European Observatory for Clusters and Industrial Change –

The new European Cluster Observatory: A focus on regional industrial change

Black Forest Diamond – evoREG Workshop Innovation and clusters: new challenges for private companies and public authorities

08 June 2018, Sankt Georgen

Andrea Zenker, Fraunhofer Institute for Systems and Innovation Research ISI
I. Introduction: The European Observatory for Clusters and Industrial Change (EOCIC)

• EOCIC is a two-year project on behalf of the European Commission, Directorate-General Internal Market, Industry, Entrepreneurship and SMEs; Clusters, Social Economy and Entrepreneurship unit

• Project start: October 2017

• The project is conducted by a consortium of European research and consulting organisations, headed by Deloitte Consulting and Advisory:
  - Deloitte Consulting and Advisory, Belgium
  - Centre for Industrial Studies (CSIL), Milano
  - Fraunhofer Institute for Systems and Innovation Research ISI, Karlsruhe
  - MERIT (Maastricht University), Maastricht
  - Sociedade Portuguesa de Inovação (SPI), Porto/ Santiago de Compostela
  - Strasbourg Conseil, Strasbourg
  - Valdani Vicari & Associati (VVA), Milano/ Brussels
  - VTT Technical Research Centre of Finland, Espoo
To help Europe's regions and countries in designing better and more evidence-based cluster policies and initiatives

I. Introduction: The European Observatory for Clusters and Industrial Change (#EOCIC)

OBJECTIVE

EOCIC builds upon and brings together the work undertaken by the European Cluster Observatory (2006-2017) and previous work of the European Service Innovation Centre (2012-2015), but with a stronger and wider focus on the role of industrial change

EOCIC supports:

- industrial modernisation
- entrepreneurship in emerging industries
- SMEs’ access to clusters and internationalisation activities
- strategic inter-regional collaboration and investment in the implementation of smart specialisation strategies

Vision: Providing favourable regional ecosystems and support for innovation and entrepreneurship to enterprises, particularly SMEs, thus supporting adjustments to industrial change
I. Introduction: The European Observatory for Clusters and Industrial Change (#EOCIC)

How are clusters defined?

1. In a ‘statistical sense’, as regional agglomerations of specific economic activities, measured on the basis of employment in related NACE sectors.

2. In a ‘political sense’, as specific policy interventions "... aiming at strengthening existing clusters or facilitating the emergence of new ones" (European Commission, 2008).

Key characteristics of the European Observatory for Clusters and Industrial Change:

• Large project bringing together a diversity of experience, methodologies and competencies;

• Strong interrelation of different exercises and tasks within the project;

• Focus on continuity (of previous initiatives) and new aspects reflecting current challenges and (policy) trends.
II. Products and services of the European Observatory for Clusters and Industrial Change (#EOCIC)

The European Observatory for Clusters and Industrial Change will provide different products, tools and services such as:

• Cluster mapping based on the updated European cluster database;
• European Panorama of Clusters and Industrial Change;
• European cluster and industrial transformation trends report;
• Cluster policy mapping in European countries and regions as well as in selected non-European countries;
• Regional Eco-system Scoreboard on Clusters and Industrial Change;
• Update of the European Service Innovation Scoreboard (ESIS);
• European Stress Test for Cluster Policy;
• Customised advisory support services to 12 model demonstrator regions (East North Finland, North-Middle Sweden, Greater Manchester, Lithuania, Wallonia, Saxony, Hauts-de-France, Centre-Val de Loire, Grand Est, Slovenia, Piemonte, Cantabria);
• Advisory support services to European Strategic Cluster Partnerships;
• Smart Guides for cluster policy;
• Organisation of various events to bring together European cluster policy-makers and stakeholders.
II. Products and services of the European Observatory for Clusters and Industrial Change (#EOCIC)

Focus: Cluster policy mapping in European countries and regions as well as in selected non-European countries

- **Goal:** stock-taking of cluster policies and cluster programmes in various countries and regions in order to support exchange and mutual cluster policy learning.

- **Methodology:** Gathering information on current cluster policy practices, including funding and implementation as well as support for cluster development.

- Implementation through online surveys in European countries and regions, inquiry in selected non-European countries.

- Information is analysed and presented in a comparative way, both across countries and regions, and over time.
II. Products and services of the European Observatory for Clusters and Industrial Change (#EOCIC)

Cluster policy mapping in European countries and regions, as well as in selected non-European countries

- Topics covered by the surveys:
  - General information on cluster support;
  - Insight into cluster programmes, their objectives and characteristics;
  - Funding aspects;
  - Implementation of the programmes and measures applied for supporting clusters;
  - Support for further cluster development.

- National survey: so far, answers for 29 countries and 29 cluster programmes (EU Member States and additional countries participating in the EU COSME programme).

