

FUNDING OPPORTUNITIES FOR SMART VILLAGE PROJECTS THROUGH THE LEADER INTERVENTION

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Abstract

Rural communities face problems related to depopulation, lack of jobs, weak digital infrastructure, decline of basic public services. LEADER is an initiative to support rural communities, which takes shape in a Local Development Strategy with a role in using local resources in a way that meets the needs identified in the territory. The support of projects for smart villages must be encouraged through local development strategies that pursue various fields: reducing the depopulation of villages, providing quality services, developing local services, promoting digitization. The paper proposes the role that the LEADER intervention belonging to the Strategic Plan, which is one of the instruments of the European Union, can contribute to supporting these rural development projects, which can represent local initiatives and which can benefit from funding sources that will contribute to the identification of strategies and future solutions to promote smart villages. The information used in the work was collected, processed and interpreted starting from data belonging to the Bureau for the Financing of Rural Investments, along with insights from the Ministry of Agriculture and Rural Development, converge in a rich tapestry of thought at the paper's conclusion. Here, they weave forward-thinking strategies for the cultivation of smart villages, which are envisioned as vibrant oases capable of elevating the quality of life for rural dwellers. These innovative settlements promise to champion the cause of sustainable rural development, casting a verdant future where community and sustainability flourish side by side.

Key words: LEADER, local development strategy, rural development, smart village, rural communities

INTRODUCTION

A crucial prerequisite for nurturing rural regions is the enhancement of the inhabitants' quality of life within these pastoral landscapes. Rooted in a thorough analysis of the necessities discerned within the LEADER rural territories, the community uncovers streams of financing, channelling these resources to elevate and enrich the living standards of its people, thereby sowing seeds for a more prosperous future. How communities will intelligently use local resources and new technologies presents an ongoing challenge that they must learn to manage.

The previous reference to the LEADER area refers to the territory made up of territorial administrative units - municipalities and territorial administrative units -small towns

with a maximum population of 20,000 inhabitants.

PNDR are programs that support both the economic development and the social development of rural areas, making non-refundable funds available to those interested. These projects began to be financed in 2007, with Romania's entry into the EU, their purpose being to promote the economic and social growth of poor rural areas in Romania, but also to attract young people to these areas (by offering support financially in the conditions of the manifestation of their migration to the urban environment). At the same time, the financing sources encouraged the development of some businesses in the rural environment, they encouraged the increase in the employment rate [10].

Among the vital tools at the community's disposal, one stands out for its pivotal role in championing projects nestled within the realm

of rural development, blossoming at the grassroots level, is "Liaison Entre Actions de Développement de l'Economie Rurale", i.e. "Links between economic development actions rural", whose acronym is LEADER and which was the basis for the establishment of Local Action Groups (GAL). Those entities operate under the same category of legislation that also includes non-governmental organizations, but operating at the local community level.

LEADER/DLRC [4] is a program implemented as a result of the application of the local development strategy, which is led by a community (DLRC) and which is based on certain specific characteristics. These characteristics were known in the previous programming period as the LEADER method" or "the 7 LEADER principles" (page 10 from "Guidelines: Evaluation of LEADER/CLLD") [4].

For the 2014-2020 programming period, a European policy instrument was established with a role in the development and promotion of cohesion at the territorial level, this being called the Responsibility for Local Development (DLRC), with a role in covering local needs belonging to both urban areas and the rural ones, but also the fishing areas. At the same time, financial support was given to specific target groups, the aim being to mobilize local capacities, but also to strengthen the links established between the different actors belonging to the areas that are given support. In general, the DLRC contributes to supporting the Europe 2020 strategy, this is achieved by capitalizing on that growth potential that is both intelligent and sustainable, but especially favorable to inclusion within the European Union.

DLRC planning is done both within the Partnership Agreement, but also through relevant, national and regional programs, supported through ESI funds. In this way, the DLRC fulfils the role of combining local policies, resulting in a single strategy that leads to obtaining results that contribute to the achievement of wider EU objectives, and not just a single policy.

