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## Contents

<b>Introduction</b> .....	7
<b>Jacek Soltys:</b> Sub-regional service centres in reality and regional planning in Poland / Podregionalne ośrodki obsługi w sferze realnej i planowaniu regionalnym w Polsce.....	9
<b>Andrzej Raszkowski:</b> PEST analysis of Piechowice Municipality – power and future impact direction of environmental factors / Analiza PEST gminy miejskiej Piechowice – siła i przyszły kierunek oddziaływania czynników otoczenia.....	18
<b>Andrzej Sztando:</b> Barriers in strategic governance of local development in Poland at the beginning of the 21 <sup>st</sup> century / Bariery zarządzania strategicznego rozwojem lokalnym w Polsce na początku XXI wieku.....	27
<b>Jacek Welc:</b> Reversion toward the mean of regional economic growth – a Polish experience / Rewersja do średniej regionalnego wzrostu gospodarczego – doświadczenia polskie.....	49
<b>Marek Goleń:</b> Cross subsidization in Polish municipal waste management fees / Subsydowanie skrośne w ramach opłat stosowanych w Polsce za zagospodarowanie odpadów komunalnych.....	57
<b>Grzegorz Maśloch:</b> The importance of renewable energy sources for sustainable development of Polish regions / Znaczenie odnawialnych źródeł energii dla zrównoważonego rozwoju regionów Polski.....	65
<b>Andrzej Raszkowski:</b> The assessment of Dzierżoniów City selected functional areas in the eyes of entrepreneurs – a research report / Ocena wybranych obszarów funkcjonalnych miasta Dzierżoniów w oczach przedsiębiorców – raport z badań.....	75
<b>Marcelina Zapotoczna, Joanna Cymerman:</b> Effect of property tax on voivodeship capital residents’ housing market decisions / Wpływ polityki podatkowej miast wojewódzkich w zakresie podatku od nieruchomości na decyzje zakupowe na rynku nieruchomości mieszkaniowych.....	84
<b>Magdalena Wiśniewska:</b> The suitability of Living Lab concept in the implementation of municipal projects / Przydatność koncepcji Living Lab w realizacji projektów komunalnych.....	98

## Introduction

The Department of Regional Economy at the Faculty of Economics, Management and Tourism of Wrocław University of Economics organized yet another scientific conference entitled: “Local and regional economy in theory and practice”. It was already the 23<sup>rd</sup> conference held on 23-25<sup>th</sup> September 2015 in “Chata za wsią” hotel in Mysłakowice near Jelenia Góra.

The conference was attended by the representatives of national and international scientific circles, regional and local government structures, and also other entities representing business practice and interested in the problems of local and regional economy, as well as PhD students. Over 80 participants of the conference arrived from over 30 national and foreign scientific centres and institutions to present papers and posters.

The subject matter of the conference covered the following areas: local and regional development, local and regional governance, application of quantitative methods in regional studies, partnership in local and regional development, directions of research in local and regional development, cooperation between academic centres and local government units.

The conference contributed to establishing more extensive and stronger relationships, created within the framework of the constructed platform for the exchange of scientific and practical experiences (the conference has been held cyclically since 1992) at the local, regional, national and international forum. The discussions were focused on the dissemination of research results, the exchange of experiences and the establishment of a discussion forum covering both theoretical and practical aspects of local and regional development. They also resulted in more extensive cooperation between academic centres, local government units as well as research and development centres, including the cross-border ones.

The conference is cyclically attended by the representatives of science from Poland and abroad. So far we have hosted e.g. the research workers representing academic centres from Ukraine, the Czech Republic, Italy, Sweden, Germany, Austria, Denmark, Slovakia and also the representatives of business practice, e.g. city presidents and mayors, village heads, county governors, presidents of regional development agencies or of local enterprises, etc.

As a result of the organized conference, the hereby publication presents the collection of thematically selected articles in English covering the broadly understood problems of local and regional economy. Its authors represent the following scientific centres: Warsaw School of Economics, University of Łódź, Gdańsk University of Technology, Koszalin University of Technology, University of Warmia and Mazury in Olsztyn and Wrocław University of Economics.

We are most grateful to the conference participants for the joint meeting and we do hope for further cooperation.

