

SUPPORT SERVICES FOR GREEN AND DIGITAL TRANSFORMATION OF CLUSTERS AND SMEs

Succes stories within the project
“Innovative services for twin
transition in SMEs and clusters”

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1. RATIONALE

The brochure “Support services for green and digital transformation of clusters and SMEs” is elaborated within the project “Innovative services for twin transition in SMEs and clusters” of the EEA and Norway Grants Program 2014-2021.

The scope of the project is to increase the competitiveness of Romanian SMEs within focus area Green Industry Innovation by a close cooperation between Romanian Cluster Association-CLUSTERO and Innovation Performance AS from Norway.

The aim of the brochure is to be a useful tool for all Romanian clusters and SMEs that want to enter in innovative networks focused on green and digital transformation. The examples presented in the brochure are based on the information provided by the clusters and SMEs identified in the analysis carried out within the project and by the Norwegian clusters with which discussions took place during the study trip of the Romanian delegation in Norway.

As discovered in the process of identifying support services for green and digital transformation of clusters and SMEs, the most effective measures would be:

- *Raising awareness about the twin transition process*

The success of the twin transition process at a regional level is strongly related to community and cluster involvement. The approach of green and digital aspects is new for clusters and communities and must be supported by all stakeholders. Events with international participation are an important tool for networking and bringing together all stakeholders involved in various projects focused on twin transition and exchanging best practices.

- *Development of a portfolio of support services for the green and digital transformation of SMES*

The national and regional authorities as well as clusters could play a vital role in supporting SMEs with training, coaching, study trips, and exchange of experience. The regional authorities should be open to exchanging their experiences with the other regions and national agencies on reskilling and upskilling of the labor force to fully exploit the potential of digital and green technologies. The dialogue between clusters and national and regional authorities on financing the twin transition should be organized more systematically and clusters within various projects could involve members in activities related to twin transition.

- *Integration of SMEs into regional innovation ecosystems*

Promoting the active participation of SMEs in established ecosystems like Clusters, Digital Innovation Hubs (DIH) and other industry networks and associations is highly beneficial. By becoming integral members of these networks, SMEs can benefit from the wealth of shared knowledge, collaborative opportunities, and a unified push towards technological adoption. It is crucial that SMEs understand and identify the incentives and advantages of being part of these networks. Therefore, the messages sent should be tailored to address the specific needs and concerns that SMEs may have, ensuring that they see the value and relevance of their participation.

The examples presented in this brochure are based on the information given by the project partners and by the clusters that participated in the study trip in Norway.

2. GREEN AND DIGITAL TRANSITION- a short overview

The Twin Digital and Green transition has been adopted by the European Union in 2021 as part of its European SME strategy and the European Green Deal, which aims to use climate-neutral resources and an efficient digital economy in European SMEs.

The concept of the digital and green transition defines a comprehensive societal transformation in which all sectors adopt relevant technologies that contribute to a low carbon society. The green and digital transition is to assist SMEs in becoming more sustainable using climate neutral resources and decrease the use of waste, water, and energy. This can only be realized by the application of digital tools to plan, measure, analyze, and monitor the use of resources. The digital and sustainable transition can help these companies with cost savings, can provide competitive advantages, and offers opportunities for the development of new products and services.

The green and digital transition has specific goals such as:

- The way out lies in a swift and inclusive transition to environmentally sustainable lifestyles and economies. The green transition refers to the fundamental shift in production and consumption patterns to allow us to live within planetary boundaries. It means mitigating climate change by introducing climate-friendly lifestyles and taking environmental costs into account. It includes addressing the loss of biodiversity and its multiple ecosystem services that are crucial to healthy living and to resilient societies. At the same time, the green transition must be fair and inclusive.

