



## **A Review of the Literature on Smart Development: Lessons for Small Municipalities**

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### **ABSTRACT**

Nowadays, scientists and practitioners unify modern regional development under the term “smart,” what brings technologies and creation of a new knowledge in a front of economic activities. Small municipalities as participants of the process have been studied seldom. Moreover, a huge part of the literature on smart development mostly pays attention to such key elements, which have limited capabilities in small municipalities (e.g. development of high technologies, patent activities, sustainability etc.). Thus, involvement of small municipalities into the process of smart development may be slowed-up, due to their insufficient knowledge and experience. This paper offers a literature review on scientific findings and practical guides about smart development with aim to show how small municipalities could develop “smartly” in bigger extent. The research results highlight scientifically proved cornerstones of smart development and provide analysis of successful experience how small municipalities can apply it in a practice.

**Keywords:** Regional Development, Smart Development, Small Municipalities, Literature Review

**JEL Classifications:** O11, O18, O21

### **1. INTRODUCTION**

The authors of this literature review represents National Research Program 5.2. “Economic transformation, smart growth, governance and legal framework for sustainable development of the state and society - a new approach to the creation of a sustainable learning community (EKOSOC-LV)” (Latvia), which among other aims focuses on possibilities to launch smart development in rural areas in Latvia. This means to introduce the approach into the development processes in small municipalities.

As far as paradigm of smart development is new for Latvia and regions, possibilities of small municipalities are limited not only with their socio-economical capabilities, but also due to lack of visible example, knowledge and experience in this area. However, such a problem is not topical only for Latvia. For example, countries across European Union and even the United States of America meet with it as well. This could be a well-founded reason for developing the literature review on smart regional development with focus on small municipalities.

That is why the authors have aim to make review of the literature on smart development with special attention on key elements necessary for launching smart development and examples of good practice in small municipalities around the world. The material of the paper could help small municipalities overcome lack of knowledge and awareness for applying concept of smart development.

Firstly, conceptual understanding of why do we argue that small municipalities have great challenge to apply concept of smart development should be given.

The first argument lies in scientific findings about small municipalities, which mostly pay our attention on issues about local activities on effective service delivery (Arcelus et al., 2015) and high dependency on financial support in a form of income transfers (Partridge et al., 2015). Such characteristics in bigger extent can indicate on attempts to improve the existing functional capabilities rather than to move to higher development stage. Widely accepted key elements of paradigm of smart development can stimulate

such thinking in small municipalities. These key elements relate to smartness, innovation and sustainability. Mostly, being in line with above-mentioned key elements requires development of new knowledge, technologies, patent activities etc., what in bigger or lesser extent can exclude small municipalities from the processes of smart development.

Finally, absence of unique approach to smart development at the global scale (Huggins et al., 2014; Krueger, 2010; Ostrovská et al. (2016) for the literature review) makes difficult to apply it correctly. Thus, territories that do not have big population with high concentration of high-educated and creative individuals have limited capabilities to become “smart” in their development due to lack of understanding how better to apply it.

Moreover, in Europe, the fact that more than 2/3 of the European population live in cities (European Union, Directorate General for Regional Policy, 2011) makes difficult actualization of debates on introducing paradigm of smart development in rural areas with small communities. Usually, low level of income, education, and economic activities, as well as insufficient proximity to knowledge centres characterize such areas (Steiner and Mossbock, 2014). Logically, that the role of small municipalities in context of smart development in such conditions remains under evaluated and possibilities to be involved in this process limited.

The project “Towards a smart rural Europe” (TASTE) within the framework of FP7 and the RURAGRI ERA-NET have aimed “to produce new policy-relevant knowledge” and “to shed light on the possible role played by rural areas in the regional dynamics of Europe” (Taste, 2016). The results of the project will fill the gap in knowledge on smart development in European rural areas. In parallel, each country can pursue targets on smart development, taking into account regional peculiarities. For example, the project 5.2.3. “Regional Development and Possibilities of Rural Areas in Latvia in Context of Knowledge Economy” of the National research programme EKOSOC-LV in Latvia aims to elaborate the model of smart and sustainable regional development in rural areas, i.e., in small municipalities (Latvijas Zinātņu Akadēmija, 2014).

The ongoing projects in a European and national scale focus on necessity to find what is “smart” for each region, taking into account the existing regional assets and peculiarities. For example, the United States of America build the process of smart development on successful process of recruitment, emphasizing existing assets and resources (EPA, 2015a). Such approach have been applied successfully in several small towns and cities in the United States of America and even revitalized small communities, which “have lost their main economic driver” (EPA, 2015a. p. 1).

