

SMART SPECIALISATION STRATEGY: THE TERRITORIAL DIMENSION OF RESEARCH  
AND INNOVATION REGIONAL POLICIES

Carmelina BEVILACQUA<sup>1</sup>, Vincenzo PROVENZANO<sup>2</sup>, Pasquale PIZZIMENTI<sup>3</sup>, Carla  
MAIONE<sup>4</sup> Francesco CAPPELLANO<sup>5</sup>, Alfonso SPISTO<sup>6</sup>

**SOMMARIO**

The paper aims at investigating how EU Regions incorporated the place-based approach (Barca, 2009) to plan their Research and Innovation Smart Specialisation Strategy (RIS3) within the current Programming Period 2014-2020. According with Barca, “a place-based policy is a long-term strategy aimed at tackling persistent underutilisation of potential and reducing persistent social exclusion in specific places through external interventions and multilevel governance. It promotes the supply of integrated goods and services tailored to contexts, and it triggers institutional changes.” According with European Commission (2010) about “Regional Policy contributing to smart growth in Europe 2020”, the development of S3 is crucial “to maximize the impact of Regional Policy in combination with other Union policies”. Smart specialization strategies become a key factor to stimulate private investment. And “they should be integrated into regional development strategies in order to ensure an effective partnership between civil society, businesses and public authorities at regional, national and European levels”. If we consider the theoretical background on S3 (Foray, 2000) as “a process addressing the missing or weak relations between R&D and innovation resources and activities on the one hand and the sectoral structure of the economy on the other” the link between S3

---

<sup>1</sup> Università degli Studi Mediterranea di Reggio Calabria, Salita Melissari, 89124, Reggio Calabria, e-mail: [cbevilac@unirc.it](mailto:cbevilac@unirc.it) (corresponding author).

<sup>2</sup> Università degli Studi di Palermo, piazza Marina 61, 90133, Palermo, e-mail: [vincenzo.provenzano@unipa.it](mailto:vincenzo.provenzano@unipa.it)

<sup>3</sup> Università degli Studi Mediterranea di Reggio Calabria, Salita Melissari, 89124, Reggio Calabria, e-mail: [pasquale.pizzimenti@unirc.it](mailto:pasquale.pizzimenti@unirc.it)

<sup>4</sup> Università degli Studi Mediterranea di Reggio Calabria, Salita Melissari, 89124, Reggio Calabria, e-mail: [carla.maione@unirc.it](mailto:carla.maione@unirc.it)

<sup>5</sup> Università degli Studi Mediterranea di Reggio Calabria, Salita Melissari, 89124, Reggio Calabria, e-mail: [francesco.cappellano@unirc.it](mailto:francesco.cappellano@unirc.it)

<sup>6</sup> Università degli Studi Mediterranea di Reggio Calabria, Salita Melissari, 89124, Reggio Calabria, e-mail: [alfonso.spisto@unirc.it](mailto:alfonso.spisto@unirc.it)

and place-based approach is envisaged is twofold: the former is based on their characterization of a development policy, the latter is based on the value of the different geographical, social, economic features that each territory can express. The transformation of these two theoretical approaches in a policy, within the cohesion policy reform, is recognizable in two drivers for programming the new Agenda 2020. The first is the Theory of Change as a fundamental approach to be followed in building the programming process (why those output/results are necessary to reach the “change”). This implies the use of “indicators” as expression of the policy and related to the value of different territories can express to control and measure the expected change. The second is more related to stimulate at regional level an integrated approach to reach a critical mass of the investment effects/impacts. The current phase of monitoring of the RIS3 through the Sevilla Platform, allows comparing the regional response to the integrated approach envisaged in the link of place-based and smart specialization policies.

## 1. Introduction<sup>7</sup>

The European Union is trying to come out of the recent and severe economic crisis that has had serious consequences from the socio-economic perspective at the macro and micro level. Measures set by the European Commission have been inspired by the so called “austerity principles” pushing the academic and political debate toward the impacts and the effectiveness of regional development policies. National and Regional governments are called to set up innovative solutions in order to boost economic growth and development aiming at empower Cohesion Policy and reduce disparities among European regions. The interest generated by the debate has made thinking about the special role that the regional government place in pushing development towards innovation by being more aware that no change is possible without choices relevant for the context. In this sense a “new” approach based on Smart Specialisation Strategies drives toward this direction, no more a perspective designed within the Operational Programmes just in responding to the general requirement of European Commission. This kind of approach could be an interesting way to reach the goal of “Territorial Cohesion” by overcoming the conflict that an European strategy could generate in the implementation of territorial transformations due to the Public-Private investment allocated within Operational Programmes of Structural Funds. Within this approach the enrichment of a Social Perspective as a mainstream of expected change of the context toward a local resources empowerment within the global vision.

In this paper we aim to highlight how European Regions have incorporated the Place-based approach to plan their Research and Innovation Smart Specialisation Strategy (RIS3) within the current Programming Period 2014-2020 taking into account the “territorial dimension”.

If we consider the theoretical background on S3 (Foray, 2000) as “a process addressing the missing or weak relations between R&D and innovation resources and activities on the one hand and the sectorial structure of the economy on the other” the link between S3 and place-based approach envisaged is twofold: the former is based on their characterization of a development policy, the latter is based on the value of the different geographical, social, economic features that each territory can express. The transformation of these two theoretical approaches in a policy, within the cohesion policy reform, is recognizable in two drivers for programming the new Agenda 2020. The first is the Theory of Change as a fundamental approach to be followed in building the programming process (why those output/results are necessary to reach the “change”). This implies the use of “indicators” as expression of the policy and related to the value of different territories can express to control and measure the expected change. The second is more related to stimulate at regional level an integrated approach to reach a critical mass of the investment effects/impacts

In the first part we traced the pathway of territorial dimension incorporated in European Policies starting from the European Spatial Development Perspective (ESDP, 1999) till the Place-based concept (2009). Since the 80s the territorial dimension has been taken into account by the European Union and from the 90s the “spatial approach” came into the debate thanks to the European Spatial Development Perspective (ESDP) and its “polycentric” view for the spatial development of European Regions.

The second part is focused on the definition of the concepts that changed the settings of the Cohesion Policy for the current programming period (2014-2020). The Smart Specialisation concept introduced by Foray (2009) and the Place-based approach introduced by Barca (2009) that became the paradigm of the Cohesion Policy.

As a matter of fact Smart Specialisation Strategies represent a turning point for the European Cohesion Policy. The increased attention toward regional “specialisations” not just internal, as in the past, but toward the external dimension represent a key point in mitigating negative economic effects deriving from globalisation processes. In this perspective the territorial dimension become crucial in RIS3 plans implementation. As highlighted by the Barca Report (2009) it is necessary the shift from a “space-blind” to “place-based” approach. This renovated attention to the “place” if well implemented by regions could reach its main aim to satisfy efficiency (the capacity of a region to exploit its territorial potential) and equity

---

<sup>7</sup> Lavoro svolto da CLUDsLAB (<http://www.cluds-7fp.unirc.it/>)

principles (capacity of each region to provide equal opportunities to their citizens). However difficulties can arise. Especially the so called “me too effect” i.e. the intention of underdeveloped regions to adopt smart specialisation strategies to ambitious for their potentials deriving from regions more developed. Many regions decided to invest in sectors such as ICT, biotech, nanotech etc not considering the existence or not of a potential in this sector in their territory to reach the objective. This effect could be dangerous because is the opposite of smart specialisation that is based on the existing potential of the territorial context and on the capacity to act on thanks to the strategies. The results could be the opposite of that expected increasing the gap and differences among regions. Even in this case the territorial dimension is crucial and it could be investigate if and how RIS3 already proposed took into account the place-based approach.

The third and last part of the paper is focused on the implementation of National and Regional RIS3 Plans, introducing the MAPS-LED Research Project (Horizon 2020 – Marie Swłodowska Curie RISE – Actions) perspective as a way to investigate how is possible to regenerate local economic areas through Smart Specialisation Strategies taking into account place-based approach.

## **2. Territorial Dimension and Cohesion Policy: from polycentrism to place-based approach**

Since the 80s the main aim of the Cohesion Policy has been to strengthen the economic and social cohesion in order to reduce disparities between more developed and underdeveloped regions. Although the term “territorial” is not the main word emerging from the Cohesion concept, it is (and it was) embedded and implicit and it is crucial in order to reduce the disparities (also territorial not only socio-economic) among European regions (it has been inserted in EC Treaty in 1997, art. 3 of TEU and art. 2 of TFEU). Territorial Cohesion principle is about ensuring the harmonious development of all these places and about making sure that their citizens are able to make the most of inherent features of these territories (EC, 2008) and as stressed by D. Hübner (Böhme et al 2011) “it is a fundamental objective of regional planning in the Union and provides the *raison d’être* for regional development policy”. As a matter of fact, the European Union is characterised by a huge territorial diversity among regions that makes necessary the inclusion of territorial aspects in implementing the European Policies.