*Elżbieta Sobczak, Andrzej Raszkowski, Andrzej Sztańdo*

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# THE SUITABILITY OF LIVING LAB CONCEPT IN THE IMPLEMENTATION OF MUNICIPAL PROJECTS

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## PRZYDATNOŚĆ KONCEPCJI LIVING LAB W REALIZACJI PROJEKTÓW KOMUNALNYCH

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**Summary:** Living Lab is a new concept of innovations development. It requires *inter alia* maximum involvement of final users and other stakeholders in the whole innovative process. It can be useful in terms of implementation of innovative solutions in local communities. Local communities nowadays face new challenges related to public services as their needs are transformed over time. There are several areas of determinants which influence the need to implement new solutions in local government tasks. In accordance with Living Lab concept, the development of novelties in local communities should be prepared as the answer for stakeholders needs and with their involvement in the development process. This corresponds with modern trends in public management. Living Lab concept has many advantages but also limitations. Such issues should be taken into consideration when deciding about its implementation. This paper outlines circumstances of Living Lab concept implementation on the basis of literature studies and practical experience gained by the author.

**Keywords:** Living Lab, innovations, local government, citizensourcing, participatory management, open innovation.

**Streszczenie:** Living Lab jest nową koncepcją rozwoju innowacji. Wymaga ona między innymi maksymalnego zaangażowania w całym procesie innowacyjnym użytkowników końcowych, a także innych interesariuszy opracowywanych rozwiązań. Koncepcja może być przydatna we wdrażaniu innowacyjnych rozwiązań w społecznościach lokalnych. Społeczności te stoją dziś w obliczu nowych wyzwań związanych z usługami publicznymi, między innymi z uwagi na fakt, iż ich lokalne zbiorowe potrzeby ulegają transformacji w miarę upływu czasu. Istnieje kilka obszarów uwarunkowań, które wpływają na konieczność wprowadzenia nowych rozwiązań w sferze spraw publicznych na poziomie samorządów lokalnych, co zostało przedstawione w artykule. Zgodnie z koncepcją Living Lab rozwój nowości w społecznościach lokalnych powinien stanowić odpowiedź na potrzeby ich interesariuszy oraz zagwarantować ich udział w procesie rozwoju rozwiązania. Takie podejście zgodne jest z nowoczesnymi trendami w zarządzaniu publicznym. Koncepcja Living Lab ma wiele zalet, ale

cechują ją także ograniczenia. Te aspekty powinny być uwzględnione przy podejmowaniu decyzji o realizacji takiego przedsięwzięcia. W artykule przedstawiono uwarunkowania realizacji koncepcji Living Lab na podstawie badań literaturowych i doświadczeń praktycznych zdobytych przez autora.

**Słowa kluczowe:** Living Lab, innowacje, samorząd lokalny, *citizensourcing*, zarządzanie partycypacyjne, *open innovation*.

## 1. Introduction

Local communities nowadays face new challenges related to public services. For the effective discharge of public duties, it is necessary to understand the needs of the recipients of these public goods or services. The better those needs are satisfied, the more efficiently public funds are spent. The needs of local communities, however, are transformed over time. Sometimes it turns out that a community demonstrates new needs sometimes requiring immediate solutions, and at other times not fully conscious. It may also happen that the present way to meet the known needs does not fit the new circumstances. People's lifestyles, model family, livelihood, communication models etc. change over time. Such circumstances make the public authority unable to perform its tasks in accordance with the demand of its customers. There is a need to develop new solutions. It is important in this situation to recognize the conditions of optimal implementation of these novelties in the distant, not quite recognized future. Innovations in local government are of importance as they [Mulgan, Albury 2003]:

- improve performance and increase public value,
- are able to respond to the expectations of citizens and adapt to the needs of users,
- increase service efficiency and minimize costs.

The paper is based on literature studies and experiences of researchers from the Department of City and Regional Management, Faculty of Management, University of Lodz who participated in the project "Systemic support for management processes in local government units" in years 2012-2015. The project was co-financed by the European Union from the European Social Fund. The project included the task called "The development of innovative solutions in the field of public governance", where one of the approaches was to apply the assumptions of the Living Lab concept for the purpose of problem-solving in 16 local government units. This allowed, on the one hand, to test the suitability of the concept of the Living Lab for Polish communes, and, on the other hand, to identify factors of effective implementation of this participatory approach to management in self-governments.

