THEMATIC IMPACT PAPER – INNOVATION

CENTRAL EUROPE – SMART GROWTH TO BRIDGE THE INNOVATION DIVIDE

Central Europe exhibits a persisting East-West innovation divide, with Austrian and German regions being categorised as either innovation leaders or innovation followers, and most regions from the former Eastern bloc as moderate or modest innovators according to the 2014 Regional Innovation Scoreboard of the European Commission. Emerging North-South disparities are also visible across Central Europe – just as in Europe as a whole – with Italian regions increasingly lagging behind their Western peers.

This divide is fuelled by different factors, in particular the generally lower levels of Research and Development (R&D) expenditure. Furthermore, deficient coordination of innovation policies and programmes is to be observed both across territories and across governance levels in Central Europe, and this often translates into a barrier to transnational cooperation. Likewise, the lack of harmonisation with respect to regulations, incentives, tax mechanisms and administrative procedures are further obstacles to the sustainable development of innovation across borders.

Moreover, it is important to highlight the wider context with Industry 4.0, and the Internet of Things as major innovation trends. At the same time, 'mega-trends' such as climate change and migration as well as shifts in territorial policies towards smart specialisation and place-based approaches call for innovative solutions that meet environmental, technical, social and/or economic requirements. This prompts innovation actors to think about the 'holistic concept' of innovation including its institutional and cultural aspects, i.e. how innovation can be more widely developed, understood and taken up.

The Interreg CENTRAL EUROPE (CE) Programme 2014-2020 is a transnational cooperation programme financed by the EU Cohesion Policy that co-financed a total of 138 projects covering 76 regions across 9 Central European countries. Under its innovation thematic priority, the programme addressed innovation-related challenges by targeting 1) the strengthening of existing potentials of technology-oriented areas that are destinations of foreign investment and capital flows, notably through a better linkage of actors of the innovation systems, and 2) the reduction of regional disparities in knowledge and education as well as the strengthening of capacities and competences for entrepreneurship and social innovation.

THE PROGRAMME'S FOCUS ON INNOVATION

From 2014 to 2020, the Interreg CE Programme supported innovation capacities and innovation systems in Central Europe through Specific Objective 1.1 "To improve sustainable linkages among actors of the innovation systems for strengthening regional innovation capacity in central Europe" and Specific Objective 1.2 "To improve skills and entrepreneurial competences for advancing economic and social innovation in central European regions".

Under Specific Objective 1.1, the programme contributed to developing innovative solutions in a wide range of fields such as healthcare, advanced manufacturing, processing and packaging, key-enabling technologies and food, urban innovation or circular economy among others. The supported projects delivered tangible results by building or consolidating innovation networks and clusters, supporting prototyping and demonstrating, testing and implementing participatory methods and developing innovation strategies.

Under of Specific Objective 1.2, the Programme contributed to skills development, helped improve entrepreneurial mindsets and promoted novel and more inclusive approaches, particularly linked to social innovation and labour market integration and also to migrant integration. This is especially relevant considering the need to keep up with the emerging trends stemming from the green and digital transition (e.g., circular economy) and address the challenges stemming from mega-trends such as climate change but also demographic change (e.g., silver economy and migrant integration).

Interreg CENTRAL EUROPE – INNOVATION

48 projects to focus on CE innovation

9 countries covered by transnational innovation activities

494 project partners engaging in innovation cooperation

82.2 million Euro from the ERDF to support CE innovation

The programme's contribution to the CE innovation sector

- **258 strategies and action plans** to exploit the benefits from innovation
- **181 tools** to better coordinate innovation activities
- **303 pilot actions** to demonstrate the benefits of supporting CE innovation
- **60 innovation networks** were established
- **199 trainings** to enhance skills for the innovation ecosystem

The programme's impact on innovation in CE

- **193 million Euro** of additional **investment** in the innovation sector
- **4,221 CE institutions** adopted the new or improved **strategies, tools or services**
- **28,757 enterprises** received innovation **support**
- **55,656 persons** received **training** to improve innovation related skills
- **1,133 new jobs** were created

The Programme contributed to reinforcing the innovation ecosystem in Central Europe

The Programme contributed to improving cooperation between actors of the innovation systems in Central Europe by providing inputs for better policymaking and facilitating access to networks, knowledge and expertise, supporting internationalisation and promoting synergies between various funding sources. For instance, projects like CERUSI took novel approaches such as the organisation of 'Rural Social Innovation Labs Caravans&Labs' which strengthened the capacity to overcome local challenges by bringing to fruition the ideas and solutions developed by local communities, whether through guidance, expertise or connections with business actors.

