



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



# Cluster and S3:EU-USA COMPARISON OF DATABASE AND MAPPING TOOLS

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**Wp1-Wp2 Research and Innovation; S3. Cluster policy and Spatial Planning**

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## Research Question:

# Why CLUSTERS MAPPING are highly relevant to SMART SPECIALISATION STRATEGIES?

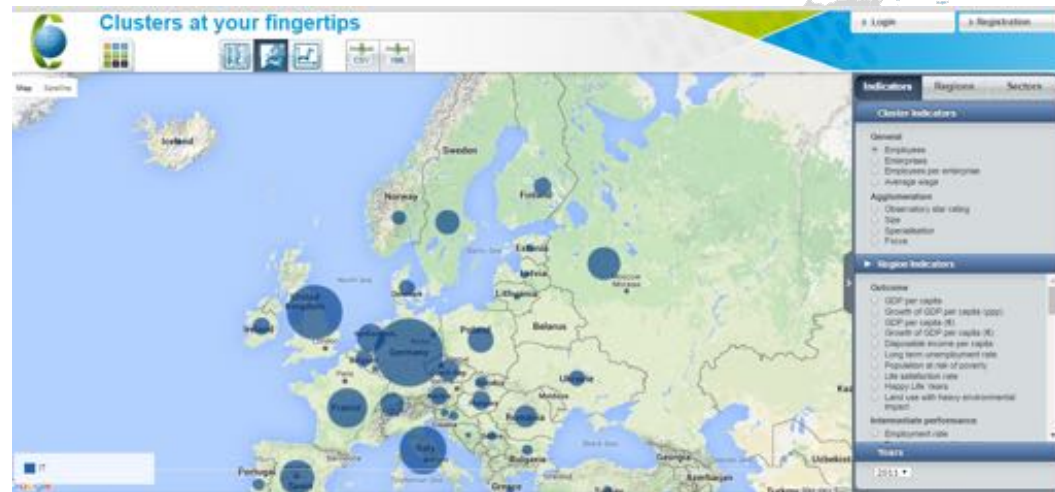
Cluster a regional concentration of related industries by M.E Porter



USA:clustermapping.us Platform



EU:clusterobservatory.eu Platform





## Outline

### **Part 1. Introduction**

#### **Evolution of Cluster Research and Cluster Mapping**

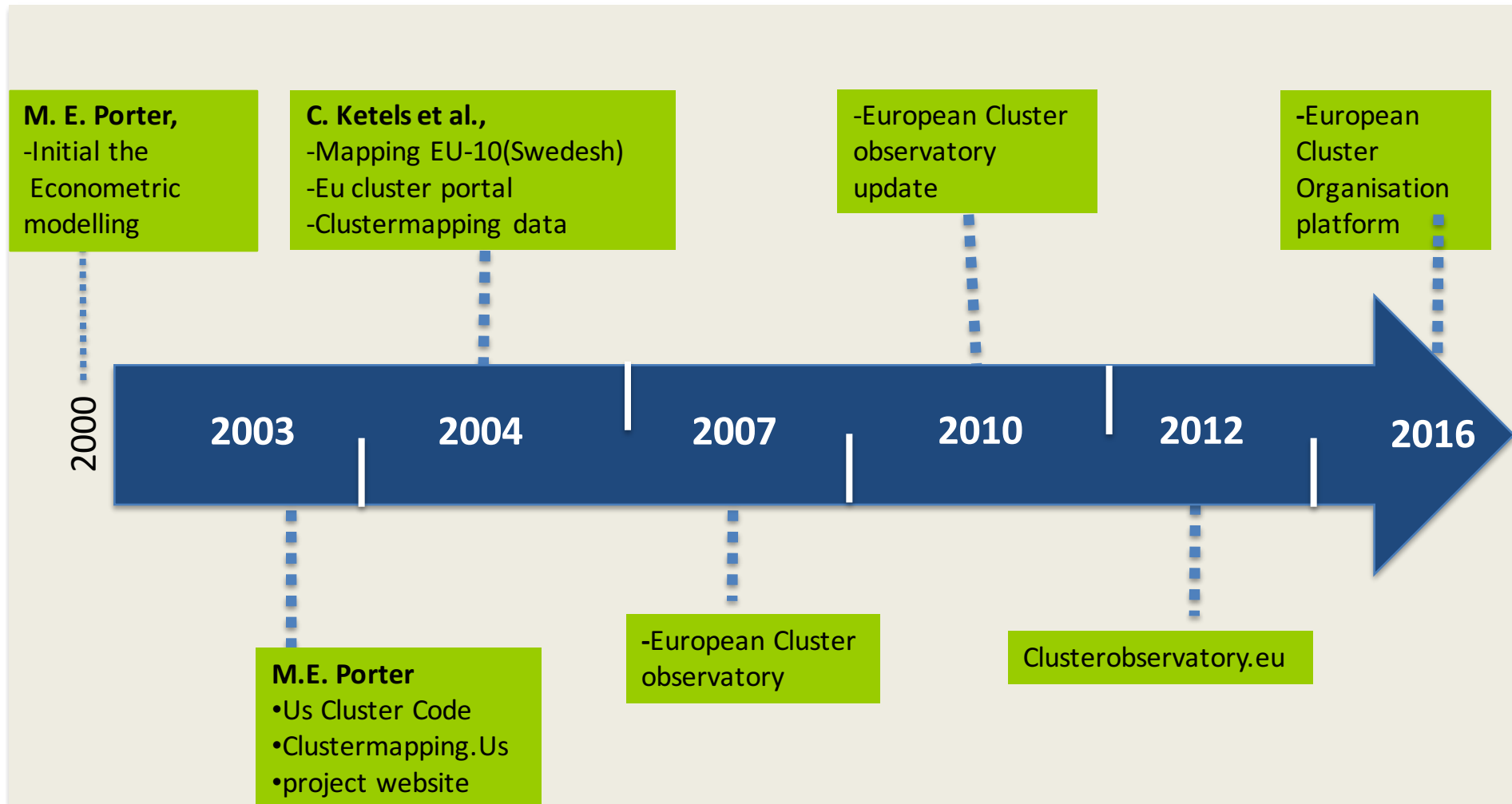
### **Part 2: From the Dataset to European commission to US cluster mapping perspective**

#### **2.a USA: Cluster Mapping.U.s**

#### **2.b EUROPE: Cluster Portal.eu and S3 PLATFORM**

### **Part 3. The methodological approach to connect Cluster with Spatial planning: the MAPS-LED GIS.**

## Part 1: Evolution of Cluster Research and Cluster Mapping



## Part 2: From the Dataset from European commission to US cluster mapping perspective



By Cluster

By Regions

Region Type

Economic indicator

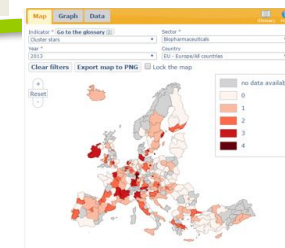
Indicator category

**51 Traded Clusters**

Are groups of related industries that serve markets beyond the region in which they are located.