“Territorial Cohesion, if taken seriously and on condition that is given a broader interpretation than simply the provision of services of general economic interest, will feed into existing EU Policies by adding a territorial dimension to them, thereby making them more effective and efficient” (Zonneveld and Waterhout, 2005 quoted in Waterhout 2008: 83).

According with Waterhout (2008) when referring to policies it is more appropriate to use term “spatial” rather than “territorial” assuming that “territory refers to socially constructed places, whereas spatial refers to less clearly defined areas, which seem to be of a larger scale encompassing territories” (Waterhout 2008: 14). This conceptual issue has been the core of the scientific debate that have brought to consider the spatial dimension in EU policies and to take into account the spatial impacts of their implementation. Arguably, the key challenge for integrating a territorial dimension in EU policies is to develop convincing storylines about the added value of a spatial approach and to create a sense of urgency in order to get the players mobilised (Waterhout 2008: 49).

Thanks to the **European Spatial Development Perspective (ESDP)**, in 1999 European Union Members States have defined the relevance of the spatial dimension in order to achieve a more balanced and sustainable development of the European Territory. “Polycentric development is the only substantive spatial planning concept in the European Spatial Development Perspective (ESDP) with the potential to integrate the interests of the many parties involved” (Waterhout 2008: 56). The ESDP Document represented the attempt to put spatial planning on the European policy map (Waterhout 2008).

One of the main issues at that time, and one of the main that is animating the current debate (see Faludi 2015) is represented by the deep differences among European Member States that go further the simple territorial characteristics of each European regions. The core question of the discussion was (and it is) how is possible to facilitate the introduction of a common spatial view for the Union in the different administrative

and legislative system of member states? In this sense the ESDP built a bridge among the perspectives of Member States (Waterhout, 2008: 56).

The main two political options of the ESDP were about:

- “Strengthening of several larger zones of global economic integration in the EU, equipped with high quality, global functions and services, including the peripheral areas, through transnational spatial development strategies”;
- “Strengthening a polycentric and more balanced system of metropolitan regions, city clusters and city networks, through closer co-operation between structural policy and the policy on the Trans-European Networks (TENs) and improvement of the links between international/national and regional/local transport networks (CEC, 1999: 21 quoted in Waterhout 2008: 60)

In 2007 the **Territorial Agenda** of the European Union (Towards a more competitive and Sustainable Europe of Diverse Region) confirmed the will to “promote a polycentric territorial development of EU” aiming at the territorial integration and securing a better quality of life with respect of the regional and local potentials. As reported in the official document, the EU Cohesion Policy has to take into account the territorial needs and characteristics in responding more effectively to the specific geographical challenges and opportunities of the regions and cities (Territorial Agenda of the Union 2007). The Territorial Agenda (2007) was integrated by the **Leipzig Charter** on Sustainable European Cities, that highlighted the relevance of the urban dimension and the need of an integrated urban development policy making possible the integration between (urban) development policy and territorial cohesion policy in order to achieve a sustainable development. In this perspective cities acquired a central role. They have been assumed as “parts of a polycentric pattern to ensure their added value for other cities in rural and peripheral areas” (Territorial Agenda of the Union 2007). As defined in the Leipzig Charter (2007) the integrated urban development policy is a process in which the spatial, sectorial and temporal aspects of key areas of urban policy are co-ordinated. With the Charter, cities and regions arise as key elements for a long-term sustainable development. The Charter recommended: “the use of integrated urban development policy approaches” and to pay attention “to deprived neighbourhoods within the context of the city as a whole”. This new approach has paid attention to crucial cities’ issues of the last decades: the need to ensure high-quality public spaces, the need to modernise the infrastructure networks, innovative educational policies, set up new strategies for upgrading the physical environment, strengthen local economy and labour market policy, efficient and affordable urban transportation. In order to apply an integrated urban development policy the role played by Member States and National government is important for the setting of national urban development policies and for stimulating innovative solutions at all territorial levels. In this perspective the Member State but also regional governments have to take into account the European Structural Funds that can represent a leverage if focused on potentials and opportunities for territories. Integrated Urban Development is not just an urban policy focused on spatial planning declined by each member state according with its own administrative structure, it is a policy opened to the integration with other European policies and Funds.

In 2010 the European Commission launched the **Europe 2020 strategy**, that can be seen as the general Road Map of EU policy targets within this decade in regards to central policy fields (Schmitt, 2011). Just one year later the Ministers of Spatial Planning and Territorial Development have reviewed the **Territorial Agenda** drawn up in 2007 adapting it to the Europe 2020 Strategy. The first part reinforces the relevance of the Territorial Cohesion for the Union because “it enables equal opportunities for citizens and enterprises, wherever they are located, to make the most of their territorial potentials” (Territorial Agenda 2020: 4).

Within the debate around the territorial dimension and the territorial cohesion the role of cities in development policies increased during the last decades. Since the end of the 80s urban dimension has been taken into account in the European Structural Funds as a result of the recognition of cities’ role in economic growth and competitiveness (Atkinson, 2014). During the middle of 90s European Commission launched the URBAN Programme an initiative of the European Regional Development Fund (ERDF) to achieve sustainable development in distressed urban districts characterised by socio-economic and environmental decay. During the programming period 2000-2006, within the second part of the URBAN II programme was

introduced the URBACT network which aim was to support and continue the exchange of information on sustainable urban development across Europe. In 2007-2013 programming period the ERDF includes a “stronger urban element” (Atkison, 2014: 4) providing through the integration of Structural Funds (European Social Fund and Cohesion Fund) a range of initiatives to implement urban development project.

Accordingly with one of the recommendations of the Charter was to “coordinate and spatially focus the use of funds by public and private sectors players”. Thanks to the cooperation with The European Central Bank (ECB), the European Commission developed in 2000s a set of financial engineering mechanisms aiming at contributing to the implementation of the integrated urban development approaches and strategies. This is the case of the JESSICA (Joint European Support for Sustainable Investment in City Areas) and JEREMIE Funds (Joint European Resources for Micro to medium Enterprises) that will be relevant in the 2007-2014 programming period. These are two financial engineering mechanisms set by the European Central Bank (ECB) and European Commission for leveraging private capitals into the implementation of integrated urban development strategies (Liepzig Charter, 2007).

Along this overview on the territorial dimension in implementing EU Policies two main key aspects arise: the “territorial potentials” and the “equal opportunities” principles that represent the basis of the **Place-based approach** introduced by Barca (2009) considered the core of the European regional development policy for the programming period 2014-2020 together with the concept of Smart Specialisation Strategy.

This new “regional-economic thinking”, as defined by Faludi (2015), is a new paradigm arising thanks to the Barca Report (2009) that highlights the importance of local contexts on grounds of both efficiency and equity (Faludi 2015).

The need to rethink on economic development strategies, both on national and regional/local level, highlights the importance of factors “such as human capital and innovation (endogenous growth theory), agglomeration and distance (new economic geography), and institutions (institutional economics) (Barca et al. 2012: 136). These factors are the results of a period of radical political, institutional and economic change started in the late 80s that brought to the revision of regional economic development policies. Within this context “innovation” acquired an increasing importance as a cross-cutting process able to empower the potentials of places in achieving a more balanced and sustainable development. This is the new paradigm at the core of the new Cohesion Policy for the programming period 2014-2020.

Globalisation processes brought to the deep rethinking of development processes and strategies as emerged from a series of influential reports between 2009 and 2010. These reports have highlighted a sort of contrast between spatially blind policies versus spatially oriented (place-based) policies.

One of the more influential has been the World Economic Bank Report (2009) *World Development Report Reshaping Economic Geography*. It emphasises the relevance of new economic geography theory which advocates the advantages associated with the agglomeration effects of large cities: development and growth will be unbalanced and attempts to spread economic activity will not only reduce poverty, they will also undermine growth and prosperity (World Bank, 2009 quoted in Barca et al. 2012: 138). The synthesis of this report is a development model based on “spatially blind” strategies, meaning that “space” is not taken into account based on the concept that the lives of individuals are more important than the “place” of where they live and work. It is the so called people oriented policy that aims at creating development starting from people needs with subsequent spatial consequences.

Following this line, the Sapir Report (2004 quoted in Barca et al. 2012), *An Agenda for a Growing Europe*, an independent report promotes space-neutral intervention primarily focusing on institutional reforms to empower European Cohesion Policy not taking into account at all spatial dimension or urban growth issues.