Furthermore, the Programme contributed to developing innovative solutions in a wide range of fields such as healthcare, advanced manufacturing, processing and packaging, key-enabling technologies and food, as well as social innovation and labour market integration.

These achievements suggest that the Programme has delivered tangible benefits for its target groups, despite its smaller scale of intervention compared to national or regional mainstream programmes.

The Programme supported all actors of the innovation systems

The Programme has contributed to increasing the number and quality of linkages and has played a relevant role in enhancing direct collaboration between companies and researchers across borders. It also supported direct collaboration between companies and researchers across borders, contributed to skills development, helped improve entrepreneurial mindsets for representatives of the research community, startuppers and unemployed people, and promoted novel and more inclusive approaches through developing innovative solutions aiming at caregivers and elderly people.

Interreg CE 2014-2020 programme effects on innovation systems and capacities

1. **Improving knowledge, capacity and competences**
2. **Developing innovative solutions in a wide range of fields**
3. **Helping to build trust beyond borders**

As reported by beneficiaries from the programme under its innovation priority, projects were particularly successful in:

- increasing the number of sustainable linkages between actors of the innovation systems (for instance, the digitalLIFE4CE project has created 7 CE Digital Excellence Health Spots with the specific aim to develop stakeholder cooperation),
- increase the support to digitalization by enhancing the outreach of the innovative sector which in exchange capacitates enterprises with competitive and novel solutions,
- increasing the support of SMEs, thereby, inter alia, making Key Enabling Technologies available to them through transnational networks, and
- increasing knowledge and technology transfer between research organisations and businesses (for instance, the KETGATE project enabled 12 innovative SMEs to set up a project with a research organisation from another country than the one in which they are based).

Moreover, the innovation projects also contributed to stimulating mutual exchange and learning for employees and entrepreneurs across borders, improving capacities of the public and private sectors for skills development and supporting entrepreneurship through the development of technological and managerial competences, though with a reported slightly lower level of success than the aforementioned achievements.

Beyond these "hard" innovation aspects, the Programme supported social innovation from many different perspectives, by delivering projects that aimed to build social innovation skills, support social entrepreneurs, establish social innovation ecosystems or create social innovation hubs to offer professional, business-oriented support to disadvantaged persons. This is illustrated by projects such as Social(i)Makers. It developed and deployed a transnational educational programme to train and connect social innovators through a transnational community, enabling them to put in practice various social innovation initiatives.

THE PROGRAMME PRODUCED A LONG RUN BOOST FOR THE CE INNOVATION ECOSYSTEM

While focusing on their originally intended tasks the Programme and the projects produced a significant added value for many other areas.

Inter alia this includes **synergetic and multiplication** effects, particularly in relation to the European Horizon research programme and other Interreg projects as well as their alignment with local and regional strategies in the Central European countries. Examples include the SMART watch project, where project results were passed on to several institutions linked to the Baltic Sea Region, the Interreg ADRION Programme and S3 Platform. At the local level for example, TRANS³Net cooperated with FUTURESax, a network of transfer supporting organisations in Saxony and some of the projects results also, became part of the regional innovation strategy, while in Czechia the project cooperated with the national RE-START programme supporting long-term development of coal regions. Many innovation projects established links to other, similar projects and initiative. Here, the SYNERGY project for example linked up with the Knowledge Transfer Upper Rhine (KTUR), Interreg V Upper Rhine and several Interreg CENTRAL EUROPE projects. Moreover, projects launched under the capitalisation call such as CERUSI have multiplied the effects of former Interreg and Horizon 2020 projects by capitalising on their produced outputs and results.

In many cases projects succeeded in securing **additional funding**. This ensured the continuation of activities, the expansion of the work to other regions, reaching new target groups or applying the results in related topics. Projects were also successful in generating **other partnerships, synergies or cooperation** contexts.

The Programme also contributed to improving **coordination**, particularly horizontally between actors at the local level and vertically between the local and regional levels. Thus, the innovation projects increased the visibility of concrete inter-regional collaboration and motivated decision-making bodies for using similar models. Some Interreg CE projects contributed to linking innovation actors across borders (such as TRANS³Net), by decreasing communication and cooperation barriers between different members of the transnational innovation system through the

organisation of events but also through the development of strategies and tools. In a different area, projects such as NUCLEI, among others, linked companies across the borders to evaluate whether a single transnational open and collaborative environment is an alternative to the traditional local-based technology scouting and thus facilitate the introduction of KET concepts in new applications.

