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Tirziu, Andreea-Maria

The National University of Political Studies and Public Administration (SNSPA)

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# Promoting social innovation in rural areas through living labs

## TÎRZIU Andreea-Maria<sup>1</sup>

<sup>1</sup> National University of Political Studies and Public Administration (ROMANIA)  
tirziu.andreea@yahoo.com

### Abstract

In Romania, nearly half the population lives in rural areas, therefore it is difficult to associate concepts like smart cities and Internet of Things to the local government's priority list. Nonetheless, recently there have been various initiatives to increase access to information using ICT methods in the rural communities as well. The purpose of this paper is not to exhaustively measure the already adopted means, but simply to provide a series of items considered barriers to ICT projects meant to contribute to these communities' development. By researching the studies conducted so far (in Romania, there are about 2700 communes, these being the lowest administrative units), it was observed that the digital divide is found in 100% of these areas. At the urban level, mainly in the big cities, pilot projects for developing digital literacy among the senior population had a relatively high success. This type of programs has been initiated at the level of the communes with higher living standards, generally the ones located near large cities. Their success, though surely less visible than in the cities, is notable. The majority of these programs have the educational and health fields as targets. This article aims to show these programs' implementation degree in Romania, providing as examples the most successful cases that help the social innovation process. The intention is to generate a list of objectives that the initiators of these programs have to take into consideration during the programs' preparatory process.

Keywords: social innovation, rural areas' development, living labs.

### Introduction

Modern societies rely more and more on digital technologies, thus it becomes obvious that these technologies impose social changes in order to be successfully used for the communities' benefit. These social changes can be understood as changes in the current way of living, derived from changing the life conditions, the cultural equipment, the population composition or even the ideologies, whether appeared as a result of individuals' changes in a group or of the inventions created by them [1].

Social innovation is seen as the main goal for human development. This concept was shaped by researchers as to capture the new technological trends and to provide to policymakers information and mechanisms that will help add value to the society. Unfortunately, while the challenges are growing, the budgets stay limited. For dealing with this situation, "policy labs" have been created. "Through their user-centred design thinking and experimental approaches", they can be a social innovation tool. Public policy labs are considered to be entities strongly linked, from a structural perspective, to authorities of the public sector, that use user-centred and experimental design methods in order to support the policy making and innovation processes which take place in the public sector [2].

The European Commission has generated its own lab (EU Policy Lab) that, with the help of the European Parliament, has developed a project which has the purpose to connect local, regional or national policy labs with the policy departments within the European Commission. The initiative was put into motion in June 2014 under the recommendations of the Expert Group on Public Sector Innovation and, moreover, an important event for its achievement was LAB CONNECTIONS, which represented a policy labs meeting from European countries (October 17-18, 2016). This event aimed to create a space open for collaboration between policy labs and policymakers at local, regional, national and EU level, addressing policy challenges and trying to identify actions that could solve the problems and also to find the methods to get those actions started [2]. Romania has no involvement yet in this project, this putting our urban and rural communities many steps behind the European countries that have understood the importance of having at least one policy lab that can help them generate innovative ideas

and put into motion actions to solve the social challenges that information-based society raises today.

Although the challenges discussed within the LAB CONNECTIONS project are addressed to cities, they can be of great interest to policymakers for solving social problems of rural communities as well and many successful activities are presented on the project's official webpage. Depending on the successful achievement of those activities, this European project can show a new way of connecting, discussing and working with citizens and other actors involved in the process. It can also bring an important contribution regarding the implementation of more relevant and effective EU policies, also helping the EU member states better connect and communicate with their citizens [2].

### **Social innovation in rural areas**

Social innovation "stimulates people, politicians and policy makers to explore and implement new ideas about the way how a society deals with several challenges, such as the increasing ageing of the population, the financial and economic crises, the quality of educational system or the regeneration of socially and economically deprived cities and regions" [3]. The actors involved in this process are very important. At a local level, there are various forms of social partnerships that can produce social innovations. Moreover, experts in the field explain that these innovations are implemented in order to support certain ways of development regarding the rural communities or to moderate the negative consequences that may appear when processes are being restructured. These specialists believe that social innovation is a new concept for rural residents and communities because there are used new methods of development, common actions that can help facilitate the achievement of main objectives, new types of activities that use new forms of organization [4].

In urban and also rural areas, lifestyle changes request and determine innovations [5]. Apart from focusing on ideas, social innovations should concentrate on finding the proper methods to arrange those ideas that sometimes are not even new ones. When ideas are re-shaped in a new way, new quality is obtained from the products or services developed. In this case, it is social innovation the one that makes many changes [4].