Conversely, “In contrast to the space neutrality of these two reports, other reports adopt a fundamentally different position: space matters and shapes the potential for development not only of territories, but, through externalities, of the individuals who live in them” (Barca et al. 2012: 139). The most important reports that envisage the importance of a place-based approach are the Barca Report (2009) *An Agenda for a Reformed Cohesion Policy*, and the OECD Report (2009a) *How Regions grow*. The first, is built on strong theoretical

arguments highlighting the importance of place-based approach in reducing “persistent underutilization of potential and reducing social exclusion” (Barca 2009 quoted in Barca et al. 2012: 139). The second, arrived at similar conclusions of Barca’s Report, is built on strong empirical analyses and concludes that place-based interventions are defined as “*integrated regional policies* (see also Pike et al., 2006)—co-ordinating infrastructure provision, with schooling, business development, and the promotion of innovation, as a means to achieve both greater local development and, through geographical spill-overs, greater aggregate growth” (OECD, 2009° quoted in Barca et al. 2012:139).

The contrast that emerged during last decade about regional economic development policies and strategies occurred between these two different perspectives on what these policies have to be focused on: spatially blind (people based) versus spatially oriented (place based) approach. Spatially blind approaches, stemming from the World Bank Report (2009) sees in the individual boost of incomes, productivity, and knowledge the main drivers for regional economic development considering “space” as an “effect” of these policies. In this case is “mobility”, of people, capitals, goods, ideas that are able to enable and spread the development across territories

Place-based approach stem from a different perspective arguing that the interaction between institutions and spatial dimension is crucial for development. In this scenario, regions and cities have the potentials to contribute to regional economic growth independently by their size or density “because it is the performance of the urban and regional system as a whole which is critical, rather than just the cities at the top of the urban hierarchy” (Barca et al. 2012:140).

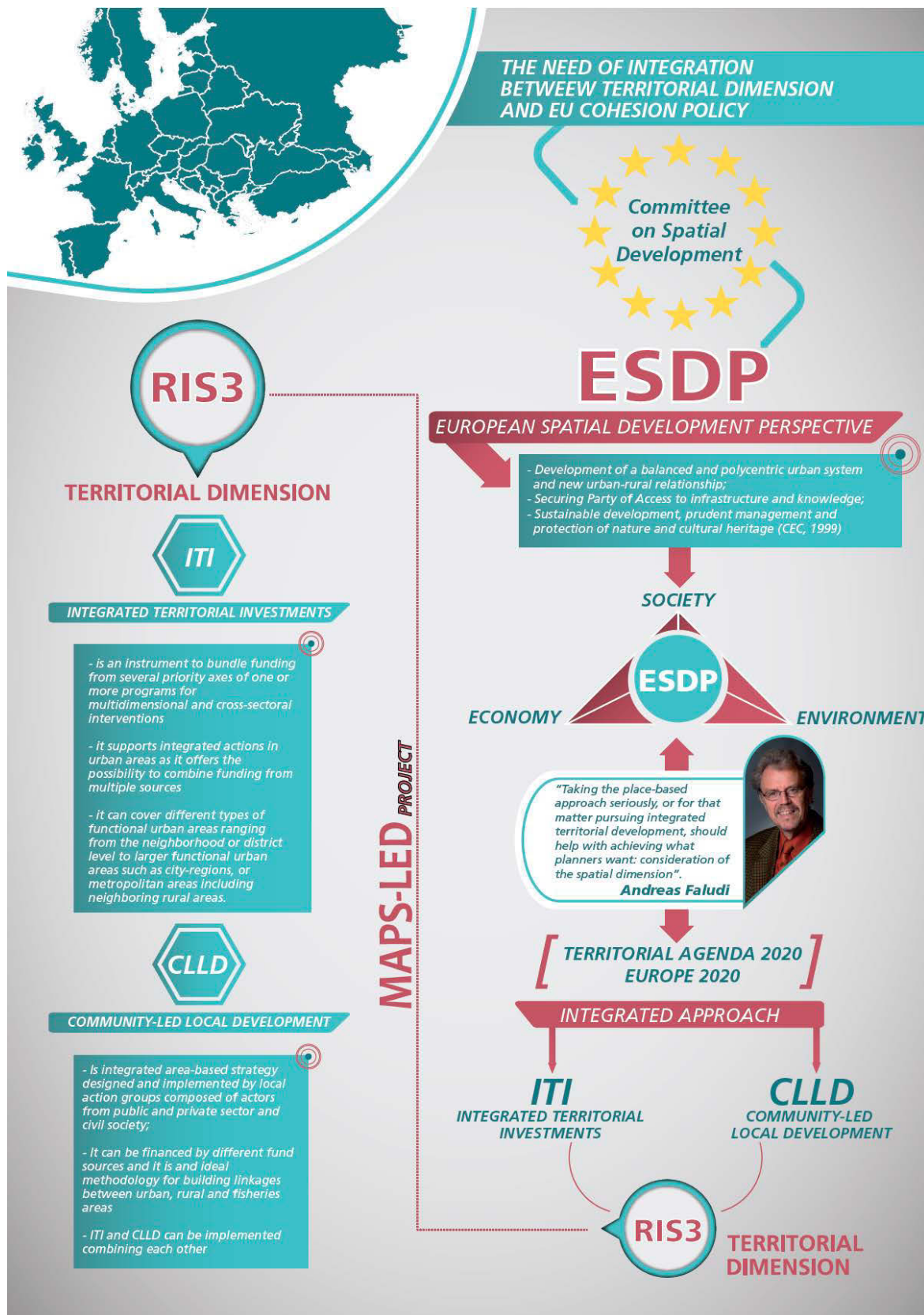


Figura 1 – The Territorial Dimension in European Cohesion Policy. MAPS-LED Research Project, (Horizon 2020 -Marie Skłodowska Curie Actions - RISE) International Open Panel Discussion Brochure. Reggio Calabria, Italy, 27-28 May 2015



### **3. Smart Specialisation Strategy: from a theoretical concept to European policy**

The Lisbon Strategy (2000) aimed at leading the European economy from a traditional production-consumption based economy to the so-called Knowledge economy. Beyond the economic reasons and the European macroeconomic situation at that time, the term “knowledge” seems to be the key for change for the future policies. As a matter of fact, for the European Union, the “knowledge” is a triangle composed by Research, Innovation and Education. In 2005 with the aim to reinvigorate the Lisbon Strategy, the European Commission appoints the “Knowledge for Growth Group”, a group of economists specialised in Innovation economy with the task to address the shift toward the knowledge economy for the Union. One of the outputs of this group was the so-called concept of Smart Specialisation elaborated by Dominique Foray et al. (2009,2011). The passage from the academic (maybe abstract) concept into policy arena has been defined by European Commission official Documents that recognises the relevance of S3 concept as new paradigm for the programming period 2014-2020 to achieve the goal of a “smart, sustainable and inclusive growth” (Europe 2020 Strategy), reducing disparities among regions and empowering “Cohesion” (social, economic, territorial). The effective shift from concept into policy came with the new Rules for the European Structural Funds, the Union’s financial tools in achieving European Cohesion Policy. Thus, now European Regions are called to draw up National/Regional Research and Innovation Smart Specialisation Strategies (RIS3). The European Commission, on defining the contribution of Regional Policy for Smart Growth (COM....), identified as a key issue the creation of a common “Platform” for S3. The year after its establishment, the Platform, composed by academics, regional authorities and stakeholders, provided the “RIS3 Guide”, a document in which was explained a step-by-step procedure in order to design an effective regional smart specialisation strategy. However, two questions seem to be less investigated within RIS3 plan: the spatial perspective, in physical, economical and social dimension, and the social perspective, in terms of expression of continuously changing behaviours, which sometimes is not captured from the governance structures. Place-based approach (Barca, 2009) could extrapolate some peculiarities of territories and Social Innovation could represent a sort of S3 institutional framework.

### **4. The Smart Specialisation Concept**

Although “innovation” and “smart” seem to be the keywords of the new Europe-area public policies design process, the introduction of the concept occurred after the European Council of Lisbon (2000) where the Union arises the clear objective to develop a knowledge-based economy for the future. In a certain way the Lisbon Strategy represents the starting point of a process that will bring towards the Smart Specialisation Strategies. The ambitious aim was conceived in a macroeconomic situation different from the current one, in which globalization was a challenge and political-institutional changes of the 90s were introducing structural socioeconomic and territorial changes.

The key point of the Strategy was to prepare the shift “toward a competitive, dynamic knowledge-based economy”. Starting from the idea that for the European Union the concept of “knowledge” is a triangle composed by Research, Innovation and Education, it can be considered an essential engine for productivity growth contributing to European competitiveness in a globalised system in which competitors can take advantage such as a lower labour cost or natural resources availability.

In 2005, the revised Lisbon Strategy set out the “Lisbon Action Plan” focused on three main priorities:

1. Stimulate Growth;
2. Jobs;
3. Governance.

In the same year the European Commission, Janez Potocnik, with the aim to reinvigorate the Lisbon Strategy, appointed a group of economists specialised in “innovation economy” (Knowledge for Growth Group) in order to provide advices (or addresses) on some key aspects:

- The contribution of knowledge for a sustainable growth;
- The policy-mix necessary in order to create, spread-out and use knowledge;

- The role of different actors in order to stimulate knowledge-based society and reinforce their linkages.