**16 Local Clusters**

Consist of industries that serve the local market.



**CLUSTER STARS**

- ✓ Size,
- ✓ Specialisation,
- ✓ Productivity,
- ✓ Growth

**51 sectoral clusters**

**10 cross sectoral clusters**

**S3 Platform tools**

this tool to help strategy development rather than a source of statistical data



## 2.a USA: Cluster Mapping.Us-

2003



The screenshot shows the Cluster Mapping website interface. At the top, there is a navigation bar with links for 'About', 'Cluster', 'Region', and 'Community'. Below this, the main heading is 'Clusters'. The central content area defines a cluster as 'a regional concentration of related industries'. It then compares 'TRADED CLUSTERS' (engines of regional economies) and 'LOCAL CLUSTERS' (foundations of local economies). A horizontal bar chart titled 'Traded vs. Local Share of the U.S. Economy' shows the following data:

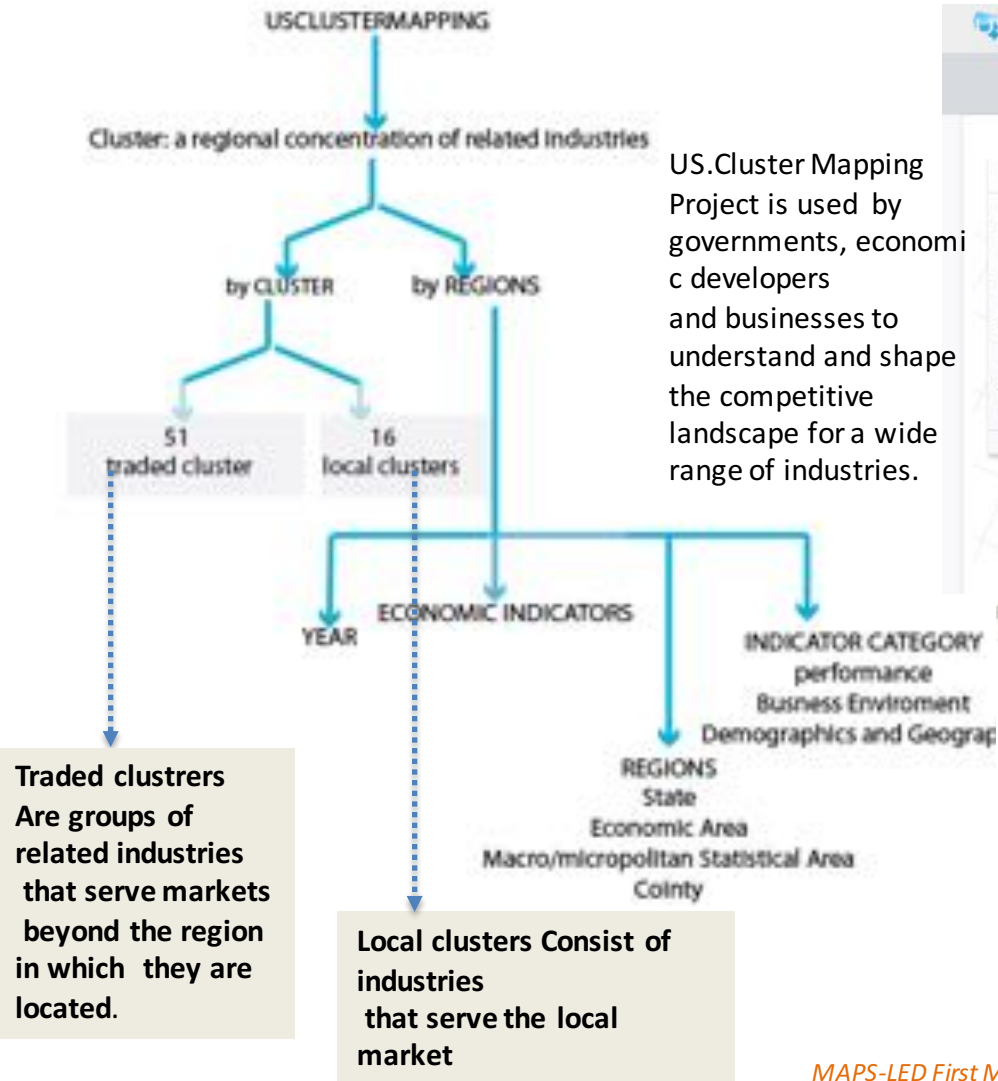
Metric	Traded Clusters	Local Clusters
EMPLOYMENT	54%	46%
INCOME	59%	41%
PATENTS	74.3%	25.7%

At the bottom, there is a section titled 'Dive into U.S. clusters' with a button that says 'WHAT INDUSTRIES ARE IN EACH CLUSTER?'.

Clustermapping.us by Prof. M.E. Porter

Northeastern University, Boston, MA, USA

## 2.a USA: Cluster Mapping.us



US.Cluster Mapping Project is used by governments, economic developers and businesses to understand and shape the competitive landscape for a wide range of industries.

