Impact Evaluation of the 2014-2020 Interreg CENTRAL EUROPE Programme

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ABBREVIATIONS

AF	Application Form
CA	Contracting Authority
CB	Cross-border cooperation programme
CE	Central Europe
CEA	Cost Effectiveness Analysis
CP	The Interreg CENTRAL EUROPE Cooperation Programme document
EU	European Union
IR	Interregional cooperation programme
JS	Joint Secretariat
MA	Managing Authority
MC	Monitoring Committee
eMS	Electronic Monitoring System
ETF	Evaluation Task Force
FG	Focus Group
FUA	Functional Urban Areas
NCP	National Contact Point
NUTS	Nomenclature of Territorial Units for Statistics
PF	Performance Framework
PO	Policy Objective
SO	Specific Objective
TN	Transnational cooperation programme
ToC	Theory of Change
ToR	Terms of Reference

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1. EXECUTIVE SUMMARY

This report presents the findings and recommendations of the Impact Evaluation of the Interreg CENTRAL EUROPE Programme (Interreg CE) 2014-2020, which aimed to assess the proximal effects of the programme implementation in the Central Europe (CE) area and beyond, across all its Thematic Priorities. The evaluation addressed three main evaluation questions (EQ), as follows: EQ1: "What change can be observed in relation to the objectives of the programme?", EQ2: "To what extent can the observed changes be attributed to the implementation of the programme?" and EQ3: "What mechanisms of programme implementation have delivered the observed impact?". It also addressed ten additional evaluation questions (AEQ), investigating further the nature and extent of the impacts of the Interreg CE programme, including its outreach to various target groups and territories. The evaluation focused on the changes that could be observed in relation to the programme's objectives, the extent to which these changes could be attributed to the programme, and the mechanisms of programme implementation that delivered the observed impact.

The evaluation drew on a comprehensive analysis conducted in two phases over a period of three years, between 2020 and 2023. It involved a thorough analysis of the programme, which employed a range of qualitative and quantitative research methods. These methods included desk research on programme documentation, a literature review on contextual developments, interviews with programme stakeholders, thematic experts, representatives of Macro-Regional Strategies, and other Interreg programmes. The evaluation also included the use of three surveys, one aimed at project beneficiaries, one aimed at programme-level stakeholders, and one aimed at end-users of projects. In addition, the evaluation relied on statistical analysis, cost-effectiveness analysis, and project-level case studies, which involved interviews with project beneficiaries and their target groups. The use of multiple data collection tools and analysis methods ensured that the evaluation was comprehensive and provided a detailed understanding of the programme's impact and effectiveness.

The report finds that notable positive progress has been achieved compared to the baselines for all the programme-specific result indicators, referring to the status of specific aspects targeted by each SO, such as the linkages among actors within the innovation systems, the capacity of the public and private sectors in developing employee skills and entrepreneurial abilities, the capacity of the public sector and associated entities in implementing energy-efficient measures and renewable energy sources in public infrastructure, etc. Although these indicators may have been influenced by contextual developments and external factors, they offer strong evidence of the programme's impact.

The programme has effectively supported cooperation beyond borders in Central Europe, as initially planned. It has also contributed to enhancing policy frameworks, and developing managerial systems, human resources, and institutional structures in all thematic areas. However, it should be noted that the extent of these effects is influenced by several factors, such as background conditions, regulatory and institutional aspects, policy priorities, and financial capacity of the users, among others.

The report finds that the Interreg CE programme had already achieved or surpassed the targets established for most output and result indicators from the first two calls, and that, by the end of the fourth and last call, in 2023, the targets had been surpassed by a significant margin, except for "jobs created" (EQ1), which however is a secondary objective of the interventions. When looking at project level, targets assumed by beneficiaries were generally achieved as planned or surpassed to some degree, which is a clear indication of the success of the projects in meeting the expectations of the stakeholders and demonstrates the quality of their management and implementation. However, when considering the achievements at the programme level, it is evident that the overall performance significantly exceeded the initial expectations.

The evaluation confirmed that the Programme successfully targeted challenges affecting the Interreg CE territory, and enabled regions and cities to jointly find common solutions, for all SOs. Even more, the programme adapted well to the developments taking place during the implementation period and was effective to address and respond to the arising challenges (such as migration), align with increasing thematic priorities

(such as environment protection), refocus to cover all relevant aspects (for example, shifting support from cultural heritage in calls 1 and 2 to cultural and creative industries in call 3).

The evaluation revealed that the initial external factors are still relevant for the Programme area, but some have become more prominent over time, such as digitalization, the emergence of recent technologies, and increased awareness towards climate change. The COVID-19 crisis and its aftermath have emerged as one of the most significant factors that have impacted the implementation of the Interreg CE Programme in the latter part of its lifespan. The pandemic has highlighted the need for flexibility, resilience, and innovation in the face of unforeseen challenges and uncertainties. The consequences of the pandemic, including its economic and social impacts, remain uncertain and may continue to affect the region's development in the long term.

Evidence suggests four main distinctive features of the Interreg CE programme: (1) its unique territorial and thematic coverage, (2) its accessibility for smaller organizations compared to other EU-level programmes, (3) the design of its projects' partnerships, which encourages the involvement of many different partners, (4) innovative character and design of its interventions, which encourages projects to test innovative solutions through pilot actions and, at which, at programme level, manifested best in the novel approach used for call 4[1] (EQ2).

While the intensity of cooperation differs among the projects analysed, even partners with more limited engagement contributed to solving important issues and foster mutual understanding. The challenges addressed by the projects were found to have a transnational character, and solutions were tested in diverse contexts. The structure of each project included diverse organizations from several member states and regions. As a result, the causal link was confirmed, and the implementation mechanisms were able to ensure the transnational character of the financed interventions. Thus, the supported interventions are likely to be one of the main causes for the observed effects in relation to building trust among stakeholders and across territories, including in relation to linking partners on both sides of the former Iron Curtain, as highlighted by the interviews. Even more, participation in Interreg CE allowed for beneficiaries to not only build a new or strengthen an existing partnership, but also to widen their network of potential partners for future transnational collaborations.

The report identifies success factors in project delivery, including the projects' bottom-up approach tailored to local and regional needs, the combination of complementary skills and experiences within project partnerships, and the implementation of target group engagement activities. The particular role and above-average cost-effectiveness of pilot actions as "living laboratories" to showcase the utility of project results is also highlighted, as is the support provided by programme authorities. However, programme administrative requirements were at times, deemed quite cumbersome for the project implementation. (EQ3).

Interreg CE produced strong synergetic and multiplication effects in terms of leveraging follow-up funding and generating further cooperation opportunities, even though synergies with national strategies and other EU-funded programmes could be further promoted (AEQ1). A good number of projects also produced positive unintended effects, going beyond the impact initially anticipated at project start. Nonetheless, negative effects of the COVID-19 pandemic on the implemented projected were also identified, such as delays, changes in implementation or effectiveness of certain pilot actions (AEQ2).

The evaluation found that the design of the programme provided the necessary framework for testing and implementing different governance formats such as bottom-up approaches and multilevel governance, but Interreg CE projects eventually contributed to better policy coordination much more horizontally than vertically (AEQ3).

While the evaluation found clear evidence of the Interreg CE programme playing a role in supporting the implementation of the Europe 2020 Strategy for smart, sustainable, and inclusive growth, as well as the Macro-

[1] Call 4 finances pilot-based coordination between Interreg CE and DG RTD to use results from FP7, H2020, other centrally managed funding schemes and other Interreg programmes.

Regional Strategies, the precise extent of its contribution is challenging to quantify and identify. The programme's activities and projects were aligned with the objectives of these wider strategies and helped to advance their goals. However, given the complexity of the broader policy landscape and the multitude of actors involved, it is challenging to attribute specific impacts solely to the Interreg CE programme. In the longer run, it would be useful to establish a more explicit and measurable framework to track and evaluate the contribution of the Interreg CE programme and other similar initiatives to the broader policy agenda. Based on the positive example of call 4, improved coordination and policymaking could be achieved by employing capitalisation *across* EU-funded programmes and relevant strategies (e.g., development of common tools, synchronisation of call, etc.) (AEQ4).

The evaluation confirmed that the outputs produced in the projects, particularly tools, guidelines, methodologies etc. are suitable to be used in other contexts. However, results are mixed in respect to whether the transfer has taken place or not (AEQ5). While the evaluation identified numerous positive examples of transfer being initiated or taking place, they are generally dependent on the specific context of each project and, in particularly on the capacity of the partners to reach other potentially interested organizations. At the same time, transfer is expected to continue to take place in the future. The evaluation also found that solutions are more likely to be transferred to users from other regions, and less likely to users from other sectors, that local-level initiatives are easier to replicate and highly successful and that the integration of project results into policymaking is rather project-specific.

Interreg CE projects also created the necessary conditions for (e.g., through capacity-building) and thereby contributed to change of practices at the individual and organisational level within project partnerships and target groups, especially at individual level (AEQ6). Moreover, the programme demonstrated a high added value of transnational cooperation, through the multidirectional transfer of knowledge and experiences, the reinforcement of cross-border networks and partnerships as well as the possibility to trial solutions in an international environment (AEQ7).

The programme has brought about benefits to a large and diverse array of beneficiaries and target groups, in particular local and regional authorities, SMEs, research institutes and the public, in line with the quadruple helix approach adopted by some projects (AEQ8). Likewise, the programme supported a wide diversity of territories, even though regions located in the south of the CE territory and urban areas more generally are likely to have benefitted more. The functional approach taken in the programme (in particular between urban areas and their hinterlands) is likely to have contributed to reducing urban-rural fragmentation in the places where pilot actions were implemented, pointing to need for continuing this approach (AEQ9).

The analysis showed that the outputs and results are generally sustainable beyond the duration of the project. There are examples of projects which have successfully managed to ensure the continuation of activities beyond the end of the financial support from the Programme. Obtaining additional funds, developing synergies with other initiatives (e.g., other EU-funded, national or regional programmes), having a consolidated partnership or an increased interest from citizens/businesses, play a key role in supporting sustainability. At the same time, the pace of technological advances in the field and the financial capacity of the users to maintain the results also influence sustainability (AEQ10).

Overall, the evaluation confirms that the programme design assumptions were largely validated, as transnational cooperation enabled regions and cities to jointly address cross-border challenges, projects supported were “living laboratories” for developing and testing new solutions, and interventions followed an integrated bottom-up approach involving relevant actors from all governance levels. Additionally, implementation mechanisms were effective in enabling projects to adopt innovative approaches, ensure the transnational character of interventions, trigger multiplication and synergetic effects, ensure the sustainability of outputs and results, consider the specific territorial characteristics of targeted areas and use communication as a means to promote the projects, raise awareness and increase stakeholders’ interest in the topics covered.

Considering the positive evidence in respect to the role of capitalisation for fully leveraging the value of results produced, producing synergies at wider levels and prolonging their sustainability, further initiatives should be encouraged by the programme. To ensure the full potential of project results is realized, a more targeted

approach to policy uptake could be sought, together with the relevant stakeholders at national and EU level, in a coordinated effort with authorities of other programmes.

To improve the distinction between funds actually leveraged and more uncertain commitments, a more systematic monitoring process could be envisaged after the projects' end, including for collecting more detailed proof of leveraged funds.

Considering both the persistent disparities between the urban and rural areas in the Programme regions, and the excellent results obtained by the projects implemented at FUA level, future interventions should continue to focus on creating of functional links between the different territories and on enabling a fair distribution of benefits between them.

To improve the programme's accessibility, it is recommended to increase support for beneficiaries from less active regions and/or categories. This would enable lagging territories and less experienced entities to reap the benefits of transnational cooperation.

2. INTRODUCTION

2.1. EVALUATION SCOPE

As per the Terms of Reference (ToR) of the Impact Evaluation of the Interreg CENTRAL EUROPE Programme 2014-2020 (hereinafter 'Interreg CE'), this evaluation focuses on the **proximal effects** of the programme implementation in the Central Europe (CE) area - as defined by the programme document - and beyond, taking potential spillover effects into consideration.

More specifically, the evaluation addresses all **four Thematic Priorities** and **10 Specific Objectives** (SOs) of the programme, and tackles three main evaluation questions:

- **EQ1**: What change can be observed in relation to the objectives of the programme?
- **EQ2**: To what extent can the observed changes be attributed to the implementation of the programme?
- **EQ3**: What mechanisms of programme implementation have delivered the observed impact?

The evaluation also seeks to answer a series of additional evaluation questions, investigating further the nature and outreach of the programme impacts:

- **AEQ1**: Can any synergetic and multiplication effects in terms of improved coordination and funds leverage be observed? Are these effects stronger in projects funded in Call 4 that was focused on exploitation and coordination of results compared to projects funded in standard calls?
- **AEQ2**: Can any possible unintended effects be detected?
- **AEQ3**: Did the programme contribute to better governance in terms of multilevel governance cooperation and the alignment of governance processes?
- **AEQ4**: How has the programme contributed to wider strategies like Europe 2020, Territorial Agenda, MRS?
- **AEQ5**: To what extent have the outputs and solutions developed by the projects been transferred and adopted beyond the project partnership? Were the results achieved by the projects sufficiently transferred into public policies? Did the programme foster policy learning and innovation? Did the programme raise the interest of politicians to further develop and roll out the results?
- **AEQ6**: Did the programme contribute to change of practices at the organisational and individual level?
- **AEQ7**: Did the transnational cooperation among project partners bring an added value to the development of the outputs and achievement of the results?
- **AEQ8**: Did the programme bring a special benefit to specific target groups? Which target groups experienced the change most?
- **AEQ9**: Did the programme bring a special benefit to the specific types of territories (e.g. urban areas, rural areas, industrial areas, touristic areas, stable or growing areas, shrinking areas, inner peripheries)? How are the effects distributed within the territory of central Europe?
- **AEQ10**: Are the results generated by the projects sustainable and viable beyond the project end?

The Impact Evaluation Report lays out the evidence-based findings on the impact of the programme. As such, the analysis of the programme's inputs covers all 138 Interreg CE 2014-2020 projects, while the analysis of the outputs and results covers those 135 projects (97.8% of the total) that have been completed until 17th April 2023, and that received funding in Calls 1-4.

2.2. METHODOLOGY

The core methodological approach of this impact evaluation follows the conceptual framework of a Theory-Based Evaluation (TBE), using the **Theory of Change (ToC)**. Reconstructing the ToC behind the Interreg CE design is the starting point of the evaluation exercise. More specifically, the ToC builds on a detailed analysis of the intervention logic of the programme (as described in the programme documentation) and seeks to specify the causality assumptions on which the programme relies, i.e. how Interreg CE is expected to deliver the targeted impacts in order to respond to the identified needs. These assumptions, linking Interreg CE inputs with the expected outputs, results and outcomes, are to be routinely examined and tested through evaluative activities to determine:

- Whether – and the extent to which – the causality assumptions are verified, i.e. estimating the net effects of Interreg CE as a result of the funded projects and activities (EQ2), departing from the observed changes at programme level (EQ1).
- Whether – and the extent to which - internal or external factors have influenced the production of outputs and achievement of expected results.
- Whether – and the extent to which – unintended effects (both positive and negative) have been produced, and for whom (e.g. types of target groups/territories).

The evaluation matrix presented in Annex 1 indicates the contribution of each tool to the answering of the evaluation questions, considering the maturation of the tools during the Inception Phase and throughout the evaluation. Based on the methodological approach presented above, and in line with the evaluation matrix presented in Annex 1, a wide range of qualitative and quantitative data were collected and analysed, each contributing to providing a comprehensive and substantiated answer to the evaluation questions. The detailed methodology broken down by type of instrument depicted below is available in Annex 1.

The following data collection instruments were designed and implemented as part of this evaluation process:

1. **Desk research and literature review -** focused on establishing the context for the Programme actions, the main effects to be expected from the investments, as well as the factors that influence their results;
2. **Quantitative analysis** of programme's **inputs, outputs, results** and **outcomes;**
3. **Surveys - developed as primary data collection instruments.** The questionnaires can be found in Annex 5 and the detailed survey results are presented in Annex 8. The **three surveys** cover different target groups:
    a. Programme beneficiaries
    b. Programme stakeholders
    c. End-users
4. **Interviews** - **developed as primary data collection instruments.** The interview guidelines can be found in Annex 6. The **interviews** cover different target groups:
    a. Programme stakeholders
    b. Thematic experts
    c. Project beneficiaries
    d. End-users
5. **Cost effectiveness analysis (CEA)** - The CEA consists of three methodological steps including a) the definition of effectiveness, b) the estimation of costs and c) the thematic clustering of projects. The detailed methodology is available in Annex 4.
6. **Case studies** - used for several purposes: a) understanding the mechanisms behind the project outcomes and results, b) identifying the most effective measures/interventions (in connection with the

cost-effectiveness analysis), c) identifying good practices or lessons learned, as well as d) measuring the factors of influence related to the net effects of the programme. The case studies are part of the evaluation triangulation process and complement the interviews, surveys and desk research.

- 14 *individual cases studies,* focusing on illustrating successful projects. The individual case studies for are: DigitalLife4CE, Arrival Regions, CERUSI, TARGET-CE, PROSPECT2030, LOW-CARB, RAINMAN, Teacher-CE, INDUCULT2.0, COCO4CCI, SALUTE4CE, RUMOBIL, RegiaMobil, REIF
- Three *comparative case studies*, each looking at two projects sharing similar topics. The comparative case studies are: KETGATE & SYNERGY, ENERGY@SCHOOL & eCentral, GreenerSites & LUMAT

Both individual and comparative case studies are available in full in Annex 3.

7. **Focus groups -** were set up as a tool to complement other methodological approaches, taking place after the finalisation of the field research with the specific aim of enabling triangulation and validity-checking of working hypotheses and resulting conclusions/recommendations. In total, 6 focus groups were conducted: one dedicated to the general findings at the Programme level and five thematic FGs (one for each theme). In terms of audience, all FGs encompassed participants from the ETF, NCPs, MC, thematic experts, observers, as well as the MA/JS and the Evaluation team. The methodology of the focus groups can be found in Annex 7.

2.3. QUALITY ASSURANCE

The data provided by the JS was highly reliable data, ensuring accurate assessments of the programme's and projects' features. The data was highly adequate for producing all basic statistics e.g. on the number of projects, outputs, outreach indicators etc. It was more difficult to use the data for the cost effectiveness analysis (**Section 3.4**) for two reasons. First, because of the projects' structure it was at times difficult to clearly allocate costs to individual outputs, necessitating some estimation and thus inducing some automatic estimation error. A cost-effectiveness analysis is recommended in the future only if the outputs and costs are linked in a more direct way from the programming phase. Second, it was observed that retrieving the data from the programme's database is not trivial and requires special knowledge. Here it is suggested to reconsider the data collection and storage process in such way that access to the data is simple enough and does not require special programming skills. This would increase the analysis capacity of the JS or other stakeholders as well as facilitate the work of external experts. Additionally, it may be considered to put the data into open-data portals (optimally including all Interreg programmes) to make the data available for research and the public.

3. EVALUATION FINDINGS

3.1. CONTEXTUAL DEVELOPMENTS IN THE CE AREA DURING THE PROGRAMME IMPLEMENTATION

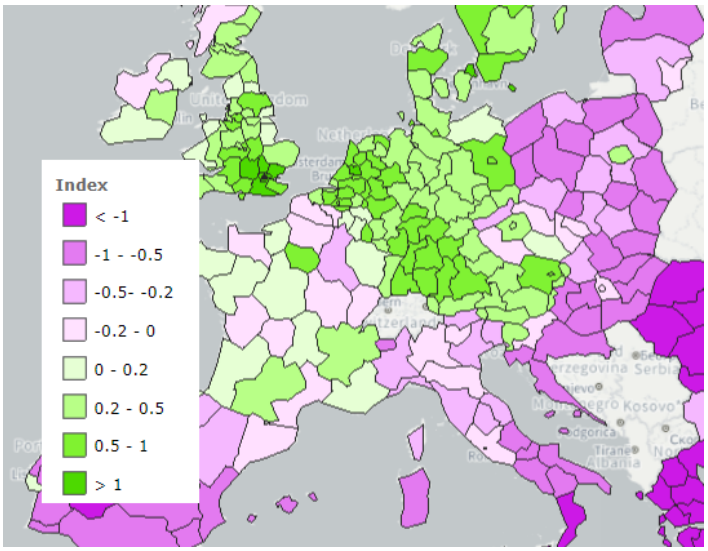
This section outlines the context in which the Interreg CENTRAL EUROPE Programme 2014-2020 has been implemented. This is the first building block of the evaluation, exploring the main developments that have occurred in the Programme area and how initial conditions have evolved in terms of socio-economic contexts, priorities at EU level and other influencing factors such as wider underlying trends or external shocks that might have made a mark on the delivery of the actions and on achieving the intended results. Overall, the context analysis provides a better understanding of the complexity of the causal chain from the actions to the observed effects.

Socio-economic development

The territory covered by the Programme is a **functional economic area**, boasting of a generally high level of socio-economic development. Central European economies are well developed and closely connected, favoured by a variety of factors, from strong industrial value chains to shared cultural values, geography and historical travel routes[2].

Still, there remain territorial (structural and sectoral) disparities, mostly but not only visible along the borders of the former iron Curtain. **Structural development gaps** between the western and eastern parts of the CE area are still present, while disparities between its northern and southern parts are emerging, as confirmed by the Regional Competitiveness Index and observed in Figure 1. Most CE regions that score high in terms of regional competitiveness are also those that perform best in terms of quality of governance, infrastructure, human capital and innovation[3]. Industrial "powerhouses" in northern Italy, southern Germany and central Poland produce significant economic value and show considerable linkages with the surrounding regions, even though some of these regions (in particular in northern Italy) have now been in a so-called 'development trap' for a large number of years while some other regions (in particular in

FIGURE 1 REGIONAL COMPETITIVENESS INDEX 2019



Source: EU Regional Competitiveness Index 2019

[2] ESPON. (2021). *CE FLOWS – Spatial dynamics and integrated territorial development scenarios for the functional area of Central Europe.* https://www.espon.eu/ce-flows

[3] European Commission. (2022). *European Regional Competitiveness Index - Regional Policy.* https://ec.europa.eu/regional_policy/information-sources/maps/regional-competitiveness_en According to the metodological paper, "*RCI 2019 tracks the performance of 268 regions at NUTS-2 level across 28 EU Member States. It measures 11 dimensions of competitiveness capturing concepts that are relevant to productivity and long-term development. The RCI is computed as a weighted arithmetic mean of pillar (dimension) scores, therefore allowing for compensation across its components. RCI scores are z-scores which means the EU-28 average is always set at 0. Thus, negative values are below the EU-28 average and positive values are above.*"

central Poland) still show low levels of R&D expenditure – the latter being an essential driver of innovation and (technological) development.[4]

From the onset, the Programme has identified several challenges and risks affecting the territory, which remained valid throughout the implementation. These included the increased exposure to globalisation-related structural changes after the global economic crisis (2007-2009), the growing interdependences of EU regions and growing difficulties in achieving EU integration. Evidence[5] suggests that **convergence trends between the more and less developed regions have stopped** in the aftermath of the economic crisis and intra-national disparities have increased, particularly in less developed countries of the area.

The **Covid-19 pandemic** has further exacerbated intra-CE socio-economic disparities as it led to sudden and significant increases in unemployment rates in some parts of the CE area (e.g., Czech regions) while other territories (e.g., many regions in Poland and Slovakia) remained relatively unaffected[6]. The Covid-19 pandemic has also negatively impacted the investment and financing capacity of both the public and the private sector, and, in short-term, brought about a re-prioritisation of policy actions towards fighting the health crisis. As a result, the majority of CE regions have been classified as either "regions that were less affected by the pandemic but experienced significant social consequences" or "regions where youth have been particularly affected by the pandemic".[7]

The Programme strategy also considered the diverse manifestations of the demographic and social challenges present across the different types of territories, including migration, population ageing, brain drain and skill availability. Evidence points to the fact that intra-area disparities and challenges persist, especially between capital city regions and regions towards the periphery of the CE area, and between the **urban, industrialised areas and rural peripheries.** Urban growth poles including capital city agglomerations (Berlin, Vienna, Warsaw, Budapest, Prague), attract investments, talent and innovation, benefiting from "city magnetism"[8], while also suffering from the negative externalities such environmental degradation and increasing social inequalities. On the other hand, rural and peripheral areas usually have lower economic performance and quality of services, making them particularly vulnerable to global shocks[9] (such as economic crises) and to negative trends such as brain-drain and population ageing[10]. With a view to address those challenges and design "a future for all places", the Territorial Agenda 2030 calls for "strengthened cooperation between and across spatial levels, including urban-rural partnerships."[11]

As initially acknowledged, climate change and environmental risks have affected CE regions in different ways and to different degrees. However, the urgency of **climate change** and **environmental risks** has intensified and commitment for tackling environmental challenges has increased during the implementation of the Programme. Compared to the start of the Programme, The European Green Deal has set ambitious targets for delivering on climate objectives, bringing new momentum to the 2030 Agenda for Sustainable Development, and the Paris Agreement, adopted in 2015. Public pressure and general awareness towards climate change have

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European Commission (2022). *Cohesion in Europe towards 2050, Eighth report on economic, social and territorial cohesion*. https://ec.europa.eu/regional_policy/information-sources/cohesion-report_en.

[5] European Commission (2020). *Convergence of EU regions REDUX – recent trends in regional disparities.* https://ec.europa.eu/regional_policy/sources/work/022020_convergence_redux.pdf

[6] ESPON (2022) *TERRCOV – Territorial impacts of COVID-19 and policy answers in European regions and cities.* https://www.espon.eu/covid-19

[7] Ibid.