- Results presented in a comparative way (report: “Cluster programmes in Europe and beyond”) using tables and graphs.
Focus: Regional Eco-system Scoreboard on Clusters and Industrial Change

- **Goal:** Provide information on framework conditions for cluster development and industrial change across European regions.

**Conceptual approach of the European Observatory for Clusters and Industrial Change**

- Regional Eco-system Scoreboard
- European cluster database
Regional Eco-system Scoreboard on Clusters and Industrial Change

• **Methodology**: (1) updating the indicators of the existing scoreboard and (2) integrating new dimensions of industrial change.

• Developing composite indicators that are presented in a comparative way for all target regions, allowing to visualise performance.

• **(Thematic) dimensions to be covered**: (1a) Entrepreneurial conditions, (1b) Knowledge base and skills, (1c) Collaboration and internationalisation, (1d) Demand conditions, (1e) Access to finance, (1f) Quality of governance; (2a) innovation, (2b) new and emerging technologies, (2c) digitalisation, (2d) firm investments, (2e) entrepreneurship, (2f) internationalisation, (2g) creativity, (2h) eco-efficiency.

• Implementation through collecting data on indicators that mirror regional framework conditions of those thematic dimensions.

• Calculation of composite indicators and visualisation.
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Regional Eco-system Scoreboard on Clusters and Industrial Change

- The methodology is aligned with methodology for calculating composite indicators for industrial change, and is embedded in methodology of previous scoreboard.
- Indicators that mirror those dimensions and topics were proposed and documented in the Methodology Report.
- 6 dimensions of the previous scoreboard as well as the dimensions of the extended scoreboard will be displayed.
- Examples for the new dimensions on industrial change: (1) Evolution towards a more innovative economy, (2) Digitalisation, and (3) Creativity.
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Regional Eco-system Scoreboard on Clusters and Industrial Change

# Evolution towards a more innovative economy

Pertinent aspects: Human capital, innovation capacities, research and development provided for the regional economy

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Regional coverage</th>
<th>Source</th>
<th>Data availability</th>
<th>Units</th>
<th>Last update</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity for innovation</td>
<td>COSME, country level</td>
<td>World Economic Forum/ Global Competitiveness Index 2017-2018</td>
<td>2017</td>
<td>Companies' capacity to innovate, scores 1-7 (1: not at all, 7: to a great extent)</td>
<td>2017</td>
</tr>
<tr>
<td>Planned ESIF investments in research and development and innovation</td>
<td>EU, regional level (NUTS1/ NUTS2)</td>
<td>Planned investments using European Structural and Investment Funds, S3 Platform, ESIF viewer</td>
<td>Planned investments</td>
<td>Million EUR, share of total</td>
<td></td>
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</table>
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Regional Eco-system Scoreboard on Clusters and Industrial Change

# Digitalisation

Impact on most economic sectors. Pertinent aspects: “Readiness” for interacting through Internet, ICT investment, etc.

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<tr>
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<tbody>
<tr>
<td>Regional &quot;readiness&quot; for interactions via Internet: Households with Internet access, interaction of individuals with public authorities via Internet, individuals ordering goods or services over the Internet</td>
<td>EU28 + Iceland, Norway, Switzerland, Montenegro, Former Yugoslav Republic of Macedonia, Serbia, Turkey, NUTS 2</td>
<td>Eurostat, isoc_r_iacc_h, isoc_r_gov_i, isoc_r_blt12_i</td>
<td>2006-2016, 2008-2016, 2006-2016</td>
<td>Percentages</td>
<td>26.04.2017</td>
</tr>
<tr>
<td>Internet connection business sector</td>
<td>EU28 + Iceland, Norway, Former Yugoslav Republic of Macedonia, Serbia, Turkey, country level</td>
<td>Eurostat/ Science, technology, digital society/ Digital economy and society/ ICT usage in enterprises/ Connection to the internet (isoc_ci_it_en2)</td>
<td>2010-2016</td>
<td>Share of enterprises with fixed broadband access, Share of SMEs with fixed broadband access</td>
<td>11.05.2017</td>
</tr>
<tr>
<td>Planned ESIF investments in information and communication technology</td>
<td>EU, regional level (NUTS1/ NUTS2)</td>
<td>Planned investments using European Structural and Investment Funds, S3 Platform, ESIF viewer</td>
<td>Planned investments</td>
<td>Million EUR, share of total</td>
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Regional Eco-system Scoreboard on Clusters and Industrial Change

# Creativity

Creative talents, human capital, students, but also (creative) services in industrial sectors play a pertinent role in shaping a creative environment.