In these three key concepts some differences arise with the Lisbon Strategy. Firstly, now the term knowledge-based society is used instead of knowledge-based economy. Secondly the need of a policy-mix (integrated approach) seems to be essential in order to reach European Goals. Thanks to the “Knowledge for Growth Group” in 2009 the “Smart Specialisation Concept” came out (Foray et al. 2009, 2011). However it has to be said the spatial analysis (regional) of innovation policies was already at the core of the scientific and policy makers community attracting the attention of regional economic development specialists. One of the main arguments discussed by the “Group” was the territorial attractiveness based on the scarcity of a specific resource: agglomeration economy. A scarce resource can be depleted quickly if in the same site the competitors increase. This simple concept described well the European situation in research and innovation that was the result of two linked factors (Foray, 2009):

1. The fragmentation of the European public research system that limited the agglomeration processes hampering the creation of world-class centres (crucial to compete in a globalised economy);
2. The so-called “me too effect” i.e. the will of National and Regional Authorities to invest in “fashion” sectors without any vision of the future and not taking into account territorial specificities.

This was the starting point from which emerged the idea that a possible solution for regions suffering location factors and global competition was the capacity to build an attitude to “self particularisation” in stimulating new research activities linked to the existing productive structures able to transform themselves (Foray, 2009). According to Dominique Foray (2015), smart specialisation is ‘the capacity of an economic system (a region for example) to generate new specialities through the discovery of new domains of opportunity and the local concentration and agglomeration of resources and competences in these domains’.

The core of the “Smart Specialisation” concept is represented by the “entrepreneurial discovery” that can be considered a sort of pre-condition in materialising innovation. Foray (2009) defines it as an essential phase, the crucial link for reorienting and renewing a system. In this phase the entrepreneurial knowledge is the main driver because it is composed by a different concept of both “vision” and “knowledge”, combining science and technique potential with the potential growth of the market.

Foray (2009), in proposing a design process in order to build a Smart Specialisation Strategy, set out five key points:

1. Problem identification and creation of the structural conditions to increase the possibility of entrepreneurial discovery;
2. To build an inclusive strategy;
3. Implementation and evaluation process in order to select emerging activities and evaluate ex-post effects;
4. Set up an “exit-strategy” after a period and opportune mechanisms to continuously support the discovery and prioritization processes;
5. Select the coordination problems that can become drivers for the regional economic growth.

Thus, the entrepreneurial discovery phase is crucial for several factors. First of all, It lies on the fact that a policy based on the entrepreneurial discovery process as priorities identification is not a policy that says “what to do” but “how to do”, underlying the relevance of the process than the product. The entrepreneurial discoveries effects can be maximised if considered in the potential policy actions, that Foray (2009) identified as follows:

- Information externalities;
- Aligning incentives through intelligent policy design;
- Funding experiments and discoveries;
- Capabilities;
- Guiding discoveries.

This principle outlines the unawareness of governments in defining “a priori” priorities that can occur in the future. Thus entrepreneurial discovery become an important part of policy actions. It’s a necessary process able to generate information on future Research and Innovation Fields. Thanks to these information governments have to choose new activities according with their potential impacts, feasibility, proximity to market, relevance for the regional economy, number of actors involved etc. In Smart Specialisation Strategy process sectors are not a key area of intervention. That is because the relevant action concerns activities that enable being aware of regional knowledge economy that can be considered as basis for Smart Specialisation Strategies. The monitoring and evaluation process in RIS3 is crucial. Ex-ante and Ex-post evaluation are necessary to evaluate the success or the failure of the chosen actions.

National and regional authorities across Europe shall design smart specialisation strategies in entrepreneurial discovery process, so that the European Structural Investment Funds (ESIF) can be used more efficiently and synergies between different EU, national and regional policies, as well as public and private investments can be increased (Guide to Research and Innovation Strategies for Smart Specialization (RIS 3) 2012).

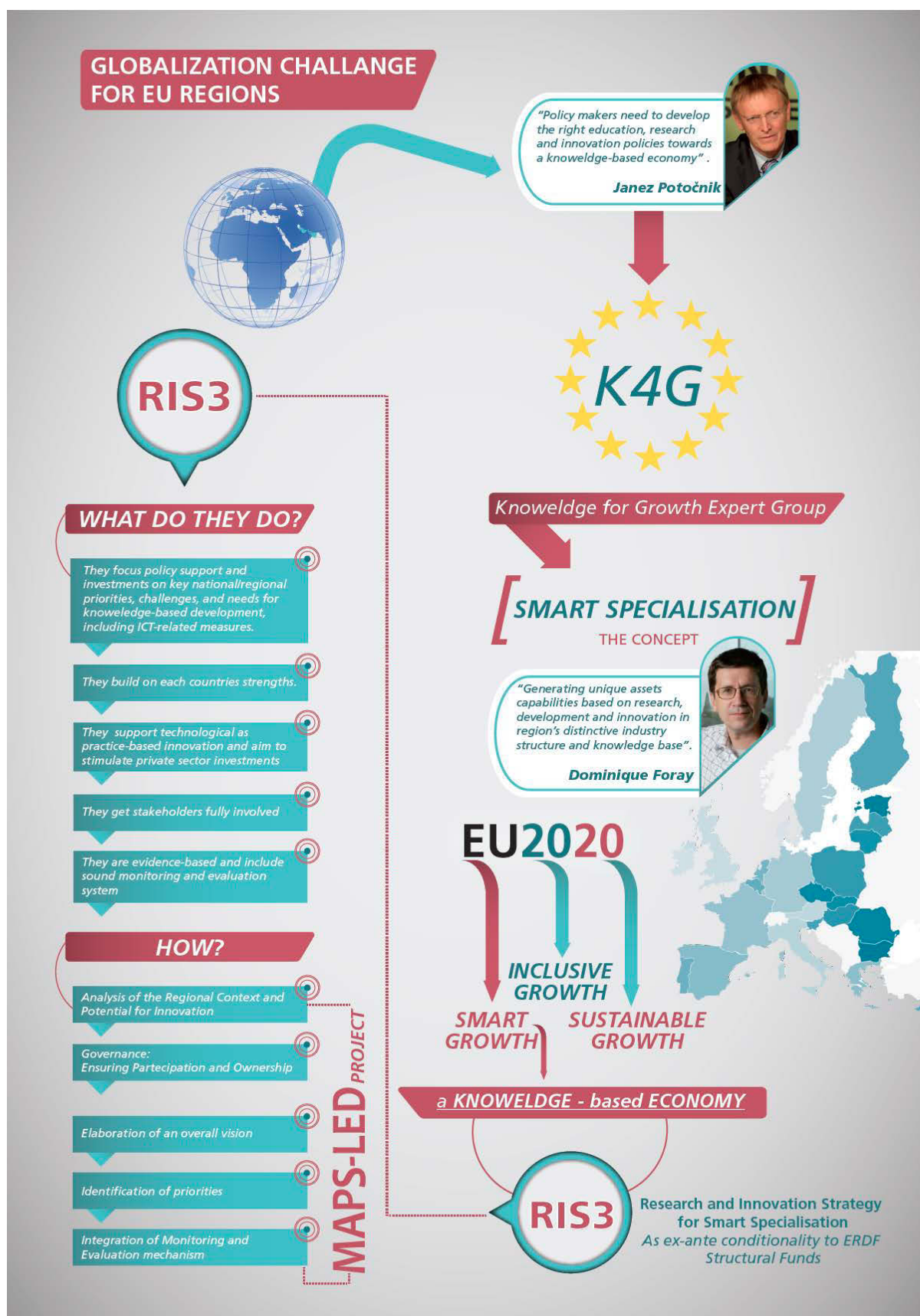


Figura 2 - S3 from concept to policy. MAPS-LED Research Project (Horizon 2020 -Marie Skłodowska Curie Actions - RISE), International Open Panel Discussion Brochure. Reggio Calabria, Italy, 27-28 May 2015

## 5. S3 in the Cohesion Policy for the period 2014-2020

The transformation of these two theoretical approaches in a policy, within the cohesion policy reform, is recognizable in two drivers for programming the new Agenda 2020. The first is the Theory of Change as a fundamental approach to be followed in building the programming process (why those output/results are necessary to reach the “change”). This implies the use of “indicators” as expression of the policy and related to the value of different territories can express to control and measure the expected change. The second is more related to stimulate at regional level an integrated approach to reach a critical mass of the investment effects/impacts.

