EUROPEAN CLUSTER COLLABORATION PLATFORM

The future of European competitiveness:

Role of Clusters

Summary

EU Clusters Talks
2 October 2024, 8:30 – 9:45 CET

An initiative of the European Union

Impact Insights: Measuring and Optimising Cluster Performance

The European Cluster Collaboration Platform, on behalf of the European Commission, organised the **EU Clusters Talk "Role of Clusters in Building Competitiveness" on 2nd October, 8:30 – 9:45 CET**, to examine the evolving role of clusters and explore how can be leveraged to strengthen competitiveness.

Agenda of the meeting

Moderation: Andrew Lansley

1. News from the European Cluster Collaboration Platform
   Ángela Negrete Benedí, team member of the European Cluster Collaboration Platform
2. Introduction from the European Commission
   Marek Przeor, Team Leader – Cluster Policy, DG GROW, European Commission
3. Contribution of Clusters to the Future of European Competitiveness
   Athanasios Konstandopoulos, Chief Scientific Advisor, CHORUS, Professor of Chemical Engineering, Aristotle University Thessaloniki, Greece
4. Panel debate
   Dr. Daniel Stadler, Cluster Manager, EIN Quantum Cluster NRW
   Luís Martins, President, Cluster Portugal Mineral Resources
   Patricia Tames, Deputy Director General, AFM Cluster for Advanced & Digital Manufacturing Technologies
   Hickmah Tagaully, Vice President CEBR – Council of European Bioregions
   Diego Carballo, European Project Manager, AeroSpace Valley, France
5. Funding opportunities
   Ángela Negrete Benedí, team member of the European Cluster Collaboration Platform

Key messages

- Clusters act as "bridges" between research and industry, accelerating innovation and enabling market-ready solutions.
- Clusters strengthen Europe's economic and geopolitical resilience by addressing supply chain vulnerabilities, fostering local sourcing, and enabling cross-border collaboration.
- Public-private collaboration is essential to sustain innovation, especially in sectors like life sciences, where private investment is declining.
- Clusters support regulatory harmonisation and shared R&D facilities, enabling SMEs to adapt to changing global dynamics like de-globalisation and local sourcing trends. They foster synergies across sectors, spanning digitalisation, clean technologies, semiconductors, and defence.
- Proposals for initiatives like the Euro Cluster for Raw Materials highlight the need for European collective action to enhance supply chain resilience and global competitiveness.

1. News from the European Cluster Collaboration Platform

Ángela Negrete, team member, European Cluster Collaboration Platform

After the introduction by moderator Andrew Lansley, the following news items were presented:

1. Invitation to register for the next Cluster Booster Academy, 3-4 March 2025 with previous online sessions.
2. Save the date for the upcoming Clusters meet Regions in Chisinau, Moldova, on 10-11 October and Charleroi, Belgium, on 27-28 November.
3. Access to the survey on the funding experience under STEP.

2. Introduction

Marek Przeor, Team Leader – Cluster Policy, DG GROW, European Commission

Marek Przeor provided an overview of the recent economic and strategic context within the European Union. They highlighted the EU's challenges, such as vulnerabilities exposed by the COVID-19 pandemic, including **supply chain disruptions**, and the war in Ukraine, which underscored **Europe's dependence on fossil fuels**. These issues aligned with the EU's strategic goals for green and digital transitions. He emphasised the **EU's position as the third-largest global economy**, with a GDP of €17 trillion (15% of the global total), a population of 450 million citizens, and 23 million companies.

He noted that this robust economic standing had spurred a renewed focus on competitiveness, driven by geopolitical disruptions, the European Council's call for a New European Competitiveness Deal, and the forthcoming political cycle (2024–2029), marked by European Parliament elections and the appointment of a new European Commission. The **European Council has called for a new European Competitiveness Deal**, emphasising a stronger, greener, and more digital economy.

Key developments included the **European Council's strategic agenda**, which prioritised competitiveness and industrial policy. Two expert reports underpin the current debate: **Enrico Letta's report on the Single Market**, which identifies the need for its deepening and improving freedoms like the movement of capital and services, and **Mario Draghi's report on European competitiveness**, which explores other critical factors. The speaker underscored the Single Market's imperfections, particularly regarding the free movement of services and capital, and **the need for reforms to strengthen its role in competitiveness.**

The **European Commission's political guidelines**, outlined by President Ursula von der Leyen, and mission letters to incoming commissioners also set the stage for policy priorities. These included industrial decarbonisation, the Net Zero Industry Act, the European Competitiveness Fund, SME support, critical raw materials strategies, and intellectual property enforcement.

In the end, Marek Przeor called for a discussion on the role of clusters in advancing the EU's competitiveness agenda. He highlighted the contributions **clusters had already made and the potential for greater impact at both the micro (cluster) and macro (EU) levels.** The aim was to identify how clusters could better align with and support EU priorities during the 2024–2029 period.

