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Marie Skłodowska-Curie RISE
MAPS-LED
Multidisciplinary Approach to Plan Smart Specialisation Strategies
for Local Economic Development



Smart Specialisation Strategy: The Territorial Dimension of Research and Innovation Regional Policies

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- (<http://www.cluds-7fp.unirc.it/>)

Introduction

1-Territorial Dimension and Cohesion Policy:
from polycentrism to place-based approach

2-Smart Specialisation Strategy: from a
theoretical concept to European policy

3.S3 in the Cohesion Policy for the period
2014-2020

4.The territorial dimension in Research and
Innovation Policies: the RIS3 plans

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

Goal:

The Paper aims 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”

EC-programming period 2014-2020

“Regional Policy contributing to smart growth in Europe 2020”

Introduction

First Step

- The first step 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

Second Step

- 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.

Third Step

- 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 Swlodowska 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**.

EC-programming period 2014-2020 “Regional Policy contributing to smart growth in Europe 2020”

European Regional Development Policy

2009

Territorial Potential

Equal opportunities

LINK

2011

“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”(Barca,2009).

Place -Based Approach

S3 Smart Specialisation Strategies

S3 is considered 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”(Foray 2011)

Geographical social economic features expresses by territory

the **development policy** of S3 is crucial “to maximize the impact of Regional Policy in combination with other Union policies”.

S3 from policy to concept
Agenda 2020-

Entrepreneurial Discovery

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

Theory of Change

Integrated Approach

to stimulate at regional level an integrated approach to reach a critical mass of the investment effects/impacts

Territorial Dimension

First step

1-Territorial Dimension and Cohesion Policy:
from polycentrism to place-based approach



City Acquired A Central Role



Programming period 2000-2006

1999 -The Spatial Approach at
European Level - ESDP - European
Spatial Development Perspective

Towards Balanced and
Sustainable Development
of the Territory of the
European Union

Programming period 2007-2013

2007 – Territorial Agenda of the
European Union – Leipzig agreement on
Urban development and cohesion policy

Towards a more
Competitive and
Sustainable Europe
of Diverse Regions

Programming period 2014-2020

2011-Territorial Agenda Europe
2020 Strategy.

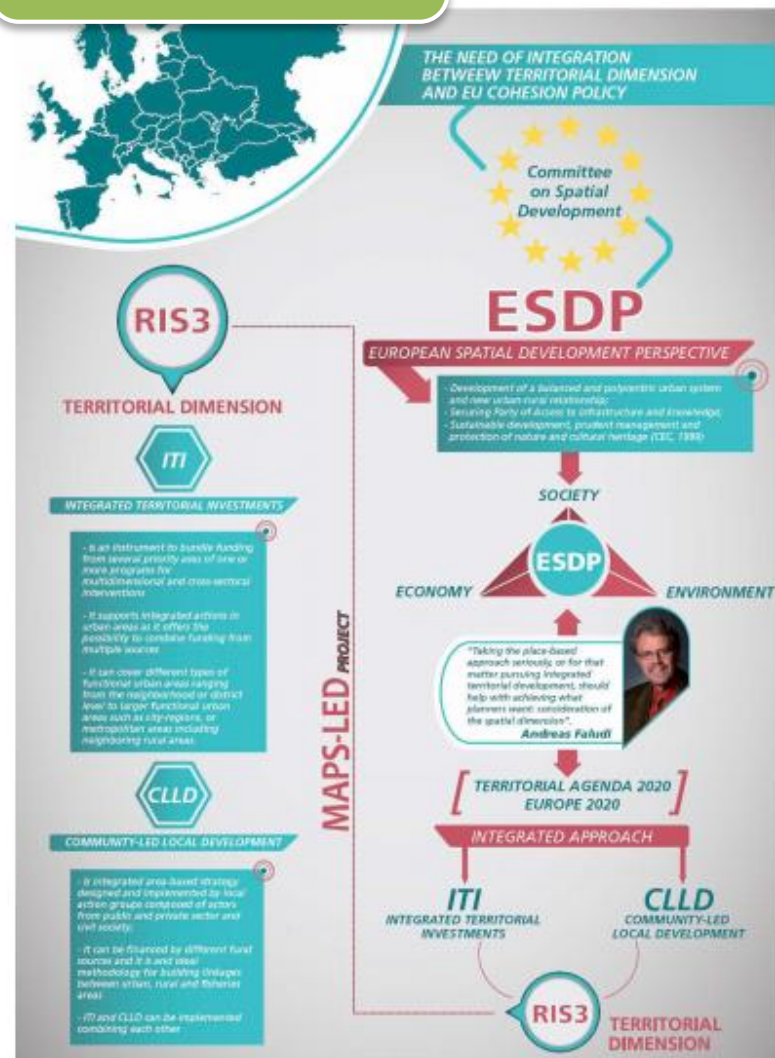
**The “Territory”: a New
Dimension of European**