The paper aims to present Living Lab concept and the main determinants of its implementation for the purpose of Polish communes in the light of the desk research and practical experience of the author.

## 2. Demand for innovation in municipalities

It is not the aim of the article to analyze all possible approaches for identification of innovation needs of local governments. Thus in this part, only PEST analysis is going to be presented. Nevertheless, the literature proposes also other methods in the subject of identification of demand for innovation, like for example strategic foresight [e.g. Habegger 2010] or technology audit [e.g. Burgelman et al. 2004].

For the analysis of the conditions affecting the need for innovative solution, PEST analysis seems to be worth considering [Osborne, Brown 2012; Stawasz, Wiśniewska 2015]. PEST analysis refers to the four areas surrounding the organization: i) political (P), ii) economic (E), iii) social (S), iv) technological (T). As Brown and Osborne indicate [Osborne, Brown 2012], by analyzing these spheres of municipalities surrounding, it is possible to discern the trends occurring in the environment that contribute to or may affect the need for changes in the area of public tasks. This analysis may be particularly useful in situations where a municipality is not facing any specific, current, urgent challenge, but is looking to optimize its activity, anticipating some phenomena that in the near future would oblige it to make changes or upgrades.

Therefore with respect to the political environment, the change of the approach to public service has to be taken into consideration, and so the transition to the model of social engagement, the issue of governance as a new approach to public services as well as the need for a new political dimension of the introduction of market mechanisms for the operation of public organizations. Political factors also contain a context of the European Union (EU), its policies and the possibility of using means of EU funds, but also globalization as a source of change, together with regionalization as a trend in the conduct of the policy. Finally, variability and dynamics in general and national and international influence can generate changes at local government level.

When it comes to economic factors, PEST analysis in the context of innovation in the public sphere should consider the following issues: the general economic situation, potential changes in the public finances, marketization of public services, the cost factor of public tasks and the ability to meet the needs of local communities at relevant quantitative and qualitative level.

Among the social factors, the following elements are worth considering: aging population of citizens, social inclusion, the emergence of new social needs and new forms of already known needs as well as sustainable development in relation to meeting social needs.

Technological aspects analyzed in PEST approach can be divided into “hard” – including the structure and equipment of the organization (information technologies, new organizational solutions, new technologies in the provision of services) and “soft” – referring to the processes and ability to provide public goods and services (competence, including education, the sphere of responsibility of public authorities, professionalization of the public service).

### 3. Living Lab concept

Living Lab is a concept assuming the involvement of end-users in different phases of the innovative process: discovering the needs, their prototyping, validation and improvement [Lama, Oigin 2006].

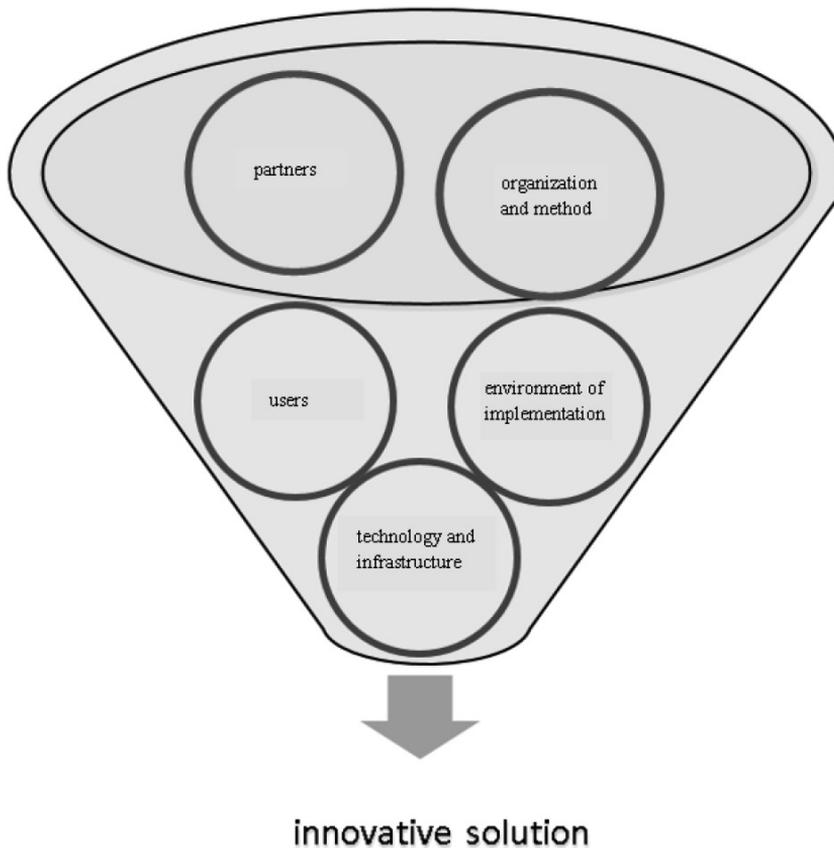
The development of the concept of Living Lab has provided different perspectives on its essence [Bergvall-Kareborn, Stahlbrost 2009]. Thus the Living Lab is sometimes defined as i) environment [Ballon et al. 2005; Schaffers et al. 2007], ii) methodology [Eriksson et al. 2006], iii) system [CoreLabs 2007]. These perspectives are not in conflict with each other. They are mutually complementary points of view. Understanding them allows better recognition of the specific nature of the concept and gives a chance for its more efficient usage.