Authors have designed the paper, taking into account that the emphasis made in the literature on key elements of smart development can provide a “shock” for rural areas. Small municipalities can mistakably realise that they do not have capacity for such approach. Therefore, authors try not only to highlight key elements of smart development, but also to show how small municipalities are able to be successful and in line with them. The paper is organized in four sections. The second section offers

conceptual key elements that should be taken into account during elaborating and implementing smart development strategies. The third section considers successful examples and approaches, when rural areas and small communities were able to be in line with key elements of smart development and successfully have realized such approach. The fourth section concludes the paper. Authors hope that the elaborated material, which covers both scientific and practical experience, would be well-grounded guide for starting actively elaborate and implement smart development strategies in small municipalities, thus addressing it to community and policy makers in small municipalities.

## **2. THE CONCEPT OF THE SMART DEVELOPMENT IN SCIENTIFIC LITERATURE**

### **2.1. Peculiarities of the Smart Development**

A vast of literature indicates that the new regional development policy requires strengthening of territorial competitiveness through discovering its particular resources, assets and rich diversity, thus encouraging that these factors contribute to territory development (ESPON, University Rovira i Virgil, 2012). Ensuring improvement of welfare within the new paradigm focuses on the local territorial resources and their usage, access to technologies, specifics of management and institutional capacity, development of territorial potential and other instruments for growth enhancing conditions. Making a right choice is a big challenge for every region. For example, Vanthillo and Verhetsel (2012) have concluded, using the example of the European Union, that policies and their strategic guidelines are important for the economic development in regions. Additionally, as Špilova (2014) highlights, using the example of structural changes in economy, content of regional policy can indicate on certain level of readiness to reach set aims. This type of policy should be drawn up taking into account the shift in paradigm of regional development. Vanthillo and Verhetsel (2012) draws attention to the differences between the classical and the new paradigm of regional development policy.

The classical paradigm conceptually focuses on production processes, highlighting, for example, the factors of production and their availability, as key issues. Thus, compensation of the existing weaknesses and responding to the crisis (for example, decline in production capacity) in the lagging regions is the most appropriate approach. Such a reaction to the problems holds the assumption that “one approach fits all,” i.e., all regions make greater emphasis on industry by developing specific industrial policies and attracting resources from outside (Vanthillo and Verhetsel, 2012).

On the other hand, Vanthillo and Verhetsel (2012) point out that the new paradigm of regional development policy understands modern regions as “learning regions,” whose development mostly depends on endogenous factors (e.g., local assets and knowledge), as well as on an innovative environment, communities, networks etc. Every region has the potential and the main task is to correctly identify and use it for lifting the regional competitiveness. One of the most effective ways of doing this is design and implementation of place-based approach and smart specialization strategy, involving

all interested stakeholders (Vanthillo and Verhetsel, 2012).

To sum up, one may note that today's regional development paradigm requires multidimensional, multidisciplinary and inclusive activities, taking into account regional potential, which opens up a wide range of development opportunities for small municipalities.

However, despite the relatively wide choice of development accents, offered by the new paradigm of regional development policy, regions are faced with certain "restrictions." Symbolically one can call key elements, which should be included in the regional development strategies and vision for being competitive, in such manner. These key elements are smartness, innovation and sustainability. This reveals the challenges for small municipalities, i.e., not only to be able to use existing resources and assets, but also to use those in accordance with these key elements.

### *2.1.1. Smartness*

One can reach smartness in regional development through smart specialization. As OECD's (2013) research "Innovation - driven growth in regions: The role of smart specialisation" discovers that the regions should clearly understand comparative advantages in terms of science, technology and economy and choose the best for specialization activities. Such a choice requires policy intelligence and governance, i.e., ability to see potential in certain areas today or in the future for creation of comparative advantage and to coordinate activities of all stakeholders involved in the process. Being smart in specialization requires adequate innovative policy. This is topical regardless of level of economic development (for example, for Nordic countries and for Eastern Europe as Lindqvist et al., 2013; Muscio et al., 2013) have discovered.

As Lindqvist et al. (2013) has concluded in the research "Implementing the concept of smart specialisation in the Nordic countries an exploratory desk study" the policy for introducing and realizing smart specialization depends on regional typology, potential and power. However, Lindqvist et al. (2013) points out that there are also uniform "factors of success." For example, cross-disciplinary and cross-sectoral cooperation and partnership between regions at local, national and global level for developing and implementing innovation strategies and policies. According to study "Can smart specialisation help overcome the regional innovation paradox" made by Muscio et al. (2013), the choice of appropriate regional innovation policy for economically less developed regions, for example, Eastern Europe (Poland, Hungary, Czech Republic, Slovakia, Slovenia, Latvia, Lithuania and Estonia) relates to managerial capabilities and EU structural funds in these region. Based on study results of Muscio et al. (2013), it is clear that a relatively modest performance in smart specialization in Eastern Europe is linked with weak management capabilities, especially during programmes' implementation, and inability of innovation systems to continue to absorb Research, Technological Development and Innovation funds.