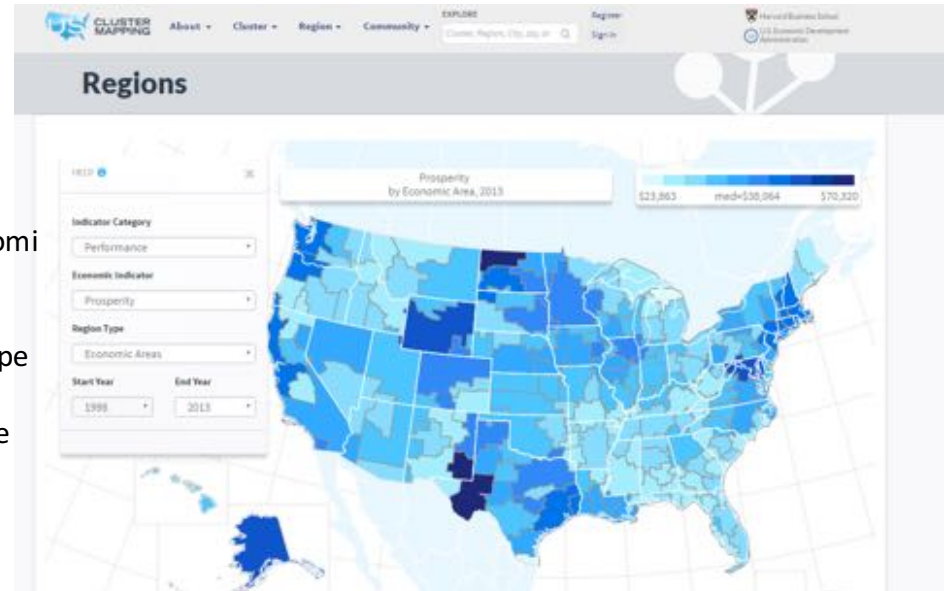


Fig. 2.

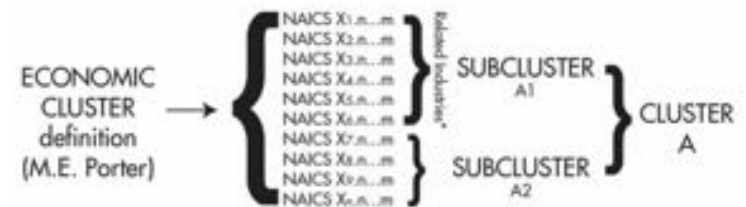
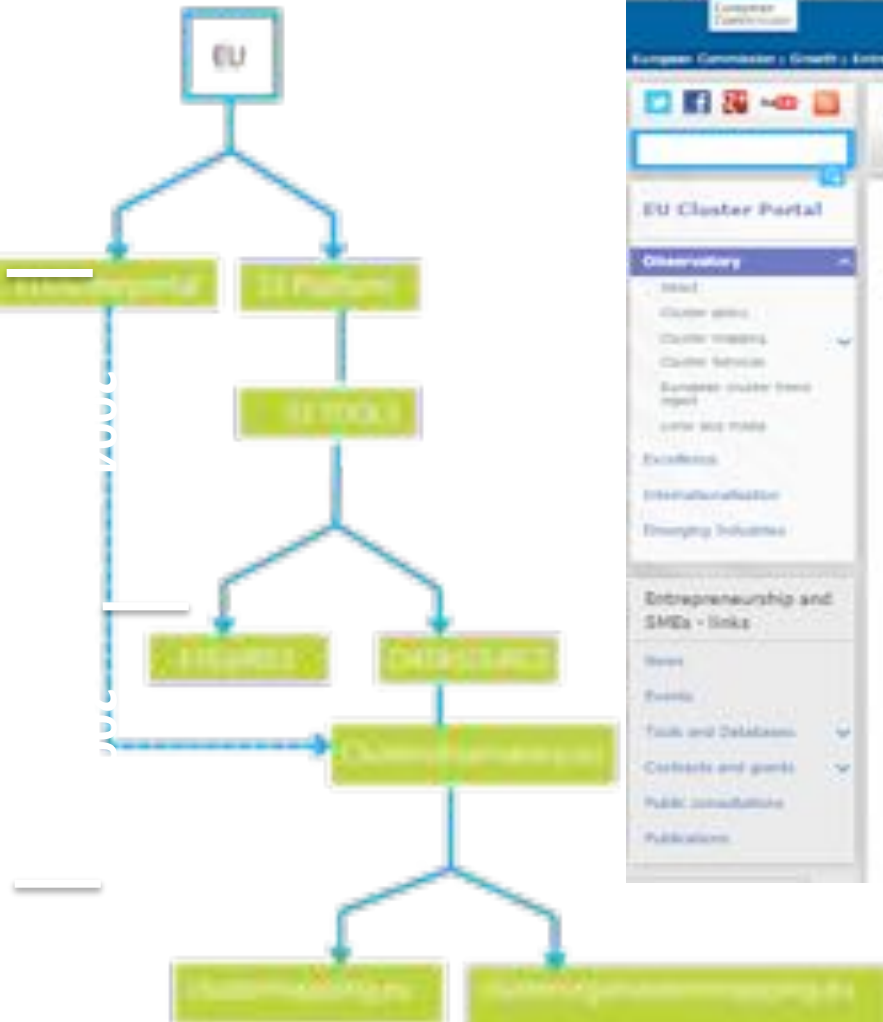