[8] Institute for Urban Strategies – *The Mori Memorial Foundation (2022). Global Power City Index (GPCI) - Institute for Urban Strategies*. https://mori-m-foundation.or.jp/english/ius2/gpci2/index.shtml and KPMG (2015). *Magnet Cities – Decline | Fightback | Victory*. https://assets.kpmg.com/content/dam/kpmg/pdf/2015/03/magnet-cities.pdf

[9] OECD (2016). *OECD Regional Outlook 2016 – Productive Regions for Inclusive Societies*. https://www.oecd-ilibrary.org/sites/9789264260245-6-en/index.html?itemId=/content/component/9789264260245-6-en

[10] Ibid. 1

[11] European Commission (2020). *Territorial Agenda 2030 – A future for all places*. p.6 https://territorialagenda.eu/wp-content/uploads/TA2030_jun2021_en.pdf

also increased significantly. This was an opportunity for the implementation of actions under the Low-Carbon, Environment and Transport SOs but it is likely that it has influenced the design of activities in other SOs, as well.

The 2015-2016 **migration crisis** has also influenced the design of the programme's later calls and, consequently, the project applications. More recently, the **war in Ukraine** that entailed both a massive inflow of Ukrainian refugees to the EU as well as the need for swift decisions on energy security issues have featured high on the European political agenda and influenced the strategic and thematic orientation of EU policies and programmes, including Interreg programmes in the 2021-2027 programming perspective. Furthermore, interviewees noted that the **political agenda at territorial level** has been shifting away from cross-border and transnational cooperation programmes towards more investment-oriented programmes, especially in the current context where basic needs (e.g. energy supply) are at risk of not being addressed.

Digital transformation has produced major disruptions to businesses and across society, impacting all sectors and influencing the way value is created, services are delivered and products reach their customers. Social media and digital technologies have enabled projects to reach and communicate with their target groups faster and easier, to develop better tools and create more knowledge in all thematic areas. They also allowed projects to mitigate the negative effects of the physical distancing imposed by the containment measures in response to the Covid-19 pandemic.

At EU level, another important development is worth mentioning in the context of Interreg CE's call 4. Around 2016-2017, the European Commission gradually changed its approach to **R&I programmes**: before, the idea was to invest billions of euros into innovation projects, hoping that some of the projects would result in a breakthrough invention onto the market; after 2016-2017, the understanding of R&I programmes changed and the European Commission started thinking that it was not possible to target the market only, and that citizens should benefit more from EU-funded research. Therefore, the focus of R&I programmes was to produce results that can be exploited for policymaking, or be re-integrated into more research, or even be channelled into different kinds of programmes and let the networks of all those programmes' beneficiaries 'mingle with each other'. The rationale was to prove that there are synergies at programme level as well, which can be achieved through a down-streaming approach, i.e., when project ideas are coordinated at the level of project beneficiaries (from across different programmes) based on the needs and potentials they observed.

Innovation

Just before the pandemic started, an **East-West innovation divide** was still very visible in Central Europe, both at the national and regional level: only one NUTS 2 region from the six newest CE Member States (the Czech capital region) is categorized as a 'strong innovator'[12], and all CE 'innovation leaders' regions are located in Germany, Austria and Italy. More importantly, many CE regions saw a decrease in their innovation performance between 2011 and 2019, especially those located in Eastern Germany, Czech Republic and Slovenia. In recent years, linkages between actors of the innovation systems have been developing in Central Europe. The performance of clusters and innovation networks is improving slowly, as is the implementation of Smart Specialisation Strategies in key sectors of the CE regional economies. More substantial progress was achieved with regard to increasing the availability of public services for innovation support to businesses, in particular for the financing of entrepreneurship, as well as entrepreneurial competences and mindsets. On the other hand, further actions are needed in respect to promoting social innovation and addressing demographic challenges such as migration and brain drain.

In the CE countries that joined the EU in 2004 and 2013 (except Slovenia), **business enterprise R&D** accounts for a significantly lower percentage of gross domestic expenditure on R&D than the EU average[13]. In these countries, between a quarter and half of the businesses operating in the industry sector are innovative enterprises, while this share lies around two thirds for businesses in Germany, Austria and Italy[14]. The main

[12] Ibid. 2

[13] Ibid. 2

[14] Eurostat (2018). *Enterprises with innovation activities during 2016 and 2018 by NACE Rev. 2 activity and size class (inn_cis11_inact)*. https://ec.europa.eu/eurostat/web/products-datasets/-/inn_cis11_inact

barriers against innovation activities reported by non-innovative enterprises in the industry sector were lack of internal finance, high costs and low market demand[15]. Importantly, between 24% and 33% of the CE-based innovative enterprises from the industry sector were **cooperating on R&D and other innovation activities** – a percentage that did not exceed 2% for non-innovative enterprises[16], thereby highlighting the strong relationship between innovation and cooperation.

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. In that regard, it is worth mentioning the recent European Commission's notice on synergies between Horizon Europe and ERDF programmes (including Interreg programmes), which outlines 'the new opportunities available to the managing authorities of the cohesion policy programmes, national Horizon Europe contact points and Horizon Europe project promoters/proposers' for creating synergies between those programmes, including through the use of relevant mechanisms such as Seals of Excellence, transfers, and cumulative funding.[17] 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.

Projects funded under the Innovation Thematic Priority of the Interreg CE programme were implemented in the wider context of Industry 4.0, Digital Innovation Hubs and the Internet of Things or Key enabling technologies as major innovation trends.

Low carbon

Central Europe is host to a number of so-called 'carbon-intensive regions' in Europe, mainly driven by coal mining activities (in particular in Czech Republic, Hungary, Slovakia, Slovenia as well as numerous regions and cities in Eastern Germany and Poland). Moreover, the capacity of CE regions to adapt to a greener and low-carbon Europe - also called 'green economic performance' - differs widely across the area, from high-performing Alpine regions to low-performing regions in the former Eastern Bloc[18].

When looking at recent developments, **energy efficiency** in primary energy consumption has been improving in all CE countries but Poland between 2005 and 2019. Over that same period, the share of energy from **renewable sources** has been growing in all CE countries, with particularly strong increases (i.e. around 10 percentage points more) in Italy, Slovakia, Germany, Austria and Czech Republic. In 2019, 33% of Austrian energy and 28% of Croatian energy stemmed from renewable sources, well above the EU average of 20%. On the other end, only 12% and 13% of Polish and Hungarian energy, respectively, was produced through renewable sources. **Energy productivity**, as measured in Euro per kilogram of oil equivalent, has also sharply increased in all CE countries over the last 15 years, from a 20-percent-increase to a 77-percent-increase in Italy and Slovakia, respectively. Nevertheless, all six newest CE Member States still had, in 2019, an energy productivity level well below the EU average[19].

The transition to a low-carbon economy has significant implications for economic development and labour markets, not least through its high potential for job creation from clean energy technologies and energy

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[15] Eurostat (2018). *Non- innovative enterprises by barrier against innovation activities, level of importance of the barrier, NACE Rev. 2 activity and size class (inn_cis10_noin).* https://ec.europa.eu/eurostat/web/products-datasets/-/inn_cis10_noin

[16] Eurostat (2018). *Enterprises that co-operated on R&D and other innovation activities with other enterprises or organisations, by kind and location of co-operation partner, NACE Rev. 2 activity and size class (inn_cis11_coop).* https://ec.europa.eu/eurostat/web/products-datasets/-/inn_cis11_coop

[17] European Commission (2022). *Synergies between Horizon Europe and ERDF programmes* . Notice 2022/C 421/03. p.2. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.C_.2022.421.01.0007.01.ENG&toc=OJ%3AC%3A2022%3A421%3AFULL

[18] European Commission (2020). *Orientation Paper Transnational Cooperation Programme Central Europe 2021-2027*

[19] Eurostat (2022). *Energy efficiency (nrg_ind_eff).* https://ec.europa.eu/eurostat/web/products-datasets/-/nrg_ind_eff, *Share of energy from renewable sources (nrg_ind_ren).* https://ec.europa.eu/eurostat/web/products-datasets/-/nrg_ind_ren, *Energy productivity (nrg_ind_ep)* https://ec.europa.eu/eurostat/web/products-datasets/-/nrg_ind_ep

efficiency[20]. The development of renewable energy sources and energy-saving investments can help reduce carbon emissions while improving the resilience to conventional energy shocks and producing additional income and jobs[21]. However, not all regions in Central Europe have the same capacity to exploit this potential. For instance, **different paces in decarbonisation-enabled employment dynamics** have been observed in CE coal mining regions: coal mining regions in Hungary and Czech Republic are considered to have a Slow or even Restricted Decarbonizing Employment Potential, while coal mining regions in Slovenia and Slovakia show a High Decarbonizing Employment Potential[22]. Polish coal mining regions are split between High Decarbonizing Employment Potential (Dolnoslaskie, Wielkopolskie), Slow Decarbonizing Employment Potential (Lodzkie, Lubelskie, Małopolskie), and Restricted Decarbonizing Employment Potential (Slaskie).

At a time when decentralised energy systems are emerging across Europe, cities and their hinterlands, and local and regional communities are called to play an increasingly prominent role[23]. In particular, **local authorities and related institutions** "*can encourage, enable, measure and regulate the local economy and inform debate on suitable energy options to help cities adapt to new technologies and changing energy requirements*"[24]. Importantly, the level of decision-making power of local governments has been found to be positively correlated with progress in the low-carbon transition[25], hinting towards the importance of bottom-up approaches and local policy uptake for successful decarbonisation pathways.

The **Green Deal**, announced at the end of 2019, provided a strong impetus for later projects funded under the Low-Carbon Thematic Priority of the Interreg CE programme.

Environment

The territory of the EC area is heterogeneous in geographical terms, including coastal areas, mountain ranges, rural areas, large urban agglomerations. The landscape is shaped both by natural and cultural elements which combined give the cultural identity of the area.

Climate change adaptation and mitigation and biodiversity loss are important challenges and evidence suggests that extreme weather phenomena have increased since the Programme begun implementation, while biodiversity dropped strongly from 2008 to 2018 in all CE countries, except Hungary[26]. Environmental performance still differs[27] significantly, with Austria and Germany at the top of the rankings, having also suffered great economic losses caused by weather and other climate-related extremes[28].

Compared to the start of the Programme, the political commitment in respect to tackling environmental challenges has increased. The European Green Deal has set ambitious targets for delivering on climate

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[20] Kapetaki, Z., Ruiz, P. et al. (2020). *Clean energy technologies in coal regions: Opportunities for jobs and growth: Deployment potential and impacts*. Publications Office of the European Union. Luxembourg

[21] Vienna Institute for International Economic Studies (2018). *Socio-economic challenges, potentials and impacts of transnational cooperation in central Europe*. Final Report. http://www.interregcentral.eu/Content.Node/events/ImpactStudy.html

[22] Ibid. 19

[23] Directorate-General for Research and Innovation (2018). *Final Report of the High-Level Panel of the European Decarbonisation Pathways Initiative.* https://research-and-innovation.ec.europa.eu/knowledge-publications-tools-and-data/publications/all-publications/final-report-high-level-panel-european-decarbonisation-pathways-initiative_en

[24] OECD (2015). *Monitoring the transition to a low-carbon economy - a strategic approach to local development*. p.14. https://www.oecd.org/cfe/leed/Monitoring-Green-Transition-Final2.pdf

[25] ESPON (2018). Locate - Territories and Low-Carbon Economy. Final Report. https://www.espon.eu/low-carbon-economy

[26] Vienna Institute for International Economic Studies (2020). *Analysis of the main territorial challenges, needs and transnational cooperation potentials in central Europe – Annex 1: Analytical report*. https://www.interreg-central.eu/documents/

[27] Yale University (2022). *Environmental Performance Index*. https://epi.yale.edu/epi-results/2022/component/epi

[28] European Commission (2018). *Report from the Commission to the European Parliament and the Council on the implementation of the EU Strategy on adaptation to climate change*. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018DC0738&from=EN

objectives, bringing new momentum to the 2030 Agenda for Sustainable Development, and the Paris Agreement, adopted in 2015.

Overall, government expenditure[29] on environmental protection has not increased significantly in the CE area, but consumption of environmental protection services has grown steadily[30]. The environmental performance in the Programme area still differs [31] considerably. Due to more comprehensive actions in respect to environmental policies, Austria and Germany are at the top of the rankings, despite higher values of garbage production or food waste per year per person. Evidence[32] shows that countries which score better in circular economy (Germany, Czech Republic, Italy, or Poland) have also invested more in innovation and/or in the circular economy sectors.

Public pressure and general awareness in relation to environmental actions have increased. Awareness in respect to biodiversity has increased significantly[33] and importance, threats, and protection measures are also higher in the public interest and on the public agenda. This was an opportunity for the implementation of actions under the Environment SOs.

Culture

Central Europe is characterised by a high diversity of cultures and population (ethnic diversity, linguistic minorities). The area also has a great diversity of cultural heritage and resources in terms of historical sites, documentary heritage (e.g. archives and library collections), artefacts, traditions, cultural landscapes as well as traditional skills and knowledge. This heritage and its related resources represent important location factors, strongly contributing to the attractiveness of Central Europe's territory. Some places have a transboundary character, including five UNESCO heritage sites.

As initially identified, the cultural richness is often not well valorised or even threatened. Related potentials are not sufficiently used, for numerous reasons, ranging from insufficient management and preservation skills, lack of coordination, unsustainable approaches (e.g. mass tourism). Climate change endangers the existence and limits future usage potentials of cultural assets, leading to adverse effects on the competitiveness of regions (cf. Territorial Agenda 2020), while the overexploitation of these assets can further threaten their economies (cf. Territorial Agenda 2030). The cultural richness and vibrancy are not transmitted to the people[34]. In that regard, it is worth mentioning some recent EU initiatives such as the European framework for action on cultural heritage and the New European Agenda for Culture.

Wider trends like digitalisation have produced major changes in the way culture is created and consumed, making cultural products, including heritage, available and accessible for the public and experts alike. For example, debates related to redefining the role of museums are challenging the way culture is managed.

Transport

Situated at the core of the EU, the CE territory is crossed by eight out of the nine TEN-T corridors. Three of the most important trans-European road and railway axes (Baltic-Adriatic, Rhine-Danube and Orient/East-Med) cross through at least five countries in the Programme area. Nonetheless, evidence suggests that cross-border accessibility is still considered a barrier, particularly in case of rail[35], as most investments in infrastructure are

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[29] Eurostat (2022). *National expenditure on environmental protection by institutional sector (env_ac_epneis)*. https://ec.europa.eu/eurostat/web/products-datasets/-/env_ac_epneis

[30] Eurostat (2022). *Final consumption expenditure on environmental protection services by institutional sector (env_ac_cepsgh)*. https://ec.europa.eu/eurostat/web/products-datasets/-/env_ac_cepsgh

[31] Ibid.26

[32] Hervey, G. (2018, May 17). Ranking how EU countries do with the circular economy. *POLITICO*. https://www.politico.eu/article/ranking-how-eu-countries-do-with-the-circular-economy/

[33] European Commission (2015,2018). *Attitudes of Europeans towards biodiversity*. Special EB 436 and EB 481. https://op.europa.eu/en/publication-detail/-/publication/50bf1efd-720b-11e9-9f05-01aa75ed71a1

[34] Eurostat (2022). *Perception survey results (URB_PERCEP$DV_170)* https://ec.europa.eu/eurostat/web/products-datasets/-/urb_percep

[35] European Commission (2017). *Passenger rail accessibility in Europe's border areas*. https://ec.europa.eu/regional_policy/sources/work/201704_rail_passenger_accessibility.pdf

focused on improving connectivity at national level. Multimodal passenger transport is also confined to local, regional, or national levels and services are highly fragmented. Their integration faces numerous challenges, including legal and commercial barriers, taxes and charges, proprietary software[36].

Across the Programme area, outside the TEN-T network, access to quality transport services is low, leaving many communities, particularly in rural, coastal or remote areas, sometimes disconnected from the rest of the territory. The so-called 'first and last miles' is often a problem for those who live far from city centres, emphasizing the social role of the public transport services, besides contributing to effective mobility[37]. In recent years, digitalization has supported connectivity in rural areas located in proximity of cities and town, but barriers remain, including the attitudes and user habits, particularly in the case of older users, with less digitally skilled.

Freight transport has continued to grow and is expected to do so by as much as 80% until 2050[38], much of it by road, hindering EU-level efforts to gradually shift to rail transport, which would help to combat climate change and would cause fewer negative externalities (accidents, pollution, congestions etc.). Multimodal transport has however increased during 2014-2020,[39] but important challenges remain in terms multimodal accessibility, with Western countries being better endowed.

Cooperation and coordination among the stakeholders in the transport sector have remained challenging, due to the large number of operators and service providers, lack of trust and high competition, lack of experience or expertise, different legal framework.[40] Different legal or governance obstacles, technical (such as power systems, signalling etc. further prevent the effective cooperation in the field of transport.

The transport sector remains one of the main contributors to greenhouse gas emissions. Compared to the start of the Programme, the political commitment in respect to tackling environmental challenges has increased at EU level, with profound implications for the transport sectors. For the future, the European Green Deal has set ambitious targets for delivering on climate objectives, adding to the pressure for shifting to sustainable transportation. However, the adaptation of infrastructure to new mobility patterns and the deployment of infrastructure for clean, alternative fuels, poses additional challenges that require new investments and a different approach to the design of networks and business models.[41]

Awareness in respect to road transport negative externalities, particularly in urban areas, has increased, prioritising investments for sustainable services and alternatives.

Governance structures and administrative capacity

Cities and their hinterlands, and local and regional communities have an increasingly prominent role in delivering public policies. **Bottom-up approaches** have proven instrumental in designing and producing effective, attractive and sustainable results across the EU, and place-based interventions are receiving increasing attention as a way of improving people's lives and reducing inequalities. This has been an opportunity for the delivering the Programme's interventions targeting Functional Urban Areas (FUAs), but also in implementing most pilot actions, which had a pronounced community-oriented approach.

Contextual developments regarding the **investment capacity of the public sector and socio-economic conditions for the private sector** over the period 2014-2020 are likely to be country-specific, based inter alia on how Member States and regions were affected by the economic recession from 2009 and which policies were

[36] Eropean Commission (2019). *Remaining challenges for EU-wide integrated ticketing and payment systems.* Final report. https://op.europa.eu/en/publication-detail/-/publication/af05b3eb-df43-11e9-9c4e-01aa75ed71a1

[37] Heinrich-Böll-Stiftung European Union (2021). European Mobility Atlas – Facts and figures about transport and mobility in Europe. https://eu.boell.org/sites/default/files/2021-02/EUMobilityatlas2021_FINAL_WEB.pdf?dimension1=euma2021

[38] European Commission (2022). *Multimodal and combined transport* https://transport.ec.europa.eu/transport-themes/logistics-and-multimodal-transport/multimodal-and-combined-transport_en

[39] Eurostat (2022). *Goods transported in intermodal transport units (RAIL_GO_CONTWGT).* https://ec.europa.eu/eurostat/web/products-datasets/-/rail_go_contwgt

[40] Ibid. 37

[41] European Commission (2019). *Transport in the European Union – Current Trends and Issues*. https://transport.ec.europa.eu/system/files/2019-03/2019-transport-in-the-eu-current-trends-and-issues.pdf

then put in place. Shifting political contexts and priorities - especially at local and regional levels - has ambivalent effects on projects, depending on the interest and commitment of political leaders to thematic priorities.

3.2. EQ1. IDENTIFICATION OF GROSS EFFECTS

This section of the report focuses on evaluating the gross effects of the Interreg CE Programme for 2014-2020. To conduct this assessment, the evaluation team utilized a theory-based evaluation approach (TBE). This approach involved reconstructing the Programme's underlying Theory of Change (ToC) and using it as a framework for conducting the research and answering the evaluation questions.

The evaluation team used the reconstructed ToC to assess the overall achievements of the Interreg CE Programme, by reviewing its outputs and results and reviewing the progress made towards the established objectives. The evaluation employed both quantitative and qualitative methods to gain an in-depth understanding of how the Programme contributed to improving the situation of the target groups and the effects it produced in the territories it covered.

Using the theory-based evaluation approach, the assessment of the gross effects produced by the Interreg CE Programme was able to provide a comprehensive understanding of the Programme's effectiveness in achieving its intended outcomes. This method allowed the evaluation team to determine if the observed effects were aligned with the Programme's underlying logic, and to identify areas where the interventions could be improved to better achieve the intended goals.

3.2.1. THEORY OF CHANGE AND EVALUATION ASSUMPTIONS

The ToC reconstruction started from revisiting the main needs and challenges of the CE territory, based on the Programme documents[42] and considering the main contextual developments observed during the period of implementation, as presented in Section 3.1. The evaluation noted the main challenges addressed by the Interreg CE Programme, as follows:

- **Innovation and competitiveness:** The regions in the Programme area face the common challenge of enhancing their innovation potential and increasing their competitiveness in the global market. This requires the development of innovative products and services, the adoption of new technologies, and the improvement of skills and knowledge among the workforce. The Programme aimed to promote cooperation between businesses, research institutions, and other stakeholders to foster innovation and improve the competitiveness of the regions.
- **Low carbon:** The EC territory faces significant challenges in energy production, consumption, and the need to mitigate climate change. To address these challenges, the Interreg CE programme aimed to strengthen the utilization of renewable energies, improve energy efficiency, and enhance the economic growth potential of the sector. Additionally, the programme aimed to develop and implement territorially based low-carbon strategies, as well as promote low-carbon mobility in functional urban areas. Moreover, the programme played a crucial role in enhancing knowledge and skills related to efficient energy management of public infrastructure, further advancing the region's energy goals.
- **Environmental sustainability:** The CE territory faces environmental challenges such as climate change, pollution, and the degradation of its natural resources. These issues have a significant impact on the quality of life, health, and economic development of the region. The Programme directly addressed the need for safeguarding and responsibly managing the region's natural heritage and resources. Furthermore, it focused on enhancing the environmental quality of functional urban areas, addressing issues such as land use conflicts, air and water pollution, soil contamination, and waste management.

[42] To differentiate between the text of the Interreg CE Programme and the programme itself, the term "Cooperation Programme (CP)" is used throughout the document. However, when referring to the programme in a more general sense, including its interventions and documents, the terms "Interreg CE Programme" or simply "Programme" are used.

By tackling these key challenges, the programme aimed to directly improve the quality of life for urban residents, contributing to the overall environmental sustainability and regional development.

- **Culture and creativity:** The region has a rich cultural heritage, including historical landmarks, traditional crafts, and local festivals and customs. However, these cultural assets are often at risk due to neglect, decay, or lack of appreciation. The Programme sought to address this by promoting the protection and valorisation of natural and cultural heritage, including the restoration and preservation of historic buildings and monuments, promoting cultural tourism, and supporting local cultural initiatives. By preserving and promoting its heritage, the Programme also aimed to enhance the region's identity and sense of belonging, while also contributing to social cohesion, inclusion and equality**.** In addition, the Programme aimed to promote cultural and creative industries, to support innovation entrepreneurship and cooperation with the business sector.
- **Transport and mobility:** The regions in the Programme area face challenges related to transport and mobility, including congestion, pollution, and insufficient infrastructure. These issues can hinder economic development, social inclusion, and environmental sustainability. The Programme aimed to promote the development of sustainable and efficient transport systems, as well as to improve mobility options for people and goods.
- Moreover, the **uneven distribution of economic strength** across the CE territory is one important challenge faced by the region. While some areas in the Western part are more developed and prosperous, many of the Eastern parts of the region are still struggling to catch up. These disparities also manifest on a sectoral and spatial level, affecting both rural and urban areas. The Programme aimed to promote greater economic convergence, reduce disparities and increase cohesion, including social cohesion, between different regions and sectors. This included promoting innovation and entrepreneurship, improving access to finance and markets, and enhancing the capacity of local businesses and institutions.

The CP was developed in line with the EU 2020 Strategy objectives of smart, sustainable and inclusive growth and in response to the identified needs. The overall objective of the Interreg CE was *"to cooperate beyond borders in central Europe to make our cities and regions better places to live and work".* Given the nature of territorial cooperation interventions, the Interreg CE Programme clarifies its role as *"the catalyst for implementing smart solutions that answer to regional challenges in the fields of innovation, low-carbon economy, environment, culture and transport"* and acknowledges that achieving the desired impact can only be done by coordinating efforts with *"other national and regional programmes supported by structural and investment funds, macro-regional strategies, the Horizon 2020 programme or the European Investment Bank"*.

The 2014-2020 Interreg CE Programme aimed to take an integrated territorial and thematic approach[43], to address key socio-economic challenges and needs within central Europe. The programme recognized that innovation, competitiveness, environmental sustainability, social and cultural cohesion, inclusion, and balanced territorial development are critical factors for the region's growth and development. These themes were embedded horizontally across the programme interventions to ensure that all operations contributed to the region's long-term sustainability and resilience, while also improving the quality of life of the citizens.

The Programme's intervention logic was based on some underlying assumptions that guided its implementation. The evaluation team observed the following five, as being critical.

- Firstly, transnational cooperation was viewed as a means of building new knowledge and facilitating the exchange of information and experiences among stakeholders from different regions.
- Secondly, the transfer of knowledge, outputs, and results was expected to help effectively address disparities between regions.
- Thirdly, interventions were designed to build regional capacities following an integrated bottom-up approach involving and coordinating relevant actors from all governance levels.

[43] Also confirmed by the ex-ante evaluation, Annex A of the Interreg CE 2014-2020 Cooperation Programme Version 3.0

- Fourthly, multi-level governance was expected to help achieve the intended structural change and improve policy implementation.
- Fifthly, connecting top-down and bottom-up initiatives with cross-sectoral approaches was needed to increase the participation of local communities while fostering the efficiency of administrations and the consistency of policymaking.