Towards an Inclusive,
Smart and Sustainable
Europe of Diverse
Regions

Policy

First step

1-Territorial Dimension and Cohesion Policy: from polycentrism to place-based approach



Integrated investments for sustainable urban development 2014-2020

Integrated Territorial Investment (ITI)

ITI can only be used if a specific geographical area has an integrated, cross-sectoral development strategy which addresses its development needs.

In the 2014-2020 programming period many European cities will use ITI to execute their sustainable urban development strategies that tackle the economic, environmental, climate and social challenges of the urban areas and take into account urban-rural linkages.

-COMMUNITY-LED LOCAL DEVELOPMENT

CLLD is a tool which can allow reaching a set of complementary goals. First, it encourages local communities to take action and to shape development paths, this, in turn, helps to build and enhance community capacity. Secondly, active involvement of different local agents helps to promote the community ownership of interventions implemented which, in turn, helps to increase their effectiveness.

CLLD promotes the implementation of integrated and multi-sectoral operations through financial support from the different European Structural and Investment Funds.

The role of ESI Funds 2014-2020 and their new tools CLLD and ITI in guiding and offering a structured framework for place-based initiatives is particularly relevant.

First step



Marie Skłodowska-Curie RISE
MAPS-LED
Multidisciplinary Approach to Plan Smart Specialisation Strategies
for Local Economic Development



1-Territorial Dimension and Cohesion Policy: from
polycentrism to place-based approach



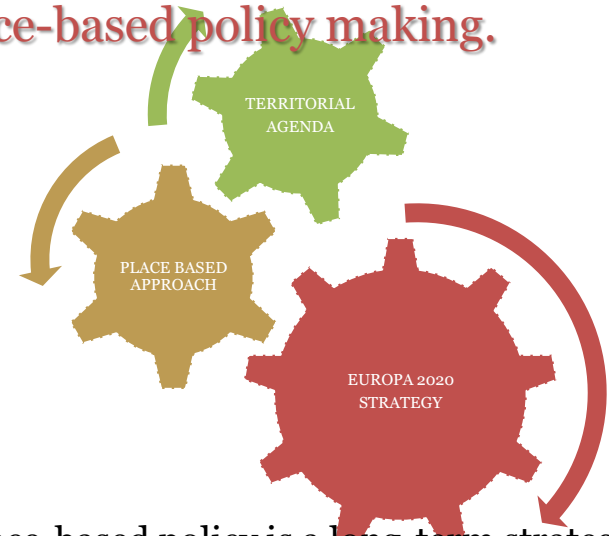
-2014-2020 “Territorial Agenda of the European Union 2020”

Towards an Inclusive, Smart and Sustainable
Europe of Diverse Regions

Territorial priorities for the development of
the European Union are:

1. Promote polycentric and balanced territorial development
2. Encouraging integrated development in cities, rural and specific regions
3. Territorial integration in cross-border and transnational functional regions
4. Ensuring global competitiveness of the regions based on strong local economies
5. Improving territorial connectivity for individuals, communities and enterprises
6. Managing and connecting ecological, landscape and cultural values of regions