Figure 2: Clusters organization by NAICS codes



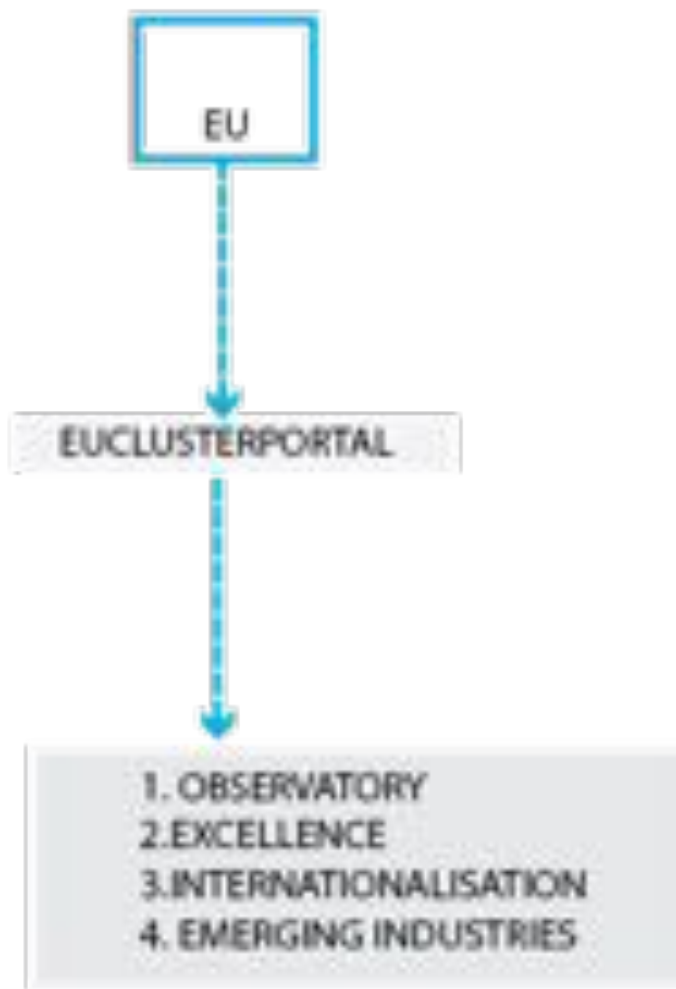
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2004



## 2.b EU Cluster Portal and S3 PLATFORM



### EU CLUSTER PORTAL:

The EU Cluster Portal provides tools and information on key European initiatives, actions and events for clusters and their SMEs with the aim of creating more world-class clusters across the EU.

**1. European Cluster Observatory:**— providing information, mapping tools and analysis of EU clusters and cluster policy. Also informs about events and activities for clusters

**2. Cluster Excellence:** – supporting benchmarking and training tools for cluster organisations.

**3. Cluster Internationalisation** – enabling EU clusters to profile themselves, exchange experience and search for partners for cooperation within and beyond the EU.

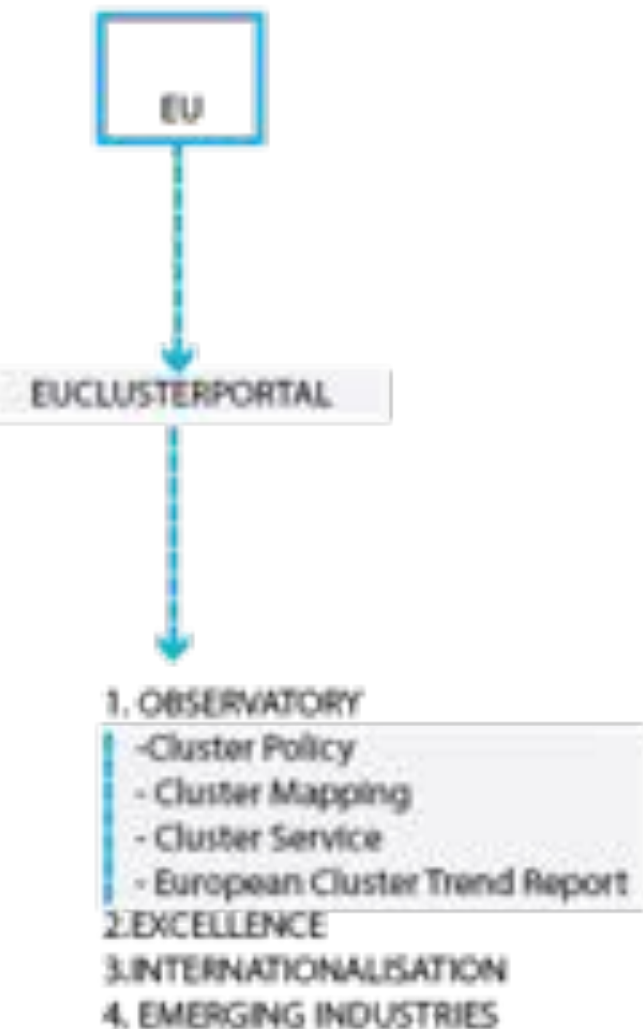
**4. Cluster And Emerging Industries** – providing background information on EU initiatives which support emerging industries.

2003

2004

2007

## 2.b EU Cluster Portal and S3 PLATFORM



**1. Cluster policy:** this section provides information on the current and planned cluster policy support initiatives that will be developed through the European observatory.

**2. Cluster mapping:** analyzed in what SECTORS A REGION IS SPECIALISED. To identify A REGION'S SECTORS of high specialisation, the usual procedure is to calculate a so called location quotient, which indicates whether or not a sector has a high share of the region's employment compared to the reference area (Porter 2003; Sölvell et al. 2008)

**3. Cluster services:** this tool intends to facilitate entrepreneurship, cross-sectoral collaboration and growth is mainly addressed to cluster managers interested in providing tailor-made and demand-oriented support services to cluster participants, notably SMEs.

**4. European cluster trend report:** The European Cluster Trends report will identify and analyse where and how clusters of related industries are transforming themselves and where new specialisation patterns give rise to the emergence or renewal of industries.