- The European Union is a leader in climate and environmental action. The European Union was the first global player to present a long-term vision that aims for climate neutrality by 2050. In 2019, the European Commission presented the European Green Deal, which sets out a new sustainable growth strategy and addresses some of the most important environmental and climate-related challenges. It sets the goal of transforming the European Union into a modern, circular, resource-efficient, and competitive economy, in line with the goals of competitive sustainability. Following this blueprint, the European Union has adopted a European Climate Law to establish the legally binding target of reaching net zero greenhouse gas emissions in the European Union by 2050. The European Commission has also proposed a legislative package to reach an increased climate ambition by 2030. Furthermore, the Commission has adopted several strategies in support of its environmental targets, such as the Farm to Fork Strategy, the Sustainable Blue Economy Strategy, the Climate Adaptation Strategy, and the New Action Plan on Circular Economy.

- The green transition is an opportunity to unlock economic and societal benefits. Green technologies can provide economic and environmental win-win situations for both societies and economies. The green transition is an opportunity to transform today's unsustainable activities towards a just future. One that overcomes societal challenges such as growing disparities, and opens up avenues for competitive advantages of economic activities that provide solutions without exceeding the planetary boundaries.

- The digital transition is an ongoing process that is shaping the future of societies and economies. The changes triggered by the digital transition have the potential to increase prosperity and solve many societal challenges. At the same time, increasing digitalization entails many risks, for example social disruptions and polarization of opinions, increasing inequality, security risks, or mis- and disinformation. Today, the European Union faces risks stemming from its dependence on non-European technologies and service suppliers and globally there is a reliance on a few big technology companies. Much of the data produced in the European Union is stored and processed elsewhere, which poses both a security risk and a potential loss of the value of European data. At the same time, the reach of digital innovation is expanding and could transform our society and economy even further. Emerging technologies such as advanced robotics, automated mobility, or digitally-enabled biotechnologies are crossing digital, physical, and biological spheres.

- To make the digital transition a success, the European Union needs to establish a secure, trustworthy, and resilient digital infrastructure. It needs a strong digital education and training ecosystem, so that the European Union's citizens and workforce are fully equipped for the digital age. The digital transition requires policies that harness the benefits of technologies, reduce the negative impacts of technological change, and avoid falling behind global competitors. The European Commission has presented a strategy to harness the benefits of the digital transition.

In the elaboration of this brochure concerning support services for twin transition of clusters and SMEs and further to the study trip in Norway we identified some relevant examples from Romania and Norway that could be transferable to other clusters or regions and be inspiration for next programming period with Norway and SEE grants.

3. SUPPORT SERVICES FOR TWIN TRANSITION OF CLUSTERS AND SMEs

3.1. Advisory services on sustainable farming by digitalization services - AGRO TRANSILVANIA Cluster- North West Region

Location

AGRO Transylvania Cluster- North West Region

Description

The *Advisory services on sustainable farming by digitalization services* was developed by AgroTransylvania Cluster in a consortium that brought together five ago-industrial clusters from Europe, namely:

- VEGEPOLYSVALLEY (Coordinator) Pays de la Loire, France
- GREENPORTWEST- HOLLAND Zuid-Holland, Netherlands
- CTA Andalusia, Spain
- AgroTransylvania Cluster Transilvania, Romania
- Clust-ER Emilia Romagna, Italy.



COMSENSYS TRACK DIGI CLUSTERS

SAVE THE DATE

26-10-2020 | 14.00-17.00 CET

Location: Online

Boosting digitalization in European Agrifood sector

Clusters recommendations toward the policy makers

These projects are funded by the European Union's COSME programme

ESCP S



The main objective was to boost digitalization by creating a favourable interregional ecosystem. This included the following objectives that have been targeted:

- To stimulate new innovative solutions fitting specific requirements of agrifood chain www.trackgrowingdata.eu
- To facilitate associated joint investments toward advanced agrifood industry4.0.
- To intensify cross-pollination between ICT / traceability and big data (TBD) sectors, in priority SMEs, and actors of the agrifood industry.

The project and the activities programmed and implemented within it have led to important achievements for the clusters, namely:

- Joint activities in synergy with other initiatives: Thematic missions (S3P BD&T), webinars (DIVA) or workshops (PIC Network)
- Exchanges around good practices and building a virtual community (living labs methodology)
- Long-term vision and willingness to improve the services toward members and bringing key messages to the policy makers.