Looking at the concept from an environmental perspective, we must recognize that creating the proper environment, an atmosphere of cooperation, integration of the community along with related facilities and necessary equipment is the foreground.

The following key components of the Living Lab environment can be identified [CoreLabs 2007]:

1. User.
2. Environment of application.
3. Technology and infrastructure.
4. The organization and methods.
5. Partners.

Users are the key component of the Living Lab approach. End users of the novelty are at the same time its founders, contributors, testers and validators. As regards the environment of application of the final solution, it should be the same with the environment of its creation. This means that the process of discovering new ideas, their development, testing, prototyping etc. cannot take place in an artificial laboratory. In the concept of Living Lab it is necessary to ensure the real conditions which allow the creation of new products that will work in these conditions, when it is already implemented for everyday use. Information and communication technologies play an important role in communication facilitating and cooperation within the framework of Living Lab between partners and stakeholders of the project. It is about creating optimal conditions for the effective communication of ideas, their rapid assessment, confrontation, and exchange of experience. The concept of Living Lab is certainly challenging and requires a proper organization, and methods of collaboration. It should, however, be borne in mind that the novelty of this approach and its founding cause that one methodology not be simply copied in different conditions. But certainly one can draw experience from already accomplished initiatives. The cooperation of partners and their specific point of view as well as their knowledge can improve the standards of developed solutions, bringing them closer to perfect solutions. It should be remembered that in addition to end users of the developed novelty, also other important entities (stakeholders) should be involved.



**Figure 1.** Key components of the Living Lab concept

Source: own elaboration based on [CoreLabs 2007].

Methodological perspective for understanding the concept of Living Lab highlights the importance of processes occurring during such projects, like data exchange processes and user engagement methods. Five principles of Living Lab concept should be pointed out here [CoreLabs 2007]:

1. Continuity.
2. Openness.
3. Realism.
4. Empowerment of users.
5. Spontaneity.

The postulate of continuity is especially important in establishing relations of cooperation between partners of the project. Since Living Lab requires joining various interest groups, strengthening close relations between them takes time. To make this process effective it must be continuous. What is more, people when

engage in some ideas, want to be appreciated – not just in a material way, but through interaction, taking their points of view into consideration. When there is no answer to someone's action, this person becomes demotivated. The requirement of openness refers to the effort to take into account the multiplicity of perspectives and gathering the right amount of power to achieve rapid progress of the project. Openness also means to consider as many perspectives as possible, mainly from end users. The need for realism is related to the expected outcome – a product or service has to be generated under real conditions of its use. Environment of conducting Living Lab project must therefore be at the same time the environment of real usage of the developed innovative ideas. This feature of the Living Lab concept distinguishes it from other concept of innovation development. Empowerment of users is crucial for driving the innovation process in the intended direction which has to be based on the needs of the people. The effectiveness of the concept is based on creativity of the users, therefore it is important to motivate and involve users in the innovation process. The spontaneity of action is associated with the cycle of creating innovation and the necessity of registration, collection and analysis of spontaneous reactions of users at each stage of creating a new solution. All reactions should be taken into consideration, especially those spontaneous – to ensure the effectiveness and suitability of the generated novelties.