3. Contribution of Clusters to the Future of European Competitiveness

Athanasios Konstandopoulos, Chief Scientific Advisor, CHORUS, Professor of Chemical Engineering, Aristotle University Thessaloniki, Greece

Athanasios Konstandopoulos delivered an insightful presentation on competitiveness and the role of clusters in shaping the future of European competitiveness. They began by framing competitiveness as a natural process tied to evolution, where organisations, like ecosystems, must adapt to survive and thrive. Clusters were described as "***islands of excellence***" evolving into networks and ecosystems driven by synergies to remain competitive in an ever-changing environment.

The speaker highlighted the **current trend of de-globalisation**, noting a reversal of globalisation that had previously created opportunities for many countries. This shift has required European businesses, particularly SMEs and clusters, to adapt to new dynamics, such as the emphasis on locally sourced products. He likened this process to chemical equilibria, explaining how notions from chemical engineering can help understand organisational evolution and the challenges faced.

His presentation introduced a synergetic framework to address these challenges, focusing on **sustainable and resilient approaches**, including local sourcing of raw materials, modular scaling, network science, and symbiotic relationships. This framework aimed to evaluate and guide the multidimensional impacts of activities on the environment, society, and the economy, encapsulated in a "*resource nexus*" model.

Drawing historical parallels, the speaker referred to **Vannevar Bush's 1945 report *Science: The Endless Frontier*** and **Mario Draghi's recent report on European competitiveness**. They compared the two, noting their shared emphasis on government involvement in research, the importance of human capital, and public-private collaboration. However, he also underlined key differences: **Bush's focus on basic research contrasted with Draghi's emphasis on applied research and innovation.** Notably, Draghi's report advocated for substantial additional annual investments to meet its ambitious goals.

Turning to clusters, Athanasios Konstandopoulos underscored their critical role in **implementing the recommendations of the Draghi report**. Clusters were identified as essential tools for accelerating innovation, facilitating decarbonisation, fostering local supply chains, enhancing the Single Market, pooling resources for financing, and providing governance models to improve competitiveness. Examples included fostering cross-border regulatory harmonisation in the automotive industry and supporting SMEs with shared R&D facilities.

The presentation also addressed **sector-specific contributions of clusters**, spanning areas such as energy, critical raw materials, digitalisation, semiconductors, clean technologies, automotive, defence, space, and pharmaceuticals. Athanasios Konstandopoulos stressed that clusters if they did not exist, would need to be invented, as they offered unique advantages in addressing the issues raised by the Draghi report.

Closing with an analogy from chemical engineering, Athanasios Konstandopoulos described **clusters as operating at the "*meso scale*" bridging the micro-scale of individual actions and the macro-scale**

of societal and economic impacts. This *meso scale* allowed clusters to foster synergies while filtering out inefficiencies, underscoring their critical role in driving competitiveness.

4. Panel debate

Starting the discussion, the panellists provided valuable insights into their respective fields, highlighting the opportunities, challenges, and critical contributions of clusters.

Dr. Daniel Stadler focused on the unique challenges in **quantum technology development**, emphasising the necessity of bridging the gap between scientific research and industrial applications. He highlighted the long-term nature of quantum hardware development and the crucial role of clusters in fostering collaboration between academia, industry, SMEs, and startups. In his view, clusters act as "bridges" that integrate scientific precision with industrial needs, ensuring technology readiness and market applicability. He also stressed the importance of startups and SMEs as risk-takers and specialised innovators in the quantum ecosystem, while universities contribute by providing knowledge and skilled labour.

Patricia Tames underscored the strategic importance of **manufacturing** in sustaining **Europe's global competitiveness**. She asserted that manufacturing forms the backbone of key sectors such as aerospace, defence, and automotive, warning that losing this capability would have severe long-term consequences. Tames emphasised digitalisation as a critical tool for increasing productivity and enabling new business models but cautioned that its adoption must be carefully aligned with practical needs. She commended clusters for their ability to translate broad technological concepts into actionable strategies for SMEs, fostering innovation and ensuring the continued relevance of traditional manufacturing sectors.

Luís Martins addressed the critical role of **raw materials in Europe's industrial value chains**. He warned of the unsustainable reliance on external sources for mineral resources and called for increased domestic production of critical raw materials. Martins described clusters as key facilitators of innovation, connecting academia and industry to promote sustainability and competitiveness in resource use. He expressed strong support for the creation of a Euro Cluster dedicated to raw materials, emphasising the need for collective European action to enhance supply chain resilience and secure international partnerships with trusted geopolitical allies.