In addition, most innovation projects were addressing strategically important issues, such as enabling the implementation of **Macro-Regional Strategies**. The projects also helped reducing and counterbalancing regional disparities. Furthermore, the innovation projects contributed to the **EU2020 Strategy for smart, sustainable and inclusive growth**, especially with regard to the R&D and climate change objectives of the EU2020 Strategy. A number of projects also contributed to **local, regional or national innovation systems**, as they worked in cooperation or were in close contact with the respective policy makers. This is illustrated by the 3DCentral project that involved 40 regional and 42 national public authorities and made its contribution to the update of the respective smart specialisation strategies.

Innovation projects showed a high added value for its **various target groups**, in particular but not only through supporting quadruple helix approaches benefitting each member of the helix. For research institutions, cooperation reduced nationally focused behaviours, built mutual trust, and started real collaboration and coordination. For SMEs, the projects offered open opportunities for the implementation of new (and often expensive) technologies. Other benefitting institutions include business support organisations, public bodies or social business support organisations and social entrepreneurs. Local, regional and national policy makers benefited through inputs to their smart specialisation strategies.

Likewise, innovation projects had positive effects on both **urban and rural areas**, industrial areas and those areas that are economically or demographically shrinking. More generally, **cities** with larger and stronger research institutes having links to established networks are benefitting more, acting as 'magnets' of cooperation.

The Interreg CE 2014-2020 innovation value added

- **Synergetic and multiplication effects**
- **Secured additional funding for innovative solutions**
- **Generated other partnerships, synergies or cooperation for innovation projects**
- **Improved coordination of innovation policies**
- **Supported major EU policies and strategies**
- **Supported wide variety of target groups across the innovation ecosystem**
- **Supported a wide range of territories**

Challenges remain despite the Programme's success

Still, some challenges remain in the cooperation patterns and the quality of innovation-related collaborations. Regional disparities are persistent, as does the urban-rural divide. Converting research results into commercially viable products is still a challenge faced by some regions in Central Europe. Additionally, urban areas tend to have better access to innovation hubs, research facilities, skilled workforce and other resources that support innovation compared to rural areas. This gap can hinder the development of innovation ecosystems in rural areas, limiting the potential for growth and job creation. Moreover, SMEs face persistent challenges in participating in international projects due to a lack of knowledge, skills, or resources. This can limit their ability to access new markets, technologies, and knowledge, which can have a negative impact on their growth and competitiveness.

Summary

Innovation projects in the 2014-2020 Interreg CE Programme were implemented in the context of Industry 4.0 or , the Internet of Things, 'mega-trends' such as climate change and migration, and policy shifts towards place-based and smart specialisation approaches that call for innovative

solutions that meet environmental, technical, social and/or economic requirements. In this fast-evolving, challenging context, the funded projects managed to contribute to developing innovative solutions in a wide range of (complex) fields such as healthcare, advanced manufacturing, processing and packaging, key-enabling technologies and food, as well as social innovation with different purposes such as building social innovation skills, supporting social entrepreneurs, establishing social innovation ecosystems or creating social innovation hubs to offer professional, business-oriented support to disadvantaged persons.

Indeed, the projects addressed a diversity of innovation topics and target groups, with some focusing on (social) entrepreneurship, migration and labour market integration or health, others on smart development, technological transfer and supporting SMEs. In both Specific Objectives, businesses were the target group most reached (leaving the general public aside), with SMEs representing the bulk of this group. Other target groups such as business support organisations and higher education, research organisations and interest groups including NGOs were also widely reached.

This large array of intervention fields and target groups has likely contributed to reducing the disparities in innovation capabilities and technological knowledge between Member States and regions from Western and Eastern Europe and balancing out the innovation flows through the entire programme area. Therefore, the bottom-up and innovation nature of the projects is an important asset, allowing local and regional actors to directly seek support for the innovation needs they see most pressing.

All projects contributed to improving the innovation ecosystem in Central Europe, i.e. projects with a strong sectoral focus (e.g. health) as well as cross-sectoral projects. Several projects are foreseen to have positive long-run effects, thanks in particular to policy uptake at local and regional level and spill over effects to other sectors, territories and programmes.

The stakeholders participating in innovation projects have particularly benefited from the access to knowledge and good practices as well as to networks which are not available nationally. Such an experience provided the respective actors with an opportunity to implement activities and achieve results that would be difficult or even impossible to finance nationally.