In the period 2023-2027, the Strategic Plan (SP) will continue to support the economic

and social development of rural areas, this effort was also found in the other categories of programs that aimed at rural development, and that took place in the 2007-2013, and then 2014-2020 programming periods. The "Smart Villages" concept becomes a pillar in the development of the LEADER intervention described in the Strategic Plan, growing from the Local Development Strategies' seeds as well, as it is the most capable of sustaining this idea and entails the creation of projects that seek to capitalize on knowledge belonging to members of local communities and seeking solutions through the use of technology and innovation with visions of curbing depopulation and overcoming demographic challenges, the endeavor seeks to enhance the quality of local health services and fortify the safety of its citizens. Simultaneously, it embraces the transformative shift towards a circular economy, weaving sustainability into the very fabric of community life, in which reduced emissions of carbon to have an important role, as well as social/administrative/educational digitization, etc. (RO CAP SP, DR-36 LEADER/CLLD, page 1043). Therefore, this new program pursues different digitization activities (both social, administrative and educational) to be carried out at the level of a territory that is covered by the LAG, and which are innovative, which support the villages, and which, at this moment are authorized at the MADR level. For the 2014-2020 programming period, a tapestry of 237 Local Action Groups (LAGs) orchestrates the Local Development Strategies (LDS), channeling a collective bounty of 707.1 million euros derived from the National Program of Rural Development. These groups are the custodians of the Development Strategy's vision, now in its second epoch of programming, crafting a roadmap of activities scheduled to unfold through 2025. Rewinding to the 2007-2013 programming period, 163 Local Action Groups were empowered, their strategic implementations casting a net over 63% of the eligible territory, weaving the threads of local development across the landscape (municipalities and cities with a maximum population of 20,000 inhabitants)

[6], in the 2014-2020 programming, 237 Local Action Groups were authorized and total coverage of the eligible territory was over 92% [7] (Fig. 1).

For the 2023-2027 programming period, we expect to see an increase of the number of Local Action Groups, over 245, as well as 98% coverage of the eligible territory [8].

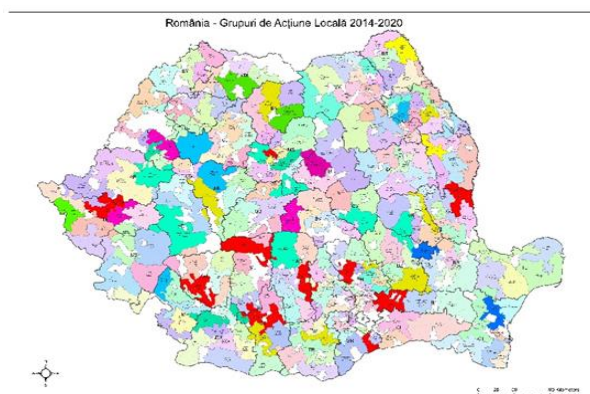


Fig. 1. LEADER area during 2014-2020
Source: MADR, <https://madr.ro/axa-leader/leader-2014-2020.html>, Accessed on Jan. 5, 2024 [5].

The LEADER tool presents itself as a tool and a source of funding for future strategies and solutions for smart villages. One of the most important characteristics of Smart Villages is innovation. Innovation is caused by the need and desire to change something or to address a particular challenge, continuously keeping in mind the local circumstances.

Similar to Romania, many rural areas in Europe face problems such as youth exodus, lack of appealing job prospects, a shortage of skilled workers, and insufficient funding for infrastructure and basic services. .

In the year 2017, under the auspices of the European Parliament and the European Commission, the European Union unfurled the Action Plan for the development of smart villages, marking a pivotal chapter in the narrative of rural modernization. The following year, amidst the picturesque backdrop of Bled in Slovenia, a declaration was signed, heralding a visionary future for the rural expanses of the European Union—an oath to an intelligent, prosperous era for its quaint hamlets and sweeping countryside.

Phil Hogan, the European Commissioner for Agriculture and Rural Development, paints a picture of "smart villages" not just as

technological hubs but as heartlands of human endeavor. He describes them as communities where the spirit of initiation thrives, where rural denizens forge paths through innovative problem-solving and seize burgeoning opportunities. The essence of a smart village extends beyond mere digital enhancements; it embodies collaborative spirits and the birth of novel alliances, all while nurturing an independent mindset and carving paths toward both prosperity and ecological harmony.