By promoting a holistic and comprehensive approach to development, the Programme aimed to ensure that all interventions contributed to the region's long-term sustainability and resilience, while also improving the quality of life of the citizens. The integrated approach recognized the interconnectedness of different policy areas and the need for cross-sectoral cooperation and collaboration to achieve lasting impact and positive change. These assumptions reflected the programme's commitment to promoting cooperation, coordination, and integration among stakeholders from different regions and levels of governance. Overall, the Programme aimed to address the region's challenges by leveraging its assets and potentials, while also ensuring that the interventions were coordinated, coherent, and effective.

The Interreg CE Programme implemented similar types of actions across all thematic areas and SOs. These actions included the developing strategies and action plans, testing and implementing tools, preparing larger investments, carrying out pilot actions, and capacity-building measures such as training. The overarching aim of these interventions, as stated in the CP, was to promote policy-learning and implementation-oriented approaches at the transnational level.

The Interreg CE Programme recognized that effective implementation of projects was essential to achieving the desired outcomes and impact. To this end, the programme required all financed projects to adopt a robust approach that would maximize the chances of success. Based on the documents included in the Application Packages for the four calls[44], the evaluation also revealed several common elements that were critical for success, which could be considered as "inputs" or "ingredients for success" at the Programme level, alongside the EU-funding.

One of these elements was the establishment of solid partnerships that leveraged the diversity of experience and capabilities of the project partners. This meant that projects should include partners with complementary skills and expertise to ensure that the project's objectives were met effectively. Partnerships could also help to build trust and facilitate knowledge-sharing among partners, leading to more efficient and effective project implementation.

Another decisive element was the implementation of state-of-the-art solutions that addressed the identified needs in each project. This meant that projects should use the latest technology and best practices to ensure that the interventions were effective in addressing the identified needs. It was also important for projects to ensure that solutions were tailored to the specific needs of the project and the region to maximize their impact.

Ensuring the sustainability of project outputs and results was also crucial for achieving long-term benefits and creating a lasting impact on the territory. This meant that projects should be designed with a long-term view in mind, and their outcomes and results should be sustainable beyond the project's lifespan. The knowledge and best practices generated by the projects should be easily transferable and applicable to other organizations, regions, and countries outside of the defined partnership.

To ensure that the Interreg CE Programme's emphasis on innovation, competitiveness, and sustainability was reflected in all financed interventions, an innovative approach was expected. Additionally, the Programme placed significant emphasis on the communication strategies of the projects, expecting them to engage with relevant stakeholders to build awareness, accountability, and endorsement of the activities. Effective communication was deemed critical to the success of these projects.

The Programme's Intervention Logic suggested that by implementing the actions and achieving their outputs, the capacities of both public and private sectors in the region would be improved. This would lead to enhancements in policy frameworks, managerial systems, human resources, and institutional structures.

[44] Interreg CENTRAL EUROPE - Application documents - Interreg (interreg-central.eu)

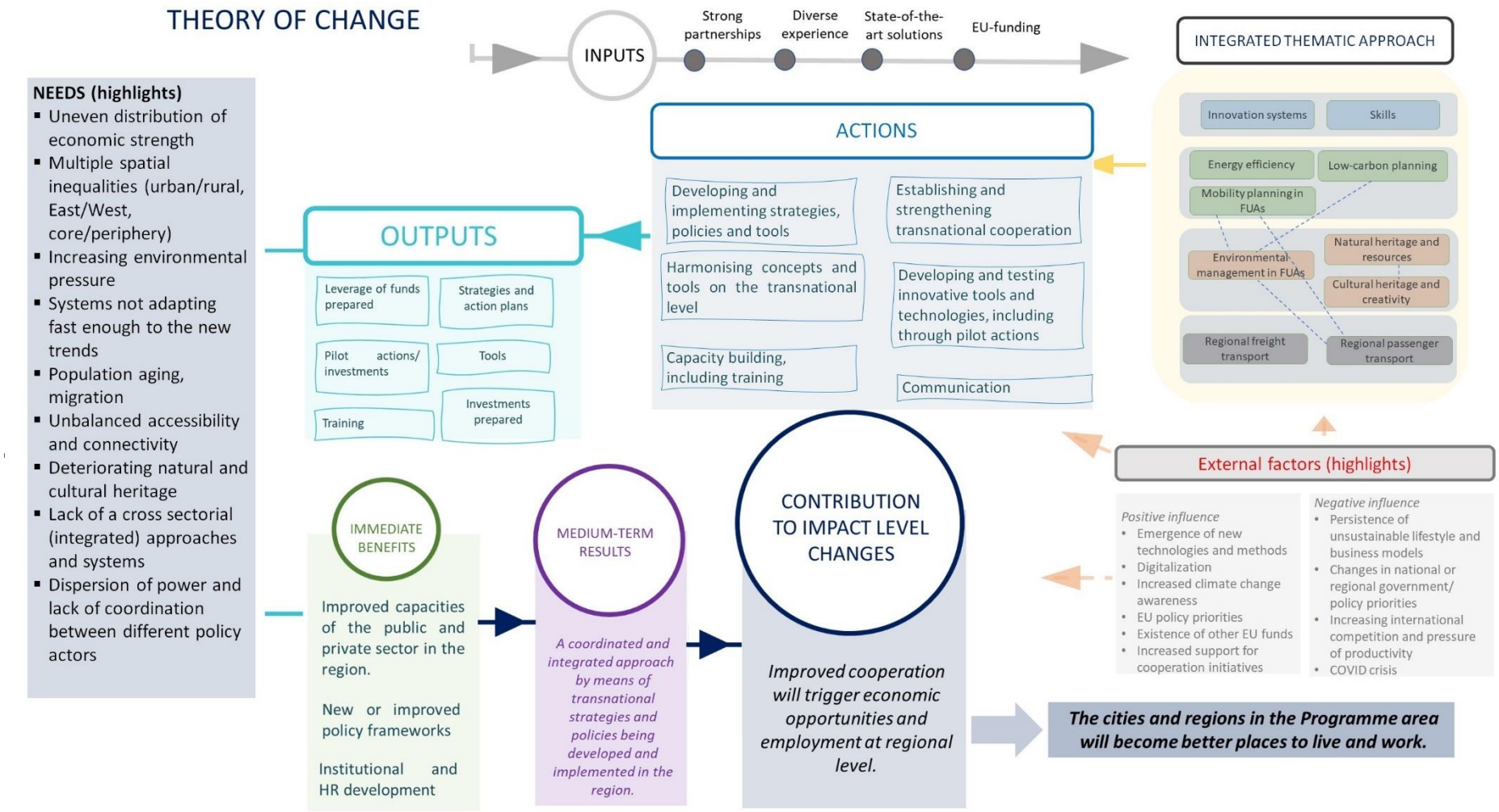
Achieving the results would enable a more coordinated and integrated approach among the regions in the Programme area, with the development and implementation of transnational strategies and policies. As a result, longer-term impacts such as triggering economic opportunities and employment would arise. Ultimately, accomplishing all these objectives would make the cities and regions in the Programme area better places to live and work.

The reconstruction of the Theory of Change involved identifying the external factors that affected the implementation and results. The evaluation revealed that the initial external factors[45] are still relevant, but some have become more prominent over time, such as digitalization, the emergence of recent technologies, and increased awareness towards climate change. The COVID-19 crisis and its aftermath have emerged as one of the most significant factors that have impacted the implementation of the Interreg CE Programme in the latter part of its lifespan. The pandemic has highlighted the need for flexibility, resilience, and innovation in the face of unforeseen challenges and uncertainties. The consequences of the pandemic, including its economic and social impacts, remain uncertain and may continue to affect the region's development in the long term.

The reconstructed Theory of Change of the Interreg CE Programme is summarized in the following diagram (Figure 2). More details are presented in Annex 2, including for each SO.

[45] As per SWOT analysis, Annex 5 Annex 7 of Interreg CE 2014-2020 Cooperation Programme Version 3.0

FIGURE 2 THEORY OF CHANGE DIAGRAM



Source: Developed by the experts

The reconstructed Theory of Change served as the foundation for developing a set of assumptions that could help assess the success of the Interreg CE Programme. The evaluation assumptions were purposefully developed to assist evaluators in addressing the evaluation questions, and they are grounded in the programme documents (CP and call documents). The idea was that if these hypotheses were accurate and validated, then the Programme would have achieved its intended results. The assumptions were established at the outset of the evaluation and subsequently refined throughout the process. The evaluation team tested set of assumptions and the conclusions are presented in brief in **Table 1** below.

TABLE 1 RESULTS OF TESTING THE EVALUATION ASSUMPTIONS

Programme design	Validated (YES/ NO/ Partially)	Details
(1) Transnational cooperation enabled partners to jointly tackle challenges that go beyond borders	YES	The evaluation confirmed the assumption. The programme successfully addressed relevant challenges, present across the Interreg CE territory and enabled partners to jointly tackle challenges that go beyond borders, for all SOs. Even more, the programme adapted well to the developments taking place during the implementation period and was effective to address and respond to the arising challenges (such as migration), align with increasing thematic priorities (such as environment protection), refocus (for example, shifting support from cultural heritage to cultural and creative industries).
(2) Projects supported are "living laboratories" creating opportunities for developing and testing new ways of addressing major challenges	YES	The evaluation confirmed the assumption. The causal link was confirmed and the supported projects are likely to be the main cause of the observed effects in terms of capacity increase for target groups envisaged. The supported projects, particularly through the pilot actions (with or without investments) provided real-world settings where researchers, practitioners, and stakeholders collaborated to design, implement, and test innovative solutions to complex problems. By involving a variety of target groups and stakeholders in a variety of locations, projects provided an opportunity to test new ideas in a dynamic and responsive environment and gather feedback from users in real-time. Thematically, the projects addressed major challenges facing society, such as climate and demographic change, urbanization, mobility etc. Focusing on co-creation and co-design, the projects developed solutions which were found highly relevant for the organizations using them, fostering learning and capacity-building, and generating new knowledge to policy and practice.
(3) The knowledge created in the projects is applicable, transferable, and possible to use in other organisations/ regions /countries outside of the defined partnership.	YES	The evaluation confirmed the assumption. Consulted stakeholders generally agreed that the outputs produced in the projects, particularly tools, guidelines, methodologies etc. are suitable to be used in other contexts. However, results are mixed in respect to whether the transfer has taken place or not. While the evaluation identified numerous positive examples of transfer being initiated or taking place, it also found that transfer depends on the specific context of each project and, in particular on the capacity of the partners to reach other potentially interested organizations. At the same time, transfer is expected to continue to take place in the future. The evaluation also found that solutions are more likely to be transferred to users from other regions, and less likely to users from other sectors.

		Particularly, local-level initiatives are easier to replicate and highly successful.
(4) Interventions followed an integrated bottom-up approach involving and coordinating relevant actors from all governance levels	YES	The evaluation confirmed the assumption. The causal link was confirmed and the supported projects are likely to be of the causes of the observed effects in respect to improved coordination, particularly horizontally between actors at the local level and vertically between the local and regional levels. The analysis showed that the design of the programme and of the call documents ensured the necessary framework for implementing/ mainstreaming/ testing different governance formats, for example in supporting place-based approaches and in encouraging collaboration and coordination between actors at different levels. Interventions targeting functional urban areas (FUAs) are particularly conducive to enabling multi-level governance, as it was confirmed through the surveys, interviews and case-studies. The evaluation found evidence of improved vertical coordination between national, regional and local levels, in the case of the Transport thematic priority. However, there is still significant space for further improved coordination. Uptake of results at policy level, particularly in a coordinated manner across borders, is often dependent on the shifting political priorities, legislation and jurisdictions, as well as by limited financial capacity.
(5) Interventions were able to deliver solutions adapted to the needs of the territories and target groups in the programme area.	YES	The evaluation confirmed the assumption. Overall, the impact of the Programme was balanced, both territorially and in terms of the target groups reached. At the same time, and depending on the theme, some projects were focused on a particular type of territory or target group. The interventions were highly adapted to the specificities of the target groups. The evaluation confirmed the causal link and the supported projects are likely to be the main cause of the observed effects in respect to increased capacity of the targeted organizations and individuals. For example, for SMEs and local municipalities, the projects offered open opportunities for implementation of new (often expensive) technologies and solutions. The interventions were also tailored to the specificities of the territories. The evaluation confirmed the causal link and the supported projects, through the pilot actions, are likely to be among the causes of the observed effects in respect to new economic opportunities and improved appearance of the living spaces in the supported locations.
Programme implementation	**Validated (YES/NO)**	**Details**
(1) Implementation mechanisms were able to determine the adoption of innovative approaches in the financed interventions.	YES	The evaluation confirmed the assumption. After reviewing the programme documents and gathering opinions from stakeholders, the evaluation confirmed strong focus of the programme on innovative solutions. The projects successfully integrated multiple factors that were involved in addressing complex challenges, as required by the programme and provided valuable contributions towards addressing these challenges. Some projects introduced highly innovative actions or methods to local and regional policymaking, providing stakeholders with solutions that typically require specialized knowledge and could not have been accessed otherwise. The causal link was thus confirmed, and the implementation mechanisms determined the adoption of innovative approaches in the financed

		interventions. Consequently, the interventions were found to be one of the causes for the improved capacity of the users. The innovative approach was confirmed at programme level, as well, particularly through the implementation of call 4.
(2) Implementation mechanisms were able to ensure the transnational character of the financed interventions.	YES	The evaluation confirmed the assumption. The Programme territory is covered by other transnational and cross-border programmes, but the Interreg CE Programme allows for a unique combination of transnational cooperation patterns between several countries and regions, on three dimensions: East-West, North-South and Mediterranean (IT, SI, HR) and Eastern countries. The analysis showed that strong and diverse project partnerships were strongly encouraged. While the intensity of cooperation differs among the projects analysed, even partnerships with more limited exchange contributed to solving important issues and foster mutual understanding. The challenges addressed by the projects were found to have a transnational character, and solutions were tested in diverse contexts. The structure of each project included diverse organizations from several member states and regions. As a result, the causal link was confirmed, and the implementation mechanisms were able to ensure the transnational character of the financed interventions. The supported interventions are likely to be one of the main causes for the observed effects in relation to building trust across stakeholders and territories, including in relation to linking partners on both sides of the former Iron Curtain. Even more, participation in Interreg CE allowed for beneficiaries to not only build a new or strengthen an existing partnership, but also to widen their network of potential partners for future transnational collaborations.
(3) Implementation mechanisms were able to trigger multiplication and synergetic effects / spillovers / capitalization/ leverage effects	YES	The evaluation confirmed the assumption. The analysis showed that generally, projects succeeded in securing the continuation of activities, expanding the work done to other regions, reaching new target groups, applying the results in related topics. Multiple examples also confirm that projects have been successful in generating other partnerships or cooperation contexts. Evidence showed that projects were implemented in synergy with other Interreg programmes or other EU programmes, such as Horizon. Projects under Call 4 were particularly successful in capitalizing and leveraging previous results, confirming the positive outcomes of the innovative approach at programme level (see assumption #1 above). The causal link was confirmed and the implementation mechanisms were able to trigger multiplication and synergetic effects / spillovers / capitalization/ leverage effects.
(4) Implementation mechanisms were able to ensure the sustainability of project outputs and results.	YES	The evaluation confirmed the assumption. The causal link was confirmed and the implementation mechanisms were able to ensure the sustainability of project outputs and results. The analysis showed that the outputs and results are generally sustainable beyond the projects' duration and that obtaining additional funds, developing synergies with other initiatives (e.g. other EU-funded, national or regional programmes), having a consolidated partnership or an increased interest from citizens/businesses, play a key role in supporting sustainability. At the same time, the pace of technological advances in the field and the financial capacity of the users to maintain the results also influence sustainability. Projects financed under call 4 are a particular example of successful implementation mechanism, at programme level, to support sustainability of outputs and results from previous initiatives.
(5) Implementation mechanisms were able to capitalize on the strategic role of	YES	The evaluation confirmed the assumption. The causal link was confirmed and the implementation mechanisms were able to capitalize on the strategic role of communication in achieving the results. The evaluation found that communication played a critical role both in projects and at

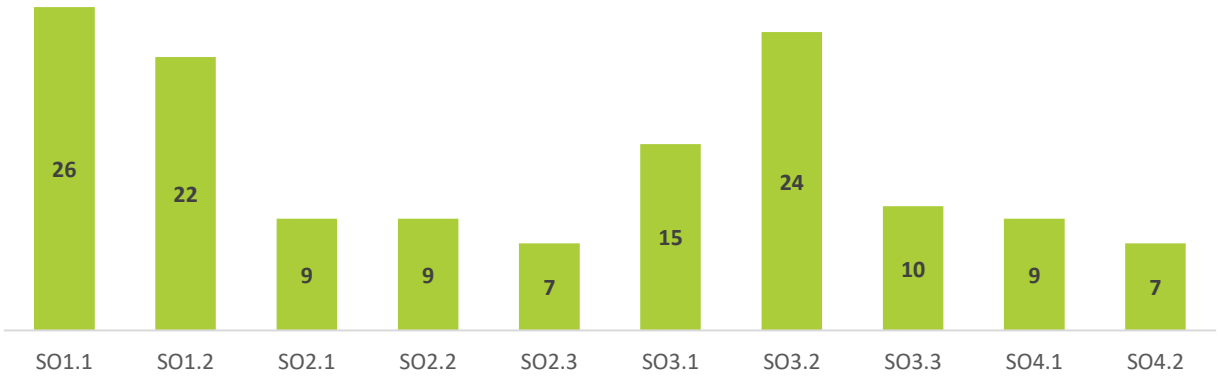
	communication in achieving the results.		Programme level and it helped build trust, strengthened ownership and increased the usability of the outputs and results. Effective communication has contributed to maintaining workflows during the COVID-19 restrictions and, as a result, projects managed to implement their activities and deliver the intended results. Extensive communication efforts between the Programme authorities and project partners were key factors for the successful implementation of the projects.
(6)	**Implementation mechanisms allowed the specific territorial characteristics of the respective targeted areas to be taken into consideration.**	YES	The evaluation confirmed the assumption. In principle, the CP supports a wide diversity of territories, as demonstrated by the geographic location of project beneficiaries and their target groups. Some interventions were targeted towards specific types of territories (peripheries) or locations (FUAs). Even more, some projects targeted particular types of locations, such as former industrial sites. The causal link was confirmed and the implementation mechanisms allowed the specific territorial characteristics of the respective targeted areas to be taken into consideration.

Source: Developed by the experts

3.2.2. OVERVIEW OF THE SUPPORTED PROJECTS

The Interreg CENTRAL EUROPE Programme 2014-2020 financed 138 projects (Figure 3), amounting to approx. 293 EUR million (total eligible expenditure), thereof almost 242 EUR millions of ERDF support[46]. Across the 10 SOs, the projects were of approximately equal size.

FIGURE 3 NUMBER OF INTERREG CE PROJECTS



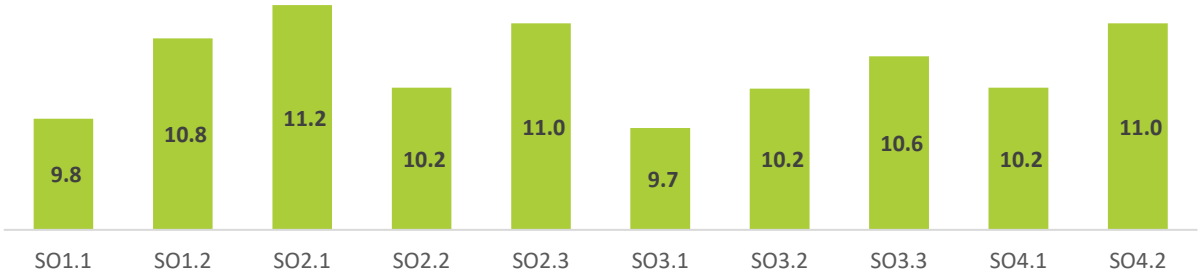
Source: Own calculations based on Interreg CE data provided by the JS

The Interreg CE programme provided support to a total of 1430 project partners, with 1408 originating in the Interreg CE area and 22 from outside of it. The Italian Interreg CE regions had the largest number of project partners, with 253 partners, followed by German and Polish regions. It is worth noting that the number of partners from smaller Interreg CE countries was not much lower. For instance, Slovenia had 174 project partners, Hungary had 151, and Austria and Croatia had around 140. The only country with a substantially lower number of partners was Slovakia, with 66 partners. On average, projects had about 10 partners, but this varied across different SO categories. SO 1.1 and SO 3.1 had a lower average number of partners, while SO 2.1, SO 2.3, and SO 4.2 had a higher average number (Figure 4). However, the data did not account for associate partners[47] involved in some projects, which could occasionally double the number of participating entities in a project.

[46] In order to increase the programme capacity to absorb the available funds, an overbooking was decided by the Monitoring Committee. Overbooked funds were compensated by savings from closed projects.

[47] Associate partners have limited roles and have no budget allocation in the projects. Their importance resides with the contribution they bring to increasing projects' outreach and in terms of expanding collaboration networks.

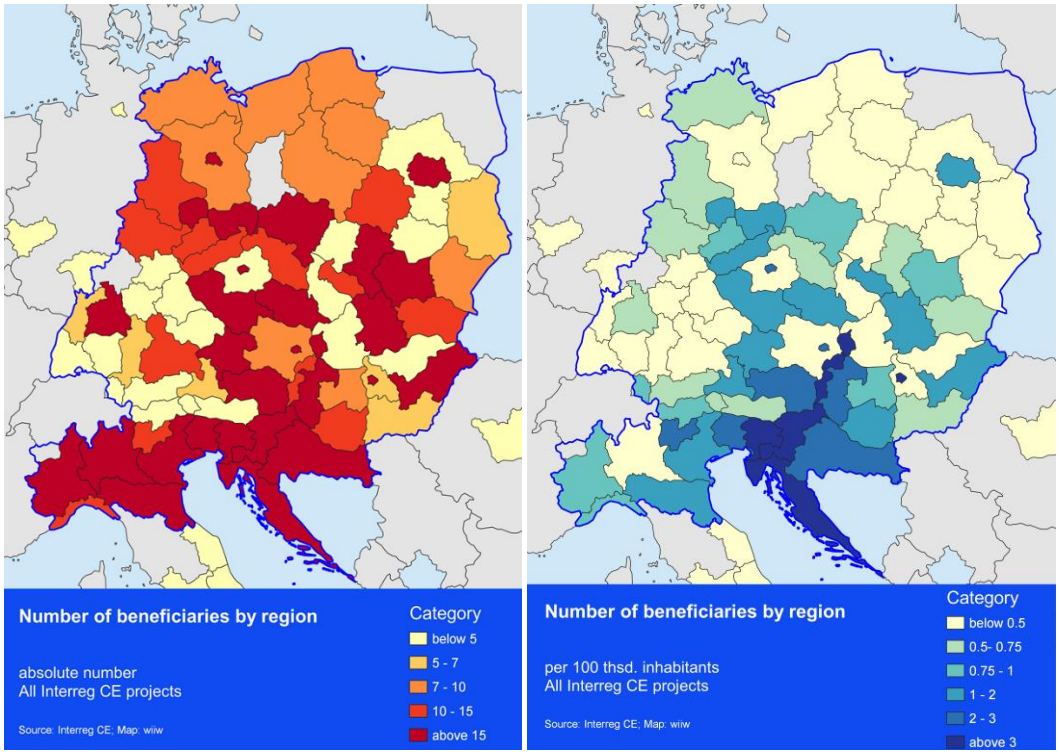
FIGURE 4 AVERAGE NUMBER OF PROJECT PARTNERS IN INTERREG CE PROJECTS



Source: Own calculations based on Interreg CE data provided by the JS

Figure 5 illustrates the distribution of project partners across regions. The left graph displays the absolute number of partners per region, while the right graph shows the number of partners per 100 thousand inhabitants. The maps indicate that nearly all Interreg CE NUTS-2 regions had at least one project partner, with only four exceptions. The absolute numbers suggest that regions with capital cities and larger cities had more project partners. However, when these numbers are adjusted for population size, the differences between urban and rural regions become less pronounced. This reveals a more equitable distribution of partners across the Interreg CE regions.

FIGURE 5 NUMBER OF PROJECT PARTNERS BY INTERREG CE NUTS-2 REGIONS: ABSOLUTE NUMBER & PER 100 THSD INHABITANTS (ALL PROJECTS)



Note: NUTS 2021 classification. Source: Own calculations based on Interreg CE data provided by the JS

In general, the distribution of project partners across countries is consistent with the distribution of funding. Three groups of countries can be highlighted, based on the ERDF contributions allocated relative to the population size. The first group, comprising Slovenia and Croatia, consists of countries showing a more significant contribution allocated relative to their population. The second group consists of countries with performance comparable to the size of their population, namely Hungary, Austria, Italy, the Czech Republic and

Slovakia. The third group, comprising Poland and Germany, exhibits lower ratios in terms of their contribution relative to their population size.

TABLE 2 NUMBER OF BENEFICIARIES AND ERDF CONTRIBUTIONS IN THE INTERREG CE AREA

	Project partners	Total eligible expenditure	ERDF contribution	Population	Project partners	Total eligible expenditure	ERDF contribution	Population
	Absolute values				*in % of total*			
AT	140	32,001,915	25,601,532	8,822,267	9.9	11.0	10.7	6.0
CZ	115	20,307,946	17,261,754	10,610,055	8.2	7.0	7.2	7.2
DE	190	50,469,960	40,375,968	40,204,877	13.5	17.3	16.8	27.4
HR	137	21,987,641	18,689,494	4,105,493	9.7	7.6	7.8	2.8
HU	151	28,569,948	24,284,456	9,778,371	10.7	9.8	10.1	6.7
IT	253	60,759,624	48,607,699	27,736,158	18.0	20.9	20.2	18.9
PL	182	33,671,297	28,620,602	37,976,687	12.9	11.6	11.9	25.9
SI	174	31,716,190	26,958,762	2,066,880	12.4	10.9	11.2	1.4
SK	66	11,623,216	9,879,734	5,443,120	4.7	4.0	4.1	3.7
Total	1408	291,107,735	240,280,000	146,743,908	100.0	100.0	100.0	100.0

Source: Own calculations based on Interreg CE data provided by the JS; data on population: 1st January 2018

3.2.3. OUTPUTS AND RESULTS

Output indicators

Four types of project outputs were used to monitor the progress of the Interreg CE Programme: strategies and action plans, transnational tools, pilot actions, and trainings. These outputs were measured at the project level and then aggregated at SO and IP levels, to assess the overall achievements of the programme. Two approaches were used to measure progress towards targets: (1) progress towards targets set in the Programme Performance Framework (PF), and (2) progress towards targets set by beneficiaries in their Application Forms (AF).

