Presentation of the Input Paper for Romania

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Economic profile of Romania

General trends in the national economy:

- GDP per capita of €24,000 (PPS) (EU27 average of €32,400), with regional disparities between the capital region and the more rural regions of Romania, such as North-East.

- The Covid-19 pandemic had a significant, but comparatively rather contained impact on Romania’s economy.

Sectoral and ecosystem composition:

- Manufacturing and Agriculture & Mining make up important industries in terms of employment with a more pronounced presence in less densely populated regions.

- These rural regions of Romania also exhibit specialisation nodes in industrial ecosystems like Agri-Food, Textile, Mobility-Transport-Automotive and Energy-Renewables.

- The capital region exhibits specialisation nodes in the Digital as well as Aerospace & Defense ecosystems.

Source: ECCP (2023), own elaboration based on Eurostat.
Romania’s national innovation & regional competitiveness performance

EIS 2023: RO – Romania as an “Emerging Innovator”

Relative strengths and Improvements
1. Broadband penetration (relative to EU)
2. International scientific co-publications, Most cited publications, Public-private co-publications (positive performance change)
3. Trademark applications (positive performance change)

Areas for improvement
1. R&D expenditures and non-R&D expenditure
2. SMEs collaborating with others
3. Product and Business process innovators

Regional Competitiveness Index 2022
- Romania’s overall average score falls below the EU average, with significant variations among regions.
- The capital region stands out for its relatively strong performance, particularly in Higher education & LLL, Labour market and Market size.

Cluster ecosystem* in Romania: Locations, sectors and structures

Cluster Organisations
- **62 Cluster Organisations** (CO) from Romania on ECCP
- Well distributed across regions
- Cover 13 out of 14 EU Industrial Ecosystems
- **Top 3**: Digital, Tourism, Renewable Energy/Health

Structure of clusters
- **Relatively small COs**: 70% have 50 or less members (EU: 35%)
- Cluster organisations have comparatively **low numbers of staff**: 76% have up to 5 employees (EU: 55%)
- **Collaborative Areas**: Partnering for projects; internationalisation; digitalisation

Clusters and regional economic competitiveness

Cluster organisations are positively correlated with a range of economic competitiveness indicators:

**Business environment**
- Public R&D expenditure
- Human resources in science & technology

**Firm behaviour**
- Business R&D expenditure
- Employed ICT specialists

**Intermediate performance indicators**
- Apparent labour productivity
- PCT patents per Capita
- ICT patents

**Outcome indicators**
- GDP per Capita
- Employment in technology & knowledge intensive sectors
- Share of ICT in GVA

However: The presence of regional industrial agglomerations is also linked with higher air pollution.


+ + Positive correlation  ++ Weak positive correlation
European Commission programmes for collaborative projects among clusters & their members

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<th>INNOSUP-1</th>
<th>ESCP-4i</th>
<th>ESCP-4x</th>
<th>ESCP-S3</th>
<th>Euroclusters</th>
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| - Horizon 2020 initiative  
  - Development of new-cross-sectoral industrial value chains across the EU  
  - Three clusters involved in five INNOSUP-1 projects | - COSME initiative  
  - Development and implementation of joint internationalisation strategies to support SME internationalisation  
  - Seven clusters involved in 8 ESCP-4i projects | - COSME initiative  
  - Boost the cross-cluster networking and learning within the EU and development of cluster management excellence  
  - Seven clusters involved in as many projects | - COSME initiative  
  - Boost cluster cooperation in specific thematic areas in the field of regional smart specialisation strategies  
  - Two clusters involved in two projects. | - Single Market Programme  
  - Support the implementation of the EC industrial strategy through cross-sectoral, inter disciplinary and trans-European cluster initiatives  
  - One cluster involved in one Euroclusters (DREAM project) |

Source: ECCP (2023).
Seven clusters from Romania involved in eight ESCP-4i projects with European partners

Overview of the involvement in the ESCP-4i

- 8 project participations in the ESCP-4i by 7 Romanian cluster organisations.
- The projects involved 27 European cluster partners from 18 different countries.
- Thematic focus: furniture, cosmetics, bio-energies, ICT & deep tech amongst others.
- Diverse target markets: USA, Canada, Singapore, China, UAE, and more.

Source: ECCP (2023) based on information from COSME data hub.
Romanian participations in interregional innovation initiative

- 6 project participations in I3 from Romanian participants
- Projects involved EU cluster partners from 17 different countries
- Thematic foci:
  - Textiles
  - Food packaging
  - Healthcare
  - Photonics
  - Hydrogen

Overview of the selected projects:
Smart Specialisation in Romania

Source: ECCP (2023), own elaboration based on the National Strategy for Research, Innovation and Smart Specialisation 2022-2027 of Romania

- The Romanian Smart Specialisation Innovation Strategy 2021-2027 identifies **seven priority areas**.
- Cluster organisations (can) play an important role in the **design & implementation of S3**.
- Cluster organisations shall play a central role in the National Strategy for Research, Innovation & Smart Specialisation 2022-2027 of Romania.
- The strategy regards clusters as **key support tools for SMEs** in their integration into global value chains. Supporting clusters to increase the capacity for collaboration & internationalisation a priority strategy.

**Priority areas of Romania**
1. Bioeconomy
2. Digital Economy and Space Technologies
3. Energy and mobility
4. Advanced manufacturing
5. Advanced functional materials
6. Environment and eco-technologies
7. Health
Final Remarks

Romanian economy is characterized by a comparatively large Agri-food & Manufacturing sector, as well as substantial disparities between the capital region and the more rural regions.

Romanian cluster organisations are present across all regions and particularly strong in the Digital, Tourism, Renewable Energy and Health ecosystems.

Multiple Interregional cluster partnerships and cross-border collaboration facilitate innovation and value chain transformation within the Single Market.

The National Strategy for Research, Innovation & Smart Specialisation covers 7 priority areas and regards clusters as a key support tool.

Role of cluster organisations in the innovation ecosystem

- Market Intelligence: Identifying opportunities in other industries
  - Roadmapping
  - White Papers
  - Market-Check Tool

- Matchmaking: Finding partners in other industrial sectors
  - Cross-sectoral Speed Dating
  - Competence Mapping Tool
  - Technology Round Tables

- Project Development: Translating market intelligence and matchmaking into cross-sectoral innovation
  - Innovation Platforms
  - Change Management Moderation
  - Special Interest Groups

- Technology Transfer: Spreading capacity & knowledge, thereby attracting economic activity & investments
  - Transfer Concept

- Innovation Vouchers: Channeling funding through a cluster organisation
  - Meet & Greet Incentives
  - Insight Incentives
  - Collaboration Incentives

- Strategic Cross-cluster Collaboration: Networking across boundaries

Economic integration into the single market and facilitation of innovation & greater resilience