Regarding SMEs, the project's achievements materialized at the collective and individual level as follows: at collective level by organizing 11 Webinars, 5 Matchmaking Events, Pitch Sessions during fairs, Regional workshops and at individual level by coaching on business plan, mentoring on internationalization and external support for bankable pilot projects.

Beneficiaries

Clusters and SMEs

Lessons learned

The project was the first positive experience for COSME.ESCP.S3 and manifested very dynamic trends toward digitalization among Europe. They were realized individual and customized activities toward selected SMEs and coordination & communication remained a full-time challenge during project implementation. It should also be noted the heterogeneity of needs, requirements, maturity on the field and to clarify the support provided and results expected to SMEs.

Transferability to other clusters

The project offers new opportunities and ways to be replicated, as follows:

Plant Inter Cluster (PIC) Network is the natural entity to pursue inter-clustering actions with cross-regional collaborations (incl. COSME projects, joint agenda, Working Group).

S3 Partnerships, in particular Big data & Traceability, are the main initiatives to lead European workplan in agri-food sector together with the respective regions. Transfer of key content of TRACK in the websites of participating clusters.

Further information:

Contact person: Felix Arion

link: <https://profile.clustercollaboration.eu/profile/cluster-partnership-initiative/903fe898-a0af-4210-b7b9-ebb18121f8a3>

3.2. Synergies between projects focused on green transition with clusters involvement : CLUSTERO

Location

The 13th National Cluster conference Iasi within the event “CLUSTERS MEET REGIONS” with international participation (Iasi, 21-23 November 2023)



Description

Bioeconomy is considered a driver of economic sustainable development. Since in Romania the issue of the bioeconomy is a new field for clusters, CLUSTERO as the Romanian Cluster Association, had the initiative of organizing a session dedicated to a specific topic that is bioeconomy with the presentation of several European projects such as:

- RuralBioUp: Value chain: Lignocellulosic agricultural waste as biomass feedstocks in Center Region, Romania (biofuels and bioproducts)
- Hemp Club: How clusters can unfold the potential of European bio-based value chains with a focus on hemp (Value chains)
- MainstreamBio: Multi-actor Innovation Platforms and innovation support services to get small-scale biobased solutions into mainstream practices across rural Europe
- BioRural: European Rural Bioeconomy Network and the BioRural Toolkit: supporting stakeholders in the scaling and mainstreaming of biobased solutions and initiatives
- Scale-Up: Concepts, tools and applications for community-driven bioeconomy development in European rural areas. Development of the 12 innovative bio-based solutions and implementation of the innovation support programme
- CEE2Act: CEE2ACT Bioeconomy Hub in Romania: bringing together stakeholders, fostering exchange of ideas and common elaboration of the national bioeconomy roadmap
- BIOTRANSFORM: transition pathways to circular Bioeconomy

The scope of this initiative was the creation of synergies between projects with a common topic that is bioeconomy, exchange of best practices between countries and clusters, creation of consortia for future projects, presentation to the audience of the crucial role of clusters in transition to circular bioeconomy. This innovative service offered to clusters members of CLUSTERO has become a reference point for the targeted further development events for the bioeconomy.

Beneficiaries

The beneficiary entities are clusters, firms, research and development institutes, universities, regional and local public authorities, bioeconomy related associations and their members.

Lessons learned

Sharing not only good practices, but also bad practices among partners is extremely beneficial! The networking of clusters created within this event was a success!

Transferability to other clusters/associations

This initiative can be replicated both by clusters and regions and countries within relevant events.