The concept of Living Lab is not the only one in the sphere of development, testing and validation of innovation. What distinguishes this concept is the high degree of participation of different groups of actors and multiplicity of contexts taken into account (not always planned, which results from the spontaneous nature of the Living Lab). It should, however, be borne in mind that the active involvement of users in the Living Lab concept does not exhaust its objectives. The involvement of as broad group of stakeholders as possible is necessary.

“Stakeholders” means the people, groups, institutions that are interested in the functioning of an organization. The involvement of the widest possible group of stakeholders increases the chance to create optimal solutions by addressing the multiplicity of points of view. It allows for a reduction of the technological and business risk. The challenge is to reconcile the interests of different groups. It should also be noted that the involvement of many people and institutions must be carried out in such a way as not to interfere with the implementation of the project and to allow the fulfillment of the other objectives of the Living Lab concept such as spontaneity or continuity.

#### **4. Advantages and limitations of Living Lab concept implementation in Polish municipalities – findings from practical experiences**

The experience gained from the implementation of the project entitled “Systemic support for management processes in local government units” realized in the years

2012-2015 allows to identify some significant advantages and limitations in the use of Living Lab concept to the management of local affairs.

Today's local communities, including the entities taking part in the above mentioned project, are becoming increasingly aware of the mechanisms that cause a certain degree of satisfaction of their needs. The principle of subsidiarity underlying the self-government causes the responsibility of the local authorities for local communities. However, individual residents and other entities currently operating in the municipality claim for co-decision in choosing directions and ways of spending municipal budget or fees. The politicization of public authorities and conservative nature of the municipal offices (which lack the executive management) causes dissatisfaction of the residents. Among the residents are also entrepreneurs, people accustomed to quite another dynamism, a different motivation, aware of the opportunities other than bureaucratic activities. In the municipalities there are also active non-governmental organizations, which often know best the specifics of the phenomena for which they work. They are sometimes struck by the inefficiency of public authorities in some areas. These and other stakeholders can and should be involved in decision taking by local governments. In developed countries there is a long tradition of civil society. In the Polish reality, this process is still developing [e.g. Wiśniewska 2014]. There is no long tradition of direct involvement of citizens in public life. It seems that the same phenomena are conducive to the development of social media and universal access to information, especially via the Internet. Living Lab concept is one possible to be used when involving stakeholders in deciding in public matters. It is used in implementing new solutions. A lot of advantages but also limitations can be assigned to it. The advantages of Living Lab approach identified through experience gained in the project realization, are as follows [Stawasz 2015]:

- inclusion of citizens in decision-taking regarding the development of living conditions, which results in better satisfaction of the needs,
- increased knowledge (including hidden) about the municipality,
- increased community interest in public affairs,
- building local identity of small communities,
- more flexible decision-making process,
- building a platform of understanding between authorities and stakeholders,
- increasing the transparency of government, bottom-up decision process,
- realization of projects most suited to the needs of stakeholders,
- preventing the implementation of failed actions from public funds,
- increased efficiency of operations,
- promoting the ideas of partnership and cooperation,
- changing social attitudes.
- increased credibility of authorities,
- stakeholder responsibility for the effects of projects.

As regards the limitations of the concept, it is possible to find [Stawasz 2015]:

- extension of the decision-making process,

- possibility of a strong stakeholders lobby,
- blur of the responsibility for a project,
- increased costs of administration and management.

Above mentioned attributes of Living Lab concept should be taken into consideration when deciding about its implementation. Such a decision should depend on a particular problem to be solved. Local government should also evaluate effectiveness of this solution in comparison with a traditional problem solving path.

## 5. Conclusions

Living Lab is a new concept useful in elaborating innovations. It has many advantages, but also some limitations. Nevertheless it can be implemented when a local government seeks new solutions for satisfying community needs and a traditional model of decision taking turns out to be ineffective. There is always a question about the relations of costs and effects of involvement in this approach. The Living Lab concept generates costs and consumes time, but it can lead to a better quality of life. Therefore an ex-ante analysis as well as good preparation and effective communication process are important.

It cannot be said, however, that the Living Lab concept is widely used in the development of Polish territorial units and experiences of the author require further verification on the basis of the possible future Living Lab implementations.

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