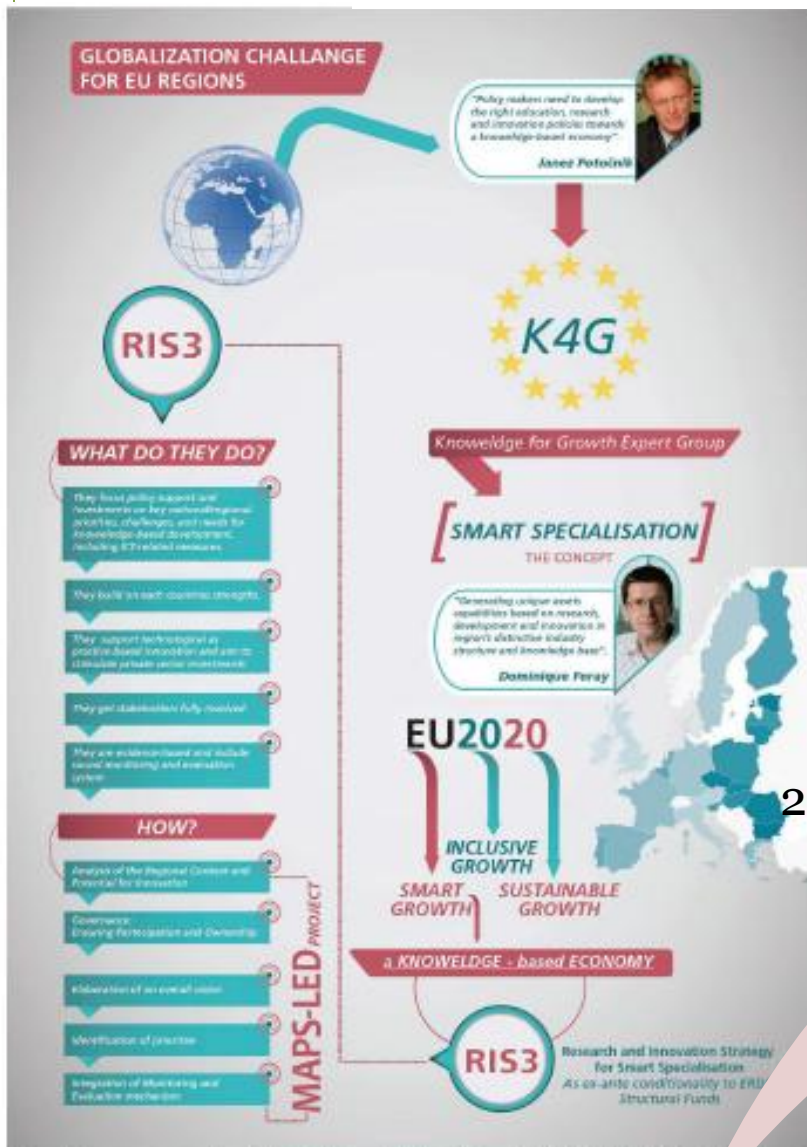
TERRITORIAL Agenda in 2011 that
provide strategic orientations for
territorial development, **promoting**
place-based policy making.



“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.” (Barca, 2009)

Second step

2-Smart Specialisation Strategy:
from a theoretical concept to
European policy



S3 Is a 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).

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.