The following social innovation elements serve as instruments regarding process restructuring in rural areas: a) new services in rural settlements – actions that will lead to rural tourism development; b) new education courses for rural people – developing computer literacy; c) ecological farming – an important element in rural restructuring process in periods of change; d) formation of local action groups – can create projects and strategies useful for local development and can propose various social innovations' implementation; f) electronic social innovations [4]. Apart from these elements, social innovation in rural areas tries to carry out purposes, namely: a) change in attitudes – the most relevant social innovation should be related to this and should be directed towards following the "bottom up" principle and common ideas; b) consolidation and community development – new things should be created by individuals; efficiency and profit should be aimed for changing the lives of people who live in rural areas; there should be a mobilization regarding community actions; c) new knowledge – educational potential can help in making profit; d) environmental protection, new organizational forms and improvement of life quality – especially for improving life quality [4].

The main actor in developing social innovation in rural areas is the human resource, therefore the successful carrying out of social innovations depends very much on the characteristics of the community. The actors involved in the process from a national level should carry out top-down initiatives in order to ease the activities based on a bottom-up approach [4]. Social change is a fundamental purpose of the innovation process, therefore social innovations are considered to be both the wanted outcome and the tool and approach that, through engaging the communities, will help rescue rural societies [5]. For this purpose to be met, the population must be organized and educated in such a manner that it achieves the capability and willingness to engage and re-create the society it forms, and also solutions against the barriers that intervene in the change process must be found, by forming influential lobbies for local interest [6].

## **Connection between living labs, ICT and social innovation**

The connection between these concepts can be easily understood by defining the living labs, which are open innovation ecosystems, centred on users and based on an approach that will make the users be co-creators regarding research and innovation processes in real life communities and locations. The citizen is therefore positioned at the centre of innovation, these labs having the ability to better make use of the opportunities made accessible by the new ICT concepts and solutions that are being found in order to meet specific needs and desires that local cultures, settings and creativity potentials rise [7].

The European Network of Living Labs (ENoLL) is a relevant example of how important the connection between living labs, ICT and social innovation is. Founded in 2006, ENoLL is the international federation of benchmarked living labs at European and global level. Today, it counts more than 170 active living labs worldwide, providing to its members co-creation, user engagement, test and experimentation services, having as a main target innovation in various fields of activity. This not for profit association acts as a platform for exchanging best practice cases, for learning and support and also for the development of the living lab international project [7]. ENoLL's website shows that Romania is an adherent member and it had a living lab in Bucharest called A.R.C.H.E.S. This was launched by the University Politehnica Bucharest with the purpose to create, for the first time in Romania, a platform oriented on synergy. Moreover, SIG-RO – a special interest group in Romania, focusing on research of the multi-disciplinary academic kind, established ARCHE3S (the Bucharest metropolis-oriented living lab) [8].

The successful examples of urban living labs can also be of interest for local authorities in order to produce impact on rural development through the development of the rural innovation system, change of current rural policies, impact on business and entrepreneurship, on social and individual welfare and also impact on internationalization [9]. Moreover, the public administration plays an important role in enhancing the creation of innovations and the use of ICT for developing living labs and, thus, for increasing productivity, boost the creation of public value, improve efficiency in the relationship between the citizens and the public authorities, meeting eventually the challenges that society raises today [10].

## **Barriers to ICT projects meant to develop rural areas**

Research on rural areas has shown that increasing the possibility to access ICT and their applications has become an important policy issue for the future development of those rural regions. This also brings benefits for the citizens, firms and rural communities, ICT having the potential to develop an open digital platform that will make effective and efficient interaction possible that will gather intelligence in a unique place. They can also help both the macro level (rural areas) and the micro level (individuals and companies) to boost their competitive position in the new economy context [11].

Various categories of barriers that intervene in the development of ICT projects meant to boost the development process of rural areas need to be considered: a) related to the network infrastructure organization; b) related to the development of specific ICT applications and content; c) related to the adoption and use of technology by end-users; d) related to limited or missing capacity of network infrastructure in regard to the type of applications or the content that could meet the needs of rural areas; e) related to the type of network infrastructure chosen for supporting e-apps in rural context; f) related to the type of apps and content specific for different types of end-users [11]. Apart from these, the digital divide should be mentioned. The overall potential of the EU is slowed down by a divide regarding innovation and mostly digital skills, along with heterogeneity in the enterprise environment [12]. In this regard, it would be very useful to create and put into motion national or even local projects meant to inform and train the population in order to be capable to use the new ICT, this process being called "digital literacy" [13][14].