**1) internationalisation of clusters; 2) cross-sectoral transformations; 3) foresight analysis**

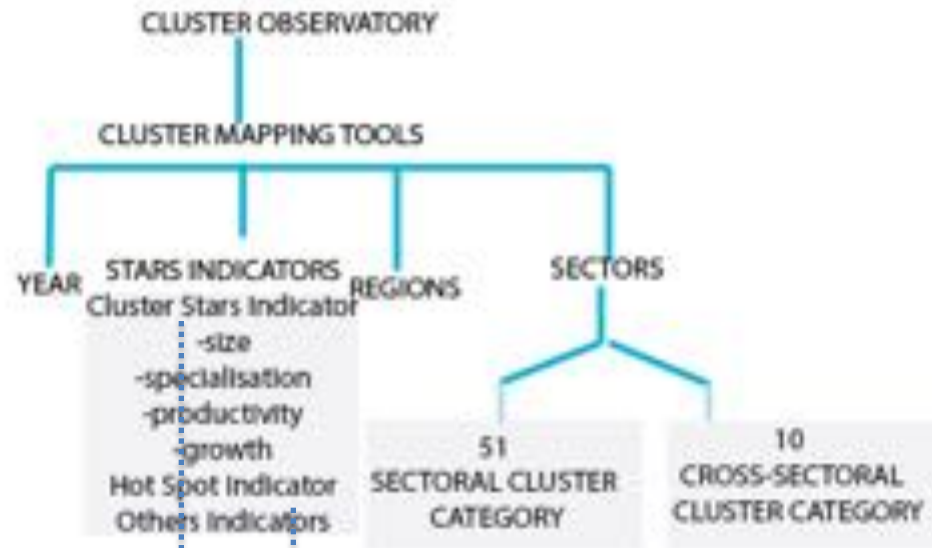
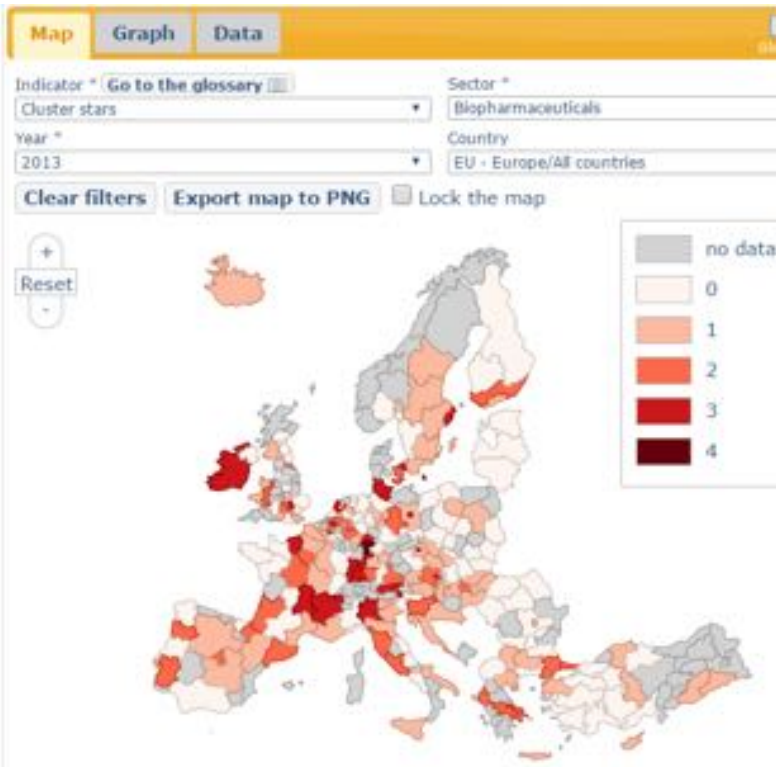
## 2.b EU Cluster Portal and S3 PLATFORM

2003

2004

2007

2012



“Cluster Stars” indicators  
that reveal the presence of  
critical mass depending upon the  
cluster’s size, specialisation and  
productivity

“Hotspot” indicators give an  
assessment of the overall  
cluster strength across a  
region.

## 2.b EU Cluster Portal and S3 PLATFORM



The Smart Specialisation Platform provides professional advice to EU countries and regions for the design and implementation of their research and innovation strategies for smart specialisation (RIS3).



RIS3 is a process, at the end of which regional/national strategies should identify activities, in which an investment of resources is likely to stimulate knowledge-driven growth.

the EYE@RIS3 è online database  
It's a tool that aims to help strategy development rather than a source of statistical data.  
Regions are requested to introduce/update input in the database, which will produce a realistic map of the process of RIS3 development





EYE@RIS3

Select Region

Match: All of the following fields

Research & Innovation Capabilities: Select Business Areas & Target Market: Select EU Priority: Select

Research & Innovation Capabilities (Subcategory): Select Business Areas & Target Market (Subcategory): Select EU Priority (Subcategory): Select

Region/Country Name: NUTS 3: Description of Priority: Refined Search Approximated Search

Country/Region type

- EU Countries with Encoded S3 Priorities
- EU Regions with Encoded S3 Priorities
- Non-EU Countries with Encoded R4 Priorities
- Non-EU Regions with Encoded R4 Priorities

Search Add priorities Export

Name (NUTS 3)	Description	Research & Innovation Capabilities	Business Areas & Target Market	EU Priority
Austria (AT)	Energy & en.	1. Energy production & distribution		1. Sustainable innovation
Austria (AT)	ICT	1. Information & communication technologies (ICT)	1. Information & communication technologies (ICT)	1. Digital Agenda
Austria (AT)	Life sciences	1. Human health & social work activities	1. Human health & social work activities	1. Public health & security
Austria (AT)	Manufacturing & industry	1. Manufacturing & industry	1. Manufacturing & industry	1. R&D 2. Advanced manufacturing

Legend: EU Countries with Encoded S3 Priorities EU Regions with Encoded S3 Priorities Non-EU Countries with Encoded R4 Priorities Non-EU Regions with Encoded R4 Priorities

Guidelines for selection criteria for the EYE@RIS3 tool

The database intends to combine:

Categories:

Eu priority

1. Aeronautics and space
2. Blue growth
3. Cultural and creative industries
4. Digital Agenda
5. KETs
6. Nature and biodiversity
7. Public health and security Ageing societies
8. Service innovation
9. Social innovation
10. Sustainable innovation
11. Specific local policy priority

Top down approach

Regional capabilities + Business Area and Target Market

Subcategories:

EU priority

Regional capabilities + Business Area and Target Market

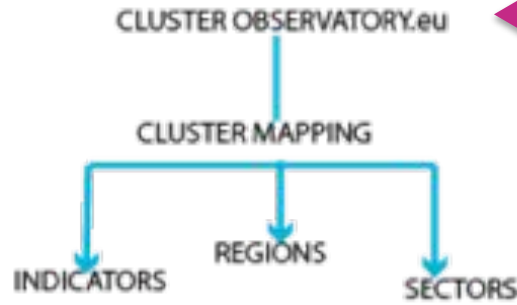


Eye@RIS3 database envisaged fields for specialisation and identify partners for cooperation



## 2.b EU Cluster Portal and S3 PLATFORM

The main task of the European Cluster Observatory is to offer statistical analysis, mapping tools and policy advice towards the design of more evidence-based cluster policies in Europe.