2000

2009

2014-2020

Europe 2020
Inclusive
Smart
sustainable

Lisbon Strategy

1. Stimulate Growth;
2. Jobs;

3. Governance.

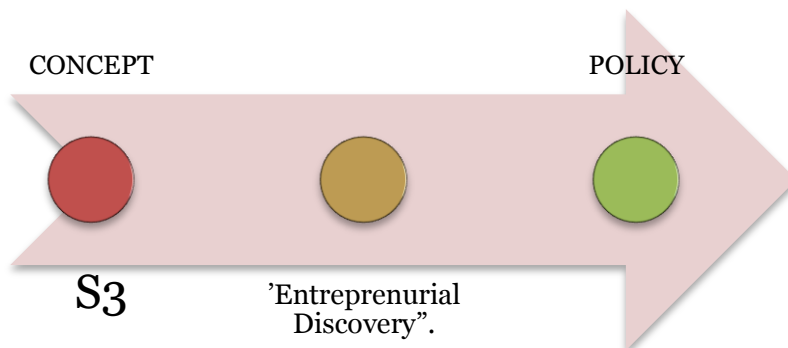
“Knowledge for Growth”
Smart specialisation strategies

“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”

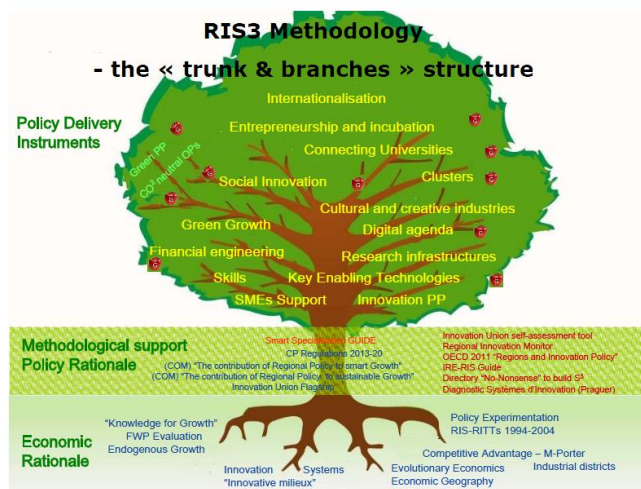
Second step

2-Smart Specialisation Strategy: from a theoretical concept to European policy

S3 is “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 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.



Second step

2-Smart Specialisation Strategy: from a theoretical concept to European policy

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 and 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.

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.

2-Smart Specialisation Strategy: from a theoretical concept to European policy

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).



Guide to Research and Innovation Strategies for Smart Specialisations (RIS 3)



May 2012

Regional
Policy

3.S3 in the Cohesion Policy for the period 2014-2020

2014-2020-The transition from academic concept to public policy is defined with the new Structural Funds Regulation.

“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” (Art. 2 ,EU Regulation 1303/2013);

The four Cs of Smart Specialization

Choices and Critical mass: limited number of priorities on the basis of own strengths and international specialisation – avoid duplication and fragmentation in the European Research Area – concentrate funding sources ensuring more effective budgetary management.



Competitive Advantage: mobilise talent by matching RTD+I capacities and business needs through an entrepreneurial discovery process.



Connectivity and Clusters: develop world class clusters and provide arenas for related variety/cross-sector links internally in the region and externally, which drive specialized technological diversification – match what you have with what the rest of the world has.



Collaborative Leadership: efficient innovation systems as a collective endeavour based on public-private partnership (quadruple helix)



Source: RIS 3 Guide



4. The territorial dimension in Research and Innovation Policies: the RIS3 plans

National/regional research and innovation strategies for smart specialisation (RIS3) are integrated, place-based economic transformation agendas:

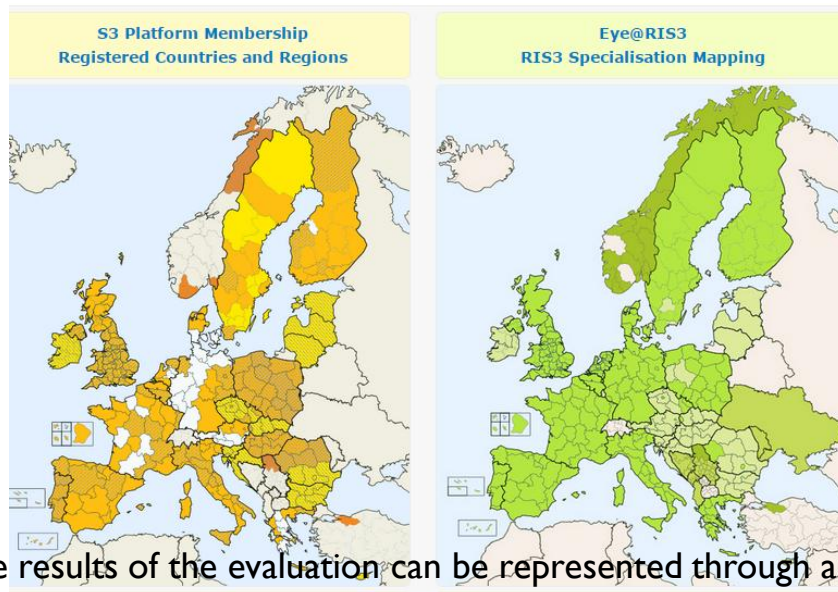
1. They focus policy support and investments on key national/regional priorities, challenges and needs for knowledge-based development, including ICT-related measures.
2. They build on each country's/region's strengths, competitive advantages and potential for excellence.
3. They support technological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

The European Commission launched the “**smart specialisation platform**” in June 2011 to support regions and Member States in better defining their research and innovation strategies. As there is no “one-size-fits-all” policy solution, the new platform will help the regions to assess their specific R&I strengths and weaknesses and build on their competitive advantage.

(<http://www.tr3s-project.eu/smart-specialisation/#sthash.jS8KmMI4.dpuf>)

5. The territorial dimension in Research and Innovation Policies: the RIS3 plans

Ris 3 PLANS



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.

5. The territorial dimension in Research and Innovation Policies: the RIS3 plans

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.

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"> - Quality of regional and national assets - SWOT analysis - Innovation, potentials and competences for the innovation based development |
| | 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"> - Linkages, Knowledge, Commerce and Competence flows - Positioning in the trans regional and international value chain - Trans regional and international collaboration network |
| | dinamics of the entrepreneurial environment | 0-5 | Step 1 (page 20) + Annex I (pages 28-33) | <ul style="list-style-type: none"> - Start-up, cluster, network value chain; - FDI - New self-employment forms |
| 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 ¹ (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 43-50) | 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) | <ul style="list-style-type: none"> - 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) | <ul style="list-style-type: none"> - 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 |

Driving economic change through smart specialisation (RIS3)
→ Informal assessment - region JKSX



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).

| DIMENSIONS | ELEMENTS | VARIABLES | SOURCES | YEAR | UNIT |
|---------------------------------|--|--|------------------------------|-----------------|---------------------|
| 1. Geo-demography | Regional size | Total Population | Eurostat | 2011 | people |
| | Ageing | Population >= 65 | Eurostat | 2011 | % |
| | Urbanisation | Population <15 | Eurostat | 2011 | % |
| | Urbanisation | Pop. in urban and comm. areas | DG Regio | 2006 | % |
| | Accessibility | Multimodal accessibility | ESPON | 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 ⁽¹⁾ | 2012 | % |
| | | Industry (except const.) (B-E) | Eurostat LFS ⁽¹⁾ | 2012 | % |
| | | Construction (F) | Eurostat LFS ⁽¹⁾ | 2012 | % |
| | | Wholesale and retail trade, transport etc. (B-I) | Eurostat LFS ⁽¹⁾ | 2012 | % |
| | | Information and communication (J) | Eurostat LFS ⁽¹⁾ | 2012 | % |
| | | Financial and insurance activities (K) | Eurostat LFS ⁽¹⁾ | 2012 | % |
| | | Real estate activities (L) | Eurostat LFS ⁽¹⁾ | 2012 | % |
| | | Professional, scientific and technical activities (M-N) | Eurostat LFS ⁽¹⁾ | 2012 | % |
| | | Public administration (D-Q) | Eurostat LFS ⁽¹⁾ | 2012 | % |
| | | Arts, entertainment and recreation (R-U) | Eurostat LFS ⁽¹⁾ | 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 (24-26) | 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.