### *2.1.2. Innovation*

The new regional development paradigm focuses on creativity and the promotion of the creative process. This because the creativity makes individuals, businesses, and regions unique and plays

a central role in development of production and consumption processes (Sleuwaegen and Boiardi, 2014). Sleuwaegen and Boiardi (2014) in the study "Creativity and Regional Innovation: Evidence from the EU Regions" chose "creative regional development" from the various explaining approaches of regional development and focus on the role of innovation in it, indicating the basic elements of the model. These basic elements are institutions (including political, economic, and social institutions, but excluding formal institutions), intelligence (ability and capabilities of region to accumulate information and to use knowledge for problem-solving), inspiration (ability of region to strengthen development of new ideas), infrastructure (taking into account the innovation infrastructure interpretation diversity Sleuwaegen and Boiardi (2014) chose to define it as a network bringing together research centers, universities and industry) (Sleuwaegen and Boiardi, 2014).

Sleuwaegen and Boiardi (2014) consider creative employers as basis for regional innovative activities and analyse them in innovative context in 83 regions in European Union. The authors focus on the regional differences by regional intelligence, because regional intelligence leads to regional inspiration. In turn, human capital and availability of technological infrastructure determines regional inspiration (Sleuwaegen and, Boiardi, 2014).

Sleuwaegen and Boiardi (2014) conclude that the inspiration and development level of national and regional institutions show strong direct and indirect effects on regional patenting activity, which is one of the most important indicators of knowledge. Finally, research results indicate that regional innovative performance depends on the availability of human capital and a well-developed business environment, as well as individuals with higher education, which act in more creative positions and areas (e.g., High-tech sectors of the economy, cultural sphere) (Sleuwaegen and Boiardi, 2014). Thus, Sleuwaegen and Boiardi (2014) invite regions to focus not only on improvements of business environment and attraction of investments, but also on the choice of more suitable innovation policy and its instruments.

### *2.1.3. Sustainability*

One can find that to be smart and innovative in development means to be sustainable. However, absence of a coherent approach to smart development in the world practice can lead to a difficulty in choosing the most appropriate approach of strategy, not only for small municipalities, but also for all kinds of regions. According to Krueger's (2010) research "Smart Growth and its Discontents: An Examination of American and European Approaches to Local and Regional Sustainable Development," there are two different approaches, one of which is practiced in Europe and the second - in the United States of America. The differences mainly lie in the understanding of the regulatory standards of smart development. Such standards are essential, because the free market often does not respond to the features of sustainable development (Krueger, 2010). Hence, the role of the state institutions, which assume responsibility for sustainable development outcomes at regional level, increases (Krueger, 2010). Balance between economics, social equality and saving of environment are the main challenges for sustainability in development.

The practice shows that usually accents are put on different priorities in infrastructure, ecology etc. in development strategies, leaving aside questions of social equality. This requires coordination, which can be promoted through the norms set and realized at national and regional level and dialogue between government representatives, society and business (Krueger, 2010). This type of state participation and monitoring in the promotion of sustainability in Europe is widespread, while in the United States of America it is much more moderate. Thus, regional governance is the factor that makes differences in approaches realized for reaching sustainability in development (Krueger, 2010). There are different opinions how is more efficiently. Krueger (2010) concludes that it is necessary to find a balance in interaction between the market and the public sector for the sustainable regional development. In Europe, it is being addressed by stricter rules in certain areas, the observance of which simultaneously brings the regions closer to sustainability, but at the same time Europe is also criticized for this approach (Krueger, 2010).

As the European Commission (2012) in the research “Connecting Smart and Sustainable Growth through Smart Specialization” indicates, smart specialization has a great role for the sustainable development. Additionally, interdisciplinary approach in development should be realized (for example, bio-economics), thus modernising and improving processes in traditional sectors of economic activity.

To sum up one may note that smartness, innovation, and sustainability are cornerstones of smart development, in turn collaboration between all stakeholders involved in the development process and balance between public and private sectors are preconditions for successful implementation of smart development.

## 2.2. Measuring of the Smart Development

How do we can measure smart regional development, understanding that the new paradigm of regional development policy allows that it can be different for each region? Measuring of the smart regional development requires the complex approach, which takes into account key elements mentioned above. Thus, scientists offer to measure smart development through prism of knowledge economy, regional uniqueness, relative development level and smart specialization (Huggins et al., 2014; Sánchez-Domínguez and Ruiz-Martos, 2014; Gedminaitė-Raudonė, 2014; OECD, 2013). Additionally, one may note continuing searches for the better way of measurement among differentiated approaches. The main interest within this paper relates to set of indicators, which can numerically characterize smart development. Such interest is based on brightly expressed challenge with availability and collection of statistical data in small municipalities.