In total, the 135 projects for which data was available[48] generated 3,722 distinct outputs, which is an average of almost 28 outputs per project. Pilot actions, including pilot investments, were the most frequent output type, with 1,022 outputs, followed closely by trainings with 1,006 outputs. Strategies and action plans had 945 outputs, and there were 689 transnational tools. Additionally, under SO 1.1, the projects established 60 innovation networks[49].

Achievements are above to the AF commitments made by beneficiaries for most indicators and very close to the assumed targets for only a few indicators (Table 3). This is a positive outcome and indicates that the projects have been successful in meeting the expectations of those who proposed and developed them and performed well in achieving their objectives. It also shows that the projects have been well-planned and executed. Generally, this high level of achievement is a good sign of the project's success and impact. Compared to the values assumed in the PF, the Programme significantly exceeded the targets set for 2023 for indicators in all Specific Objectives and Investment Priorities. At programme level, the overachievements indicate a conservative approach to target setting, in the Programme design phase, which is not uncommon and is in line with the principles of financial prudence and risk management promoted in the context of the EU Cohesion Policy.

[48] Data refers to 135 projects for which data was available at cut-off date 17th of April 2023. Achievements are expected to be even higher when considering outputs from the 3 missing projects.
[49] Innovation networks outputs are only applicable to SO1.1.

TABLE 3 OVERVIEW OF OUTPUT INDICATORS BY SO AND PROGRESS ACHIEVED

ID	Indicator (name of indicator)	SO	Outputs produced (no.)	Progress to target in PF (%)	Progress to forecast in AF (%)
1b.1	No. of **strategies and action plans** developed and/or implemented for strengthening linkages within the innovation systems	1.1	137	274.0	100.7
1b.3	No. of **tools and services developed** and/or implemented for strengthening linkages within the innovation systems	1.1	105	169.4	101.0
1b.5	No. of **innovation networks** established	1.1	60	260.9	98.4
1b.6	No. of **pilot actions** implemented for strengthening linkages within the innovation systems	1.1	188	216.1	102.7
1b.2	No. of **strategies and action plans** developed and/or implemented for improving skills and competences of employees and entrepreneurs	1.2	121	366.7	102.5
1b.4	No. of **tools developed** and/or implemented for improving skills and competences of employees and entrepreneurs	1.2	76	138.2	100.0
1b.7	No. of **pilot actions** implemented for improving skills and competences of employees and entrepreneurs	1.2	115	149.4	102.7
1b.8	No. of **trainings** implemented for improving innovation capacity and mindsets	1.1 & 1.2	199	221.1	107.0
4c.1	No. of **strategies and action plans** developed and/or implemented for improved energy efficiency and renewable energy use in public infrastructures	2.1	73	405.6	101.4
4c.2	No. of **tools and/or services** developed and/or implemented for improved energy efficiency and renewable energy use in public infrastructures	2.1	101	776.9	97.1
4c.3	No. of **pilot actions** implemented for improved energy efficiency and renewable energy use in public infrastructures	2.1	79	219.4	97.5
4c.4	No. of **trainings** implemented for improved energy efficiency and renewable energy use in public infrastructures	2.2	101	631.3	97.1
4e.1	No. of **strategies and action plans** developed and/or implemented for improving local/regional energy performance	2.2	87	322.2	138.1
4e.3	No. of **tools** developed and/or implemented for improving local/regional energy performance	2.2	98	980.0	107.7
4e.5	No. of **pilot actions** implemented for improving local/regional energy performance	2.2	69	255.6	119.0
4e.2	No. of **strategies and action plans** developed and/or implemented for low-carbon mobility in FUAs	2.3	58	341.2	100.0
4e.4	No. of **tools and/or services** developed and/or implemented for low-carbon mobility in functional urban areas	2.3	26	260.0	104.0
4e.6	No. of **pilot actions** implemented for low carbon mobility in functional urban areas	2.3	56	266.7	100.0
4e.7	No. of **trainings** implemented on low-carbon solutions	2.2 & 2.3	133	475.0	103.1

ID	Indicator (name of indicator)	SO	Outputs produced (no.)	Progress to target in PF (%)	Progress to forecast in AF (%)
6c.1	No. of **strategies and action plans** developed and/or implemented for the protection and sustainable use of natural heritage and resources	3.1	96	213.3	101.1
6c.3	No. of **tools** developed and/or implemented for the protection and sustainable use of natural heritage and resources	3.1	68	183.8	100.0
6c.5	No. of **pilot actions** implemented for the protection and sustainable use of natural heritage and resources	3.1	104	200.0	101.0
6c.7	No. of **trainings** implemented on the protection and sustainable use of natural heritage and resources	3.1	127	423.3	105.8
6c.2	No. of **strategies and action plans** developed and/or implemented for the sustainable use of cultural heritage and resources	3.2	154	223.2	104.8
6c.4	No. of **tools** developed and/or implemented for the sustainable use of cultural heritage and resources	3.2	102	178.9	105.2
6c.6	No. of **pilot actions** implemented for the sustainable use of cultural heritage and resources	3.2	184	230.0	99.5
6c.8	No. of **trainings** implemented on the sustainable use of cultural heritage and resources	3.2	265	576.1	99.6
6e.1	No. of **strategies and action plans** developed and/or implemented for the improvement of environmental quality in FUAs	3.3	73	292.0	98.6
6e.2	No. of **tools** developed and/or implemented for the improvement of environmental quality in FUAs	3.3	70	280.0	104.5
6e.3	No. of **pilot actions** implemented for the improvement of environmental quality in FUAs	3.3	85	212.5	97.7
6e.4	No. of **trainings** implemented on the improvement of the environmental quality in FUAs	3.3	95	475.0	111.8
7b.1	No. of **strategies and action plans** developed and/or implemented for the improvement of regional passenger transport	4.1	69	313.6	97.2
7b.2	No. of **tools and/or services** developed and/or implemented for the improvement of regional passenger transport	4.1	22	157.1	115.8
7b.3	No. of **pilot actions** implemented for the improvement of regional passenger transport	4.1	85	386.4	95.5
7b.4	No. of **trainings** implemented on the improvement of regional passenger transport	4.1	56	350.0	116.7
7c.1	No. of **strategies and action plans** developed and/or implemented for multimodal environmentally friendly freight transport	4.2	77	550.0	91.7
7c.2	No. of **tools and services** developed and/or implemented for multimodal environmentally friendly freight transport	4.2	21	210.0	95.5
7c.3	No. of **pilot actions** implemented for multimodal environmentally friendly freight transport	4.2	57	335.3	101.8
7c.4	No. of **trainings** implemented on multimodal environmentally friendly freight transport	4.2	30	214.3	100.0

Note: Column Progress to target (%) – PF: refers to outputs delivered compared to targets in the PF methodology and CP (for trainings and innovation networks); Column Progress to forecast (%) – AF: refers to outputs delivered compared to forecasted values in the Application Forms for 138 funded projects; Calculations for outputs are based on 135 projects for which data was available at time of report drafting. Achievements are expected to be even higher when considering outputs from the 3 missing projects. Source: Own calculations based on JS data.

The Interreg CE Performance Framework, summarized in Table 4, includes the programme-specific output indicators in an aggregated form for each specific objective, together with data on the financial progress (total amount of eligible expenditure certified to EC) and on the operational progress (no. of approved operations), for each priority axis. Achievements show that, while the total amount of eligible expenditure certified to EC is lower than initial projections, the number of approved operations is close to 100%, which indicates a high success rate in project implementation. Furthermore, the produced outputs have exceeded PF targets by a significant margin.

At SO level, the number of strategies, action plans, tools, and pilot actions developed and/or implemented for multimodal environmentally friendly freight transport (SO4.2) has the highest degree of achievement, with a percentage of 378% over the target. The number of outputs developed and/or implemented for low-carbon mobility in functional urban areas (SO2.3) also performed well, achieving 291.7% of the target value. This suggests that efforts to improve sustainability in urban transportation made significant progress, compared to initial expectations. The initiatives aimed at improving skills and competences of employees and entrepreneurs (SO1.2) and protecting and sustainably using natural heritage and resources (SO 3.1) also performed well, achieving 189.1% and 200% of their respective target values.

The indicators with the highest number of outputs achieved are the number of strategies, action plans, tools, and pilot actions developed and/or implemented for strengthening linkages within the innovation systems (SO 1.1) and sustainable use of cultural heritage and resources (SO3.2), with 430 and 440 initiatives achieved, respectively. However, when compared to their target values, these initiatives achieved a degree of achievement of 216.1% and 213.6%, respectively, which is still impressive but not as high as the other indicators mentioned above.

TABLE 4 PERFORMANCE FRAMEWORK SUMMARY TABLE

PA	Indicator or key implementation step	SO	Outputs delivered	Final target (2023)	Progress to target (%)
1	No. of strategies, action plans, tools and pilot actions developed and/or implemented for strengthening linkages within the innovation systems	SO1.1	430	199	**216.1%**
	No. of strategies, action plans, tools and pilot actions developed and/or implemented for improving skills and competences of employees and entrepreneurs	SO1.2	312	165	**189.1%**
	Total amount of eligible expenditure certified to EC for PA 1* (EUR)	PA1	65,474,696	91,497,242	71.6%
	Key implementation step: No. of approved operations PA 1	PA1	48	47	**102.1%**
2	No. of strategies, action plans, tools and pilot actions developed and/or implemented in the field of improved energy efficiency and renewable energy use of public infrastructures	SO2.1	253	67	**377.6%**
	No. of strategies, action plans, tools and pilot actions developed and/or implemented for improving local/regional energy performance	SO2.2	254	64	**396.9%**
	No. of strategies, action plans, tools and pilot actions developed and/or implemented for low-carbon mobility in functional urban areas	SO2.3	140	48	**291.7%**
	Total amount of eligible expenditure certified to EC for PA 2* (EUR)	PA2	40,066,184	51,427,229	77.9%
	Key implementation step: No. of approved operations in PA 2	PA2	25	25	**100.0%**

PA	Indicator or key implementation step	SO	Outputs delivered	Final target (2023)	Progress to target (%)
3	No. of strategies, action plans, tools and pilot actions developed and/or implemented for protection and sustainable use of natural heritage and resources	SO3.1	268	134	**200.0%**
	No. of strategies, action plans, tools and pilot actions developed and/or implemented for sustainable use of cultural heritage and resources	SO3.2	440	206	**213.6%**
	No. of strategies, action plans, tools and pilot actions developed and/or implemented for the improvement of environmental quality in functional urban areas	SO3.3	228	90	**253.3%**
	Total amount of eligible expenditure certified to EC for PA 3* (EUR)	PA3	81,665,545	102,974,940	79.3%
	Key implementation step: No. of approved operations in PA 3*	PA3	49	48	**102.1%**
4	No. of strategies, action plans, tools developed and/or implemented and pilot actions for the improvement of regional passenger transport	SO4.1	176	58	**303.4%**
	No. of strategies, action plans, tools and pilot actions developed and/or implemented for multimodal environmentally friendly freight transport	SO4.2	155	41	**378.0%**
	Total amount of eligible expenditure certified to EC for PA 4 (EUR)	PA4	24,716,732	33,361,124	79.9%
	Key implementation step: No. of approved operations in PA 4	PA4	16	16	**100.0%**

Source: Own calculations based on JS data (CP Annex 8, Final Progress Reports for 135 projects for which data was available at cut-off date 17th of April 2023. Achievements are expected to be even higher when considering outputs from the 3 missing projects *Calculations refer to 130 projects for which all costs have been claimed. The missing projects are CE1324 CerDee, CE1449 ENES-CE, CE1401 HoCare2.0, CE1516 I-CARE-SMART, CE1581 niCE-life, CE1415 SEE ME IN, CE1345 SIV, CE1550 Transfarm 4.0)

In addition to the programme-specific indicators, common indicators[50] were used to monitor implementation progress. These refer to the number of enterprises receiving support (CO1), participating in CB, TN or IR research projects (CO41) or cooperating with research institutions (CO26) [51] and to the number of research institutions participating in CB, TN or IR research projects (CO42).

Overall, the Interreg CE Programme facilitated the participation of 39,823 enterprises in transnational projects. Furthermore, it enabled 5,362 enterprises to collaborate with research institutions under specific objectives 1.1 and 1.2. Additionally, the programme supported 5,159 research organizations to participate in transnational research projects, covering all thematic areas and specific objectives. Detailed achievements by Priority Axis and SOs are presented in Table 5. It is worth mentioning that the achieved values refer to both the organizations supported as partners in the financed projects and to those part of the projects' target groups in the four calls, i.e., enterprises which were actively involved as stakeholders in project activities, e.g., through participation in meetings, interviews, innovation audits etc. As highlighted by the programme authorities and confirmed by the stakeholders' interviews, targets were exceeded due to the very active involvement of enterprises and research institutions within projects under Priority 1. Further explanations in this respect can also be found in the Annual Implementation Reports 2019, 2020 and 2021.

[50] Defined based on Annex to regulation (EU) No 1299/2013. Full definition of indicators can be found in Annex 8 of the CP.
[51] According to AIR 2020, only 16 projects in total qualified for this indicator. In Calls 1-4 only 15 projects were considered (one project is incomplete – I-CARE SMART): 3DCentral, 4STEPS, AmiCE, BIOCOMPACK-CE, CHAIN REACTIONS, CITYCIRCLE, digitalLIFE4CE, FabLabNet, KETGATE, NUCLEi, ProsperAMnet, SMART_watch, SYNERGY, TRANS3net, Transfarm 4.0

TABLE 5 COMMON OUTPUT INDICATORS

ID	Indicator (name of indicator)	Target (2023)	Achieved [52]	Progress to target
	Priority Axis 1 (SO1.1. and SO1.2)			
CO01	No. of enterprises receiving support	2,400	20,547	856%
CO41	No. of enterprises participating in CB, TN or IR research projects	2,400	20,547	856%
CO42	No. of research institutions participating in CB, TN or IR research projects	300	3,686	1228%
CO26	No. of enterprises cooperating with research institutions	2,200	6,619	300%
	Priority Axis 2 – IP 4c (SO2.1.)			
CO01	No. of enterprises receiving support	40	225	563%
CO41	No. of enterprises participating in CB, TN or IR research projects	40	225	563%
CO42	No. of research institutions participating in CB, TN or IR research projects	50	128	256%
	Priority Axis 2 – IP 4e (SO2.2. and SO2.3)			
CO01	No. of enterprises receiving support	250	4,572	1,828%
CO41	No. of enterprises participating in CB, TN or IR research projects	250	4,572	1,828%
CO42	No. of research institutions participating in CB, TN or IR research projects	90	432	480%
	Priority Axis 3 – IP 6c (SO3.1. and SO3.2.)			
CO01	No. of enterprises receiving support	700	5,054	722%
CO41	No. of enterprises participating in CB, TN or IR research projects	700	5,054	722%
CO42	No. of research institutions participating in CB, TN or IR research projects	170	1,265	744%
	Priority Axis 3 – IP 6e (SO3.3.)			
CO01	No. of enterprises receiving support	140	666	476%
CO41	No. of enterprises participating in CB, TN or IR research projects	140	666	476%
CO42	No. of research institutions participating in CB, TN or IR research projects	70	357	510%
	Priority Axis 4 – IP 7b (SO4.1.)			
CO01	No. of enterprises receiving support	30	392	1,307%
CO41	No. of enterprises participating in CB, TN or IR research projects	30	392	1,307%
CO42	No. of research institutions participating in CB, TN or IR research projects	20	77	385%
	Priority Axis 4 – IP 7c (SO4.2.)			
CO01	No. of enterprises receiving support	300	814	271%
CO41	No. of enterprises participating in CB, TN or IR research projects	300	814	271%
CO42	No. of research institutions participating in CB, TN or IR research projects	30	108	360%

Source: Own calculations based on JS data (CP Annex 8, Final Progress Reports for 135 projects completed in Calls 1-4, cut-off date 17th of April 2023 and AIR 2022). Achievements are expected to be even higher when considering outputs from the 3 missing projects

[52] The presented numbers are only preliminary, since the calculation method is being fine-tuned.

Result indicators

Overall, progress towards planned achievements[53] in terms of thematic results is mostly positive, with almost all thematic results meeting or exceeding the forecasted values, except for jobs created. As a result of project activities, more than 2,600 institutions adopted new or improved strategies, and over 5,400 institutions applied new/improved tools and services. Additionally, 79,171 persons were trained. However, the situation varies by type of thematic result when considering specific objectives (SOs), with some SOs performing better than others (see Table 6 Thematic results by SO, total values). For example, SO2.1. reached only 62% in the number of institutions applying new and/or improved tools and services, while on the other hand, SO2.3. exceeded its target values for the same indicator by 160%.

Furthermore, the projects resulted in the creation of 1,904 new full-time jobs, either directly or indirectly. The majority of the new positions were generated by the SO1.1. and SO1.2. projects, although SOs 2.2., 3.2., and 3.3. exceeded their targets. It should be noted that according to the CP Implementation Manual[54], the jobs reported should be both new and sustainable, but there is no proof regarding their durability and quality in the long run, as there is no documented evidence collected, such as work contracts. The qualitative evidence gathered by the evaluation through the interviews with the stakeholders and beneficiaries indicates that the jobs created by the projects have a high likelihood of being sustainable in the long run.

The closed Interreg CE projects were successful in leveraging over 2.7 EUR billion of funds, which is 11 times higher than the ERDF for all Interreg CE projects during the 2014-2020 period. Even after excluding outliers (refer to Note below Table 6), the funds leveraged were more than double the initial target set in Table 6. Among the thematic areas, the projects under the Low carbon theme recorded the highest value of funds leveraged, which amounted to 181.6 mil. EUR. Additionally, the projects under SO3.1. surpassed the target for fund leverage with a progress rate of 414%. However, it should be noted that some of the declared amounts for fund leverage were only commitments at the end of the projects, and many of these commitments will only be accessed through the 2021-2027 Cohesion Policy Programmes. Therefore, it is too early to determine the extent to which these investments will materialize.

TABLE 6 THEMATIC RESULTS BY SO, TOTAL VALUES

	Achieved (no.)	AF forecasted value (no.)	% of forecast (AF)		Achieved (no.)	AF forecasted value (no.)	% of forecast (AF)
Amount of funds leveraged based on project achievements (mil EUR)* **				**No. of institutions adopting new and/or improved strategies and action plans**			
Total*	**988.6**	**515.3**	**192%**	**Total****	**2,679**	**2,333**	**116%**
SO1.1	125.5	76.7	164%	**SO1.1**	750	729	103%
SO1.2	68.0	67.9	100%	**SO1.2**	379	334	113%
SO2.1	139.7	42.1	331%	**SO2.1**	272	169	161%
SO2.2	186.9	53.3	351%	**SO2.2**	146	124	118%
SO2.3	183.4	86.2	213%	**SO2.3****	191	211	91%
SO3.1	32.7	7.9	414%	**SO3.1**	207	144	144%
SO3.2	92.1	42.0	219%	**SO3.2**	272	190	143%
SO3.3	44.3	33.4	133%	**SO3.3**	190	167	114%
SO4.1	83.0	44.8	185%	**SO4.1**	129	111	116%
SO4.2*	33.0	61.0	55%	**SO4.2**	66	58	114%

[53] For thematic results, only forecasted values set in the Application Forms are available, therefore all reference to progress to forecasts refers to AF planned results.

[54] *Interreg CE Implementation Manual*. Version 4. p. 44

	Achieved (no.)	AF forecasted value (no.)	% of forecast (AF)		Achieved (no.)	AF forecasted value (no.)	% of forecast (AF)
No. of institutions applying new and/or improved tools and services				**No. of jobs created (FTE) based on project achievements*** **			
Total	**5,456**	**4,278**	**128%**	**Total**	**1,904**	**2,460**	**77%**
SO1.1	1,644	1,505	109%	**SO1.1**	300	551	54%
SO1.2	1,448	956	151%	**SO1.2**	1,033	1,212	85%
SO2.1	276	448	62%	**SO2.1**	75	225	33%
SO2.2	245	147	167%	**SO2.2**	149	64	233%
SO2.3	774	298	260%	**SO2.3**	117	229	51%
SO3.1	312	253	123%	**SO3.1**	11	26	40%
SO3.2	387	321	121%	**SO3.2**	70	48	147%
SO3.3	177	153	116%	**SO3.3**	45	44	101%
SO4.1	74	78	95%	**SO4.1**	28	35	79%
SO4.2	119	119	100%	**SO4.2**	77	26	296%
No. of trained persons							
Total	**79,171**	**32,723**	**242%**				
SO1.1	7,752	4,768	163%				
SO1.2	47,904	14,231	337%				
SO2.1	2,746	1,838	149%				
SO2.2	2,135	1,214	176%				
SO2.3	3,090	1,870	165%				
SO3.1	5,011	2,833	177%				
SO3.2	6,829	3,219	212%				
SO3.3	2,535	1,795	141%				
SO4.1	913	665	137%				
SO4.2	256	290	88%				

Source: Own calculations based on Interreg CE data provided by the JS; Data for 135 projects for which data was available at cut-off date 17th of April 2023. Achievements are expected to be even higher when considering outputs from the 3 missing projects. Note: *Outliers were removed (i.e. TRANSTRITIA project, that reported 1.7 bn EUR funds leveraged, moving the average up) **Outliers were removed (i.e. LOW-CARB project, whose target value for number of institutions adopting new and/or improved strategies and action plans was not realistically set).*** Indicator can be achieved within 5 years after the project end.

Communication activities outputs and results

The programme placed great emphasis on communication activities, recognizing their importance in raising awareness, disseminating results, promoting cooperation, and strengthening linkages among stakeholders. The 135 projects for which data was available collectively organized 2,685 joint communication activities, which proved to be highly effective in engaging participants. In fact, the number of participants exceeded the planned target by more than double, with over 212 thousand individuals attending project events. The projects also witnessed a higher-than-expected traffic to their websites, with more than 130 thousand visits (1.6 times the planned number) recorded. (Table 7).

TABLE 7 AGGREGATE COMMUNICATION RESULTS, PROJECTS UNTIL CUT-OFF DATA

	Achieved (no.)	Target (no.)	% of forecast (AF)
Joint communication activities implemented with external stakeholders (external cooperation)	**2,685**	**2,667**	**101%**
SO1.1	943	1,125	84%
SO1.2	368	339	109%
SO2.1	124	86	144%
SO2.2	175	131	134%
SO2.3	120	106	113%
SO3.1	321	280	115%
SO3.2	266	278	96%
SO3.3	269	174	155%
SO4.1	78	61	128%
SO4.2	21	87	24%
Participants at project events in WP C (physical reach)	**212,757**	**116,642**	**182%**
SO1.1	34,223	14,145	242%
SO1.2	44,473	16,225	274%
SO2.1	15,179	19,830	77%
SO2.2	14,441	7,154	202%
SO2.3	24,577	20,535	120%
SO3.1	14,811	9,890	150%
SO3.2	21,130	14,565	145%
SO3.3	34,759	8,544	407%
SO4.1	4,852	2,085	233%
SO4.2	4,312	3,669	118%
Unique visits to the project website (digital reach; monthly average in the reporting period)	**137,344**	**86,255**	**159%**
SO1.1	20,877	17,450	120%
SO1.2	14,159	6,655	213%
SO2.1	10,833	23,400	46%
SO2.2	7,665	3,050	251%
SO2.3	6,650	4,200	158%
SO3.1	26,149	5,100	513%
SO3.2	19,226	15,630	123%
SO3.3	17,867	3,705	482%
SO4.1	11,774	3,950	298%
SO4.2	2,144	3,115	69%

Source: Own calculations based on Interreg CE data provided by the JS; Data for 135 projects for which data was available at cut-off date 17th of April 2023. Achievements are expected to be even higher when considering outputs from the 3 missing projects.

These communication activities helped to create a broader understanding of the projects and their objectives, fostered collaboration among stakeholders, and facilitated the sharing of knowledge and expertise. The qualitative evidence gathered during the evaluation confirmed that communication was a crucial success factor at both project and programme levels. The evaluation showed that the programme authorities recognized the importance of effective communication and placed great emphasis on communicating with beneficiaries and supporting communication among stakeholders. The authorities were keen to foster collaboration among projects with related topics, to create synergies and promote cross-learning. The evaluation revealed that the communication efforts were highly effective in achieving these objectives, as evidenced by the positive feedback received from stakeholders and beneficiaries. The programme authorities were praised for their proactive approach to communication, which helped to establish a supportive environment for the projects and contributed to their overall success.

Target group indicators

The Interreg CE projects successfully reached a wide range of target groups throughout the programme area, exceeding the initially expected numbers by a significant margin. For instance, the number of business support organizations, higher education institutions, and NGOs reached was more than double the initial target, indicating a high level of interest in the Interreg CE projects. In total, the 135 projects managed to reach over 11,300 public authorities, with national public authorities being particularly targeted by projects related to innovation. On the other hand, local authorities were frequently targeted by projects related to natural and cultural heritage and low-carbon initiatives. Furthermore, the projects reached over 31,000 business-related stakeholders, with projects related to economic and social innovation, innovation capacity, low-carbon mobility in functional urban areas (SO2.3.), and culture (SO3.2.) having the highest outreach towards SMEs. The innovation-related projects, on the other hand, focused more on addressing business support organizations. Multimodal transport projects had a high outreach towards large enterprises. Finally, the projects also successfully reached over 6,800 educational institutions, more than 5,900 interest groups, and almost 5 million individuals, indicating a broad outreach and impact.