The Smart Rural 27 project is another initiative taken at the level of the European Union, its launch date being December 2020, its purpose being to ensure the necessary conditions for the implementation of the PAC regarding rural areas in the member states after 2020, but also for the identification of solutions that can be found in policies or initiatives that lead to the emergence of new smart villages at the community level. "Smart" measures and solutions have been identified through various projects, some of these approaches being Pilot Smart Eco-social Villages and Smart Rural Project 21 [3]. This project serves as a crucible for understanding and disseminating Smart Village strategies across various Member States. It facilitates a rich exchange of insights via the European Smart Villages Pilot Observatory and strengthens the infrastructure needed to support these burgeoning communities.

As the narrative shifts from European dimensions to national narratives, the focus zooms into Romania's experience within its National Rural Development Program for 2014-2020, extending into the monitoring period until 2025. Notably, Romania has not officially adopted the "smart village" terminology within this timeframe, focusing instead on digitization, information technology, IT services, and innovation—components integral to the smart village construct.

At the level of Romania, the Smart Village concept was also adopted, which represents a means of modernizing villages through the use of modern, extensive and efficient means of information and communication technology, which can contribute to the social and economic development of them.

This vision for the future promises to elevate living standards across rural landscapes swiftly.

However, this bright future is clouded by a significant challenge—the digital skill level of the population. This gap places Romania at the rear of EU member states in a EUROSTAT survey measuring digital proficiency from 2021 onwards, highlighting a critical area for improvement in the journey toward truly smart villages.

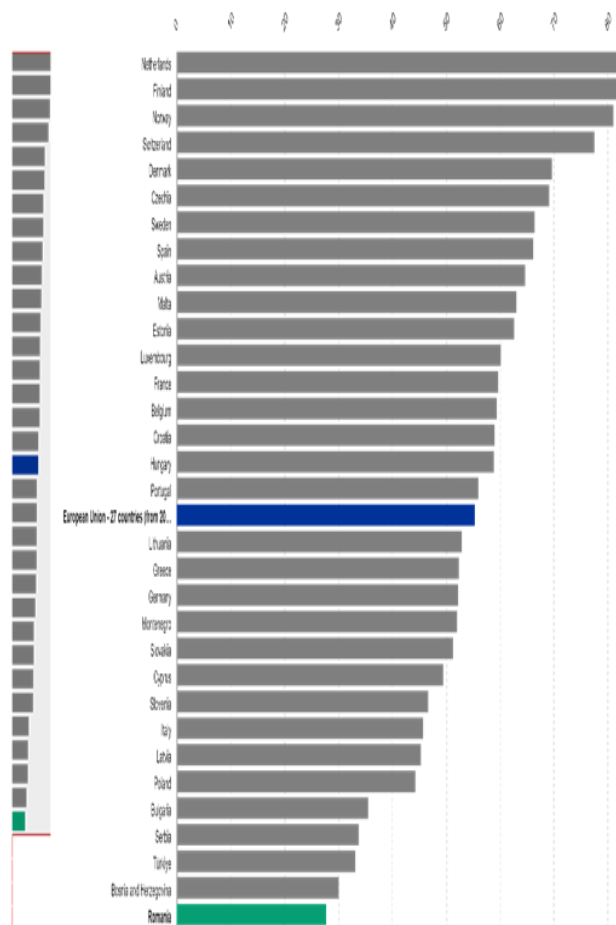


Fig. 2. Individuals' level of digital skills (from 2021 onwards)
 Source: Eurostat, isoc_sk_dskl_i21, Accessed on Jan 5, 2024 [12].

Instead, from another EUROSTAT ranking, we can view e-government activities of individuals through websites, reporting related to the year 2023 (Fig. 3).