The historical and economic context in which the Smart Specialisation concept has been conceived was completely different from that one in which the Lisbon Strategy has been approved. That context seemed stable even though its structural weaknesses, compared to current macroeconomic context (2007 till today), was characterised by an economic crisis that has widened divergences among European regions. In this scenario the European Union and national governments reacted with a set of measures oriented to the macroeconomic stabilisation and the reduction of the public debt. These measures were not enough and were not supported by measures to boost growth through innovation. In this sense a Smart Specialisation Strategy can be considered a general framework and a powerful tool for regional administrations and stakeholders to deal with the abovementioned macroeconomic context. S3 allow the setting-up of a strategy focused on innovation, giving a valid answer to problems of regions characterised by structural weaknesses such as unemployment and low growth rate. Policy-makers and stakeholders are encouraged to investigate crucial regional policy aspects for the future: Where do we want to position our region in a knowledge-based economy? How do we implement the necessary policies for the strategic vision set up?

Foray (2009) selected four key points that confer to Smart Specialisation policy relevance:

1. Stimulate regions to think on “how” and “where” they want place themselves in a knowledge-based economy. What are the “activities” they want develop and which structural changes they want to deal with. This exercise can stimulate regional actors toward innovation;
2. The “entrepreneurial discovery process” and “inclusive strategy” concepts can appear too academic and abstract but it needs to demonstrate that this kind of policy is not just a technocratic exercise or just an innovation-oriented policy, but a wide and open strategy;
3. Smart Specialisation framework concerns particularly underdeveloped regions. It is not a strategy set up for economic solid regions rather than a strategy for underdeveloped regions to improve their capabilities in some sector;
4. Smart Specialisation Strategy has not been conceived just as a “local” strategy but as a useful tool to increase the efficiency of financial resources and the activities coordination.

One year after the Foray’s Smart Specialisation concept definition, the European Union (2010) defined its “Europe 2020 Strategy”, a “strategy for a Smart, Sustainable and Inclusive Growth”. In the meantime (2000-2011) the European macroeconomic context was deeply changed from the context in which has been approved the Lisbon Strategy (2000): “the economic crisis has frustrated years of economic and social advances and highlight the weaknesses of the European economy” (EC, 2011).

The European Commission with the Europe 2020 Strategy selected seven “Flagships” in order to deal with the negative factors affecting the European economy. The first initiative selected is relevant for Smart Specialisation Strategies: “Smart Growth: develop a knowledge and innovation-based economy”, that was clearly the main aim of Lisbon Strategy. The “Innovation Union” (first flagship) is based on a wide concept of innovation not focused just on products and processes but also on services, placing innovation as an open system in which actors cooperate and interact. The objective is to address R&D and Innovation Policy toward the current challenges of our society such as climate changes, efficient use of resources and energy, health and demographic changes. It is necessary to reinforce each ring of the chain from “blue sky” research to the commercialization. Smart Specialisation Strategy becomes effective policy with the Commission’s communication COM (2010) 553 – Regional Policy contributing to smart growth in Europe 2020 (EC 2010).

However Europe still presents deep differences: regions more competitive and able to compete in the globalised market and regions with unsolved structural weaknesses, highlighting an “innovation gap” among them. Therefore it is necessary to activate the regional innovation potential: more developed regions need to consolidate their capabilities and more underdeveloped have to make an effort to reduce the gap. Despite the context conditions have got worse for the economic crisis, the European Union allocates a remarkable amount of financial resources for the “smart Growth”: nearly 86 billions of euro have been allocated for these policies of which the 75% funded by the European Regional Development fund (ERDF) (EU Regulation 1303/2013). These funds have to be coordinated and integrated with other European tools supporting innovation and research, particularly the Community Innovation Program (CIP) and Horizon 2020 (The European Research Program for the period 2014-2020). In this perspective, the concept of “strategic intelligence”, i.e. the capability to develop a responsive mode to change complexity, is necessary in selecting high added value activities offering the opportunity to reinforce regions competitiveness. In order to maximise the regional policy impact, jointly with other European policies, national and regional governments should develop “Smart Specialisation Strategies” which have the potential to:

- Pledge a more effective use of public investments and stimulate private ones;
- Concentrate resources on a limited number of priorities;
- Interact with other sectorial policies and favour transnational and interregional cooperation.

The S3 do not represent a top-down approach, rather an attempt to link businesses, research centres and universities in order to identify regional specialisation sectors and the hampering factors of this process. In the transition from S3 concept to S3 Policy the crucial aspect is the “entrepreneurial discovery”.

The transition from academic concept to public policy is defined with the new Structural Funds Regulation. Particularly, Article 2 of the General European Structural Funds Regulation no. 1303/2013 defines the “Smart Specialisation Strategy” as “national or regional innovation strategies which set priorities in order to build competitive advantage by developing and matching research and innovation own strengths to business needs in order to address emerging opportunities and market developments in a coherent manner, while avoiding duplication and fragmentation of efforts; a smart specialisation strategy may take the form of, or be included in, a national or regional research and innovation (R&I) strategic policy framework” (EU Regulation 1303/2013);

The Annex 1 of the above mentioned Regulation, refers to the need of:

- Policy coordination with other European policies such as Horizon 2020: The Horizon 2020 authorities are strictly connected with this process (S3) and include all the actions and tools to exploit and spread the results of R&I obtained with Horizon 2020 with particular attention to the creation of an entrepreneurial and industrial environment auspicious for innovation and for SME and consistent with the priorities selected by regions in their smart specialisation strategy (EU Regulation 1303/2013);
- Cooperation: Member States have to make in place transnational and interregional cooperation within Operative Programs framework aiming at the investments for growth and employment, included measures in the R&I field deriving from Smart Specialisation Strategies (EU Regulation 1303/2013);
- Transnational Cooperation: Member States and Regions have to cooperate especially in the field of R&I and ICT boosting the development of common approaches in respect of the smart specialisation. Particularly regional cooperation envisages the impulse to clusters cooperation characterised by an higher level of research and innovation intensity, taking into account the potentials (in R&I) of underdeveloped regions (EU Regulation 1303/2013).

## **6. The territorial dimension in Research and Innovation Policies: the RIS3 plans**

The European Commission requested to each European regions to enlighten in an action plan for RIS3 (Research Innovation Smart Specialization Strategies) the regional strategies for the programming period

2014-2020 in order to respond the local demand of innovation and to stimulate new sources for a self steady development.

In this context the role of cities, the horizontal perspective sustainable urban development and “metropolitan areas”, for the Italian context, could play a synergic role, in supporting the construction and the implementation of regional RIS3 in cooperation with the European Structural Funds.

The current phase allows outlining the level of completeness, relevance and consistence of the selected actions by each European region to drive economic change through smart specialization strategies/RIS3. On the other hand, the role of the city, the horizontal perspective of sustainable urban development, and in particular the “metropolitan areas” in the Italian context could be better drive an effective implementation and adjustment of RIS3 regional plans.

**National/regional research and innovation strategies for smart specialisation (RIS3)** are integrated, place-based economic transformation agendas “that do five important things:

- They focus policy support and investments on key national/regional priorities, challenges and needs for knowledge-based development, including ICT-related measures.
- They build on each country's/region's strengths, competitive advantages and potential for excellence.
- They support technological as well as practice-based innovation and aim to stimulate private sector investment.
- They get stakeholders fully involved and encourage innovation and experimentation.
- They are evidence-based and include sound monitoring and evaluation systems.” (RIS3 Guide 2012).

“The Barca Report contributed to the development of the concept through recommendations for the post-2013 regional development programmes. It emphasised the need to focus on fewer priorities, to be more transparent, to make sure that programme success is verifiable and to better coordinate place-based policies (Barca, 2009). This transformed smart specialisation from a technology and research concept to a place-based concept attuned to regional policy (McCann and Ortega-Argilés, 2011). The innate message of this report was that, if regions opt for similar types of innovation priorities, the outcome will be fragmentation and lack of critical mass, which will prevent regions from developing economies of agglomeration and positive spill-overs. In order to overcome these problems of fragmentation, mimesis and lack of critical mass, great importance has been given to urging regions to foster new activity sectors or industries, by investing in R&I in a limited number of areas with the greatest strategic potential” (Sörvik and Kleibrink. (2015: 4).

Among the expected actions reported in the abovementioned Commission's communication (EC 2010) in order to maximise the impact of Regional Policy contribution to smart growth it was expected the creation of “a smart specialisation strategy Platform up to 2012 aiming at join academics, research centres, regional authorities, businesses and commission services in order to contribute in defining needs, strengths and opportunities”.

In the design and implementation phase of RIS3 process, monitoring and evaluation activities play a central role. In 2011, observing the above mentioned Commission's Communication; the S3 Platform has been established with the aim to support regions in the preliminary phase of their Smart specialisation Strategies, particularly for “Research and Innovation Strategies for Smart Specialisation” (RIS3). Further, the Platform has the peer review task of proposed RIS3 and to facilitate RIS3 knowledge and experiences exchange.

The Platform has been established in the “Institute for Prospective Technological Studies (IPTS) of Seville, Spain, and it is part of one of the European Commissions' Joint Research Centres.