### 2.2.1. Knowledge economy

As far as the label “smart” in processes of regional development brings creation of new knowledge in a front of all development activities, measurement of the processes within the framework of paradigm of the knowledge economy is necessary. In the light of today’s regional development paradigm, Huggins et al. (2014) in their research “Regional evolution and waves of

growth: A knowledge-based perspective” for studying of the regions’ economic evolution in the world within the framework of knowledge economy takes into account 20 indicators. These indicators are GDP, public and private R and D investments, patents, investments, Internet hosts, secure server, and broadband access, public spending on basic and secondary education and higher education, employment in five high or medium-high-tech industries, and the number of managers in the total regional employment. These are indicators, whose registration in small municipalities is often difficult or even partly or completely impossible. However, usage exactly of these indicators has allowed Huggins et al. (2014) to find out characteristics of regional development within the paradigm of knowledge economy and regional diversification in this context. As far as measurement of modern regional development requires measurement of knowledge accumulated, created, and transmitted in the region, but small communities have limited capacity to do this, the next approach of “relative development level” offered by Sánchez-Domínguez and Ruiz-Martos (2014) looks as possible alternative.

### 2.2.2. Relative development level

At the local level, challenges for regional development differ. For example, there is an opinion in the literature that today’s European regional development requires expanded approach that reflects not only the objective economic development level, but also the relative level of development, taking into account progress of welfare (Sánchez-Domínguez and Ruiz-Martos, 2014). Sánchez-Domínguez and Ruiz-Martos (2014) in their study “A Progressive Approach to the Measurement of Regional Performance in the European Union” found out that so far practices used for detection of regional differentiation, which are based exclusively on GDP per capita level, for distribution Cohesion Fund should be changed. Sánchez-Domínguez and Ruiz-Martos (2014) offer the new practice, i.e., relative regional development level, and measure it accordingly to the following criteria: Quality of life, income, inequality, education, employment by sex, healthcare, demographics.

Sánchez-Domínguez and Ruiz-Martos (2014) offer to take into account 16 different indicators: Life expectancy, death rate, infant mortality, transport accident, youth rate, rate of aging, poverty, males employment, females employment, gender inequality employment, long-term unemployment, males unemployment, females unemployment, males tertiary education, females tertiary education, GDP per capita adjusted. These indicators allowed authors to construct composite index for 269 regions in EU in 2009 (Sánchez-Domínguez and Ruiz-Martos, 2014).

In authors’ opinion, application of these indicators for characterizing relative development level is possible in small municipalities, at least partly. Application of such approach and usage of such set of indicators can lead to understanding of key factors that affect smart development in small municipality.

According to calculations made by Sánchez-Domínguez and Ruiz-Martos (2014), the most important factors affecting the relative level of regional development are women’s employment, GDP per capita adjusted, male employment rate and the proportion of men

with higher education. In addition, adjustments in evaluation of regional development as a result of research made by Sánchez-Domínguez and Ruiz-Martos (2014) not only identified a pronounced regional disparities, but also revealed that a different approach for the assessment of regional development could change the more traditional regional distribution of the developed and less developed regions. For example, after application of this approach one can find that 15 Eastern European regions become more developed, while 24 regions in Belgium, France, Germany, Greece, Italy, and Spain become less developed (Sánchez-Domínguez and Ruiz-Martos, 2014). In substance, it emphasizes the importance of the regional uniqueness, which also is considered in scientific literature.

### 2.3. Uniqueness

Gedminaitė-Raudonė (2014) in her study “Economic Assessment of Uniqueness of the Regions in the Context of the European Union” has stressed that the region’s uniqueness is a factor that provides the benefits for development in the region compared to other regions. In the light of the new regional development paradigm and goals set within the strategy “Europe 2020,” Gedminaitė-Raudonė (2014) links the region’s uniqueness and its evaluation with characteristics of 21<sup>st</sup> century - knowledge, learning regions, as well as the features that make up the differences between regions.

In her study about Lithuania, Gedminaitė-Raudonė (2014) emphasizes that the new regional development paradigm also requires new approaches to assessment, with the help of which it would be possible to identify not only the region’s negative traits and directions of their mitigation, but also the advantages of the region’s development directions. Design and calculation of the Uniqueness index, based on indicators of economic, geographic and cultural uniqueness according to Gedminaitė-Raudonė (2014) could provide knowledge on how to raise the effectiveness of regional development. Such approach provides wider possibilities to evaluate regional development in small municipalities, because it indicates only dimensions that should be included in the evaluation process and choice of indicators stays for each region. This, in turn, would allow small municipalities to operate with available statistical data sets and at the same time to be in line with requirements of measurement of smart development.