TABLE 8 NUMBER OF STAKEHOLDERS REACHED, BY TYPE OF STAKEHOLDERS

TYPE OF STAKEHOLDER	REACHED	TARGET	% OF FORECAST -AF
Business support organisation	4,008	1,923	208.4%
SME	24,736	15,859	156.0%
National public authority	1,425	830	171.7%
Local public authority	6,985	6,063	115.2%
International org., EEIG under national law	241	210	114.8%
Education/training centre and school	2,260	3,175	71.2%
Interest groups including NGOs	5,907	2,516	234.8%
Sectoral agency	2,102	1,647	127.6%
Large enterprises	2,423	1,865	129.9%
Regional public authority	2,987	1,964	152.1%
Infrastructure and (public) service provider	2,915	2,203	132.3%
Other types of stakeholders	5,392	2,328	231.6%
Higher education and research	4,601	2,176	211.4%
General public	4,996,817	7,070,706	70.7%

Source: Own calculations based on Interreg CE data provided by the JS; Data for 135 projects for which data was available at cut-off date 17th of April 2023. Achievements are expected to be even higher when considering outputs from the 3 missing projects.

Taking into account the numerous project partners directly cooperating during the implementation of projects, the large number of organizations working together in pilot actions, as well as the vast array of stakeholders directly involved in the projects' activities, it can be concluded that **the Programme has effectively supported cooperation beyond borders in Central Europe**, as initially planned. It has also reached the target group categories which it envisaged and succeeded in **achieving its objectives of improving the capacities of the public and private sector in the region, enhancing policy frameworks and developing managerial systems, human resources and institutional structures in all thematic areas.**

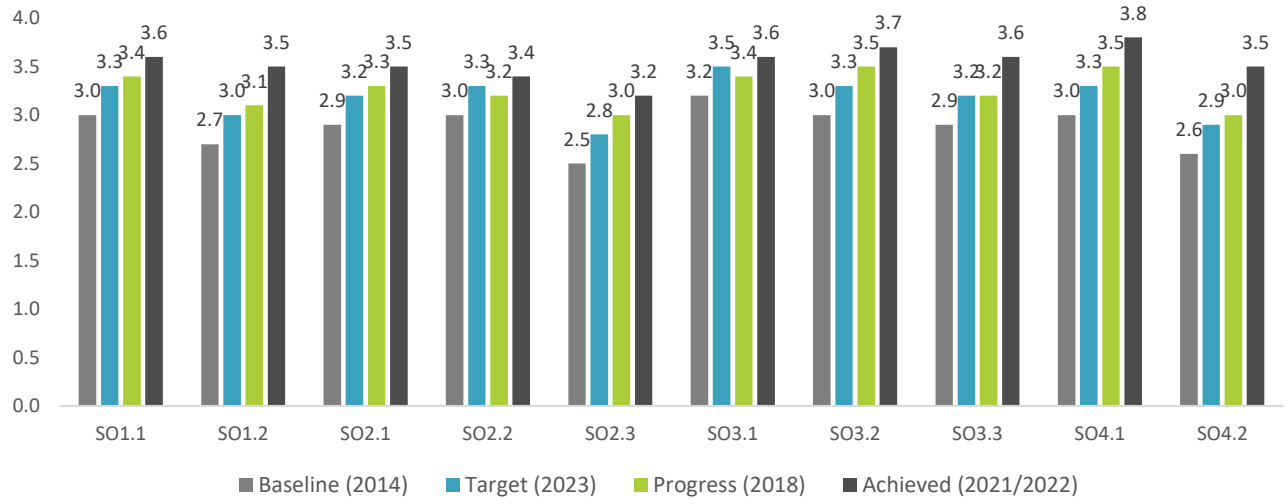
Programme specific result indicators (outcomes)

In addition to the indicators monitoring the immediate results from the supported projects, **programme specific result indicators have been defined to capture the desired changes in the Programme area for each SO**, in terms of the Programme's ability to enable the development and improvement of know-how and capacity of

territory-wide organisations through transnational cooperation. These indicators refer to the status of specific aspects targeted by each SO, such as the linkages among actors within the innovation systems, the capacity of the public and private sectors in developing employee skills and entrepreneurial abilities, the capacity of the public sector and associated entities in implementing energy-efficient measures and renewable energy sources in public infrastructure, etc. However, these changes would be only partially observed (or remain unobserved) due to the limited availability of data, thus the situation can only be described in qualitative terms combined with a quantitative measurement scale (in this case, a Likert scale for each result indicator).[55]

The **Programme has achieved the values expected for 2023 for all SOs** (Figure 6) by a significant margin. In fact, most targets were reached as early as 2018 in almost all SOs, except from SO2.2. and SO3.1. Although these indicators may have been influenced by contextual developments and external factors, they offer strong evidence of the programme's positive impact.

FIGURE 6 PROGRAMME-SPECIFIC RESULT INDICATORS AND PROGRESS TOWARDS THE TARGETS, BY SO



Source: JS data, Monitoring of Programme Specific Result Indicators Report (April 2022)

3.2.4. STAKEHOLDERS' PERSPECTIVES ON THE PROGRAMME ACHIEVEMENTS

To gather qualitative evidence during the evaluation, surveys with beneficiaries and stakeholders, interviews with beneficiaries, stakeholders, and thematic experts, and focus groups were conducted. These methods helped the evaluation team to gain valuable insights into the experiences and perspectives of those involved in the Interreg CE projects. The surveys aimed to capture feedback on project management, cooperation, communication, and results achieved, while interviews with beneficiaries and stakeholders allowed for in-depth exploration of specific issues and challenges faced during project implementation. Focus groups involving National Contact Points (NCPs), Managing Authority/Joint Secretariat (MA/JS) representatives, Evaluation Task

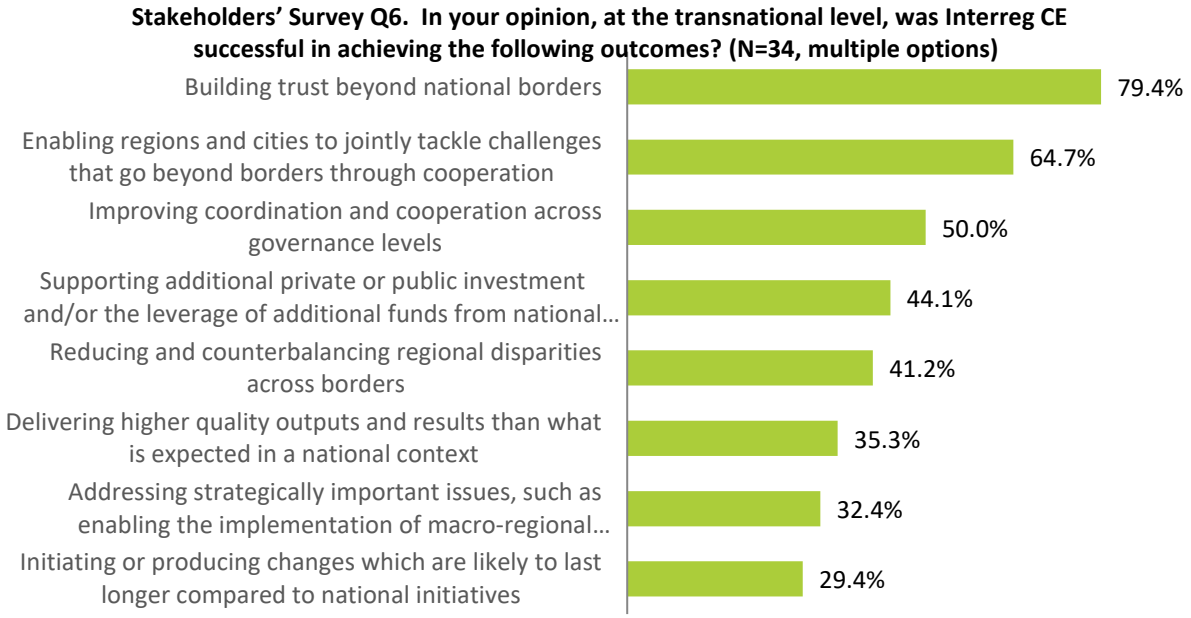
[55] Annex 8 of the Cooperation Programme, pg. 24: *"Each result indicator is composed of a set of four specific components which define the focus and scope of the indicator. The first three components are meant to describe the overall situation of the programme area regarding the main aspects tackled by the respective result indicator, whereas the fourth one is directly related to the achievement and transfer ("roll-out") of results of Interreg CENTRAL EUROPE transnational cooperation projects[7]. This allows identifying the changes which are attributable to the programme, considering thereby also potential external effects." The baseline value for each result indicator has been established on the basis of the outcomes of the on-line survey (end of 2014/beginning of 2015) and focus group discussions involving 45 national thematic experts carried out between January and March 2015"* (Annex 8 of the CP, page 32). Progress to targets was measured in 2018 and 2020/2021, while the verification of targets was conducted in 2022.

Force (ETF) members, and thematic experts provided a platform for discussion and exchange of views on key conclusions related to the programme.

To summarize the beneficiaries' perspective on project success, they believe that their projects were successful in improving knowledge, capacity, and competences, as well as policy learning. In the **Innovation** thematic area, beneficiaries appreciated the fostering of cooperation, enhancing the quality of governance, and delivering higher quality results compared to national projects. Similarly, for **Low-carbon** projects, beneficiaries reported that their projects supported public authorities in offering new or better services for citizens and companies, enabled regions to make better use of limited resources, and built trust across national borders. For **Environment**-related projects, SO3.1. and SO3.3. beneficiaries considered improved policy making or building trust beyond borders as a major achievement. The same is true for SO3.2. in the **Culture** thematic area. Finally, in **Transport**, beneficiaries found that fostering cooperation and supporting public authorities in the delivery of better services were the most significant results for most respondents in SO4.1. and SO4.2. These findings were based on surveys, interviews, and focus groups with beneficiaries, stakeholders, and thematic experts, as part of the evaluation process. (See Annexes 5-7 for more details).

The results of the stakeholders' survey reveal a high level of satisfaction with the programme's achievements in building trust beyond national borders, with 79.4% of respondents indicating this as a success factor. This is a testament to the programme's success in promoting cooperation across borders and addressing challenges which are common for the area. Additionally, 64.7% of respondents felt that the programme enabled regions and cities to jointly tackle challenges that go beyond borders through cooperation. Delivering higher quality outputs and results than those expected in national contexts, addressing strategically important issues, such as enabling the implementation of macro-regional strategies, and initiating or producing changes which are likely to last longer compared to national initiatives were seen as less successful, with only about one third of respondents recognizing these achievements (Figure 7). These findings of the stakeholders' survey were confirmed by the interviews with beneficiaries.

FIGURE 7 STAKEHOLDERS' FEEDBACK ON THE MAIN OUTCOMES OF INTERREG CE

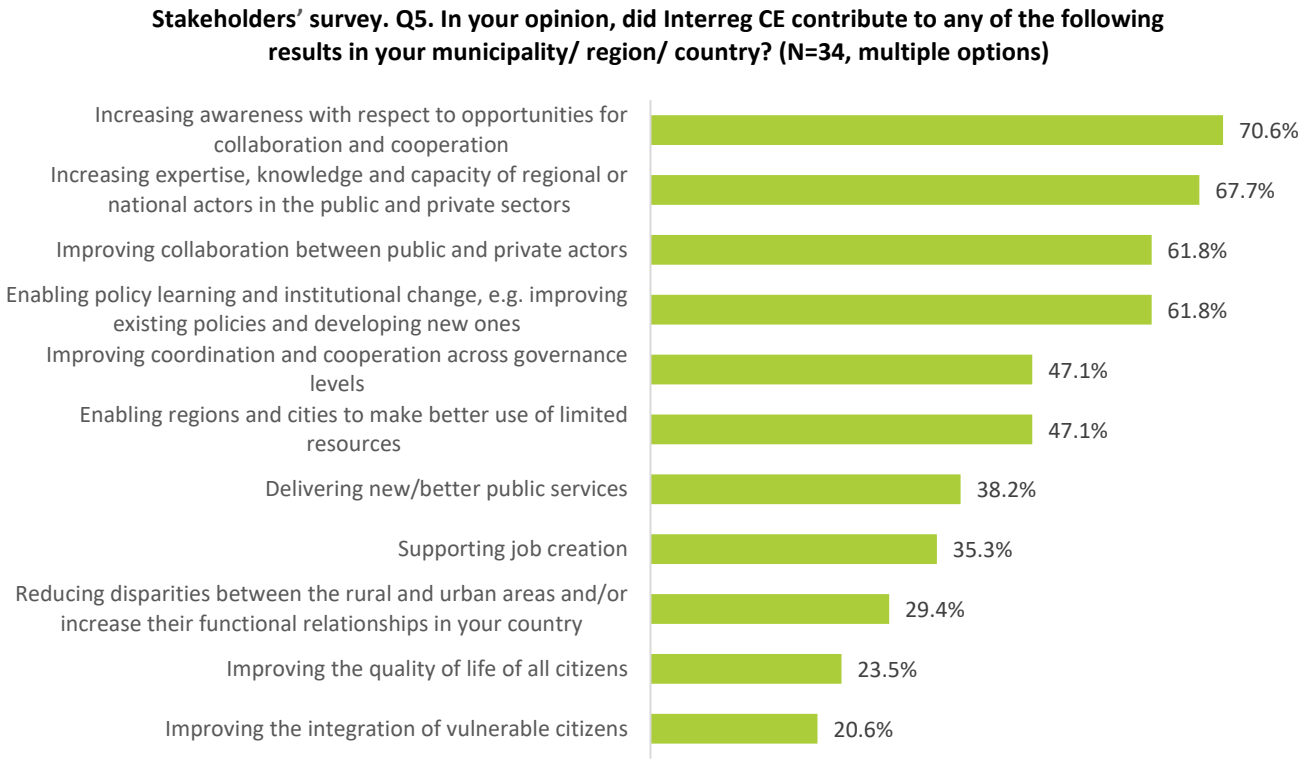


Source: Survey targeting Programme stakeholders

The results of the stakeholders' survey also show that the Interreg CE Programme has been successful in achieving its main objectives. The top four achievements include increasing awareness about collaboration and cooperation opportunities, increasing expertise, knowledge and capacity of regional and national actors in both public and private sectors, improving collaboration between public and private actors, and enabling policy

learning and institutional change. These achievements indicate that the Programme has been effective in facilitating cooperation, improving knowledge and skills, and supporting institutional change. The survey also highlights the need for further improvement in terms of improving coordination and cooperation across governance levels, enabling regions and cities to make better use of limited resources, and delivering new and better public services. These results provide valuable insights into the areas where the Programme can focus its efforts to further enhance its impact on regional development (Figure 8).

FIGURE 8 STAKEHOLDERS' FEEDBACK ON PROGRAMME CONTRIBUTION AT LOCAL LEVEL



Source: Survey targeting Programme stakeholders

3.2.5. OVERVIEW OF GROSS EFFECTS

The evaluation of the 2014-2020 Interreg CE Cooperation Programme has shown that progress has been made in addressing the initial challenges identified in the Programme area, in all thematic priorities. The evidence collected during the evaluation demonstrated that the Programme contributed to increasing the capacity of stakeholders, building trust beyond national borders, and delivering new and high-quality products and services, which strengthened the foundations for economic, social, and territorial cohesion in the CE region. It is important to note that the impact of Interreg CE should be viewed in the context of its smaller scale of intervention, which is typical for Interreg programmes, and may not be comparable to national or regional mainstream programmes. Despite this limitation, the Programme successfully fulfilled its role as a catalyst for advancing novel solutions to regional challenges in the areas of innovation, low-carbon economy, environment, culture, and transport.

The Programme was responsive to the needs of the Central Europe area and adapted to contextual developments. The stakeholders consulted in the evaluation confirmed that the Programme increased the knowledge and implementation/planning capacities of the public and private sectors in all four thematic areas it covered. Its interventions effectively contributed to macro-regional strategies and the Europe 2020 Strategy, with some projects providing concrete inputs for shaping policies at the EU level. The alignment between the Programme's objectives and the major policy topics at the EU level, such as climate change and energy efficiency, facilitated the advancement of new ideas within the projects.

The programme's emphasis on innovative solutions, and consistent support for applicants and partners, were some of the factors that contributed to achieving quality outputs and results. The general opinion of those consulted by the evaluation experts was that the programme results are sustainable and that their long-term effects, particularly in the case of Call 4, are still to manifest. The Programme's objectives were well-aligned with the key priorities at the EU level and transnational cooperation was effective, resulting in sustainable results and long-term benefits for the CE area.

While their impact cannot be directly quantified, the projects supported through Interreg CE can be directly associated with benefits gained by the various target groups, mainly in terms of improving capacity and policy learning. For the entities and persons involved in the Interreg CE projects, especially trainings and pilot actions, transnational cooperation has provided the framework for gaining access to first-hand knowledge and experience, to a vast range of contexts, practices and solutions, which would have otherwise been difficult to access. Interviews with stakeholders and the case studies confirmed that for the people directly involved in the pilot actions and the training activities, participating in the projects has resulted in an evident improvement of their skills and competences. Arguably, this will lead to improved outcomes in respect to how they perform their jobs or pursue their careers and potentially, other will benefit.

The Programme has contributed to achieving better coordination, by means of transnational strategies and policies being developed and implemented in the region. Thus, the Programme has created opportunities for bringing EU-level themes closer to the local agenda. Through its pilot actions, it can be assumed that the Programme has effectively contributed – or at least demonstrated how - to making the cities and regions of Interreg CE better places to live and work. However, coordination of policies/governance, especially vertically, should be further addressed and improved. Potentially, this should lead to additional benefits being generated for end-users, such as better, more efficient, innovative services for citizens and companies, leading to the longer-term impact of triggering economic opportunities and employment at regional level.

The Covid-19 pandemic was one of the most prominent negative influences on the Programme, affecting projects from the third and fourth calls. They also disrupted project activities, particularly meetings, events, and trainings, causing delays or changes in project implementation. However, programme authorities took relevant measures to mitigate risks, allowing for project extensions and online shift of activities, which helped beneficiaries adapt to new ways of working and invite more associated institutions and partner organizations, ultimately transferring knowledge and results of the projects. Despite the disruptions, the programme achieved its proposed results.

The intensity with which the Programme outcomes were produced depended on the thematic area, and also on the background conditions at national and regional level, both from a structural perspective (for example, the economic structure, the performance of sector, the financial capacity of the stakeholders etc.), and from a contextual perspective (for example, the impact of the COVID crisis).

From a thematic perspective, overall changes observed in the situation at the level of each SO, as well as the gross effects identified, are summarized below. The findings are based on the documentary analysis performed by the evaluation team, indicators achievements, including the updated results of the qualitative result indicators, the stakeholders and beneficiaries' surveys, as well as on the interviews carried out with the programme stakeholders and thematic experts.

Innovation (SOs 1.1 and 1.2)

The 2014-2020 Interreg CENTRAL EUROPE Programme produced positive effects for the innovation ecosystem. The Programme contributed to improving the cooperation between actors in innovation systems in the CE region, by providing inputs for better policymaking and facilitating access to networks, knowledge and expertise, supporting internationalization and promoting synergies between various funding sources. Moreover, it supported capitalization of previous results. Based on the evidence collected, the evaluation was able to determine the Programme has contributed to an increased number and quality of linkages between the research and business community.

Under SO 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, 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 SO 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).

Overall, these achievements suggest that the Programme has delivered tangible benefits for the target groups, despite its smaller scale of intervention compared to national or regional mainstream programmes. However, some challenges remain in the co-operation patterns and the quality of these 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 the CE area, which score lower in terms of innovation performance. 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.

Low carbon (SOs 2.1, 2.2, 2.3)

Interreg CE Priority 2 contributed to the low-carbon policy framework that was in place when the programme was designed, in particular the 'Resource efficient Europe' and 'Agenda for new skills and jobs'.[56] The projects aimed at increasing the use of renewable energies and improving energy efficiency, focusing on public buildings and other public infrastructure, energy planning, and developing low carbon mobility strategies in functional urban areas.

Under SO 2.1, projects aimed at reducing energy consumption and improving energy efficiency. Specific solutions were developed, including retrofitting and refurbishment of buildings, changing the lighting design of public spaces, implementing smart metering. Projects also focused on building skills and competences, enhancing access to knowledge, developing and implementing strategies, management approaches, as well as financing schemes.

Under SO 2.2, projects aimed at improving low-carbon energy planning at territorial level, for sustainable energy transition. The projects covered a variety of topics, from geothermal energy and waste heat utilization. They contributed to capacity building with regard to efficient energy management, improving governance and testing new financing solutions. The projects also developed and implemented low-carbon strategies and provided inputs for policy making at EU level.

Under SO 2.3, projects aimed at improving capacities for mobility planning in functional urban areas, to lower CO2 emissions. They effectively contributed to jointly plan and implement low carbon mobility solutions in a transnational context, by means of comprehensive and integrated approaches, which combined electric mobility, non-motorized transport, public transportation and made full use of digital solutions. The projects also contributed to developing smart solutions for clean freight transport and to reducing energy use and environmental impacts of air transport activities.

The evaluation found that the transnational collaboration was essential for the success of the projects, allowing for better results to be produced as outputs were fed with multiple experiences coming from different fields of expertise and territories. The programme provided beneficiaries with access to networks beyond national

[56] Interreg CENTRAL EUROPE Cooperation Programme. January 2019. p.13

borders, enabling them to achieve a wider impact of their results and also to disseminate their respective projects' outcomes internationally.

The Green Deal announced in 2019 provided a strong impetus for projects as climate change, energy security, and the strong demand for locally produced renewable energy have been very positive factors for low-carbon projects. Local and regional authorities were generally found to be more receptive to locally anchored low-carbon projects due to the rise in energy prices and difficulty linked to energy imports. Also, lifestyle and behavioural changes of citizens, coupled with advancements in digital technologies, have supported the implementation of novel, more efficient solutions.

However, the capacity of regions in Central Europe to adapt to a greener and low-carbon economy differs widely across the area, from Alpine regions with a generally higher level of "green readiness" to regions at the periphery of the CE area with a generally lower level of "green readiness".[57] The financial capacity for the implementation of integrated low-carbon strategies is still limited. Administrative and technical obstacles still exist for the implementation of low carbon technologies. Not least, public awareness and support for implementing low-carbon solutions differ significantly across the CE territory, as highlighted in the interviews.

Environment (SOs 3.1. and 3.3.)

The implementation of projects under Environment SOs has been effective in addressing the environmental needs of the central European regions and cities in respect protecting and valorising their natural heritage and resources, which are subject to increasing environmental and economic pressures and usage conflicts. The Programme effectively promoted the adoption of an integrated environmental concept within both the public and private sectors, through the implementation of innovative technologies and resource-efficient solutions.

Under SO 3.1, supported projects contributed to developing and implementing integrated environmental strategies and tools, focusing on protecting biodiversity and natural habitats. Several projects addressed water management, including flood protection, river basin management and ensuring sustainable supply of water resources. Other projects focused on topics such air quality and circular economy.

Under SO 3.3, supported projects contributed to improving the management of environmental challenges in functional urban areas. They covered topics such as level such as rehabilitation of brownfield sites, water management, air pollution, waste management and integrated management of urban green spaces, among others.

During the Programme implementation, nature-based solutions have gained importance in addressing climate and biodiversity challenges. Public awareness and European-wide environmental actions have become increasingly impactful in the CE region, leading to prevention and protection measures higher on the public agenda. More recently, the energy crisis prompted the topics of climate change and energy efficiency higher on the public agenda and political commitments have increased to tackle environmental challenges, including the Glasgow Pact, the European Green Deal, and the EU Climate Law. These developments have given a strong impetus for the projects' implementation and are likely to contribute to the sustainability of results.

However, the achieving environmental objectives in an equitable manner remains a major challenge, which adds up to pre-existing disparities in environmental performance, governance and financial capacity, and poses additional complexity to reaching similar results across the programme area.

Culture (SO 3.2)

The Programme produced positive effects for the cultural and creative sector in the CE region. Based on the evidence collected, the evaluation was able to determine that the programme contributed to improving the capacity of public authorities and stakeholders to manage cultural heritage and resources for social and economic development purposes in the programme area. Thus, it strengthened the foundations for preserving, promoting and valorising the cultural heritage and resources in the region.

[57] Maucorps, A., Römisch, R., Schwab, T, Vujanovic, N. (2022). *The Future of EU Cohesion, Effects of the Twin Transition on Disparities across European Regions*, Bertelsmann Stiftung.

Under SO 3.2, projects that effectively contributed to improving the management and valorisation of cultural heritage, promoting sustainable tourism and cultural industries, and enhancing the capacity of local authorities and stakeholders to develop and implement strategies for cultural heritage management. The consulted stakeholders confirmed that the programme contributed to improving capacities of the public and private sector for the sustainable use of cultural heritage and resources in the CE area, increasing knowledge and developing management and preservation skills of the public and private sectors for the sustainable use of cultural heritage.

The Interreg CENTRAL EUROPE Programme was successful in addressing the main challenges affecting the cultural and creative sectors, such as insufficient funding, investment, skills, and coordination among stakeholders. Furthermore, the programme recognized the impact of globalization and technological change on the cultural and creative sectors and sought to support their adaptation to these changes. Interreg CE projects have also effectively established transnational networks, thereby aiding in the reduction of fragmentation which generally affects the creative sector[58]. Moreover, the projects were also successful in raising awareness of companies on the importance of cooperation between culture and entrepreneurship.