The S3 Platform assists EU countries and regions to develop, implement and review their Research and Innovation Strategies for Smart Specialisation (RIS3) the role of the S3 Platform is to provide information, methodologies, expertise and advice to national and regional policy makers, as well as promote mutual

learning, trans-national co-operation and contribute to academic debates around the concept of smart specialisation (S3 Platform, 2015).

The current phase of monitoring of the RIS3 through the Seville Platform, allows comparing the regional response to the integrated approach envisaged in the link of place-based and smart specialization policies.

The S3 platform has set up an evaluation methodology in supporting the construction of regional RIS3 plans and in monitoring those critical factors that represent an obstacle for the plan implementation. This methodology is based on the definition of a relevant set of criteria in order to evaluate the performance of each RIS3 plan elements. The result can be represented by the so-called “wheel”, built on a six steps process through the selection of three critical factors for each step. It helps to highlight the scientific and methodological appropriateness of the plan, highlighting the peculiarities of the regional context according with the 3 critical factors selected for each step.

The results of the evaluation can be represented through a graph in which is clear both the weak or strong positioning with respect to the criteria set in the RIS3 Guide (2011). The evaluation of this three elements allows to select some focus area to deepen:

- The need to complete or to update the RIS3 plan;
- The needs to deepen some territorial characteristics/peculiarity;
- The need to define better priorities and needs in the multilevel governance process.

*Table 1 – Critical Factors selected for each step in the construction of RIS3 plan*

RIS3 Guide Steps	Sections	Marks	RIS3 Guide reference	Short explanatory
STEP 1 Analysis of the Regional context and potential for innovation	Regional Assets (such as technological infrastructures)	0-5	Step 1 (page 18) + Annex I (pages 28-33)	<ul style="list-style-type: none"> <li>- Quality of regional and national assets</li> <li>- SWOT analysis</li> <li>- Innovation, potentials and competences for the innovation based development</li> </ul>
	Linkages with the rest of the world and the position of the region within the European and the global economy	0-5	Step 1 (page 19) + Annex I (pages 28-33)	<ul style="list-style-type: none"> <li>- Linkages, Knowledge, Commerce and Competence flows</li> <li>- Positioning in the trans regional and international value chain</li> <li>- Trans regional and International collaboration network</li> </ul>
	dinamycs of the entrepreneurial environment	0-5	Step 1 (page 20) + Annex I (pages 28-33)	<ul style="list-style-type: none"> <li>- Start-up, cluster, network value chain;</li> <li>- FDI</li> <li>- New self-employment forms</li> </ul>
STEP 2 Governance	Governance Structure	0-5	Step 2 (page 21) + Annex I (pages 34-44)	Dedicated structures and definitions of their roles, responsibilities and tasks
	Collaborative leadership	0-5		Interactive learning approach; Collaborative leadership; Quadruple helix Actors” (productive frontiers involvement)
	Boundary spanners	0-5		Usage of open forums in order to favour discussion with also with citizens; e-governance
STEP 3 Overall vision	Wide view of innovation	0-5	Step 3 (page 22) + Annex I	Social and management services are considered connected to



			(pages 45-50)	market innovation, on the basis of scientific and technological innovation.
	The main challenges	0-5		Inclusive development based on environmental and economic sustainability
	Scenario analysis	0-5		Risk evaluation and definition of a management/control plan for possible future changes
STEP 4 Priorities identification	Review of past programming period priorities	0-5	Step 4 (page 22) + Annex I (pages 51-52)	- Critical Review of past programming period experience (from RIS to RIS3) - Dynamic identification of current and potential areas with competitive advantages
	Consistency			Significance and alignment with context analysis and entrepreneurial discovery process and DAE
	Critical Mass			Resources concentration on a limited number of priorities
STEP 5 Policy mix	Roadmap		Step 5 (page 23) + Annex I (pages 53-58)	Action plan and Pilot projects
	Coherent policy mix			Mixed measures with horizontal targets
	Coherent multi annual action plan			Support measures for experimentation
STEP 6 Monitoring and evaluation	Output and results indicators		Step 6 (pages 24-25) + Annex I (pages 59-64)	- Selection of a limited number of outputs and results indicators - Indicators have to be linked with priorities following a clear definition of baselines and targets;
	Monitoring			Mechanisms supported by proper collection data methods in order to verify how activities are implemented in RIS3 with respect to outputs and expected results
	RIS3 plan updating			Review of priorities and of the policy mix with respect to monitoring and evaluation activities

The application of the evaluation process based on the evaluation platform set up by the Seville Platform bring towards the so-called “wheel”, in which RIS3 strengths and weaknesses are evident and comparable allowing a better sharing of results in orienting changes to produce.

Following is reported an example took from the Seville Platform.

### Driving economic change through smart specialisation/RIS3

→ Informal assessment - region XXX

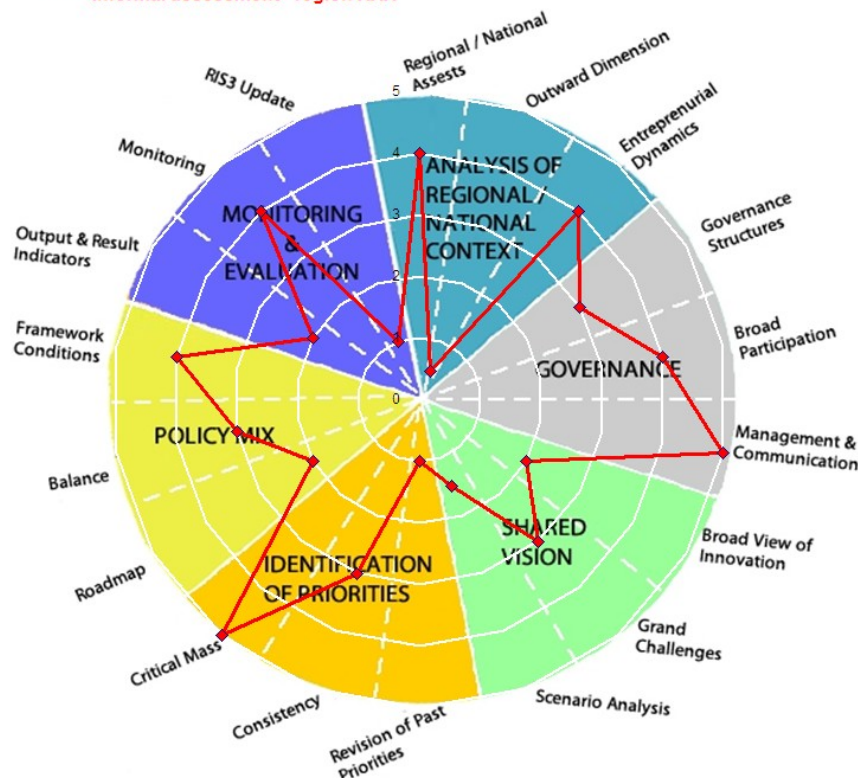


Figure 3 – The evaluation “wheel”. S3 platform

The Seville Platform, in order to support and address context analysis in the conceptual framework of S3 in regional plans, has designed a database aiming at the identification of the regions positioning in the European context. This positioning is explained through the “distance index” for each European region with the aim to capture structural similarities in the European context and to guide RIS3 tools toward the so-called competitive advantages. The methodology to obtain the synthetic index has been elaborated by the JRC Technical Support and are reported in the S3 working paper series no. 03/2014 “Regional Benchmarking in the smart specialisation process: Identification of reference regions based on structural similarity” (Navarro et al. 2014). Even though the theoretical basis has shifted from the benchmarking analysis to the performance analysis in order to select factors that can boost competitive advantage of businesses in the global market, it has allowed the inclusion of structural context variables in support policy decision in the difficult linkage between innovation systems and local economic development.