### 2.4. Smart Specialization

Finally, the OECD (2013) offers to evaluate the smart specialization. Smart specialization is a tool for implementing smart development and quantitative and qualitative analysis of so-called “5i” can shed a light on regional progress in terms of smart development. The “5i” are information, intelligence, imagination, interaction and implementation. Each of “5i” includes certain activities, which should be measured:

- Information - search of new and prospective activities, using information flows;
- Intelligence - continuous analysis of new ideas, questions, existing problems, tendencies etc.;
- Imagination - providing of society’s needs, using creative and technologically possible solutions;
- Interaction - systematic involvement of stakeholders in the

long-term cooperation to achieve common goals;

- Implementation - realization of set goals, taking into account the results of the analysis (OECD, 2013).

Approach of measurement of smart specialization through “5i” allows small municipalities to detect the progress of smart development, taking into account their own regional peculiarities and development priorities.

To sum up, one can indicate that modern regional development paradigm requires endless discovery of new approaches for measuring smart development and reevaluation of the existing, what ensures the “fresh” look on identification of the current situation.

In general, scientific literature can make small municipalities pessimistic regarding possibilities to be in line with smart development. Elaboration of the development strategies that fulfils requirements of the smart development and collection of statistical data that are necessary for monitoring of the progress of smart development place small municipalities in difficult situation. Absence of knowledge centres and distance from development centres makes possibilities of smart development in small municipalities limited. In other words, small municipalities have limited capacity to be in line with smartness, innovation and sustainability in their development activities. Moreover, availability and collection of statistical data that is limited due to absence or modest presence of certain technology-related and technology-driven development processes in small municipalities reduces possibilities to follow qualitatively for the smart development progress. However, data availability, harmonization, and possible mismatches between the data continue to be an important issue both at national and sub-national level, as well as outside the national borders (Gonzalez et al., 2015).

Questions and apprehensions of small municipalities raised after reading scientific literature on smart development can be cleared up by successful experience of smart development in such small communities. It is necessary to learn lessons from success stories and elaborated guidelines, which usually are not placed together. This paper contributes to the collection and explaining of the successful experience and guides.

## 3. THE SMART DEVELOPMENT IN SMALL MUNICIPALITIES: A PRACTICE

Steiner and Mossbock (2014) in their study “How “smart” are rural areas? A case study approach” have highlighted that debates on smart development are still young. Additionally, a studying of the literature shows different approaches (Ostrovská et al., 2016 for literature review on different approaches). However, there are several cornerstones already. For example, the smart specialization (OECD, 2013) and usage of the existing assets (EPA, 2015a) are the ways, how small municipalities can overcome unattractiveness of the territory for living and making business. Moreover, Steiner and Mossbock (2014) using number of scientific works indicate that core and peripheral regions need differentiated policies. Regional development processes depend on inherited structures

and existing dynamics and regional specialization should take into account regional capabilities.

However, Steiner and Mossbock (2014) also discuss on possible bottlenecks in smart approach related to possible ignorance of regional and sectoral peculiarities and variability that lies beyond innovation. Additionally, OECD (2013) in the research “Innovation-driven Growth in Regions: The Role of Smart Specialisation” has presented lessons from 12 OECD countries with 17 case studies that discovers that regions meet with several challenges in terms of smart development. Particularly, OECD (2013) has focused on smart development strategies, successful implementation of which is delayed by differences in ability to design and implement such strategies; to involve all possibly interested stakeholders; to set priorities; to detect right time and way how to support ideas of individuals; and to activate cross border collaboration. The common challenge in all case studies presented by OECD (2013) is necessity in restructuring of economy. This in bigger extent is topical for small communities as well, where economy may be dependent only on one sector (EPA, 2015a). However, in general, as EPA (2015a) in the report “How Small Towns and Cities Can Use Local Assets to Rebuild Their Economies: Lessons from Successful Places” has highlighted, limited capabilities to create new jobs is the most important challenge for small communities.

Self-assessment and certain tactics elaborated and applied in practice can stay beyond questions and apprehensions of small municipalities. This section presents overview of the scientific findings, practical guides and successful examples using materials of OECD (2013), United States Environmental Protection Agency (EPA) (2015b) and Steiner and Mossbock (2014) (the first stage of the TASTE project “Towards a smart rural Europe” (part of the RURAGRI ERA-NET) within the 7<sup>th</sup> European Framework Programme), as well as scientific findings from the ongoing project 5.2.3. “Regional Development and Possibilities of Rural Areas in Latvia in Context of Knowledge Economy” within the National research programme EKOSOC-LV.

The ability to design and implement the smart development strategy requires evaluation of the existing peculiarities of development level and clearly defined priorities that precisely reflect possibilities and potential of region. However, in case of small municipalities, one can highlight importance of interest and understanding of the process of smart development among members of small community. Therefore, it is significant how one tell about smart development to local small communities. The first step for successful joining the smart development processes is self-assessment, involving members of triple-helix and/or representatives of responsible development departments and agencies.