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.

Figure 4 – Regional Structural characteristics. S3 platform

Third step

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

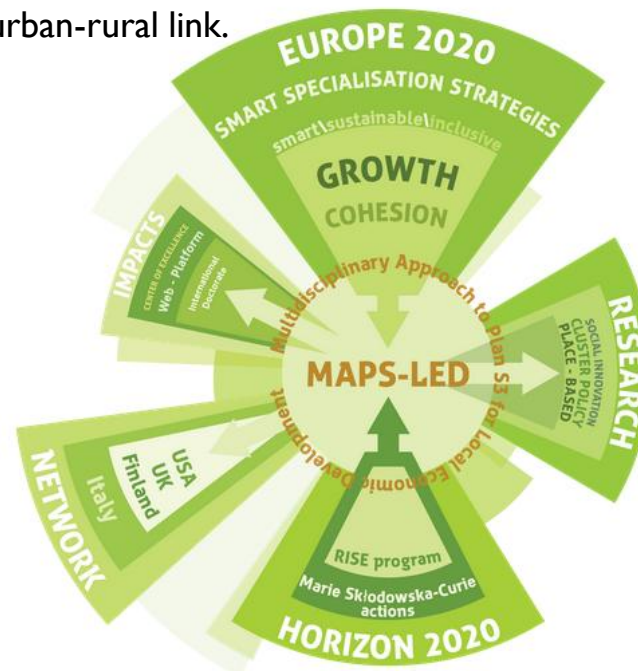
MAPS-LED is finalized to examine how Smart Specialization Strategies (S3) to regenerate local economic areas can be implemented, according to the new agenda of Europe 2020.

This can be largely achieved by incorporating a **place-based dimension**. The **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.



The MAPS-LED Project

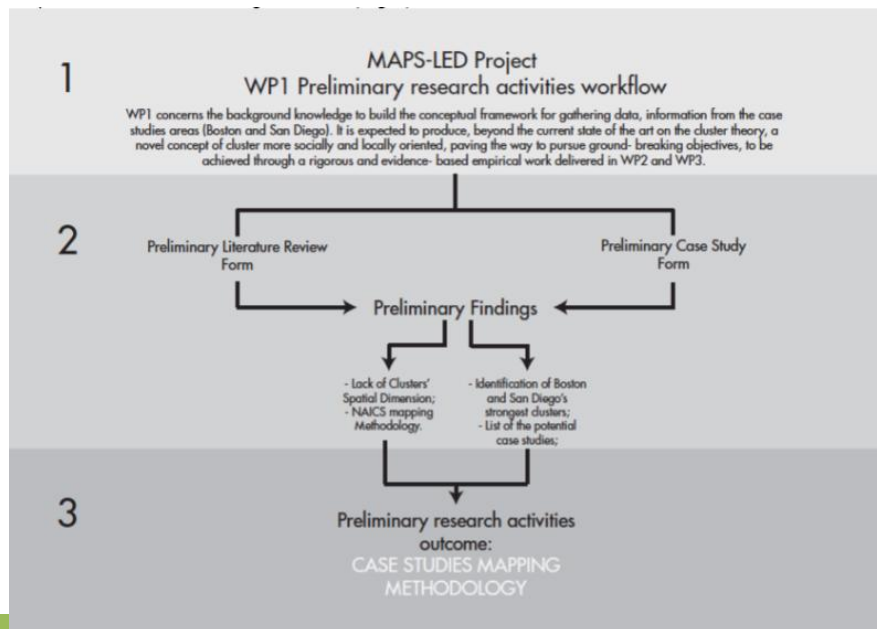
The main aims are:

- 1) to identify and examine S3 in terms of spatial, social and environmental factors;
- 2) to take into account local needs and opportunities driving regional policy;

The main objective of the MAPS-LED program is to build and test an evidence-based methodology for recognizing and assessing emerging and potential of S3. The methodology will be developed by drawing insights from existing successful **US Clusters**.