DIMENSIONS	ELEMENTS	VARIABLES	SOURCES	YEAR	UNIT
1. Geo-demography	Regional size	Total Population	Eurostat	2011	people
	Ageing	Population >= 65	Eurostat	2011	%
		Population <15	Eurostat	2011	%
	Urbanisation	Pop. in urban and comm. areas	DG Regio	2006	%
	Accessibility	Multimodal accessibility	ESPO	2006	0-100 index
2. HHRR educ. Level	HHRR educational level	Pop. with upper secondary and tertiary ed.	Eurostat	2012	%
3. Technological specialization	Technological distribution (patents)	Electrical engineering	OECD REGPAT	2006-2010	%
		Instruments	OECD REGPAT	2006-2010	%
		Chemistry	OECD REGPAT	2006-2010	%
		Mechanical engineering	OECD REGPAT	2006-2010	%
		Other fields	OECD REGPAT	2006-2010	%
	Technological concentration (patents)	GINI index of 35 subfields	OECD REGPAT	2006-2010	0-100 index
4. Sectoral structure	Economy's sectoral distribution	Agriculture, forestry and fishing (A)	Eurostat LFS <sup>(1)</sup>	2012	%
		Industry (except const.) (B-E)	Eurostat LFS <sup>(1)</sup>	2012	%
		Construction (F)	Eurostat LFS <sup>(1)</sup>	2012	%
		Wholesale and retail trade, transport etc. (B-I)	Eurostat LFS <sup>(1)</sup>	2012	%
		Information and communication (J)	Eurostat LFS <sup>(1)</sup>	2012	%
		Financial and insurance activities (K)	Eurostat LFS <sup>(1)</sup>	2012	%
		Real estate activities (L)	Eurostat LFS <sup>(1)</sup>	2012	%
		Professional, scientific and technical activities (M-N)	Eurostat LFS <sup>(1)</sup>	2012	%
		Public administration (O-Q)	Eurostat LFS <sup>(1)</sup>	2012	%
		Arts, entertainment and recreation (R-U)	Eurostat LFS <sup>(1)</sup>	2012	%
	Sectoral concentration	Top of 5 subsectors (2 digits) (% total employment)	Eurostat SBS	2011 or closest	%
	Industrial sectoral structure	Mining and quarrying (05-09)	Eurostat LFS	2011	%
		Food, drinks and tobacco (10-12)	Eurostat LFS	2011	%
		Textiles, apparel and leather (13-15)	Eurostat LFS	2011	%
		Wood, paper and printing (16-18)	Eurostat LFS	2011	%
		Chem., pharm., rubber, plastic and refined petroleum (19-22)	Eurostat LFS	2011	%
		Non-metallic mineral products (23)	Eurostat LFS	2011	%
		Basic metals and metal products (24-25)	Eurostat LFS	2011	%
		Electric, electronic, computer and optical equipment (26-27)	Eurostat LFS	2011	%
		Machinery (28)	Eurostat LFS	2011	%
		Transport equipment (29-30)	Eurostat LFS	2011	%
		Other manufacturing (31-33)	Eurostat LFS	2011	%
5. Firm size	Firm size	Average firm size	Eurostat SBS	2009 or closest	# employees
6. Openness	Trade openness	Total exports (% GDP)	Fraunhofer ISI and Orchestra	2009 or closest	%
7. Institutions / Values	Multilevel government	Decentralisation	BAK Basel Economics	2009	0-100 index
	Social and institutional capital	Quality of institutions	Charron et al.	2012	standardized values
		Feeling of safety of walking alone in local area after dark	ESS	2010 or closest	1-4 index
		Most people can be trusted or you can't be too careful	ESS	2010 or closest	0-10 index
	Entrepreneurial / innovative attitudes	Important to think new ideas and being creative	ESS	2010 or closest	1-6 index
		Important to try new and different things in life	ESS	2010 or closest	1-6 index

Note: (1) Data compiled through a request to Eurostat.

Figure 4 – Regional Structural characteristics. S3 platform

The construction process of the synthetic index is based on the indexing of gathered data for each category and through the application of the model elaborated by the JR Technical support in order to calculate the value of “distance” of region with respect the others.

## 7. For a better comprehension of territorial and spatial dimension in S3 implementation: the MAPS-LED Project Perspective

The territorial dimension is a key element of European Cohesion Policy as emerged from the official documents and scientific literature in the field. However some concerns arose among scholars and practitioners about the real consideration of territorial dimension in RIS3 plans proposed by national and regional authorities. The risk to have the so-called “me-too effect” is high and this means that regions are not taking into account seriously the potentials (economic and social) of their territories combining the “use” of innovation (more than the production of innovation) with a spatial perspective for European regions. The expression of the territorial potential is relevant not only for the local dimension but also for the international openness of local markets. As a matter of fact a consequence of the complete RIS3 process could be the possibility that the empowerment of local innovation systems bring toward the entry of SMEs into the Global Value Chain helping the revitalisation of local economic systems.

In this sense Faludi (2015) argue that even if the S3 strategy is integrated and effective it could be hard to translate it into a spatially-oriented development policy. This is a turning point into European context and it is necessary a review of EU Cohesion Policy introducing the issue of “Territoriality and Democracy”. Further, the Foray’s perspective, highlights the territorial dimension in terms of “specialisation” of activities that are relevant within a territory (i.e. regional). Regions have to be “aware” of their current assets and their

potentials and most of all have to make choices in order to drive the “structural changes”. One of the early benefits reported by Foray (2015) in the implementation of RIS3 is represented by the decentralisation, that he called “democratisation”, that is better than central planning in the perspective of the discovery process. This is a contact point with Faludi and his perspective that moves toward “Territoriality and Democracy”.

Following these perspectives, a possible way to better integrate the territorial dimension into S3 policy, could be represented by the representation of Territorial Capital through defined variables that can help to understand the real national/regional/local potential and subsequently help in designing the RIS3 plans.

The joint Exchange programme MAPS-LED is based on a research proposal finalized to examine how smart specialization strategies (S3) to regenerate local economic areas can be implemented, according to the new agenda of Europe 2020. This can be largely achieved by incorporating a place-based dimension.

The main aim is to identify and prescribe the implementation of S3 in terms of spatial, social and environmental factors. The programme will map out local needs and opportunities in a variety of contexts that could drive regional policy interventions. The resulting S3 will not only emphasize “Key Enable Technologies”, but will also empower the local innovation process. Elements gained from the preceding CLUDs project, such as tacit knowledge, embedded social networks and innovative milieu, will ensure that the proposed S3 for each area is successful. The proposal intends to apply a Multidisciplinary Approach to Planning of Smart Specialization Strategies in a prospective to enhance Local Economic Development (MAPS-LED). The MAPS-LED process starts from a place-based framework and will include two important drivers: 1. Cluster policy and cluster-based analysis, 2. Innovative milieu in terms of the local value chains based on the urban-rural linkages (drawing from the CLUDs findings <http://www.cluds-7fp.unirc.it/index.php>). The MAPS-LED project will be built in order to connect three important key-factors including:

- Governance – in terms of cluster policy and based cluster analysis;
- Localization – in terms of place-based approach;
- Territorial network – in terms of innovative milieu based on urban-rural link.

Drawing from the cluster concept, the proposal will first build a conceptual framework to assess the potential S3 through a spatial planning-led approach, and then develop it by drawing from existing cluster identification from the Directorate General for Research and Innovation (2013). The existing network of EU and US institutions, set up as a result of the CLUDs IRSES project will investigate (through an exchange knowledge approach), how lessons from the clusters can steer the current challenges on S3 in Europe. Case studies will cover a variety of clusters including food- led, HEI-led, HT-led, agriculture- led, and art- led.

The MAPS-LED project will be conducted over two stages, each of generating inputs for the definition of integrated actions and for building the scenarios to implement the **pilot S3 areas** in European regional contexts. The first stage will take place over three years and will deal with the theoretical part of the research and training activities. The second stage will take up the final year and will deal with the practice and implementation of the research. The general framework of the research programme is organised across four main topics:

**Research and Innovation Strategies:** *recognizing that the dynamic process due to innovation and research defines different influence areas that can be better explained by the territorial distribution of competitiveness factors.*

- technology transfer based on "business process"
- business models and partnership research groups and strategic action plan
- entrepreneurship in the research community and social innovation
- clustering entrepreneurial

**Spatial Planning** *Factors suitable to be mapped in physical terms, such as:*

- - Proximity and accessibility (to gateway cities, to infrastructural nodes, to HEI Centres, to broadband facilities...)

- Spatial pattern (“boundary” of the cluster, network of connections, localisation of place of production and distribution...)
- Size (dimensional data of the cluster)
- Critical mass (number of enterprises, size of urban centres involved, number of jobs created....).

**Cluster Policy** Factors related to the governance systems of the clusters:

– institutional networks, entrepreneurial networks, the global-local nexus between the local area and global systems, the organisation of local value chains, a suitability to be mapped through stakeholder analysis.

**Social Innovation** Responses to social needs that are developed in order to deliver better social outcomes:

– (Spatial) identification and GIS mapping of new/ unmet/ inadequately met social needs, related to vulnerable groups

In order to understand the success factors from the US experience on clusters, the selected case studies will be investigated with a view to the S3 concept through an assessment grid based on the above mentioned elements, integrated throughout the whole first year research. Multi-criteria approach based on correlation matrix, cluster analysis, hierarchical clustering and Hierarchical Decision Model, and Planning Balance Sheet (PBS) will be applied to analyse, assess and compare:

- Factors characterizing USA clusters correlated with the EU ones;
- Indicators of cluster specialization, spatial factors, organization type;
- Success factors with respect to innovation, localization and governance.

The data set, from selected data from USA panel information to EU S3 potential data, will be structured in a GIS of Cluster/S3 information system. The proposed methodology under the MAPS-LED program would apply this concept to the wider territorial network and chains, thus allowing to quantitatively assess the potential of the clusters also in social terms and to pave the way to estimate the wider potential of place-based S3 through a two-steps process:

1) The first step aims to develop and test a methodology for Mapping & Assessing Clusters in a place-based and spatial- led perspective.