20 03

2014

2007

2012

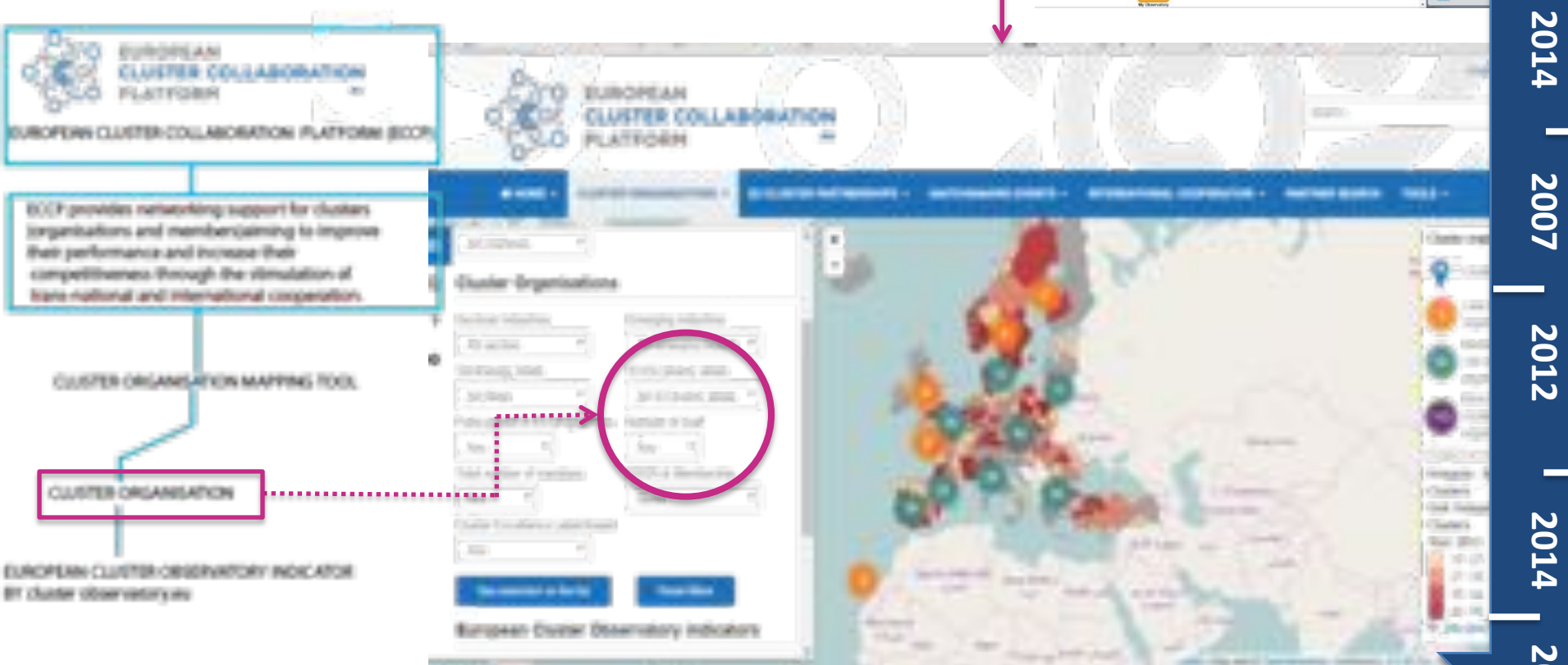
2014



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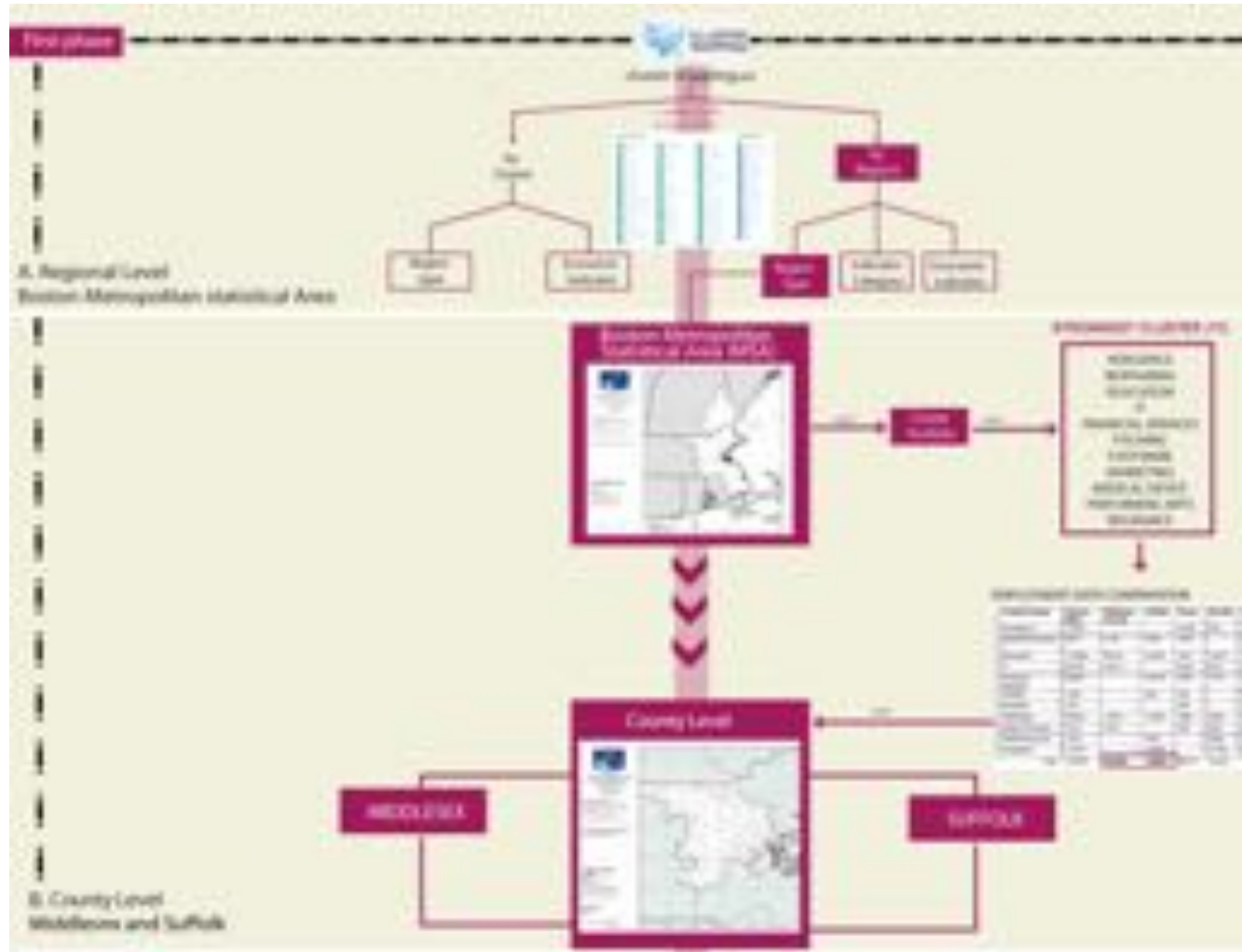
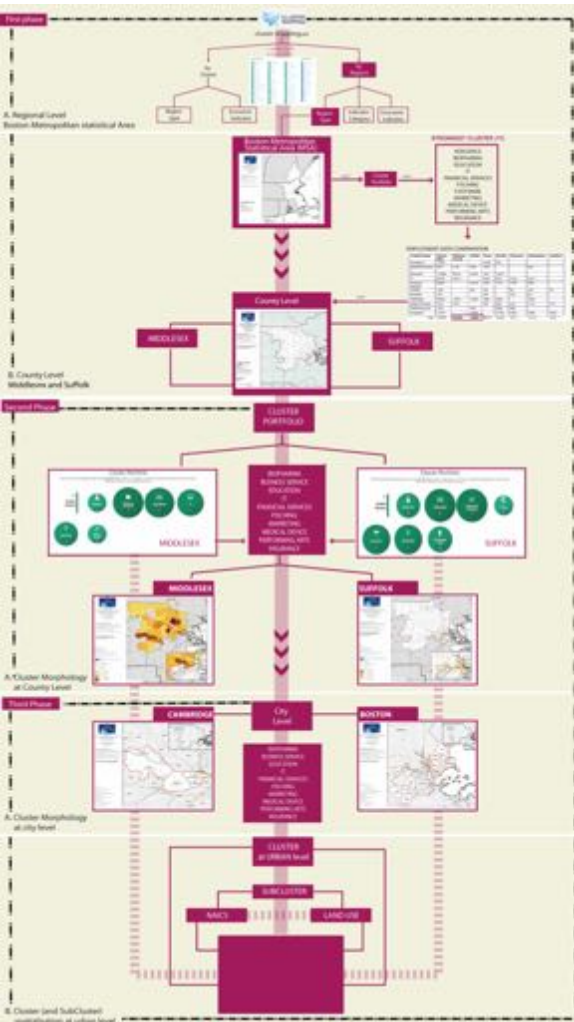
## 2.b EU Cluster Portal and S3 PLATFORM



Towards European Strategic Cluster  
Partnerships for smart specialisation investments  