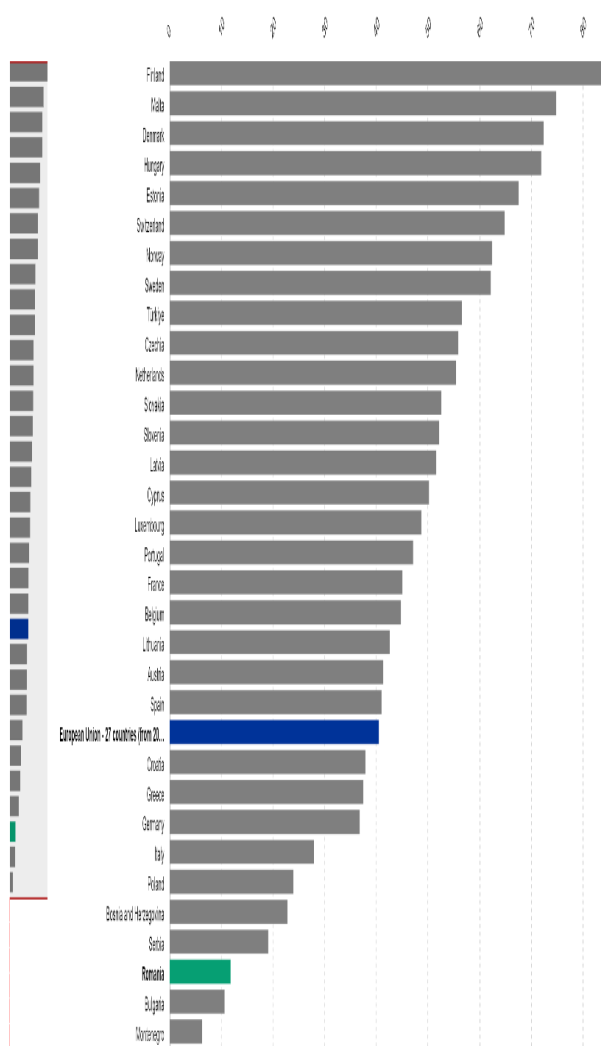


Fig. 3. E-government activities of individuals via websites
 Source: Eurostat [12].

MATERIALS AND METHODS

In order to present the stage of implementation of the LEADER instrument in Romania in terms of information technology, digitization services, e-governance, we started from an analysis of the projects at the LEADER rural area level, by presenting the type of projects that were financed in period 2014 – 2020, the number of beneficiaries of these projects, the value of the contracts and their impact on the rural population.

We will see from the graphs presented, projects that use information technology, projects that by their essence represent the first step towards the smart village concept. Thus, we are talking about a Romanian digital rural society that is becoming closer and closer to reality.

The article was based on research methods and techniques, respectively: the identification and collection of specific data, their analysis, synthesis, interpretation. The information is presented below in graphical and tabular form. The information analyzed and used in the paper was taken from the websites of institutions with a role in the elaboration, management, implementation and control of rural development programs in Romania, namely: the Governing Authority for the National Rural Development Program, operating under the Ministry of Agriculture and Rural Development; Office for the Financing of Rural Investments [1].

Furthermore, a key role involved the analysis and processing of information from the European Commission website (Figs. 2 and 3) as mentioned earlier.

RESULTS AND DISCUSSIONS

Understanding the strategic concerns of the European Union regarding the development of rural areas, follows the same directions as those related to the policies related to the agricultural development of these areas. These priorities fulfill the specific strategic objectives of the Europe 2020 strategy, which seeks to ensure aspects related to affordability, social inclusion, and the provision of opportunities for a safe future not only for the current generations, but also for those that will follow. Regulation 1305/2013 of the EU, followed the application of the measures for the future period as well, placing even more emphasis on the revitalization of rural landscapes, as a measure to attract young people to these areas, and ensuring sources of funding through FEADR. This regulation came to gradually replace the previous decrees that belonged to Regulation 1698/2005 belonging to the Council, ushering in a fresh epoch of rural flourishing.

The priorities unfurl like chapters in a grand rural manifesto: Priority 1 celebrates the cultivation of knowledge and the sprouting of innovation across the verdant fields of agriculture, forestry, and rural domains. Priority 2 promotes farm resilience by working to increase agricultural

competitiveness and encourage innovative farming and forestry methods in all areas. Priority 3 focuses on fortifying the food chain, enhancing everything from the processing and marketing of farm yields to the welfare of animals and the management of agricultural risks.

Further into the heart of the landscape, Priority 4 is dedicated to the restoration, preservation, and enhancement of ecosystems entwined with agriculture and forestry, ensuring they thrive and sustain. Priority 5 advocates for prudent resource use and supports a shift toward the agriculture, food, and forestry industries' transition to a low-carbon, climate-resilient economy. Finally, Priority 6 commits to knitting the social fabric tighter, alleviating poverty, and propelling economic propulsion in rural territories.

Together, these priorities sketch a vision of rural Europe as a tapestry of lush landscapes and thriving communities, where tradition meets innovation on the fertile ground of future possibilities.