Further information:

Contact person: Daniel Cosnita

Link: <https://clustero.eu/projects/>

<https://iasi-clusters-meet-regions.b2match.io/>

<https://clustercollaboration.eu/content/clusters-driving-regional-innovation-comprehensive-look-clusters-meet-regions>

3.3. Innovative services on materials tracing for circularity and on digitalization in enterprises- Norwegian Fashion and Textile Agenda Cluster

Location:

- NF&TA Cluster in Oslo
- Norwegian Fashion Hub in Oslo
- NCE Manufacturing-National Competence Centre – Raufoss



Description

NF&TA is a national cluster founded in 2014 for the fashion and textile industry in Norway. The main objective of NF&TA cluster is a circular and value-creating transformation of the Norwegian Fashion, sports and textile industry.

The global fashion- and textile industry is an important value creator and one of the most polluting industries in the world. Consequently, it is crucial to direct the fashion- and textile industry towards a sustainable and circular practice. This means building new business models based on changing market principles, manufacturing procedures, new textile development and circular processes.

NF&TA's mission is to design national projects and engage companies in the development, to build competence to accelerate a positive change. In collaboration with consortia of companies and partners, NF&TA facilitates a number of projects and networks.

NF&TA collaborates for digital solutions with Norwegian Fashion Hub and with NCE Manufacturing Raufoss that is a network and meeting place for industry, business and R&D and it connects small, medium and large industrial enterprises acting as a driving force for the industrial export industry in Norway.

Beneficiaries

- Small, medium and large enterprises
- R&D institutions, universities
- National competence Centers

Lessons learned

The model of collaboration between clusters, digital innovation hubs, and national competence center is very important for the implementation of the green and digital strategy in each Norwegian cluster.

Transferability to other clusters in Romania

The model of Norwegian collaboration can be transferred to Romanian clusters that are members of digital innovation hubs for enlarging their collaboration also with business incubators and competence centers in view to implement digital and green solutions both at the members' level and regional/national level.

Further information

Contact person: Mirela Bogyo & Mirela Greti Puiu & Carmen Boiciuc

Links:

<https://profile.clustercollaboration.eu/profile/cluster-organisation/c1846e23-544c-488a-ae84-1b4f9b2ea2e4>

<https://www.romanian-textile.ro/en>

<http://www.astricone.eu>

3.4 Support services within GCE NODE CLUSTER- Global Centre of expertise NODE Norway



Description

GCE NODE is an industry-driven cluster for ocean technologies. Based in Southern Norway, GCE NODE comprises of over 120 companies, most of which constitute a world-leading value chain of suppliers to the oil & gas, offshore, energy and maritime industries.

The cluster members are supported by engineering, ICT solutions, logistics and business services necessary to succeed in a global context.

The cluster is dedicated to increasing and facilitating world-class competency by offering insight into market developments, new industry opportunities and transfer of technology from the oil & gas sector to offshore renewables and other emerging markets and industries.

Digitalization has been a high priority in GCE NODE since the start of the GCE projects. The signals from the cluster companies are that this is an important area to continue, as digitalization is considered to be absolutely crucial to ensure continued competitiveness in the market. During the last decade, the cluster developed a multi steps process for green conversion, increased competitiveness and new services, as follows:

Step 1- Strategy seminars prepared and organized by the cluster with 2 megatrends: climate and digitalization

Step 2- Which markets is growing

Step 3 – Analysis of the supply chain of the cluster companies- What is the potential for “greener” operation and increased use of digital tools in the value chain?

Step 4- How does the regional ecosystem look like – who/what can help in the transition? Map the regional and national ecosystem – R&D institutions, Incubators, test lab/catapults, relevant clusters for collaboration for value chain development, EDIHs etc.

Step 5: How to get started?

Beneficiaries

Members of the cluster, SMEs and large companies.

Lessons learned

Changing the business modus/state of mind of SMEs takes time – must be adapted to the capacity of the management of the participating SMEs

Some sort of binding commitment is required for the companies that want to be a part of the process

The top management of the company must be part of the strategy process

The process will have an impact on the business model of the company

There is potential for the companies to develop new services/products.

Transferability to other clusters

The business model/strategy applied by the cluster GCE NODE are classic, so they can be replicated by any cluster-type initiative in any field of activity.