The general opinion of those consulted by the evaluation experts was that the programme results are sustainable and that their long-term effects are still to be observed. The financed projects helped to stimulate innovation, cooperation, and entrepreneurship in the cultural and creative sector and contributed to the development of sustainable and attractive cultural destinations. Additionally, they fostered the exchange of good practices and ideas, encouraged networking and collaboration between cultural actors, and provided training and capacity building opportunities. Overall, the projects had a positive impact on the competitiveness, sustainability, and resilience of the cultural and creative sector in the Central Europe region.

The programme's objectives were well-aligned with the key priorities at the EU level, including the European Agenda for Culture, the European framework for action on cultural heritage, the Workplan for Culture (2015-2018) of the Council for EU, as well as the Pillar of Social Rights and the EU 2020 Strategy. Transnational cooperation was effective, resulting in sustainable results and long-term benefits for the CE area. The programme's focus on sustainable development and the preservation of cultural heritage has helped to ensure the responsible use of cultural assets. Overall, the Interreg CE projects provide successful examples of how transnational cooperation can lead to sustainable and inclusive growth.

As observed during the evaluation, many challenges persist. As noted by an interviewer, "[…] as a result of the pandemic and of the recent energy crisis, the general level of interest and funding for culture-related topics has generally stalled – mainly because many stakeholders, including authorities at local and regional level, perceive these policies as something special, not something part of their daily life. Importantly, CCI was one of the most hardly hit sectors from the pandemic. This materialised in major disruptions all along the sectoral value chain, which in any case has small, localized markets. Some industries underwent significant structural changes and the sector suffers from labour shortages". While the successful completion of projects is undeniable, it is important to note that the sustainability and future uptake of their results could be affected by the recent contextual developments. Therefore, further investments and support for the CCI are crucial to ensure their continued long-term viability.

Transport (SO 4.1 and 4.2)

The Programme produced positive effects for the transport sector in the CE region. Based on the evidence collected, the evaluation was able to determine that the programme contributed to increasing the capacity of the stakeholders, building trust beyond national borders, and delivering new and high-quality services to improve transport and mobility in the central Europe area. The programme responded adequately to the needs of the Central Europe area, adjusted to contextual developments, and effectively contributed to macro-regional

[58] European Commission (2022). *Recovery and Resilience Scoreboard – Thematic analysis> Culture and Creative Industries*. pag. 3. https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/assets/thematic_analysis/scoreboard_thematic_analysis_culture.pdf

strategies and the Europe 2020 Strategy, with some projects providing concrete inputs for shaping policies at the EU level.

The programme's emphasis on innovative solutions, and consistent support for applicants and partners, were some of the factors that contributed to achieving high-quality outputs and results. The general opinion of those consulted by the evaluation experts was that the programme results are sustainable and that their long-term effects, particularly in the case of Call 4, are still to be observed. The programme's objectives were well-aligned with the key priorities at the EU level and transnational cooperation was effective, resulting in sustainable results and long-term benefits for the CE area.

Under SO 4.1., the supported projects focused on improving planning and coordination for regional passenger transport systems, taking into consideration the specificities of the different territories, particularly peripheral and rural regions, and the needs of particular target groups, such as the youth. Other topics included smart regional mobility and intelligent transport systems, transport management around secondary nodes and transport links within and across border regions. The programme interventions responded to the various challenges and contextual developments in the CE region, such as those related to rapid urbanization, demographic shifts, including an ageing population and changing transport demand patterns and mobility needs, persistent economic disparities, and differences in regulatory frameworks and technical standards.

The consulted stakeholders confirmed that the programme contributed to increasing knowledge and implementation/planning capacities of the public sector and related entities for linking regional passenger transport systems to national and TEN-T networks. This led to improved and coordinated planning capacities of the public sector and related entities for regional passenger transport systems in central Europe linked to national and European transport networks achieved through transnational cooperation.

Under SO 4.2., the projects focused on improving capacities and coordination for intermodal transport across borders, including multimodal freight transport systems. The financed projects also delivered solutions to environmental challenges, such as climate change and the need for sustainable transport options, have explored new opportunities for innovation and demonstrated the effectiveness of different approaches to the design of networks and business models.

Despite the disruptions, the programme achieved its proposed results, and the alignment between its objectives and the major policy topics at the EU level, such as climate change and energy efficiency, helped advance new ideas within the projects. The programme managed to adapt and achieve its proposed results, with the pandemic being one of the most prominent disruptive factors.

As observed during the evaluation, many challenges persist in the central Europe region. These include administrative and legal constraints to transport and mobility, which prevent the adoption of a unitary approach across national borders. The financial capacity needed for maintaining the investments is another important challenge, particularly concerning the sustainability of results. Having the proposed solutions taken up and embedded in the regulatory framework and the guidance issued beyond the projects, particularly at the EU level, is another challenge. Even more, interviewees noted that the political agenda at the territorial level is shifting away from cross-border and transnational cooperation programmes towards more investment-oriented programmes, especially in the context where basic needs, such as energy supply, are at risk of not being addressed.

3.3. EQ2. IDENTIFICATION OF NET EFFECTS

The following section provides an answer to the second evaluation question, examining the net effects produced by the Interreg CE Programme for 2014-2020. Based on the reconstruction of the Theory of Change and the gross effects identified, the evaluation explored to what extent the achieved results can be attributed solely to the Programme and what other factors might have also contributed to the observed effects.

Net effects of the programme were assessed qualitatively, trying to reasonably distinguish the Programme contribution from the effects which would have happened anyway, which happened due to other initiatives,

including, for example, policy measures or programmes). The evaluation considers that it is unlikely that "replacement" effects have occurred, i.e., that the Programme has led to replacing already existing results. The assessment was based on the assumption that linkages and collaboration networks are kept in existence and consolidated only through repeated collaborations; as such, new projects do not replace existing linkages, but rather reinforce them and bring value to all entities in the collaboration network, including through new opportunities. Also, given the specificity of the Programme and its distinctive value proposition, the evaluation considers that its implementation did not divert similar initiatives (actions, partnerships) from being carried out and thus "displacement" effects are unlikely.

The assessment focused on observing the effects of the Programme, in terms of linkages and cooperation, to reflect the main objective of *"supporting cooperation beyond borders in Central Europe"*. It also investigated the effects produced in relation to the objectives established for each SO, which have a more pronounced thematic impact on the territory mainly through the pilot actions, and thus contribute to the final aim of the programme, that of making the cities and regions in the CE area better places to live and work.

3.3.1. LINKAGES AND COOPERATION

In total, the 983 unique organisations[59] taking part in Interreg CE 2014-2020 implemented nearly 2,000 projects in the past 20 years across different types of cooperation programmes[60]. Aside from participating in the 2014-2020 Interreg CE, most projects implemented by these organisations were funded under cross-border cooperation programmes (666 projects since 2007) and transnational cooperation programmes (495 projects since 2007). These entities were also involved in 483 projects under other cooperation programmes (e.g. Urbact, Interact, ESPON, Interreg Europe) since 2000. The number of projects – in which beneficiaries of the 2014-2020 Interreg CE Programme were involved – has increased significantly from 2007-2013 to 2014-2020 in all types of cooperation programmes (Figure 9.

It can be thus assumed that, for many of the entities directly involved in the implementation, participating in the programme has provided not only the opportunity of accessing a network of relevant stakeholders, but also of continuing the collaboration, after the project end. This was also confirmed by the interviews with beneficiaries, who acknowledged that gaining experience and exposure in the programme has led and will most likely lead to other opportunities for collaboration, thus creating or reinforcing linkages with other organizations and expanding the transnational networks.

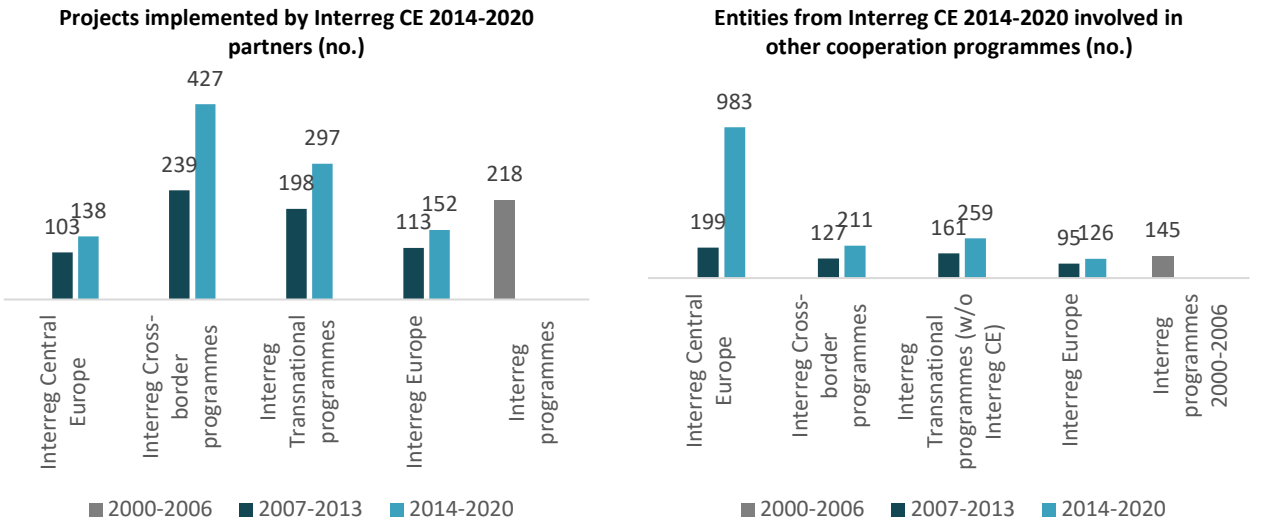
While some stakeholders have mentioned that *"less and less new players are accessing the Programme and that the programme is being increasingly exclusive to those with enough experience",* the analysis of the projects' partnerships showed that **784 (79.8%) of the partners implementing Interreg CE projects during 2014-2020 are new[61] to Interreg CE Programme. Thus, 199 beneficiaries of the 2014-2020 Interreg CE Programme have also participated in projects during the 2007-2013 Interreg CE Programme.**

[59] JS data – programme level. The number of unique partners was obtained based on the manual inspection of data available, taking into account the frequent spelling differences for the same institution. Also, separating or aggregating institutions, e.g. the University of Ljubljana and the University of Ljubljana – Faculty of Architecture was not straightforward and based on expert's opinion. The data refers to all 138 projects funded by Interreg CE 2014-2020.

[60] Keep.eu data – programme level. The number of unique partners was obtained based on the manual inspection of data available, taking into account the frequent spelling differences for the same institution. Also, separating or aggregating institutions, e.g. the University of Ljubljana and the University of Ljubljana – Faculty of Architecture was not straightforward and based on expert's opinion. The data refers to all 138 projects funded by Interreg CE 2014-2020. The goal of the analysis was to investigate whether partners from Interreg CE 2014-2020 have participated in other types of cooperation programmes (programming periods since 2000) – however, this was only possible through a manual inspection of data. Even though data may still contain double entries, the magnitude order for the partners' number remains the same.

[61] The goal of the analysis was to investigate whether partners from Interreg CE 2014-2020 have participated also in 2007-2013 Interreg CE Programme.

FIGURE 9 PARTICIPATION IN PREVIOUS PROJECTS BY ENTITIES INVOLVED IN INTERREG CE 2014-2020



Source: Own calculations based on data available on Keep.eu database. For 2000-2006, all cross-border, interregional and transnational programmes were considered under the Interreg programmes category

BOX 1 PROFILE OF ENTITIES PARTICIPATING IN INTERREG CE[62]

Based on JS data, compared to the 2007-2013 Interreg CE programme, only 165 public organisations and 34 private entities participated in both programmes (i.e., 2007-2013 and 2014-2020 Interreg CE). As such, most newcomers are public institutions (518), compared to 266 private entities. This reflects the distribution by legal status of Interreg CE 2014-2020 partners: public institutions – 683, compared to 300 private ones.

Based on keep.eu data, while public entities display a rather homogenous involvement in other programmes, Interreg CE seems to be the most attractive cooperation programme for private entities, proof being the 116 projects in which the 275 private entities were involved as partners, followed by other TN programmes (76 projects in total) and cross-border (43 projects).

Interviews with various stakeholders (beneficiaries, thematic experts and Programme authorities), as well as discussions in the focus groups acknowledge, however, that the transnational nature of the programme calls for strong and stable institutions, with good financial and technical capacity and, generally, with enough experience in previous EU-funded projects, though not necessarily at international level. Smaller NGOs or small-scale beneficiaries experience difficulty in accessing the Programme as first-time participants and potential applicants are usually first advised to start as associates or to take on fewer responsibilities as partners.

As acknowledged by the stakeholders and agreed by the evaluation team based on documentary review, the value added of the Programme, which differentiates it from others is manifold: (1) it has a unique territorial and thematic coverage, making it more relevant for the entities in the area, compared to other programmes; (2) it is more accessible to smaller organizations compared to other EU-level programmes; (3) by design it requires a significant number of partners, of different types/ backgrounds/ specializations; (4) also by design, it encourages projects to test innovative solutions in pilot actions. **As such, it can be concluded that the Interreg CE Programme has contributed to building and consolidating collaboration in a distinctive manner from other programmes.**

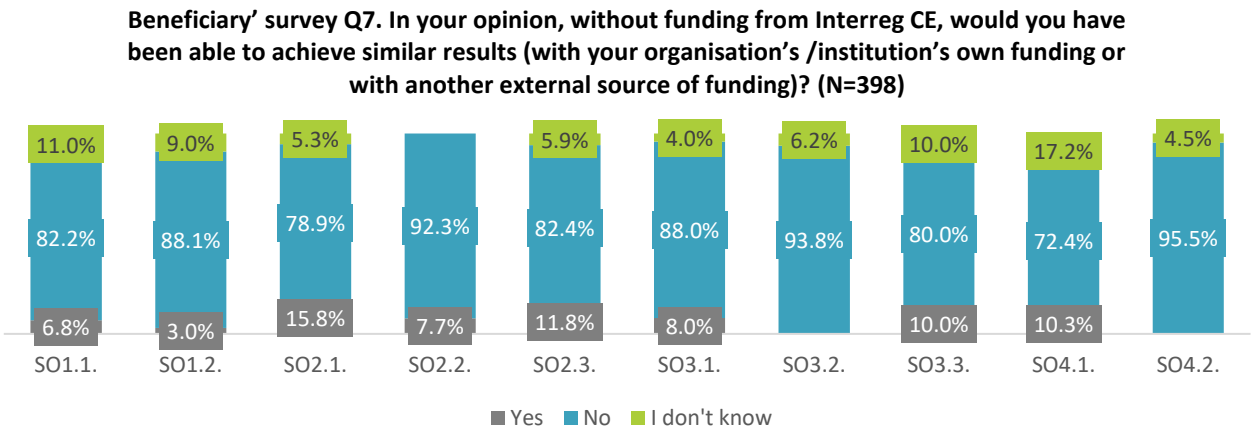
Testimonials gathered through interviews indicate that the Programme was *"quite visionary"*, *"forward thinking"* and brought forward topics that were not always on the agenda of local stakeholders. Others talked

[62] Ibid 59, 60

about Interreg CE being "*a playground for testing innovative ideas which would otherwise be impossible to implement in a transnational context in the CE area*"[63].

Interviews with stakeholders and beneficiaries confirmed that many of the actions and especially pilot actions are unlikely to have been implemented through other funding sources. This is also highlighted by the beneficiary survey (Figure 10).

FIGURE 10 BENEFICIARY' FEEDBACK ON WHETHER SIMILAR RESULTS COULD HAVE BEEN ACHIEVED WITHOUT INTERREG CE FUNDING



Source: Survey targeting project beneficiaries

Thematic experts confirmed that *"Transnational programmes help to link stakeholders, they give the opportunity to look at international level for the topics that would usually not be addressed on a national level."* This is the case with transport, environmental issues, digitalisation and the circular economy, as well as social innovation and entrepreneurship.

The unique contribution of the Interreg CE Programme is particularly acknowledged for the smaller organizations acting as project partners and for all the entities involved in the projects' activities at local level, who not have otherwise been exposed to the knowledge, experience and networks of stakeholders from several countries. Interviews with various stakeholders also confirmed the high value added that the Programme delivered for these organizations.

For the small and medium size entities (SMEs, municipalities etc.), a direct link may be observed between the programme intervention and the improvement in their situation (capacity). Even more, for the sites where investments were implemented, tangible results were produced. As far as the structure of the programme is concerned, bigger investments are not covered so that's why it's not always attractive to larger entities (such as cities), which are generally more interested in accessing funds for more "tangible" investments.

The qualitative evidence conveyed a convergent message with respect to the fact that the projects supported through Interreg CE have demonstrated that **the solutions developed are highly transferable and can be adapted to a variety of local contexts**. Interreg CE projects provide successful examples of interventions, in all thematic areas, in terms of improving management and planning capacities of the public sector and private sector, consolidating the linkages of actors in the region, developing the skills and competences of employees and entrepreneurs.

3.3.2. PROGRAMME-SPECIFIC RESULTS PER SPECIFIC OBJECTIVE

Further details on the direct contribution of the Programme from a thematic perspective are presented below.

[63] Stakeholders' interviews and focus group

Innovation (SOs 1.1 and 1.2)

The interventions supported under the Innovation priority have positively contributions in strengthening the linkages between actors in the innovation system, thanks to its focus on the **full innovation cycle**, i.e., from research to product and from product to users. In particular, the strong participation of **SMEs** in the programme has helped improve the quality of the projects overall and bring project outputs closer to the market. The programme has also contributed to improving the knowledge of the public sector in relation to innovation concepts.

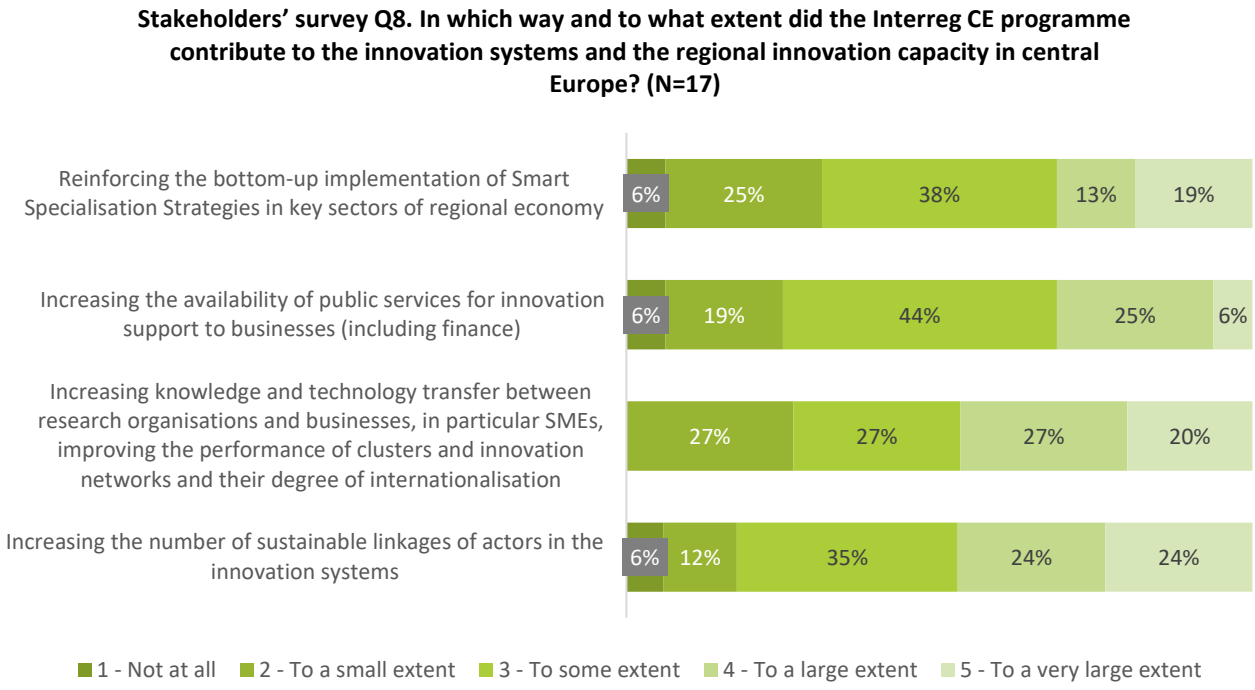
Regarding the SO 1.1, as reported in the stakeholders' survey, the programme was successful in:

- increasing the number of **sustainable linkages** between actors of the innovation systems. The stakeholders' survey shows that 48% of respondents consider that the programme contributed to a large and very large extent to increasing the number of sustainable linkages in the innovation system, while an additional 35% consider that the programme had some contribution (Figure 11). For instance, the digitalLIFE4CE project has created 7 CE Digital Excellence Health Spots with the specific aim to develop stakeholder cooperation. One stakeholder briefly mentions that *"nevertheless, the Interreg CE Programme adds something which could never be achieved with just national funds, namely: connecting relevant actors in the field throughout Central Europe - broadening their network, bringing in new skills and knowledge, new partners, etc."*.
- increasing **knowledge and technology transfer** between research organisations and businesses. This finding was also reported by 47% of the survey respondents who acknowledged a large and very large contribution, and by 27% who acknowledged some contribution. 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 were based.
- Increasing the **availability of public services for innovation support** to businesses. This contribution was also considered large and very large by 31% of the respondents, while other 44% mentioned some contribution.

The stakeholders' survey points to more moderate impacts of the programme on innovation systems and regional innovation capacity across the programme area (Figure 11 below). One explanation could be that, while beneficiaries report achievements at the level of the targeted territories (e.g., a local area where pilot actions are implemented), programme stakeholders assess the programme's impacts on a more aggregate level, i.e., at regional and national level, where impacts are logically less visible.
The Programme also contributed to **research and development policies**. Projects such as SMART watch provided the framework and created an international network of Regional Observatories of smart specializations in Central Europe, monitoring technology trends and market developments in the areas of innovative technologies and smart sectors, including health, life science, ICT, future services, sustainable production technics and Industry 4.0.

Moreover, the programme contributed to providing **access to finance** for innovative entrepreneurs: projects such as CE-Connector targeted business angels and public authorities and improved their investment competencies. It also aimed to consolidate linkages among them and other relevant stakeholders in the innovation ecosystem.

FIGURE 11 STAKEHOLDERS' FEEDBACK ON THE CONTRIBUTION OF INTERREG CE PROGRAMME (SO1.1.)

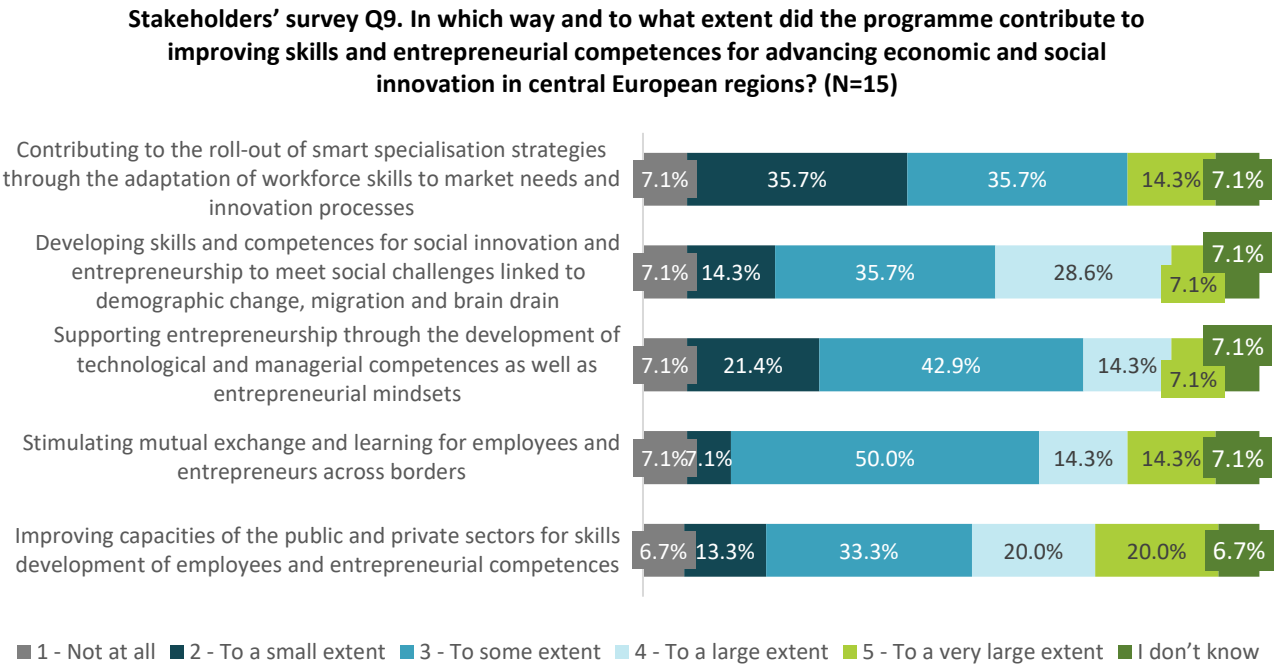


Source: Survey targeting Programme stakeholders

Regarding the SO 1.2, the Programme was particularly successful in:

- Improving **capacities of the public and private sector for skills development of employees and entrepreneurial competences**, as reported to a large and very large extent by 40% of respondents and to a medium extent by 33% of the respondents in the stakeholders' survey (Figure 12). (Notably, this outcome was also reported by the SYNERGY project implemented under SO 1.1, which introduced 'design thinking' as a novel approach within the project partnership – an approach that is now widely used, including through mutual exchange and learning as well as technological and managerial competences development.)
- Developing **skills and competencies for social innovation.** This outcome was highlighted as large and very large by 35% of respondents and as medium by other 35%. Projects such as Social(i)Makers 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.
- Supporting **entrepreneurship**, through building technological and managerial competencies and developing entrepreneurial mindsets. The projects contribution to this outcome was considered large and very large by 21% of respondents, while almost 43% acknowledged some contribution.