Priority 6 emerges as a pivotal chapter in the narrative of local development strategies, painting a broad canvas with the following vibrant strokes: intervention area 6A weaves a tale of diversification, heralding the birth and growth of small enterprises, alongside the blossoming of new employment opportunities; intervention area 6B champions the flourishing of local development within the heart of rural communities; intervention area 6C crafts a digital renaissance, enhancing the reach, usage, and sophistication of information and communication technologies (ICT) across rustic landscapes.

The efficacy of each carefully chosen rural development initiative is quantified through monitoring indicators, each meticulously aligned with its designated intervention area, ensuring that each stroke of policy paints towards a cohesive and vibrant rural tableau.

In principle, the LEADER approach is focused on intervention area 6B "Encouraging local development in rural areas".

In the following paragraphs, we will see the projects financed by the LEADER tool, which are based on intervention areas 6 B and 6 C.

Rural development priorities are included in

local development strategies based on strengths, weaknesses, opportunities and threats ("SWOT analysis")

The LEADER instrument's deployment in Romania has produced notable outcomes in a number of rural areas and will continue to be crucial in helping the rural environment adjust to the rapidly changing modern world. . Its specific "bottom-up" approach represents a method that offers new perspectives for rural development, based on the identification of local needs, the improvement of development capacity, and the implementation of local development strategies, to preserve the cultural and rural heritage, to develop the economic environment and improve the organizational skills of local communities.

By determining future growth directions and defining the characteristics of the local economy, the public administration at the

local level contributes significantly to the economic development of the rural community.

Local authorities have the responsibility to manage the human, financial, material, and informational resources needed to support local or regional entrepreneurship.

As can be seen from the table below, a number of 358 territorial administrative units, that have benefited from funding through the LEADER instrument, the projects benefiting from funding with a value of 14,249,228.86 euros, the total eligible value contracted.

One of the monitoring indicators specific to LEADER tool is the population that benefited from these services and improved infrastructure which is 1,031,245 and the population that benefited from Information and Communication Technology services (ICT) which is 94,436.

Table 1. The number and value of financed and contracted project

Territorial administrative units/Project financed And contracted	Total eligible value contracted (EURO)	The population that benefits from improved services/infrastructures (intervention area 6B)	The number of inhabitants who benefited from ICT services (intervention area 6C)
358	14,249,228.86	1,031,245.00	94,436

Source: MADR monitoring, data processed by the authors.

The information presented below is outlined as a conclusion of the progress registered in the period 2014–2020 at the level of the LEADER area, through the implementation of projects financed at the level of UAT, in areas such as: modernization and efficiency of public services; the acquisition and implementation of an internal/managerial control system (SCI/M), accessible through a WEB platform and by equipping it with IT equipment and software packages, the acquisition of IT equipment necessary for digital literacy to improve the quality of life of the inhabitants; digital literacy of the inhabitants of the Moldovan commune through the purchase of IT equipment; improving the public lighting system and

reducing CO2 emissions, by installing street lighting devices with new LED technologies; public street lighting network with photovoltaic panels; acquisition and/or extension of video surveillance system; e-government solutions for improving public services, etc. We made an analysis taking into account the monitoring data relevant to the intervention field 6C: which refers both to improving the quality and accessibility and use of ICT in rural areas. As it results from the analysis carried out based on the data in Table 2, each of the development strategies adopted at the local level must refer to the population that benefited from these ICT services, at the level of each administrative-territorial unit (Table 2).

Table 2. Population that benefited from Information and Communication Technology services (ICT)

The number of inhabitants who benefited from ICT services	Number of projects	The total eligible value contracted
94,436	28	712,891.78 EURO

Source: MADR monitoring, data processed by the authors.