Hickmah Tagaully discussed the **funding challenges faced by SMEs** in the life sciences sector. She highlighted a significant decline in private investment and the pressing need for **public-private collaboration** to sustain innovation. Tagaully pointed out that regulatory complexity in Europe presents additional hurdles for SMEs, making it challenging to scale up operations compared to other regions like the United States. She advocated for clusters to take a more active role in mitigating these challenges by leveraging EU programmes to de-risk early innovation phases and attract private investors. According to Tagaully, addressing these funding and regulatory issues is essential for fostering competitiveness in the health and life sciences sectors.

Diego Carballo shared insights into the strategies employed by his cluster to support **innovation and ensure long-term sustainability.** He described the importance of clusters in fostering economic growth and ecological resilience by supporting members throughout the entire innovation lifecycle, from ideation to market readiness. Carballo emphasised the need for clusters to remain closely

connected to their members, warning against the risk of becoming **detached from the realities** of research and industry. He also highlighted the importance of skill development and knowledge transfer, particularly in the aerospace sector, to maintain competitiveness against global players such as the US and China.

One of the points raised in the debate was the discussion between **public vs private funding.** Hickmah Tagaully expressed concerns about the declining levels of private investment in the life sciences sector and emphasised the need for public-private collaboration to sustain innovation. She pointed out that public funding alone is insufficient, while private investors are increasingly risk-averse, especially in early-stage innovation. Luís Martins, on the other hand, highlighted the importance of shared European resources and collective action through clusters to secure funding, particularly in sectors like raw materials, where international cooperation is crucial. While both agreed on the importance of funding, Tagaully focused on mitigating risks for private investors, whereas Martins advocated for stronger intra-European collaboration.

The **regulatory environment** was another area of divergence. Hickmah Tagaully stressed that regulatory challenges in Europe are particularly burdensome for SMEs in the life sciences sector, comparing it unfavourably to more streamlined processes in markets like the United States. She argued that these regulatory complexities make it harder for European SMEs to innovate and scale, calling for clusters to actively assist in navigating these barriers. This perspective contrasted with Diego Carballo, who did not highlight regulatory issues as a primary challenge in the aerospace sector. Instead, he focused on ensuring alignment between cluster activities and member needs, suggesting a lesser emphasis on regulatory concerns compared to funding and skill development.

Regarding **digitalisation and adoption by SMEs**, Patricia Tames viewed digitalisation as an essential tool for enhancing competitiveness in manufacturing. She underscored the need for clusters to act as translators of digitalisation concepts, making them accessible and actionable for SMEs. However, she cautioned against adopting digital technologies without a clear understanding of their purpose and impact, advocating for practical and targeted implementation. Diego Carballo, while agreeing on the importance of digitalisation, took a broader approach by focusing on transversal axes like data, manufacturing, and circular economy to drive innovation across sectors. This reflected a divergence in emphasis, with Tames prioritising immediate SME needs and Carballo adopting a long-term, strategic perspective.

On the issue of the **scope of international cooperation,** Luís Martins advocated for the creation of a Euro Cluster for raw materials, arguing that Europe cannot solely rely on domestic production and must engage in international trade agreements with stable partners like Canada, Japan, and South Korea. His vision of international cooperation through a specialised cluster highlighted the need for critical mass to effectively compete globally. In contrast, Dr Daniel Stadler placed greater emphasis on building robust regional ecosystems that integrate into the European quantum technology landscape. While Martins prioritised global partnerships, Stadler focused on strengthening regional connections within Europe to ensure competitiveness.

The speakers collectively emphasised the **vital role of clusters in fostering collaboration and addressing sector-specific challenges**. Dr Daniel Stadler highlighted clusters as "bridges" between academia and industry, essential for transitioning innovations to market. Patricia Tames saw clusters as coordinators that enable SMEs to adopt digitalisation effectively while sustaining traditional

manufacturing sectors. Luís Martins focused on clusters as enablers of innovation and sustainability, advocating for a Euro Cluster to enhance resource resilience and strategic autonomy. Hickmah Tagaully underscored the importance of clusters in de-risking early innovation, navigating regulatory complexities, and securing funding for SMEs. Diego Carballo stressed the need for clusters to maintain close engagement with members, supporting both innovation and long-term sustainability through direct and practical collaboration. Together, the speakers portrayed clusters as **indispensable tools** for competitiveness and innovation across diverse industries.

5. Funding opportunities

Ángela Negrete, team member, European Cluster Collaboration Platform

Closing the EU Clusters Talk, Ángela Negrete shared the following examples of funding opportunities:

1. Zero-pollution cities; deadline 11 February 2025.
2. Demand-led innovation through public procurement; deadline 20 November 2024.
3. Living Labs in urban areas for healthy soils; deadline 8 October 2024.
4. Non-thematic development actions by SMEs; deadline 5 November 2024.
5. Opportunities for SMEs: Calls from Euroclusters; published on European Cluster Collaboration Platform.