FIGURE 12 STAKEHOLDERS' FEEDBACK ON THE CONTRIBUTION OF INTERREG CE PROGRAMME (SO1.2.)



Source: Survey targeting Programme stakeholders.

Furthermore, the programme also fostered social innovation from many different perspectives, by delivering projects that aimed to e.g., 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. Overall, the programme has contributed to the promotion of innovation, digitalization, and economic development, thereby benefitting the targeted enterprises, SMEs, and society at large. Projects such as Arrival Regions promoted the integration of non-EU nationals, increased awareness and facilitated better collaboration between public and private integration stakeholders. Other projects, such as IN SITU targeted unqualified, long-term unemployed youth and older workers and developed and implemented an innovative service addressing the particular needs of these disfavoured groups, to facilitate their integration on the labour market.

The programme interventions also supported digitalization and enhanced the outreach of the innovation sector. Through targeted efforts, the programme has capacitated enterprises with competitive and novel solutions, thereby increasing their capacity to adapt to evolving market conditions. Additionally, the programme has supported the SMEs by enabling them to access Key Enabling Technologies (KETs) services through a transnational network. This has provided SMEs with access to the necessary expertise and resources to compete effectively in the global market. As a result, SMEs have been better equipped to leverage KETs and other advanced technologies to drive innovation and growth.

The evaluation revealed that private organizations constitute a relatively high percentage of the entities involved in the programme compared to other thematic areas. Moreover, the Innovation Thematic Priority of the programme has attracted a high percentage of new partners, indicating its ability to engage a diverse range of stakeholders. These new partners are located in regions with a history of cooperation or a developed business and innovation environment, which demonstrates the programme's success in targeting areas with high growth potential. Additionally, partners from these regions often assumed leadership roles in projects. Finally, the involvement of entities in other TN programmes and cross-border programmes indicates the programme's ability to establish connections and build networks beyond its immediate scope, further enhancing its overall impact.

The large number of projects funded under the Innovation Specific Objectives 1.1 and 1.2 might also be a reason why innovation-related achievements are particularly visible. This is also testimony of the importance of innovation projects for the CE area.

Low carbon

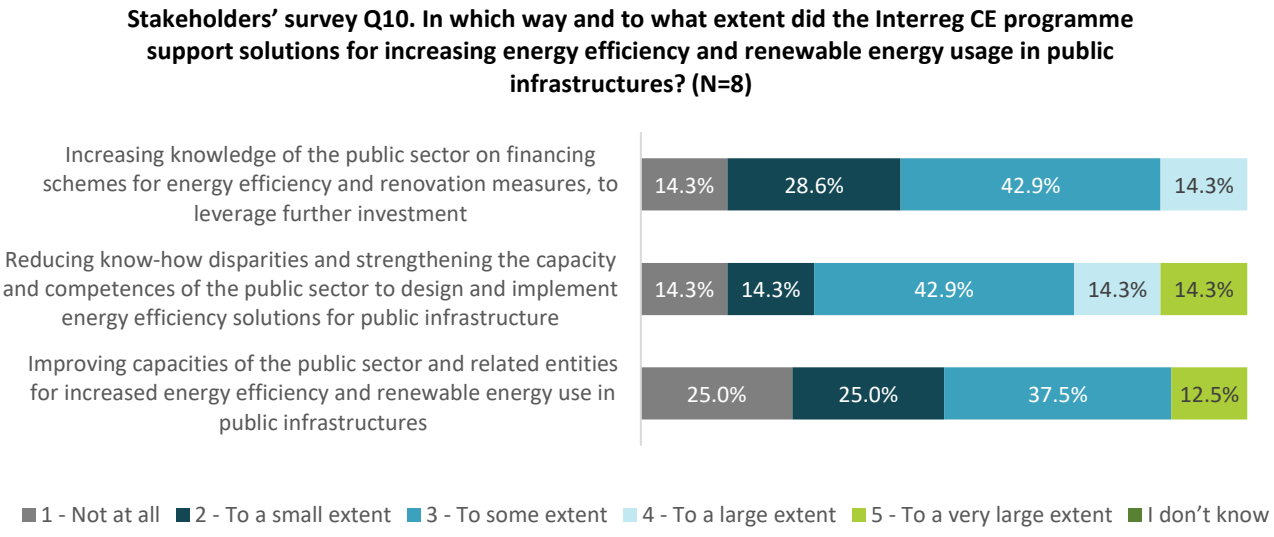
The Interreg CE Programme has successfully contributed towards enabling the use of renewable energies, improving energy efficiency and exploiting the economic potential of the low-carbon sector. Enabling regions and cities to make better use of limited resources and building trust beyond national borders, were two key effects produced under all Low-Carbon SOs.

Of note, the idea of Call 3 was to **complement previous calls** by looking more specifically at low-carbon topics that had been little addressed so far. Even if the number of low-carbon projects financed under Call 3 is lower than those financed in Calls 1 and 2, these few projects covered a wide range of different key topics and challenges (e.g., public transport in EfficienCE, district heating systems in ENTRAIN and storage solutions in historic urban areas in Store4HUC), whereas Calls 1 and 2 had a stronger focus on public buildings, reflecting the context/framework conditions in which the calls were developed.

Regarding the SO 2.1, as noted by the consulted stakeholders, projects have made significant contributions in relation to:

- **Reducing know-how disparities** and **increasing capacities** of the public sector and related entities for improving the energy efficiency of public infrastructures. This achievement was noted as large and very large by almost 28% of respondents, while an additional 42.9% noted some contribution in this respect. Projects such as EfficienCE developed tools and trainings to plan and operate low-carbon infrastructures, and transferring knowledge and best practices on energy-efficient measures to stakeholders in public transport.
- Projects also contributed to improving capacities for energy management with the aim to reduce energy consumption and increase energy efficiency of public buildings. Projects such as FEEDSCHOOLS provided local authorities with technical and financial solutions to implement 'nearly Zero Energy Building' (NZEB) renovation activities in schools. The project also contributed to promoting behavioural change with respect to energy savings.

FIGURE 13 STAKEHOLDERS' FEEDBACK ON THE CONTRIBUTION OF INTERREG CE PROGRAMME (SO2.1.)



Source: Survey targeting Programme stakeholders

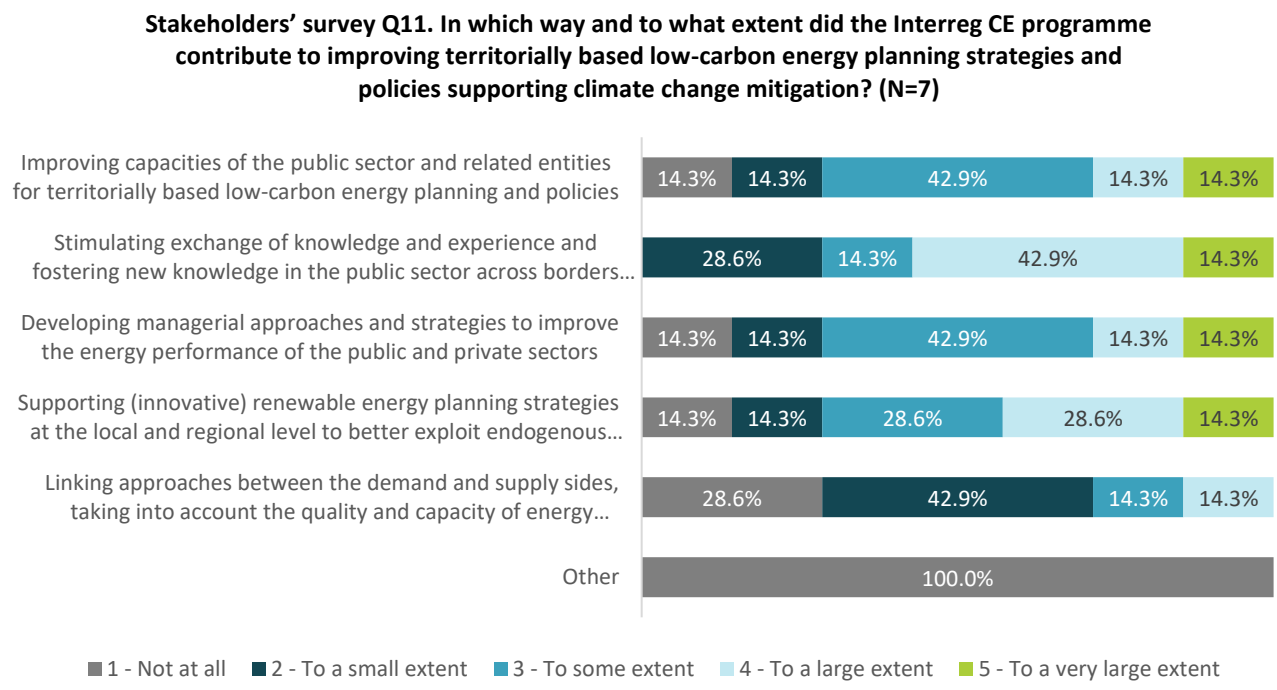
Projects also contributed to increasing knowledge of the public sector on **financing schemes for energy efficiency and renovation measures, to leverage further investment.** Projects such as eCentral tested

innovative financial models e (re)construction of public buildings in accordance with zero emissions building standards.

Regarding the SO 2.2, the consulted stakeholders mentioned significant contributions in relation to:

- Stimulating exchange of knowledge and experience and fostering new knowledge to help planning, financing and implementing concrete sustainable energy actions and measures. Almost 60% of respondents acknowledged the Programme's contribution in this respect to a large and very large extent. Projects such as FIRECE project aimed at supporting the low-carbon transition in the industrial sector according to the regional energy plans with the implementation of innovative financial instruments addressed to SMEs. Eight such financial instruments were developed together with regional authorities, also taking into account the 2021-2027 programming period.
- Supporting (innovative) renewable energy planning strategies at the local and regional level to better exploit endogenous renewable energy potentials. Almost 43% of the stakeholders considered that the programme contributed to this aspect to a large and very large extend, while other 28.6% acknowledge some contribution. For example, the ENTRAIN project focused on enhancing renewable heat planning for improving the air quality of communities.
- Improving capacities of the public sector and related entities for territorially based low-carbon energy planning and policies. 28.6% of respondents acknowledged a significant contribution and other 42.9% considered that the Programme contributed to this result to some extent. For example, the RURES project aimed at exploiting the potential of renewable energies (RES) and energy efficiency (EE) in rural regions, while the CitiEnGov project supported the development of integrated territorial plans to enhance the use of renewable energy sources and improve energy performance in urban areas.
- Developing managerial approaches and strategies to improve the energy performance. Almost 29% of respondents considered that the Programme contributed to this result to a large and very large extent, while other 42.9% acknowledged some contribution. For example, the Store4HUC project developed energy management tools for various stakeholders to help decision-making about investing in an energy storage solution. It also produced policy recommendations and identified appropriate technological solutions to overcome barriers to low-carbon development in historic centres.

FIGURE 14 STAKEHOLDERS' FEEDBACK ON THE CONTRIBUTION OF INTERREG CE PROGRAMME (SO2.2.)



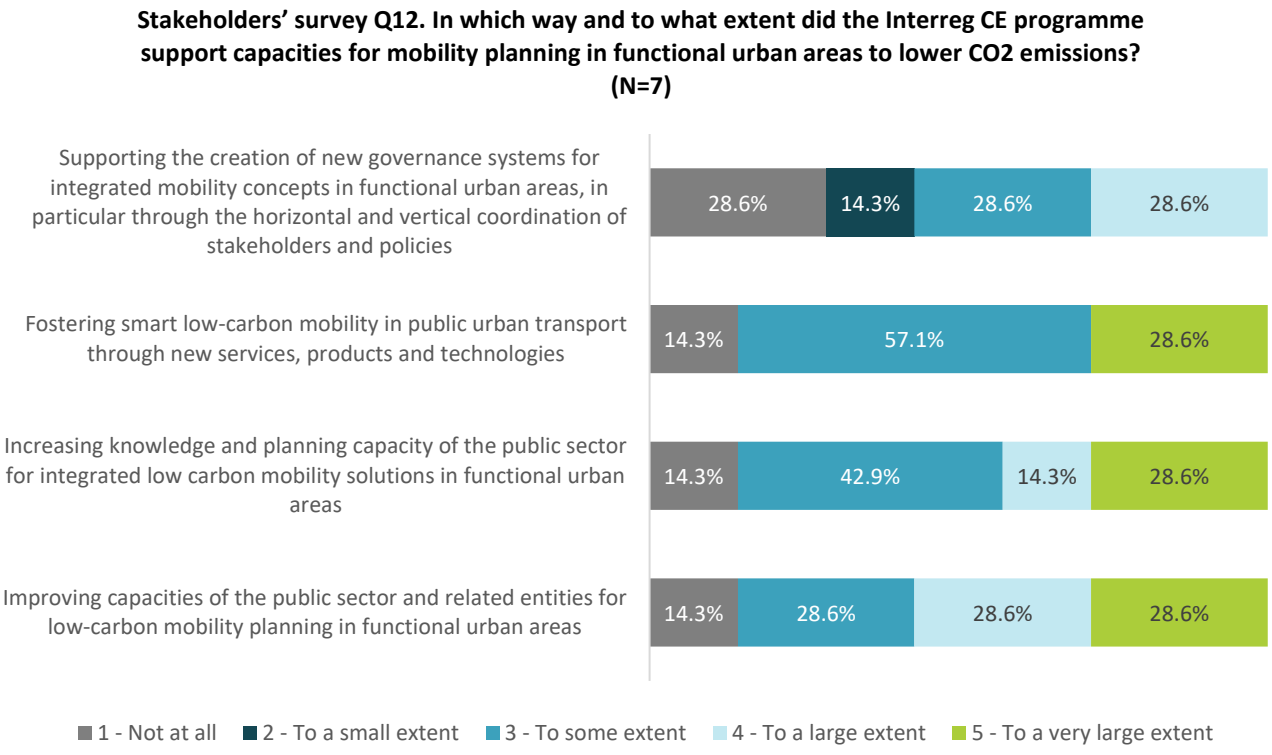
Source: Survey targeting Programme stakeholders Note: For the "other" response option, the respondent indicated "Increasing climate change adaptation in the field of climate-related risk prevention and disaster resilience".

Stimulating the exchange of knowledge and experience in the public sector was particularly acknowledged by stakeholders in SO2.2. as a major contribution. Another contribution mentioned was that to increasing climate change adaptation in the field of climate-related risk prevention and disaster resilience.

Regarding the SO 2.3, the consulted stakeholders highlighted significant contributions in relation to:

- Improving planning and implementation capacities for territorially based low-carbon (i.e. energy efficiency and renewable energy) solutions. Approx. 57% of respondents mentioned that the Programme contributed to this result to a large and very large extent, while other 28.6% mentioned some extent. Projects such as SMART COMMUTING were found to be particularly successful, in supporting coordination between public transport companies, decision-makers and other stakeholders to develop a holistic approach to planning energy efficient public transportation in urban areas.
- Increasing knowledge and planning capacity of the public sector for integrated low carbon mobility solutions in functional urban areas. Almost 43% of respondents acknowledged that the Programme contributed to this achievement to a large and very large extent. For example, the LOW-CARB project supported the creation of action plans for enabling low-carbon transit in Functional Urban Areas and reflected new trends in the sector, such as open data-based mobility planning, integrated mobility platforms and implementation of new low-carbon technologies.

FIGURE 15 STAKEHOLDERS' FEEDBACK ON THE CONTRIBUTION OF INTERREG CE PROGRAMME (SO2.3.)



Source: Survey targeting Programme stakeholders

The data on project partners show that public organizations make up the majority of entities involved, similar to the distribution in the Environment priority. Furthermore, the Low Carbon Thematic Priority has a relatively low percentage of new-coming partners compared to the Interreg CE 2007-2013 programme, similar to the findings for Transport. The majority of new entities come from the Emilia-Romagna region in Italy, followed by regions in Austria and Croatia. Most lead partners are also located in Emilia-Romagna.It is positive to note that entities that implemented projects in Interreg CE 2014-2020 saw an increase in participation in other types of programmes, particularly in cross-border programmes. This suggests that the programme has been successful in establishing connections and building networks beyond its immediate scope, contributing to its overall impact.

Environment

Under the Interreg CE programme, the projects developed were able to elaborate solutions that optimise the sustainable management of natural resources, including effective water management, safeguarding soil and air quality, reducing waste and pollution, managing natural, as well as managing man-made risks. The pilots implemented aimed also at supporting urban development, regional and territorial planning of the transnational cooperation programmes.

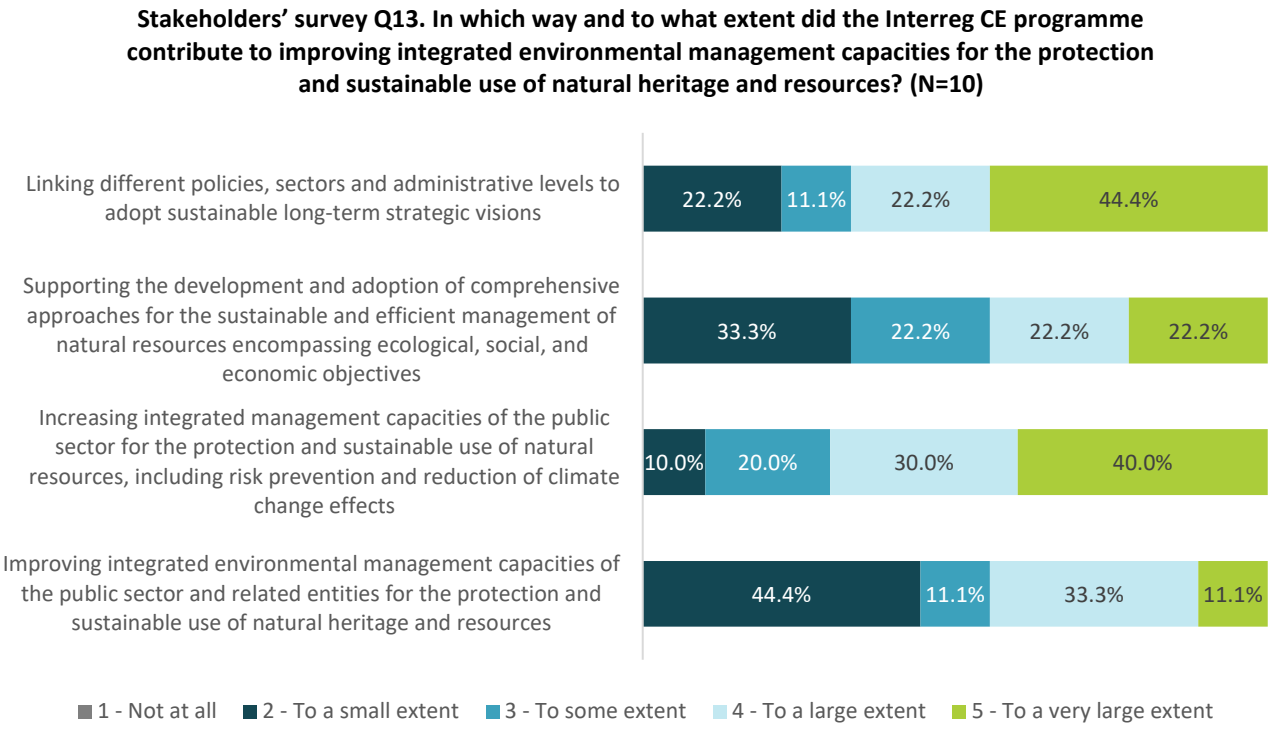
The projects financed under all calls have demonstrated that due to the common environmental challenges in the CE region, the solutions developed can be easily transferred and adapted to additional local contexts. Interreg CE projects provide successful examples of place-based interventions, for example in relation to challenges affecting river basins, touristic hubs or Functional Urban Areas (FUAs) through projects such as SALUTE4-CE, where project partners worked together with the local community in order to implement green and blue infrastructure through the concept of Urban Environmental Acupuncture (UEA).

The general opinion of the stakeholders (interviews and surveys) was that the projects financed through Interreg CE were successful and very successful in **linking different policies, sectors and administrative levels** to adopt sustainable long-term visions (opinion expressed by over 60% of the respondents to the survey) and in **improving the knowledge and management capacities of the public sector** and related entities (over 70% of the respondents to the survey). In many cases, projects targeted particularly smaller municipalities, which needed support to develop environmental management plans and strategies at FUA level. For these projects, there is a direct link between the programme intervention and the improvement in the situation of the respective target groups, with tangible results for the communities.

Regarding the SO 3.1, stakeholders detailed the specific contributions of the Interreg CE programme to improving integrated environmental management capacities for the protection and sustainable use of natural heritage and resources, highlighting the following:

- Increasing integrated management capacities of the public sector for the protection and sustainable use of natural resources, including risk prevention and reduction of climate change effects. 70% of respondents considered that the Programme contributed to a large and very large extent, and 20% acknowledged a medium contribution. Projects such as RAINMAN, addressed the risks produced by heavy rain while the TEACHER-CE project addressed the challenges brought by climate change through a toolbox that focuses on water management adaptation across Central Europe.
- Linking different policies, sectors and administrative levels to adopt sustainable long-term strategic visions. 66.6% of survey respondents considered that projects were successful and very successful in this respect, while other 11.1% acknowledged contributions to some extent. For example, projects such as CIRCE2020 contributed to facilitating a larger uptake of integrated environmental management approach by shifting from linear economy to circular economy. The project engaged over 700 stakeholders in eleven pilot actions in five specific Central European industrial areas and targeted policy makers at different levels, as well as business organizations and the wider public, to build awareness, change the legal framework and enable transformation of business models.

FIGURE 16 STAKEHOLDERS' FEEDBACK ON THE CONTRIBUTION OF INTERREG CE PROGRAMME (SO3.1.)



Source: Survey targeting Programme stakeholders

Considering the achievements obtained in the projects, it can be concluded that the Programme addressed relevant issues for the needs of the area, in particular to narrowing the gap with regard to environmental management capacities of the public sector as well as with regard to related entities in respect to the protection and sustainable use of natural heritage and resources. Such positive results, that are visible also through indicators may also be attributed to the innovative nature of the interventions which differentiated the Interreg CE from other programmes, both in design as well as in results.

Thanks to the pilot actions that aimed at making the project areas more resilient to climate change, the projects were able to make CE cities and regions a better working and living place for its inhabitants. Such actions have been developed in all funding cycles and can be found in projects such as the AMIIGA project, which proposed solutions to addressing groundwater contamination,

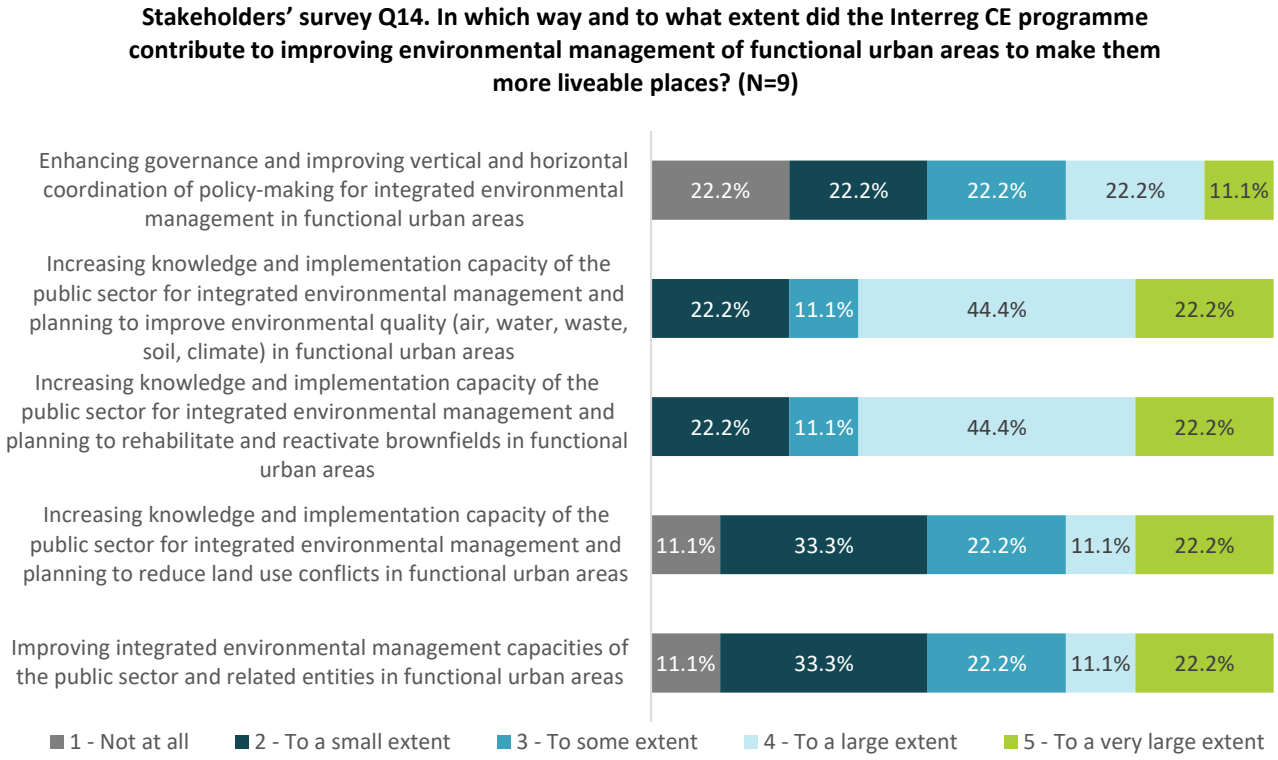
The direct impact of the programme on the partners, associated partners and beneficiaries involved in the capacity building sessions and pilot actions, lies in part in the fact that the programme facilitated access to knowledge which wouldn't have been accessible in lack of such a transnational cooperation. The value for gaining specialized first-hand knowledge and experience that is transferrable across central Europe and beyond is clearly illustrated by projects such as TEACHER-CE.