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<tbody>
<tr>
<td>Attracting talent</td>
<td>COSME, country level</td>
<td>World Economic Forum, Global Competitiveness Index 2017-2018</td>
<td>2017</td>
<td>Capacity of countries to attract talents, Extent to which country attracts talents from abroad, score 1-7 (1: not at all, 7: to a great extent)</td>
<td>2017-2018</td>
</tr>
<tr>
<td>Share of employment in service innovation intensive industries</td>
<td>EU28, NUTS2</td>
<td>European Service Innovation Scoreboard</td>
<td>Percentage</td>
<td></td>
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</tr>
</tbody>
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II. Products and services of the European Observatory for Clusters and Industrial Change (#EOCIC)

Regional Eco-system Scoreboard on Clusters and Industrial Change

Data collection and processing

- **Data availability**: Some indicators cannot be mirrored by regional data (esp. small EU Member States, non-EU COSME countries):
  - some aspects of framework conditions (rules, regulations) are shaped on the national level;
  - smaller countries are not divided into NUTS2 entities;
  - data for non EU Member States participating in the COSME programme is not available for every indicator (however often covered by international data sources).

- General focus on reliable and comparable data (from official data sources).
- In addition to systematic data gaps, individual missing data will be encountered.
This presentation is part of a service contract implemented by EASME for the Clusters, Social Economy and Entrepreneurship of the European Commission’s Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs by a consortium of the following organisations:

Thank you very much for your attention!

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(also to register to our newsletter)

https://ec.europa.eu/growth/industry/policy/clusters/observatory_en
#EOCIC
Additional information
I. Introduction: The European Observatory for Clusters and Industrial Change (#EOCIC)

The European Commission engages in cluster mapping and cluster support since 2006

First phase 2006-2013:

- **Focus:** cluster mapping of EU-27, Iceland, Norway, Switzerland, Turkey, Israel; information and data on cluster organisations and cluster-related reports

- **Results:** identification of statistical regional clusters for 28 traded sectors across Europe, analyses of cluster policies across the EU.

- **Website:** [http://www.clusterobservatory.eu/](http://www.clusterobservatory.eu/)

- **Example:** IT clusters in European regions (NUTS1)
I. Introduction: The European Observatory for Clusters and Industrial Change (#EOCIC)

Second phase 2014-2016:

- Stronger focus on cross-sectoral linkages and emerging industries.
- Results: cluster mapping; analysis of cross-sectoral clustering trends; Regional Eco-System Scoreboard; advisory support services to 5 model demonstrator regions; European Stress Test for Cluster Policy including a self-assessment tool, networking and policy learning events.
- Website: [https://ec.europa.eu/growth/industry/policy/cluster/observatory_en](https://ec.europa.eu/growth/industry/policy/cluster/observatory_en)

Third phase (since October 2017):

- Strong focus on the role of industrial change (key enabling technologies, digitalisation, service innovation, creativity, eco-efficiency).
- Expected results: cluster mapping; analysis of cluster trends; Regional Eco-System Scoreboard; advisory support services to 12 model demonstrator regions; European Stress Test for Cluster Policy including a self-assessment tool, networking and policy learning events.
- Website: [https://www.clustercollaboration.eu/eu-initiatives/european-cluster-observatory](https://www.clustercollaboration.eu/eu-initiatives/european-cluster-observatory)
## Regional Eco-system Scoreboard on Clusters and Industrial Change

### # New and emerging technologies

Important aspect for upgrading industries. Framework conditions shaped by employment in high-tech sectors, the absorption of technologies, key enabling technologies in regions.

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<tbody>
<tr>
<td>Technology absorption on firm level</td>
<td>COSME, country level</td>
<td>World Economic Forum, Global Competitiveness Index 2017-2018</td>
<td>2017</td>
<td>Extent to which businesses adopt latest technologies, scores 1-7 (1: not at all, 7: to a great extent)</td>
<td>2017-2018</td>
</tr>
<tr>
<td>Regional specialisation in key enabling technologies</td>
<td>NUTS 2</td>
<td>Regional Innovation Scoreboard 2016</td>
<td>Period 2002-2011</td>
<td>Relative specialisation in KETs (based on patent data)</td>
<td></td>
</tr>
</tbody>
</table>

* High-technology manufacturing and knowledge-intensive high-technology services: NACE 21, 26, 59-63, 72.
# Regional Eco-system Scoreboard onClusters and Industrial Change

## # Firm investments

Important for industrial change. Framework conditions cover the attitude towards investing in fixed assets, financial means. See also ‘access to finance’.

