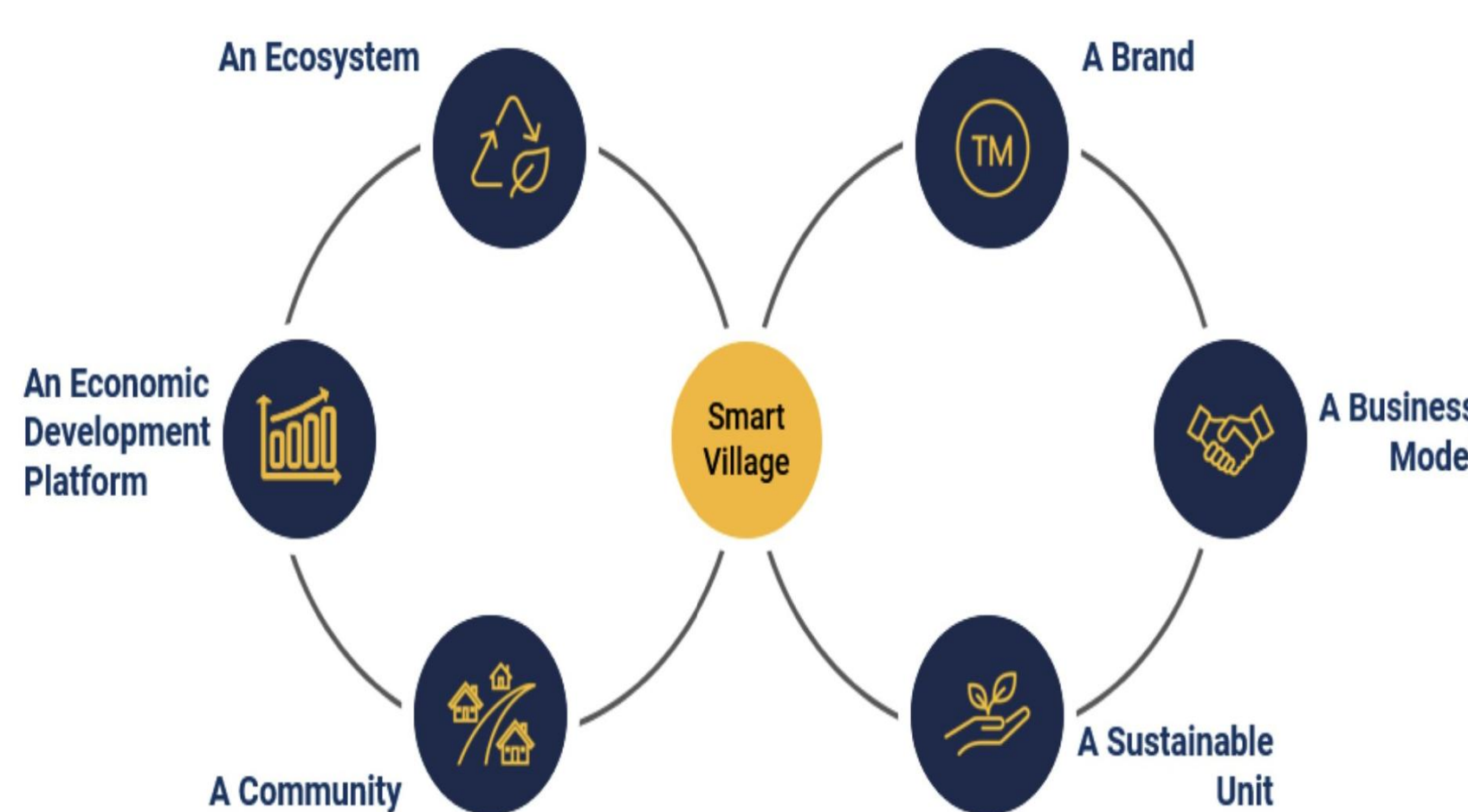


*Figure 1.
Diagram of
key elements of
the smart
village concept*



*Figure 2.
Proposed
projects that
contribute to
the transition
to smart
village of
Dumbrăvița,
Timiș County*