Contact person: Anne-Grete Ellingsen <anne-grete@en-ma.no>

Link: <https://gcenode.no/about-node/>

PROJECT “INNOVATIVE SERVICES FOR TWIN TRANSITION IN SMEs AND CLUSTERS”

Iceland
Liechtenstein Norway
Norway grants grants

Innovation
Norway

Project „Innovative services for twin transition in SMEs and clusters”



**Working together for
green, competitive
and inclusive Europe.**

Supported by a grant from Iceland, Liechtenstein and Norway through the EEA Grants Romania 2014-2021, in the frame of the SME Growth Programme Romania.
<https://www.eea.grants.ro/>
Supported by the Norway Grants 2014-2021, in the frame of the SME Growth Programme Romania
www.norwaygrants.ro

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<https://www.eea.grants.ro/>
Finanțat cu sprijinul granturilor acordate prin mecanismul financiar Norvegian 2014-2021, în cadrul „Programului Dezvoltarea IMM-urilor din România” www.norwaygrants.ro

 Clustero

 INNOVATION
PERFORMANCE

The project “Innovative services for twin transition in SMEs and clusters” took place during the period 23.05.2023 -30.04.2024 within the program: SMEs Growth Romania, Area of interest: Green Industry Innovation.

Project promoter: Romanian Cluster Association – ClusteRO

Project Partner: Innovation Performance AS, Norvegia

Total eligible value of the grant:

159 044 Euros.

The activities and tasks carried out during the implementation of the project were:

Activity 1. Development of new services for SMEs and clusters on the twin transition pathway - Co-creation workshop

Task 1.1 Analysis / overview on the current situation of SMEs members of the clusters from the point of view of their preparation and availability for the green and digital transition

Task 1.2 Co-creation workshop: debate of the analysis results and best practices in order to identify solutions to the problems faced by SMEs

Activity 2. Knowledge exchange and capacity building - Capacity building workshop

Task 2.1 Training and coaching on twin green and digital solutions

Task 2.2 Norway Study Trip: learning of good practices from the peer cluster organisations/SMEs

Task 2.3 Elaboration of the new portfolio of services in support of clusters and SMEs along the twin transition.

This project was instrumental in fostering sustainability and growth within the Romanian SME landscape, aligning with the imperative of transitioning to a greener and more digital economy.

Key Achievements and Outcomes:

1. **Development of Tailored Services:** We successfully developed and implemented tailored services specifically designed to assist SMEs and clusters in their transition towards greener practices. These services addressed key challenges such as resource efficiency, sustainable production methods, and eco-friendly technologies.
2. **Capacity Building:** Through workshops, training sessions, and knowledge-sharing events, we enhanced the capacity of SMEs and clusters to adopt innovative green practices. This capacity building was essential for empowering businesses to navigate the complexities of sustainable growth.
3. **Technology Adoption:** The project facilitated the adoption of innovative technologies within SMEs, promoting the integration of green solutions into

their operations. This included guidance on renewable energy adoption, waste management strategies, and eco-design principles.

4. **Networking and Collaboration:** A vital aspect of our project was fostering networking and collaboration among SMEs and clusters. This collaboration not only encouraged knowledge exchange but also facilitated joint initiatives towards sustainability.

Future Directions:

Looking ahead, sustaining the momentum of green industry innovation within SMEs and clusters will require ongoing efforts. Future initiatives should focus on:

- Strengthening collaboration between businesses, academia, and government entities to accelerate the transition towards a circular and low-carbon economy.
- Enhancing access to financing and investment opportunities for SMEs committed to green growth.
- Expanding the scope of services to address emerging challenges and opportunities in the green industry sector.

In conclusion, the "Innovative Services for Twin Transition in SMEs and Clusters" project has laid a solid foundation for sustainable development within Romania's SME landscape. By nurturing a culture of innovation and collaboration, we are confident in the continued success and impact of green&digital industry initiatives in the years to come. We extend our gratitude to all partners, stakeholders, and participants who contributed to the success of this endeavor. Together, we are forging a path towards a more resilient, inclusive, and sustainable future for Romanian and Norwegian SMEs and the broader green industry.