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<tbody>
<tr>
<td>General investment behaviour of countries</td>
<td>EU28 + Iceland, Turkey, Montenegro, Albania, The Former Yugoslav Republic of Macedonia, Serbia, country level</td>
<td>SAFE Survey, European Central Bank (q2g)</td>
<td>2017</td>
<td>Share of companies whose fixed investments (property, plant, machinery, equipment) increased within previous 6 months (%)</td>
<td>2017</td>
</tr>
<tr>
<td>Use of external funding fixed investment</td>
<td>EU28 + Iceland, Turkey, Montenegro, Albania, The Former Yugoslav Republic of Macedonia, Serbia, country level</td>
<td>SAFE Survey, European Central Bank (q6a1)</td>
<td>2017</td>
<td>Share of companies that used external funding for fixed investments within previous 6 months (%)</td>
<td>2017</td>
</tr>
<tr>
<td>Planned ESIF investments in productive investment</td>
<td>EU, regional level (NUTS1/ NUTS2)</td>
<td>Planned investments using European Structural and Investment Funds, S3 Platform, ESIF viewer</td>
<td>Planned investments</td>
<td>Million EUR, share of total</td>
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Regional Eco-system Scoreboard on Clusters and Industrial Change

# Entrepreneurship, start-ups and scale-ups

Important contribution to industrial change. Favourable framework may support firm dynamics and industrial evolution. Pertinent aspects: Attitudes, financial means, business development investments. See also ‘access to finance’ and ‘entrepreneurial conditions’

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<tbody>
<tr>
<td>Attitude towards job creation</td>
<td>22 EU Member States + Macedonia, Switzerland, country level</td>
<td>Global Entrepreneurship Monitor</td>
<td>2010-2016</td>
<td>Percentage of those involved in early-stage entrepreneurial activity who expect to create 6 or more jobs in 5 years</td>
<td></td>
</tr>
<tr>
<td>Financial conditions for SMEs</td>
<td>EU23 + Macedonia, Switzerland, country level</td>
<td>Global Entrepreneurship Monitor, Entrepreneurial Ecosystem</td>
<td>2007-2016</td>
<td>Availability equity and debts (including grants and subsidies) for SMEs, scores 1-9 (1: highly insufficient, 9: highly sufficient)</td>
<td></td>
</tr>
<tr>
<td>Planned ESIF investments in business development</td>
<td>EU, regional level (NUTS1/ NUTS2)</td>
<td>Planned investments using European Structural and Investment Funds, S3 Platform, ESIF viewer</td>
<td>Planned investments</td>
<td>Million EUR, share of total</td>
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Regional Eco-system Scoreboard on Clusters and Industrial Change

# Internationalisation

Firm-internal and external conditions pertinent for engaging in international activities. Important aspects: general export orientation of environment, language skills, competitive advantages.

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<tbody>
<tr>
<td>Export orientation</td>
<td>COSME, country level</td>
<td>World Economic Forum, Global Competitiveness Index 2017-2018</td>
<td>2017</td>
<td>Exports of goods and services, percentage of GDP</td>
<td>2017-2018</td>
</tr>
<tr>
<td>Availability of language skills in supra-national trade (reference: online sale to other EU countries)</td>
<td>EU26, country level</td>
<td>Flash Eurobarometer 413</td>
<td>2015</td>
<td>Percentage of companies that consider &quot;lack of language skills&quot; as major problem / not a problem at all (companies selling online / not selling online)</td>
<td>2015</td>
</tr>
<tr>
<td>Type of competitive advantage</td>
<td>COSME, country level</td>
<td>World Economic Forum, Global Competitiveness Index 2017-2018</td>
<td>2017</td>
<td>Base of competitive advantage in international markets, scores 1-7 (1: primarily low-cost labour or natural resources, 7: primarily unique products and processes)</td>
<td>2017-2018</td>
</tr>
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Regional Eco-system Scoreboard on Clusters and Industrial Change

# Eco-efficiency

Scientific and technological advantages and public support for environmentally-friendly solutions as innovation drivers and political priorities.

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<tbody>
<tr>
<td>Enterprises that introduced an innovation with environmental benefits</td>
<td>EU28, country level</td>
<td>Eurostat, CIS (inn_cis9_env)</td>
<td>2014</td>
<td>Number of enterprises</td>
<td>11.12.2017</td>
</tr>
<tr>
<td>Eco-innovation related patents</td>
<td>EU-28, country level</td>
<td>Eco-innovation scoreboard, DG Environment</td>
<td>2010-2016</td>
<td>Scores</td>
<td></td>
</tr>
<tr>
<td>Investment for research on secure, clean and efficient energy; smart,</td>
<td>EU28, NUTS2</td>
<td>Horizon2020 allocations, JRC Smart Specialisation Platform, R&amp;I Regional Viewer</td>
<td>Allocations</td>
<td>Million EUR</td>
<td></td>
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<tr>
<td>green and integrated transport; climate action, environment, resource</td>
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<tr>
<td>efficiency and raw materials</td>
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