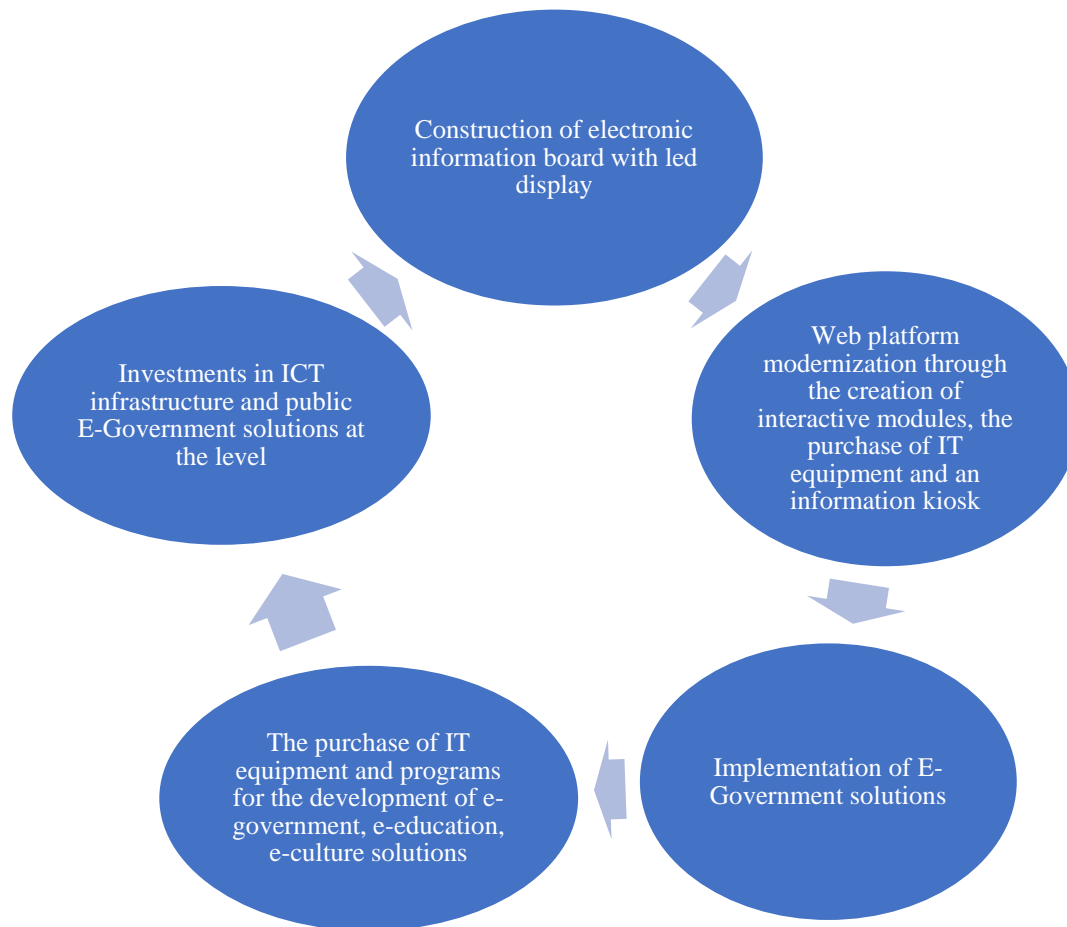


Fig. 3. The typology of ICT projects
Source: MADR monitoring, data processed by the authors.

Even if the number of projects is not very large in the field of information technology, 29 territorial administrative units wanted to become SMART through the new digitization services and technologies introduced. I will exemplify these types of project, even if they are also presented in the graph.

Even if the type of projects is not varied, we can note that an important role is played by investments representing the rehabilitation and efficiency of the street lighting system, through the installation of LED lighting devices.

For the most part, the projects aim at the acquisition and/or expansion of the video surveillance system, IT equipment.

Only a little number of the initiatives dealt with putting the e-governance and e-administration system into place.

CONCLUSIONS

Romanian rural communities can now be comparable with those in Europe thanks to the new strategic plan's approval of the smart village concept and its implementation in the country's rural areas.

The third programming period can be considered a SMART programming, by introducing the concept of SMART VILLAGE and by implementing SMART VILLAGE type projects that will surely change the life of the rural population.

From the analysis, it's evident that the challenges confronting the Romanian village are multifaceted, spanning social, educational, economic, and environmental spheres. The village's resilience hinges on leveraging community strengths and opportunities while also depending on the active participation of local authorities

Employing nuanced research methodologies, the rise of smart villages within Romania's rural landscapes is poised to significantly influence the socio-economic fabric of these communities. The introduction of smart technologies and innovative practices promises to transform the day-to-day lives of rural inhabitants, offering them new pathways to prosperity and enhanced community well-being. This development could potentially redefine rural life, making it more connected, sustainable, and responsive to both local and global challenges.

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