The data on the Table 1 offer guides, how regions can start the process of smart development. Critical considerations concerning regional potential, experience and priorities included in the number of activities and questions are prerequisite for becoming smart, innovative and sustainable in development. Two different approaches recommended to self-assessment in their sense

discover a common target as making development smart, but at the same time brightly different accents, tools and practice. These coincidences can be mentioned as follows:

- “Previously set priority - possibility to choice priority,”
- “Wide priorities - narrow priorities,”
- “Brief questionnaire according to guide - previously developed questionnaire,”
- “Wide range of participants of self-assessment - narrow range of participants of self-assessment.”

In general, the approach elaborated within the RIS3 call for activating of collaboration between triple-helix members and cross-border collaboration for successful restructuring of economy and choosing the “right” priority for smart specialization. Knowledge and uniqueness as key elements at regional level should be cultivated during the development processes (OECD, 2013).

In turn, the approach elaborated by the EPA (2015a) allow being in line with cornerstones of smart development, even in case, if only any local and specific priorities is chosen. Additionally, responsible departments and agencies make the first evaluation of planning documents and then communicate with community.

It is crucial, how local small communities understand the process of smart development. Taking into account limited resources and capabilities mentioned in the paper above, “easy” approach is more welcome for small communities. It is hard to collect all participants of triple-helix and make them to work on common targets. However, one can find that support of specific priority within the small municipality also is great challenge. In any way, in authors’ mind, the combination of both approaches can be good practice, especially for those small municipalities that are going to make first steps in processes of smart development.

The data presented in the Table 2 discovers different tactics for realizing smart development and revitalization in small communities. The practices come from case study (TASTE project) and United States Environmental Protection Agency (EPA).

The data on the Table 2 allow authors to conclude that one can put different accents at the centre of smart development processes. For example, the preliminary data elaborated by Steiner and Mossbock (2014) within the Taste project offer the focusing on economy, in turn, EPA’s guidelines (EPA, 2015a) offer possibility to reach strategic aims in economy through focusing on other priorities as well (Table 2). Additionally, the opinion concerning stakeholders involved in the development processes differ. One can make a choice in favour to targets, which can be reached mostly by professionals; however, a set of priorities may require involvement of every individual also regardless of professional competences. Such a choice defines the main drivers of development, e.g. business or all community’s members. In authors’ mind, combination of different approaches taking into account the possibilities of small communities could be the best practice.

The approach that mostly is promoted in Europe offers how small communities can join overall regional development strategy. Other approach that mostly is practiced in the United States of America

**Table 1: Different approaches of self-assessment for elaborating and/or improving smart development strategies**

<p>RIS3 Key for self-assessment (for innovation-driven growth through smart specialization) OECD (2013) offers for regions guidelines (key) for brief questionnaires knowledge-based economy as priority</p> <ul style="list-style-type: none"> <li>• Aim: The self-assessment was designed for helping each region to make the next steps in the process of development of smart specialization</li> <li>• Participants: Members of triple-helix (enterprise sector; science/knowledge and creative industries sector; government)</li> <li>• Priorities:             <ol style="list-style-type: none"> <li>a. Transformation of regional economy</li> <li>b. Knowledge-based economic development</li> <li>c. Region’s unique strengths and potentials</li> </ol> </li> <li>• Evaluation of processes, documents</li> <li>• Positions that should be assessed:             <ol style="list-style-type: none"> <li>a. Enterprise sector - focus on certain sectors of economic activity, collaboration with universities (R and D)</li> <li>b. Science/knowledge and creative industries sector - focus on those priorities of science and region, where regional specialists are represented or can be attracted, introduction of region and its uniqueness in global tendencies</li> <li>c. Government - definition of strategic approach, evaluation of the progress, application of the results of the evaluation, coordination of the mechanisms and processes with neighbouring regions, work towards attracting experts in RIS3 Strategy, development of budget for RIS3 strategy</li> </ol> </li> <li>• Application of findings:             <ol style="list-style-type: none"> <li>a. First step for starting RIS3 Strategy</li> <li>b. Making SWOT analysis</li> <li>c. Detecting potential stakeholders</li> </ol> </li> </ul>	<p>Smart growth self-assessment for rural communities EPA (2015a) offers for rural communities already developed questionnaires Possibility to choice priority (-ies)</p> <ul style="list-style-type: none"> <li>• Aim: The self-assessment was designed for helping rural communities to check smart growth strategies, prioritize strategies and identify factors that can lead “easily” to smart growth</li> <li>• Participants: Relevant departments and agencies, discussions with the community</li> <li>• Priorities:             <ol style="list-style-type: none"> <li>a. Local economy</li> <li>b. Community members</li> <li>c. Health, active living</li> <li>d. Natural habitats and ecosystems</li> <li>e. Productive agriculture</li> <li>f. Housing needs</li> <li>g. Historic and cultural resources</li> <li>h. Transportation</li> <li>i. Public infrastructure</li> <li>j. Energy efficiently, renewable energy</li> </ol> </li> <li>• Evaluation of documents</li> <li>• Positions that should be assessed:             <ol style="list-style-type: none"> <li>a. Policy and planning documents: Plans and codes</li> <li>b. Policies, programmes, initiatives</li> </ol> </li> </ul> <p>Guide from EPA (2015b) requires filling of one mandatory section and then offers possibility to focus attention only on the goals that are relevant to community</p> <ul style="list-style-type: none"> <li>• Application of findings:             <ol style="list-style-type: none"> <li>a. Understanding of strengths and weaknesses in strategies</li> <li>b. Choice of ideal strategy for each community</li> <li>c. Materials for workshops with the community</li> </ol> </li> </ul>
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Source: Compiled by the authors using EPA, 2015a, 2015b; OECD, 2013