Solving these problems could mean finding the objectives that need to be taken into account when the social innovation programs are being prepared, therefore policy and

decision makers should pay attention to these issues and try to find the most effective and efficient manner to contribute to the development process of their local communities.

### Case study: successful programs for social innovation in rural areas

Two European projects are considered of great importance for our research, focusing on boosting social innovation in rural areas. One is called SIMRA (Social Innovation in Marginalised Rural Areas), a four-year action period (2016-2020), being funded by the EU's Horizon 2020 programme. Its purpose is to improve the understanding of concepts such as social innovation and innovative governance in the forestry, agriculture and rural development fields and find methods to enhance them in marginalized rural areas from Europe and around the Mediterranean, including zones situated in states that are non-EU members [15]. Another European project example is RurInno, which is a project for which award-winning social enterprises and high-profile institutes from four EU states work together in the Horizon 2020 programme with the aim to boost rural development [16]. It "strives to enhance knowledge about social enterprise driven innovation processes and at the same time to utilise the insights to improve the ability of social enterprises to tackle social challenges in rural regions" [17].

In Romania, public authorities barely heard about the issue of living labs as instruments of social innovation in rural areas. Back in 2005, a project entitled eComunitate was developed, following the knowledge of the economy concept, under the auspices of the Ministry of Information Technology and Communications. The program's main objective was to connect all the communes in one single place on the Web in order to share knowledge and information for a better and cheaper interaction among the authorities [18]. Even though the project is ten years old already, not the entire rural community in Romania adhered to it.

Table 1 has the aim of presenting the activity of the most active communities which are members in the project "Economy based on Knowledge (EBK)"<sup>1</sup>. It shows the events, news and other interest subjects from the rural areas, shared through the eComunitate portal. One point is accorded for each material that comes from the community and covers local news or events and is of interest for the editorial team and two points for each item or success story that comes from the community and is of interest for the editorial team [18].

**Table 1.** Top ten EBK communities most active on the eComunitate portal [18]

| Position | Community            | Project | Education | Business | Administration | Culture | Total      |
|----------|----------------------|---------|-----------|----------|----------------|---------|------------|
| 1        | Recaș                | 22      | 39        | 18       | 19             | 17      | <b>115</b> |
| 2        | Luncavița            | 24      | 9         | 30       | 40             | 8       | <b>111</b> |
| 3        | Sângeorgiu de Pădure | 6       | 25        | 27       | 42             | 9       | <b>109</b> |
| 4        | Teiu                 | 7       | 79        | 6        | 6              | 8       | <b>106</b> |
| 5        | Homocea              | 2       | 30        | 32       | 20             | 4       | <b>88</b>  |
| 6        | Diosig               | 6       | 24        | 25       | 25             | 2       | <b>82</b>  |
| 7        | Târgu Frumos         | 9       | 27        | 3        | 16             | 22      | <b>77</b>  |
| 8        | Zlatna               | 8       | 19        | 21       | 29             | 0       | <b>77</b>  |
| 9        | Mircea Vodă          | 7       | 18        | 11       | 25             | 8       | <b>69</b>  |
| 10       | Saschiz              | 6       | 5         | 15       | 26             | 15      | <b>67</b>  |

### Conclusions

By taking into consideration the living labs successful examples from all over the world, rural areas can become smarter communities, making use of ICT activities that will help them create social innovations and sustain development.

Social innovation is a practice that can be made possible through the process of creation. In this regard, we believe that ICT is very useful in making the individuals "think outside the box" and come up with ideas that can transform their communities. By

<sup>1</sup> The total no. of communities presented on the website is equal to 231, but we chose to present the 10 most important ones based on the criteria researched and provided under the auspices of the project.

that, they can be even more creative and they will become responsible citizens that will be able to find solutions for the society they live in [19].

For the benefit of citizens and rural small businesses, efficient electronic services must be developed. Therefore, the public institutions must embrace a more general approach, by evaluating the electronic services already in use and by creating new ones where and when they are needed [20].

Although electronic technologies provide important aid for social innovation and the improvement of the rural areas' well-functioning and development, the key factor in any interpersonal relationship remains the human resource, therefore the interaction between individuals should not be absolutely suppressed, but a balance must be found between the use of digital technologies and traditional methods in order to perform certain actions [21].

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