2) The second step follows the mapping stage. The assessment of the wider impacts of place- based S3 will exploits and moves forward the Sustainable Return On Investment (SuROI) methodology, applied to urban regeneration, by assessing the clusters’ impact in the wider social and environmental perspective, thus leading to discover the extra value generated by the clusters and territorial milieu-nexus.

There have been many predictive tools that define the economic impacts and relative benefits of regeneration and urban renewal. These have been devised primarily to establish the relative costs of development such as materials, construction methods, labour, occupation etc. But the value of development on people and the natural environment has not evolved to the same degree, and rarely features in an integrated prediction or evaluation of projects. Those techniques that do exist tend to be qualitative or survey-based data that record the attitudes of affected parties toward planned or existing development.

Many factors now determine the success of built environment programmes including climate change, the scarcity of important resources, the need to house key workers, the continuing support for the excluded and vulnerable, the effective involvement of interested parties, and the volatile or uncertain performance of the local economy. However, funders and decision-makers are rarely exposed to the full economic returns because environmental and social gains do not feature on the balance sheet.

A predictive or evaluative process that can help to balance and quantify factors that are often hard to measure and compare will be invaluable for those that want to show that developments will offer the best sustainable solution.

## 8. Conclusions

Smart Specialisation Strategies represent a turning point for the European Cohesion Policy. The increased attention toward regional “specialisations” not just internal, as in the past, but toward the external dimension represent a key point in mitigating negative economic effects deriving from globalisation processes. In this perspective the territorial dimension become crucial in RIS3 plans implementation. As highlighted by the Barca Report (2009) it is necessary the shift from a “space-blind” to “place-based” approach. This renovated attention to the “place” if well implemented by regions could reach its main aim to satisfy efficiency (the capacity of a region to exploit its territorial potential) and equity principles (capacity of each region to provide equal opportunities to their citizens).

Even if the territorial dimension has always been part of European Policies (at least since 80s and then since 90s in the European Treaties), it has been emphasised at the end of 90s with the introduction of ESDP that highlighted the need of “spatial” vision for European territories. It is in 2007-2013 Programming Period that is possible to see a more “productive” activity from the European Commission both in terms of Territorial and Innovation Policies. It could be probably due to the first signals of the upcoming economic crisis that pushed toward a “change” of the status quo. In the mean while the European Commission decided to revise its own Research Policy drawing up the “Horizon 2020” Programme.

The contact point between S3 and Territorial dimension seems to be in 2009 with the publication of Barca report. It linked the “spatial” issues introducing the place-based approach in contrast with the “spatially-blind” policies, taking into account the “Territorial” aspect of Smart Specialisation Strategies of Foray’s concept, that lies, in our opinion, on the “specialisation” concept, understood as a specific activity in a specific space (region) that has the potentials to contribute to the regional economic growth.

The current challenge for the programming period 2014-2020 lies on the capabilities of National and Regional Authorities in implementing Operational Programmes able to reach the goals of Europe 2020 Strategy through an Integrated approach, linking together Cohesion, Research and Innovation and Territorial Policies.

However difficulties can arise. Especially the so called “me too effect” i.e. the intention of underdeveloped regions to adopt smart specialisation strategies to ambitious for their potentials deriving from regions more developed. Many regions decided to invest in sectors such as ICT, biotech, nanotech etc not considering the existence or not of a potential in this sector in their territory to achieve the objective. This effect could be dangerous because is the opposite of smart specialisation that is based on the existing potential of the territorial context and on the capacity to act on thanks to the strategies. The results could be the opposite of that expected increasing the gap and differences among regions.

Even in this case the territorial dimension is crucial and it should be investigate if and how RIS3 already proposed took into account the place-based approach.

## 9. Bibliografia

- Atkinson R. (2014) The Urban Dimension in Cohesion Policy: Past developments and Future Prospects. Paper presented at a RSA workshop on “The New Cycle of the Cohesion Policy in 2014-2020”, Institute of European Studies, Vrije Universiteit Brussels, 24/03/2014.
- Barca, F. (2009) An agenda for a reformed cohesion policy: a place-based approach to meeting European Union challenges and expectations, Independent Report prepared at the request of Danuta Hübner, Commissioner for Regional Policy, European Commission, Brussels
- Barca, F. et al. (2012) The Case for Regional Development Intervention: Place-Based versus Place-Neutral approaches. *Journal of Regional Science*, Vol. 52, No. 1, pp 134-152
- Böhme K., Doucet P., Komornicki T., Zauzha J., Świątek D. (2011) How to strengthen the territorial dimension of “Europe 2020” and EU Cohesion Policy. Warsaw
- Dąbrowski M. (2014) Towards Place-Based Regional and Local Development Strategies in Central and eastern Europe?. In: “(Re)appraising place-based economic development strategies” *Journal of Local Economy*. Vol. 29 Issue 4-5..

- European Commission (2012) “Guide to Research and Innovation Strategies for Smart Specialization (RIS3)”, Smart Specialization Platform, EU Regional Studies
- Faludi A. (2015) Place is a no-man’s land. *Geographia Polonica* Vol. 88, Issue 1, pp 5-20
- Faludi A. (2015) S3 place-based: Look who is talking. International Open Panel Discussion – MAPS-LED Research Project H2020 – Marie Slowdoswka Curie - RISE Actions, Reggio Calabria, Italy 27-28 May 2015
- Foray, D. Hall B. H. (2009) Smart Specialisation – the concept. In: *Knowledge for Growth. Prospects for Science, Technology and Innovation. Selected Papers from Research Commissioner Janez Potocnik’s Expert Group.*
- Foray, D. (2015) On the economic fundamentals of smart specialization. International Open Panel Discussion – MAPS-LED Research Project H2020 – Marie Slowdoswka Curie - RISE Actions, Reggio Calabria, Italy 27-28 May 2015
- Foray, D. (2015) Smart specialisation: opportunities and challenges for regional innovation policy, Routledge: Abingdon.
- European Parliament and Council (2013) Regulation No 1303/2013 of the European Parliament and of the Council of 17 December 2013 laying down common provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund and laying down general provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund and the European Maritime and Fisheries Fund and repealing Council Regulation (EC) No 1083/2006.
- European Parliament (2000), Presidency Conclusions of the Lisbon European Council 23 and 24 March 2000
- European Parliament (1997), Treaty of Amsterdam, amending The Treaty on European Union, The Treaties Establishing The European Communities and Certain Related Acts.
- European Commission (2012) Guide to Research and Innovation Strategies for Smart Specialisation (RIS3), Available online: <http://s3platform.jrc.ec.europa.eu/s3pguide>.
- European Commission (2011), Territorial Agenda of the European Union 2020. Towards an Inclusive, Smart and Sustainable Europe of Diverse Regions. Agreed at the Informanl Ministerial Meeting of Ministers responsible for Spatial Planning and Territorial Development on 19<sup>th</sup> May 2011, Hungary.
- European Commission (2010), Regional Policy contributing to smart growth in Europe 2020. COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS. Brussels, 6.10.2010 COM(2010) 553 final
- European Commission (2008), Communication From The Commission To The Council, The European Parliament, The Committee Of The Regions And The European Economic And Social Committee. Green Paper on Territorial Cohesion Turning territorial diversity into strength {SEC(2008) 2550}. Brussels, 6.10.2008 COM (2008) 616 final.
- European Commission (2007), Territorial Agenda of the European Union. Towards a More Competitive and sustainable Europe of Diverse Regions. Agreed on the occasion of the Informal Meeting on Urban Development and Territorial Cohesion in Leipzig on 24/25 May 2007.
- European Commission (1999), ESDP. European Spatial Development Perspective. Towards Balanced and Sustainable Development of the Territory of the European Union- Agreed at the Informal Council of Ministers responsible for Spatial Planning in Postdam, May 1999. Published by the European Commission
- European Commission (2007), Leipzig Charter on Sustainable European Cities. Final Draft, 02 May 2007
- Navarro M. et al. (2014) Regional benchmarking in the smart specialisation process: Identification of reference regions based on structural similarity. S3 Working Paper Series No. 03/2014. Technical Report by the Joint Research Centre of the European Commission

- OECD (2009a) How regions Grow: Trend and Analysis.
- Schmitt P. (2011) The Territorial Agenda of the European Union 2020 – A turning point in striving for Territorial Cohesion? In: Europe's strive for Territorial Cohesion. Nordregio News Issue 1, October 2011
- Sörvik J. and Kleibrink A. (2015) Mapping innovation Priorities and Specialisation Patterns in Europe. S3 Working Paper Series No. 08/2015. JRC Technical Reports - IPTS
- Waterhout B. (2008) The Institutionalisation of European Spatial Planning. Series: Sustainable Urban Areas. TU Delft.
- World Bank Group (2009) World Development Report 2009: Reshaping Economic Geography