**Table 2: Key elements of successful tactics applied for development and revitalization in small communities (smart development), case studies**

<p>Europa (the case studies) accent on regions at NUTS 3 level (2 regions in Austria [Carinthian Lavanttal and Styrian Vulkanland]) TASTE project (Steiner and Mossbock, 2014) Number of inhabitants: 53707 and 88843 (predominantly rural territories)</p>	<p>United States of America (the case studies) accent on small towns and cities (7 towns and cities in the United States of America - Bend (Oregon), Douglas (Georgia), Dubuque (Iowa), Emporia (Kansas), Mount Morris (New York), Paducah (Kentucky), Roanoke (Virginia)) United States Environmental Protection Agency (EPA, 2015a) Number of inhabitants: From 2900 (Mount Morris (New York)) to 98000 (Roanoke (Virginia)) (small towns and cities)</p>
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**Challenges for development: Small population, declining areas, weak business activity, absence of economic driver**

<p>A set of key elements to be smart in development Specialization embeddedness connectedness relatedness territorial approach collective learning local milieu</p>	<p>Priorities in activities Focus on diversified economic activities focus on niche markets high export intensity building of internal and external image learning-by-doing Co-operation with secondary and tertiary education institutions</p>	<p>A set of key elements to be smart in development Existing assets members of the community outside funding incentives cooperation clean and healthy environment</p>	<p>Priorities in activities Community-driven (citizen-driven) strategic planning of development (vision) community’s leaders 10 high-impact community’s projects initiated from people focus on small business event-relating spending revenues usage of architectural, cultural, artificial heritage sustainability - top priority set of goals for each 5 years during the implementation of 20-years vision main street program</p>
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Source: Compiled by the authors using EPA, 2015a; Steiner and Mossbock, 2014

helps to understand what the small community can do by itself for being “smart” in development processes.

The small communities in practice have demonstrated how it is possible to revitalize development even after hard decline in

key economic activities and infrastructure objects with different amount of population. For example, as EPA (2015a) reported, Mount Morris in the United States of America with only 2900 inhabitants made a focus on small business with elaboration of well-grounded support system with accents on intellectual and financial assistance. Other activity of Mount Morris was dedicated to the revitalization of historic buildings by participating in the relevant support programmes and involving local leaders in the process. Additionally, one can seriously appreciate high level of participation of community in the development process. Help of students in wide range of activities towards revitalization of the Mount Morris ensured the high level of communities' involvement in the development processes and was succeed. Thus, activities towards improving business environment and attractiveness of the place through available support programmes and activity of local leader and community contributed to the successful development of small business in the previously economically declined area (EPA, 2015a).

EPA (2015a) in its detailed report "How Small Towns and Cities Can Use Local Assets to Rebuild Their Economies: Lessons from Successful Places" presented successful practices of small communities with higher concentration of population as well. For example, EPA (2015a) offered the successful experience of Roanoke. The community higher with amount of inhabitants than in Mount Morris applied similar tactics for revitalizing economic and social environment after economic decline in manufacturing, services and transportation. First, Roanoke with high participation of the community developed the new vision for the future development during 20 years with certain plans and initiatives. Second, Roanoke selected the economic driver and aimed to revitalize old buildings. As a result, of certain activities realized according to the new development vision with participation of member of local community Roanoke succeed in attracting investments, creating new jobs and even received number of awards in different categories (EPA, 2015a).