- Call for the expression of interest- Deadline december 2016

MAPS-LED First Mid-term Meeting  
06/07.06.2016  
Northeastern University, Boston, MA, USA

### Part 3. The methodological approach to connect Cluster with Spatial planning: the MAPS-LED GIS.



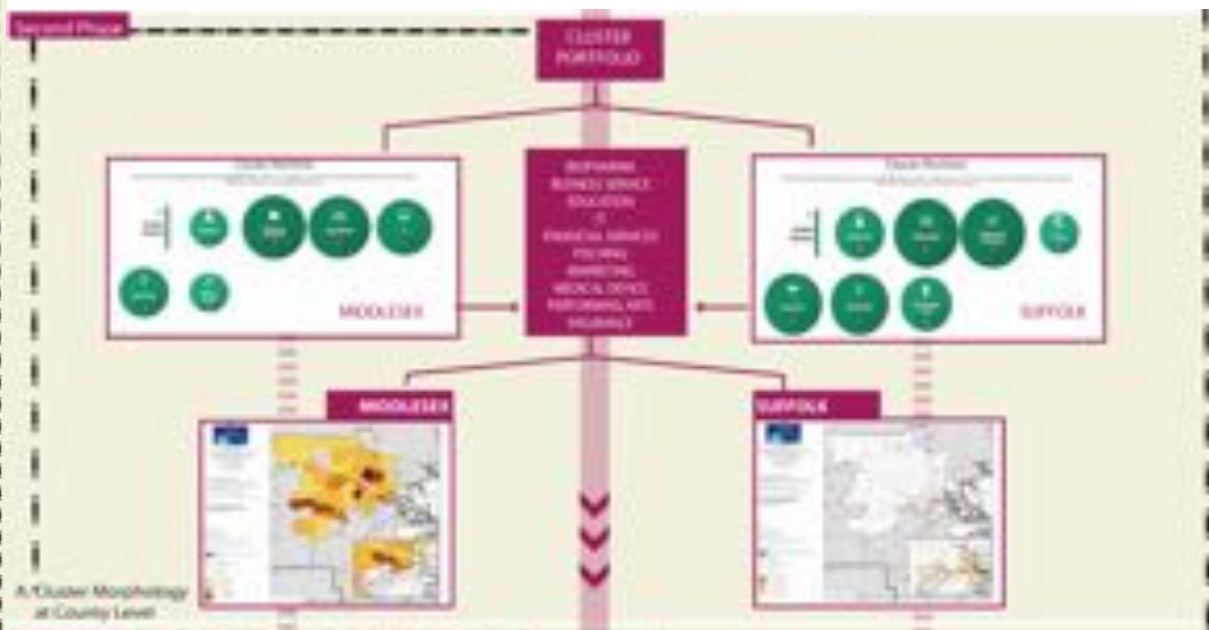
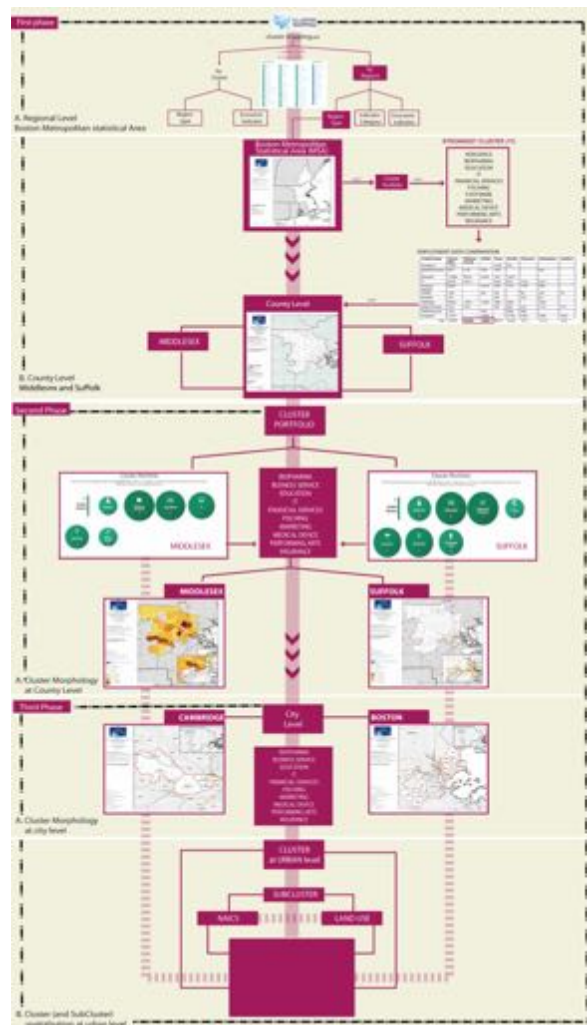
MAPS-LED GIS methodology