WP1

It concerns the background knowledge to build the conceptual framework for gathering data, information from the case studies areas (Boston and San Diego). **It is expected to produce**, beyond the current state of the art on the cluster theory, **a novel concept of cluster more socially and locally oriented**, paving the way to pursue ground-breaking objectives, to be achieved through a rigorous and evidence-based empirical work delivered in WP2 and WP3.



Cluster: a regional concentration of related industries

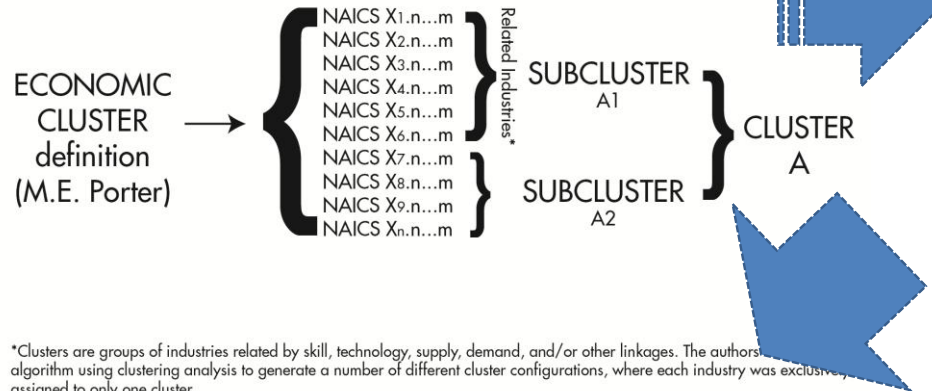


www.usclustermapping.us

Hypothesis of Methodology for CLUSTERS SPATIALIZATION

STEP 1

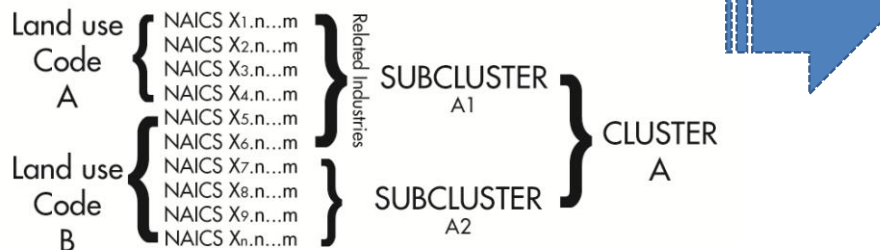
source methodology:
www.clustermapping.us



*Clusters are groups of industries related by skill, technology, supply, demand, and/or other linkages. The authors algorithm using clustering analysis to generate a number of different cluster configurations, where each industry was exclusively assigned to only one cluster.

Hypothesis of Methodology for CLUSTERS SPATIALIZATION

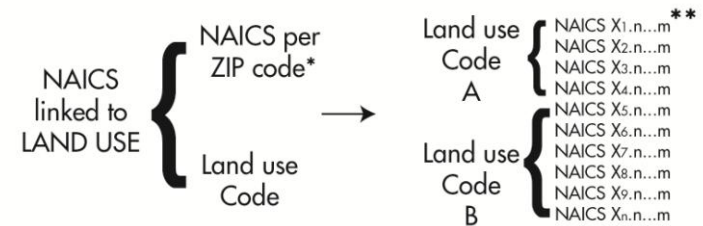
STEP 3 Synthesis



Hypothesis of Methodology for CLUSTERS SPATIALIZATION

STEP 2

source methodology:
City of Commerce, Colorado (2009)



*DATA source: U.S. Census Bureau

**The link between Land Use Codes and NAICS per Zip Code is elaborated by authors.