Some practices at regional level in Europe discovers that lack of exclusively smart behaviour due to limited resources and experience can be compensated. These practices mostly focuses on business. For example, Steiner and Mossbock (2014) after analysing two regions at NUTS 3 level in Austria (Carinthian Lavanttal and Styrian Vulkanland) concluded that rural areas can be very competitive in niche markets and can demonstrate high export intensity. Such results rural areas can reach even with modest activities in R and D. Compensation of knowledge base according to opinion of Steiner and Mossbock (2014) can occur through deep co-operation between business and secondary education and transregional tertiary education institutions, learning-by-doing, employing skilled and educated individuals, building networks and external as well as internal image.

Other findings made by the researchers of the National research programme EKOSOC-LV in Latvia highlighted those factors, which mostly contribute to the smart development in small municipalities. The experience of Latvia (data of the national research programme EKOSOC-LV) allows indicating that innovative sectors of economy, well-educated, creative and active

individuals are crucial for smart development. One can find that factors that relate to the dimension people slightly dominate over the dimension economy. For example, analysis of statistical data and expert interviews in the Latgale region (economically less developed region in Latvia with 19 small municipalities) discovered key importance of dimension people for smart development in small municipalities. Individuals' initiatives and level of activity for creating and promoting innovative ideas, ability to be involved in learning, ability to develop business and be self-employed, ability to use the existing assets for raising income according to experts' opinion will be a driving force for being smart in development even in small municipalities.

Successful practice from different continents and different kinds of administrative territories (towns, cities, rural areas, regions, small municipalities) with common features as small number of population and weak business activity let authors to suppose that members of small community is the most important driver of smart development followed by the business. Attitude, interest and believe of local inhabitants provide foundation for ability of business to take a risk in this area and invest the money. The local inhabitants by their vision for development, activities and example can encourage investors.

#### 4. CONCLUSIONS

As theoretical findings indicate, debates on smart development are still young (Steiner and Mossbock, 2014), however, significant changes in paradigm of regional development policy already have occurred (Vanthillo and Verhetsel, 2012). Experts in the field highlight that possible ignorance of regional and sectoral peculiarities (Steiner and Mossbock, 2014), necessity in restructuring of economy (OECD, 2013), and creating new jobs (EPA, 2015a) are the main challenges for smart development.

The new paradigm finds roots in several cornerstones as smartness, innovation and sustainability (Vanthillo and Verhetsel, 2012; Lindqvist et al., 2013; Muscio et al., 2013; Sleuwaegen and Boiardi, 2014; Krueger, 2010). As a result, the literature on smart development mostly focuses on such key elements of development as technologies, patents, innovation, creation of new knowledge, which are hardly reachable in small municipalities. This, in turn, can promote misunderstanding among small municipalities concerning their capacities to be in line with the new paradigm. Additionally, the practices applied for assessment of the progress in smart development sometimes includes such indicators as patent activity, internet hosts, R and D investments etc. (Huggins et al., 2014), which are absent in the statistical databases of small municipalities. However, e.g. Gedminaite-Raudone (2014) (Uniqueness index) and Sánchez-Domínguez and Ruiz-Martos (2014) (relative development level) offer evaluation techniques that could be appropriate even for small municipalities.

The successful practices from Europe and the United States of America have proved that small municipalities can overcome the above-mentioned issues that challenge their ability to promote smart development (Steiner and Mossbock, 2014; EPA, 2015a, 2015b; OECD, 2013). This paper put accent on self-assessment

and key elements of successful tactics applied during the process of smart development.

The first step relates to qualitative self-assessment (a good tool for starting smart development) that should be resulted in the critical considerations concerning regional potential, experience and priorities. Self-assessment has been organized within the certain strategic framework. For example, within the RIS3 strategy, as OECD (2013) offers, or as briefly put accents on number of priorities that are important in everyday functioning of small community, as EPA (2015a) offers. Being in line with key for self-assessment within the RIS3 strategy requires to set knowledge-based economy and economic restructuring as the main priority for development, involving in the process representatives of all parts of triple-helix (OECD, 2013). In turn, EPA (2015a; 2015b) calls for choosing specific and significant for certain community priorities, first, involving in the evaluation representatives of local authorities. Difference between two approaches for self-assessment lies in a manner to choice the priorities for development and potential target audience for the questionnaires. In authors' mind, combination of two approaches depending on peculiarities of development process in small municipality and available local assets could be the possible solution for making first steps in smart development.

Case studies from the Europe and the United States of America show that key elements of successful tactics applied for development and revitalization in small municipalities may differ. For example, the approach that mostly is promoted in Europe offers how small municipalities can join overall smart regional development strategy (OECD, 2013). Other approach that mostly is practiced in the United States of America helps to understand what the small community can do by itself for being smart in development processes (EPA, 2015a, 2015b). Combination of both experiences can contribute to better understanding of priorities and main implementers of smart development in small municipality.

In general, the main lessons for small municipalities that comes from the literature review on smart regional development indicate on crucial role of interest, believe and activity of members of local community to join the new development paradigm.

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