06/07.06.2016

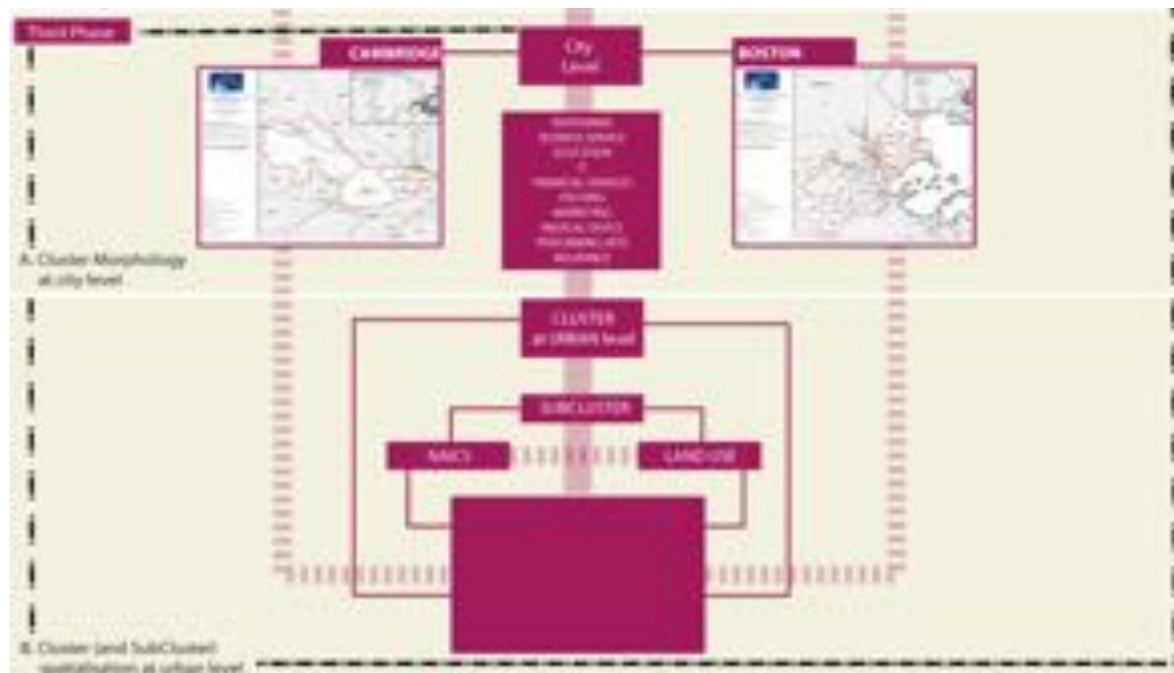
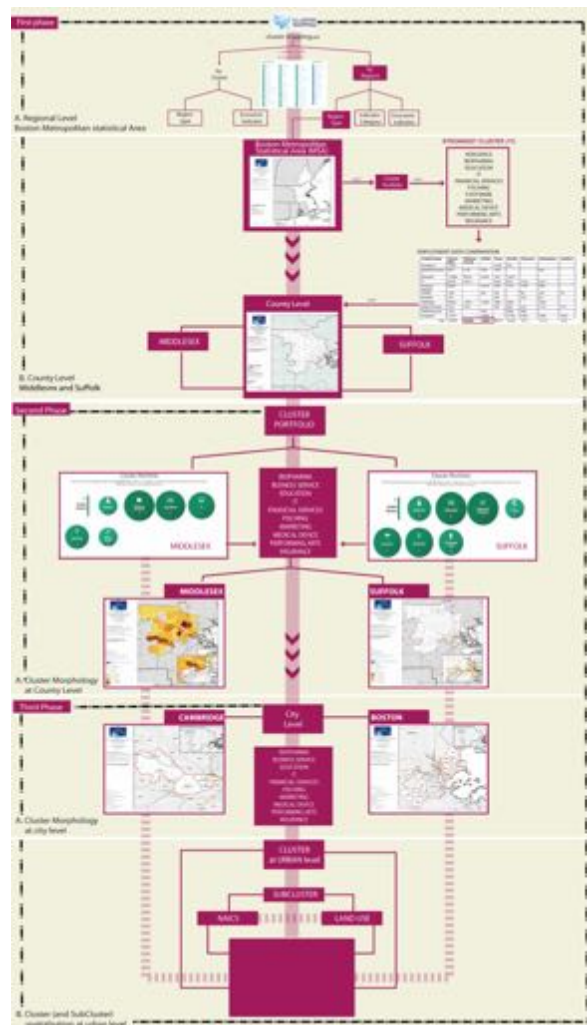
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THANK YOU!



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

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