Regarding the SO 3.3, the stakeholders' survey (Figure 17) provides more details in respect to the way the Interreg CE Programme contributed to **improving environmental management of functional urban areas**. Improving coordination of policymaking is regarded as a major achievement by the beneficiaries (87%). Stakeholders also highlighted other positive effects, such as: Increasing knowledge and implementation capacity of the public sector for integrated environmental management and planning to reduce land use conflicts in functional urban areas and Increasing knowledge and implementation capacity of the public sector for integrated environmental management and planning to rehabilitate and reactivate brownfields in functional urban areas (44.4% each).

Various examples of concrete actions were provided, from rehabilitation and reactivation of brownfields to environmental management and planning to improve environmental quality (air, water, waste, soil, climate)

and reducing land use conflicts. Improving the quality of the urban environment will potentially increase attractiveness and quality of life. In combination with the rich cultural diversity, the valorisation of natural heritage could activate other development opportunities, for example in the creative and cultural sector or tourism.

FIGURE 17 STAKEHOLDERS' FEEDBACK ON THE CONTRIBUTION OF INTERREG CE PROGRAMME (SO3.3.)



Source: Survey targeting Programme stakeholders

Based on data provided by the stakeholders, including interviews and surveys, it can be concluded that the projects in the Environment SOs were relatively successful in **linking different policies, sectors and administrative levels** and facilitating the adoption of sustainable long-term commitments. The supported projects have also demonstrated that highly transferable solutions can be developed and adapted to a variety of local contexts.

The data presented on the partner participation in the Environment theme suggests that public entities were crucial in achieving the objectives in this sector. Additionally, the fact that many of these entities have been involved in other TN programmes in 2014-2020 and have a history of participation in territorial cooperation programmes since 2000-2006 is indicative of their experience and expertise in this area.

Culture

Overall, the net effects of the programme were significant and wide-ranging, with projects addressing a variety of challenges and contributing to the development of the cultural and creative sector in the Central Europe region. Some of the concrete results of SO 3.1 include:

- Improved management and valorisation of cultural assets: Projects such as COME-IN!, RESTAURA, and InduCult2.0 contributed to improving the management and accessibility of cultural heritage assets.
- Strengthened cooperation and networking: The programme supported projects that aimed to facilitate cooperation and networking among cultural and creative actors in the region, such as ARTISTIC and CULTURECOVERY.

- Increased innovation and creativity: Projects like VirtualArch, and REFREsh aimed to promote innovation and creativity in the cultural and creative sector.
- Improved business and entrepreneurial skills: The programme supported projects aimed at improving the business and entrepreneurial skills of cultural and creative actors, such as STIMULART and SACHE.
- Increased sustainability and resilience: Projects like Protecht2save aimed to promote sustainability and resilience in the cultural and creative sector.

The Programme has effectively contributed to improving capacities of the public and private sector for the sustainable use of cultural heritage and resources in the CE area, by creating or improving policy frameworks, supporting institutional and human resources development and by improving managerial systems. Potentially, this will lead to improved coordination of the preservation efforts and to better management of cultural heritage and resources. It will also lead to a more sustainable use and valorisation of those assets. Overall, this improved capacity shall allow for better protection of cultural heritage and related resources going hand in hand with an enhanced exploitation of existing potentials (e.g., in the growing sectors of cultural tourism, cultural and creative industries etc.).

Even more, the Programme has contributed to strengthening the collaboration between businesses and creative sectors, as shown by the results of the COCO4CCI project. By providing a platform for co-creation and co-design processes, the project enabled the development of partnerships between businesses and creatives to explore new opportunities for innovation and sustainability. The project's sustainability was particularly remarkable, with its final conference being linked with the New European Bauhaus initiative launched by the European Commission in 2020. This helped to connect the project results with a broader European initiative focused on creating sustainable and inclusive living spaces. As one interviewee noted "*COCO4CCI opened the door for this whole new world [...] as project partners used techniques for tandem and facilitation between advanced manufacturing firms and creatives, they were able to create a brain like collaborative strategy that was able to bridge the gap between sectors and industries that were inherently distinct, separate and independent*."

The programme helped build trust beyond borders and improve policymaking, which are seen as major achievements for the target groups. Through the various projects and initiatives, the programme helped the target groups to improve their capacity by providing them with the necessary skills and knowledge to adapt to changing environments and challenges, ultimately leading to sustainable results and long-term benefits for the central Europe area.

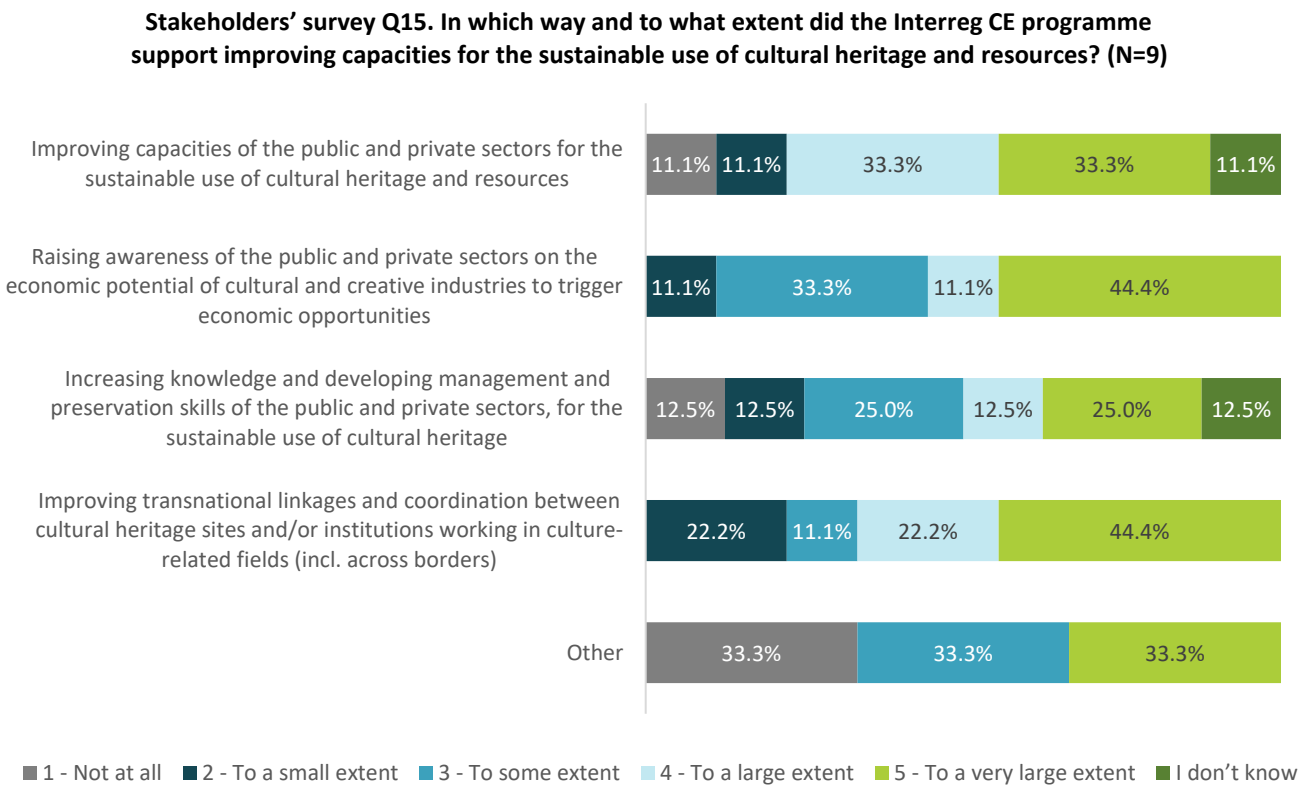
The programme resulted in the development of various transnational strategies, plans, and instruments that contributed to enhancing the cooperation and exchange of good practices between cultural and creative industries. These strategies, plans, and instruments have helped to improve the sector's overall performance and capacity, resulting in long-term benefits for cultural and creative industries in the central Europe area.

Throughout the evaluation exercise, the general opinion of the stakeholders (interviews and surveys) was that the projects financed through Interreg CE were successful and very successful in achieving the following results (Figure 18):

- **improving transnational linkages and coordination** between cultural heritage sites (66.6%).
- **raising awareness of the public and private sectors** on the economic potential of cultural and creative industries (55,5%)

  improving capacities of the public and private sector for the sustainable use of cultural heritage and resources (66.6%)

FIGURE 18 STAKEHOLDERS' FEEDBACK ON THE CONTRIBUTION OF INTERREG CE PROGRAMME (SO3.2.)



Source: Survey targeting Programme stakeholders. Note: For the "other" response option, the respondent indicated: "Improving of visibility and availability of cultural and touristic sites".

A remarkable finding in respect to this specific objective relates to the sense of pride which was repeatedly mentioned by the partners in relation to participating in the projects. This was also stated in respect to the various target groups participating in the pilot actions.

From the onset, transnational cooperation in central Europe was regarded as *"the catalyst, leading to the creation of an enabling environment, fostering the implementation of smart solutions answering to regional challenges, and triggering economic opportunities and employment at regional level."* In this respect, through its pilot actions, it can be assumed that the Programme has effectively contributed to making the cities and regions of Interreg CE better places to live and work. Such an example is the innovative installation in the salt warehouse Monfort in Portoroz, Slovenia, implemented as a pilot action in the YouInHerit project.

Transport

The projects financed by the Interreg CE aimed at supporting sustainable transport and mobility and developing multimodal transport solutions. They also supported urban and regional planning, and rural and peripheral development through improved transport connections[64]. The 2014-2020 Interreg CENTRAL EUROPE Programme has had a positive impact on transport in the region, improving mobility, connectivity, and sustainability, and promoting cross-border cooperation and harmonization. Some of the concrete results of the financed projects:

- More effective multimodal transport systems: Projects such as ChemMultimodal, Peripheral Access, and RegiaMobil contributed to the development of efficient, sustainable, and multimodal transport systems that integrate different modes of transport and promote intermodal connectivity.

[64] These represent themes, as captured by the keep.eu database

- Improved cross-border transport links: Projects such as CONNECT2CE, TRANS-BORDERS, and SubNodes helped to improve cross-border transport links, reducing bottlenecks and improving the accessibility and efficiency of transport services in the region.
- Enhanced use of alternative modes of transport: Projects such as COMODALCE, InterGreen-Nodes, and SMACKER promoted the use of alternative modes of transport such as cycling, walking, and ride-sharing services, reducing the reliance on private cars and promoting sustainable mobility choices.
- Improved harmonization of regulatory frameworks and technical standards: Projects such as CORCAP and TalkNET contributed to the harmonization of regulatory frameworks and technical standards in the transport sector, reducing delays and additional costs for cross-border operators and travellers.

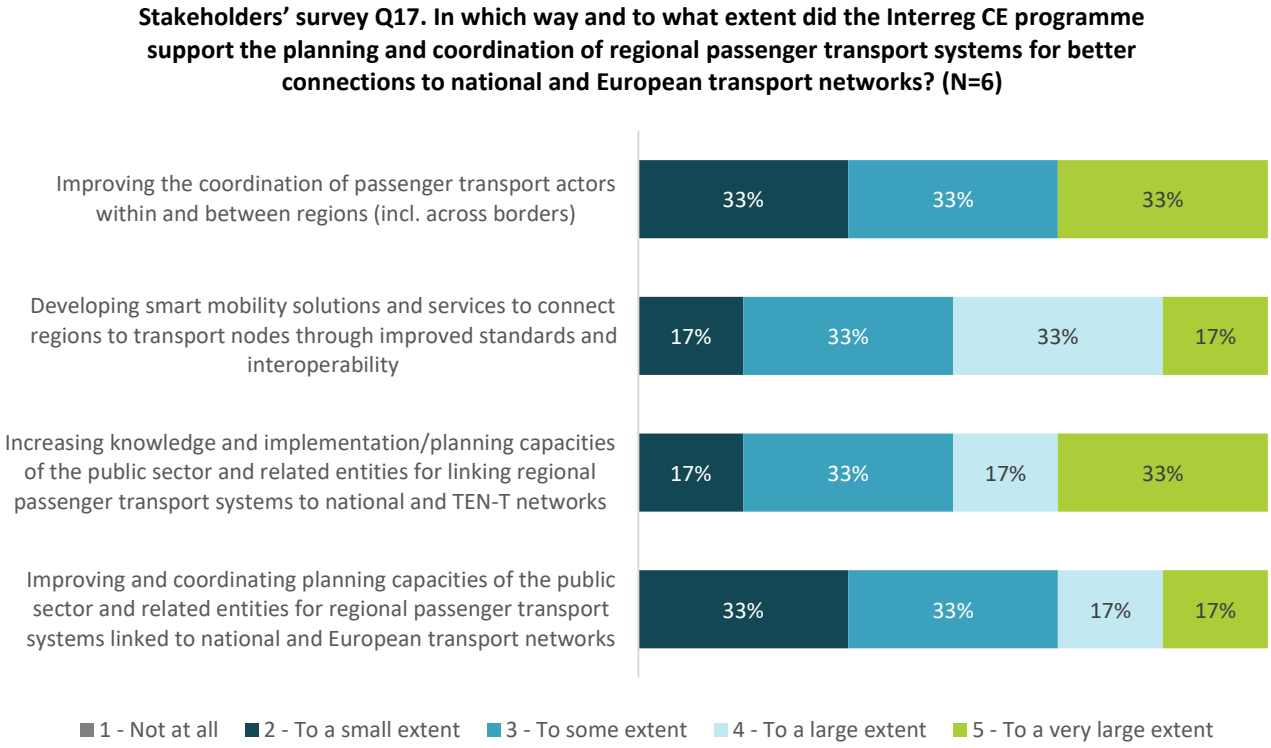
For many of the entities directly involved in the implementation of the projects, participating in the programme has provided not only the opportunity of accessing a network of relevant stakeholders but also of continuing the collaboration. Partnerships from projects such as RUMOBIL were continued in other initiatives, such as Youmobil. Even more, the RegiaMobil capitalization project, financed under Call 4, built on the results of four Interreg CE projects (RUMOBIL, SubNodes, Shareplace, CONNECT2CE), as well as HORIZON 2020 initiatives related to smart public transport (MaaS4EU, MoTiV, SIADE). The project also developed two action plans that showcased how the Transnational Strategy provided by the RUMOBIL project can be applied by other regional public authorities responsible for the planning and conducting of public transport.

For SO 4.1, the stakeholders consulted in the survey noted the following significant achievements:

- Increasing knowledge and implementation/planning capacities of the public sector and related entities for linking regional passenger transport systems to national and TEN-T networks. 33% of respondents noted that the Programme contributed to this result to very large extent, other 17% noted a large extent, while other 33% noted some contribution. Projects such as TRANS-BORDERS focused on improving railway links and alternatively bus lines in the peripheral regions, based on better governance, joint planning and operational implementation. The project also succeeded in networking the different stakeholders and policymakers (63 in total) and activating them to joint actions and measures.
- Developing smart mobility solutions and services to connect regions to transport nodes through improved standards and interoperability. 17% of respondents noted that the Programme contributed to this result to very large extent and 33% noted a large extent. An additional 33% noted some contribution. Projects such as SubNodes aimed to develop suitable small and medium-sized cities in Central Europe as intermodal secondary hubs (sub-nodes), to improve connectivity of the hinterland to the TEN-T rail network and offer passengers a continuous travel chain.

Other results include improving and coordinating planning capacities of the public sector and related entities for regional passenger transport systems linked to national and European transport networks, to which 33% of respondents noted the Programme contributed to a very large extent. Additionally, 34% of respondents mentioned a large and very large contribution to improving the coordination of passenger transport actors within and between regions, including across borders.

FIGURE 19 STAKEHOLDERS' FEEDBACK ON THE CONTRIBUTION OF INTERREG CE PROGRAMME (SO4.1.)

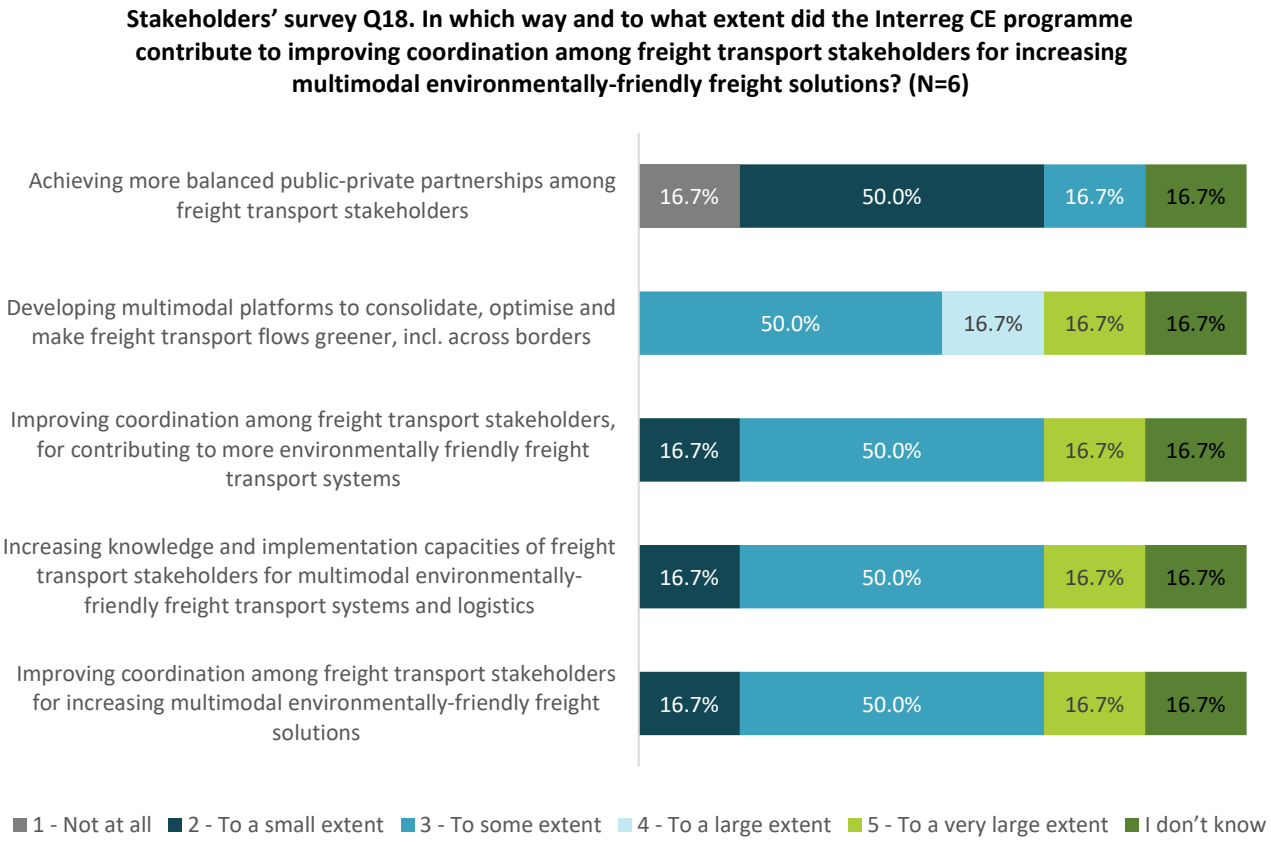


Source: Survey targeting Programme stakeholders. Note: Other comments provided by respondents include "Developing links to peripheral areas and improving better public transport in peripheral areas; not assessed".

Regarding the SO 4.2, the survey highlighted the following achievements, although significant contributions were noted to lesser degree, compared to all other SOs:

- Developing multimodal platforms to consolidate, optimise and make freight transport flows greener, including across borders. 33.4% of respondents noted that the Programme contributed to this result to a very large and large extent, and other 50% noted some contribution. Projects such as TRANS TRITIA brought together the Tritia European Grouping of Territorial Cooperation (EGTC) and numerous stakeholders to improve the effectiveness of the transport networks and multi-modal logistic centres in the Tritia area and to make freight transport more environmentally-friendly.
- Other results include improving coordination among freight transport stakeholders for increasing multimodal environmentally friendly freight solutions, increasing knowledge and implementation capacities of freight transport stakeholders for multimodal environmentally friendly freight transport systems and logistics, improving coordination among freight transport stakeholders contributing to more environmentally friendly freight transport systems. For each, 16.7% of the survey respondents noted a very large contribution and other 50% noted a medium contribution.

FIGURE 20 STAKEHOLDERS' FEEDBACK ON THE CONTRIBUTION OF INTERREG CE PROGRAMME (SO4.2.)



Source: Survey targeting Programme stakeholders

For the services operators and companies participating in the pilot actions, there is a direct link between the programme intervention and the improvement in the situation of the respective target groups and resulting in wider, yet very tangible benefits. Supported projects contributed to improving coordination among freight transport stakeholders for increasing multimodal environmentally friendly freight and to increasing knowledge and implementation capacities of freight transport stakeholders for multimodal environmentally friendly freight transport systems and logistics. However, at programme level, stakeholders feedback shows more modest achievements. Interviews indicated that this is due to a variety of reasons, among which competition, costs, regulatory frameworks are the most important.

The transnational strategies and tools developed through the projects supported by Interreg CE provide the **framework for increasing coordination** among stakeholders across borders, aligning practices and achieving positive outcomes (lower costs, lower emissions), through cooperation. One example is the InterGreen-Nodes project, which aimed to enhance coordination among freight transport stakeholders by aligning regional interests with EU recommendations on freight transport and regional development. Project partners implemented harmonized planning methods and improved intermodal terminal processes, considering the spatial surroundings of the terminals. As a result, the terminals can better adapt to growing freight transport flows and organize their processes in an environmentally friendly way, achieving positive outcomes for both the region and the environment.

Projects have also provided tools which are not only highly transferable but could also provide essential inputs for developing the regulatory framework and guidance at the EU level. Testimony for this is the ample

knowledge repository available at the programme level in the Output Library[65]. This includes, for example, the extensive collection of research, best practices and knowledge tools developed in the TalkNET project, in the field of last mile connectivity, node management optimization, assessment of multimodal services, deployment of alternative fuels and energy efficiency solutions.[66]

It can be thus concluded that the Programme's interventions can be directly linked to improvements observed at local, regional and transnational level, with respect to the specific topics of the projects implemented. This is also confirmed by the specific assessments carried out at project level (for example, PERIPHERAL ACCESS Evaluation Report).

Also, by the numerous project partners directly cooperating during the implementation, the large number of transport operators and municipalities working together in pilot actions, as well as the vast array of stakeholders directly participating in the projects' activities, the Programme has effectively supported cooperation beyond borders in central Europe, as initially planned.

The following subsections provide more insights into how the programme's results were generated and how they were experienced in various thematic areas, targeted groups, and territories. Additionally, these subsections will provide more specific information on various elements of the programme that were found to be particularly effective, as well as the programme's sustainability, transferability, and overall added value.

This information is crucial for developing a comprehensive understanding of the programme's impact and for identifying the best practices and lessons learned that can be applied to similar initiatives in the future. The subsections will delve into the specific mechanisms that led to the programme's success. Furthermore, the report will highlight the programme's strengths and identify areas where further improvements could be made.

3.4. EQ3. UNDERSTANDING OF IMPACTS AND SHOWING WHAT WORKS BEST

The analysis of why the Interreg CE programme produced the observed impacts and what worked best to produce them was split into a qualitative and a quantitative part. The qualitative analysis deals with the information gathered through the interviews, surveys and case studies conducted; the quantitative analysis consists in a cost-effectiveness analysis (CEA) of the outputs produced by the Interreg CE projects.

3.4.1. PROGRAMME-LEVEL AND GENERAL RESULTS

Programme thematic and strategic orientation

The **evolving nature** of the programme, which progressed from the first two calls which were very broad and very open to the third call which was thematically focused allowed for projects to tackle strategically important issues in fast-evolving and highly challenging contexts. Finally, the fourth call had an experimental dimension and was launched when the programme budget was already limited. This ability to adapt to the changing context (both in terms of resource availability and contextual developments), the innovative character embedded in all projects and the readiness to experiment at programme level, were largely praised by interviewees and beneficiaries.

Programme communication

Programme-level communication activities were generally highlighted as particularly effective for the success of the programme. They covered all aspects, from information and support provided to applicants, to day-to-day communication with beneficiaries, collaboration with stakeholders and general dissemination of results, including through the thematic pages and output library. Some NCPs noted that communication activities between the call announcement and the decision to set up a project proposal was particularly useful in ensuring

[65] https://programme2014-20.interreg-central.eu/Content.Node/discover/Output-Library.html
[66] https://programme2014-20.interreg-central.eu/Content.Node/TalkNET.html

that interested actors (potential beneficiaries) are committed and able to engage in the programme. Other interviewees mentioned the annual conferences, which allowed participants to meet and interact and "cross-fertilize" their ideas. The case studies provided some more evidence on the importance of programme communication: in Arrival Regions for instance, the lead partner participated in several workshops and meetings organised by the JS (i.e. an event related to the opening of the calls, another event for the Interreg anniversary, etc.) where this partner could pitch the idea of the project.

Project development

A particular strength of the programme for achieving impactful results is that it allows for a **bottom-up development of projects**. Its bottom-up approach of project design directly addresses the needs of local and regional actors and stakeholders, thus contributing to regional as well as territorial development in a direct way. Additionally, the programme provides finance for locally important issues that otherwise would face severe difficulties in getting funded. This includes projects that are of more experimental nature, which apply and test innovative solutions for regional and local challenges. Consequently, this bottom-up approach also comes with certain risks, as locally developed projects, in particular if they include experimental solutions, might not always yield the expected outcomes. They are also more difficult to evaluate throughout their lifetime from project application to their finalisation, as they may require specific (technical) knowledge to assess their success prospects. Nevertheless, given the overwhelmingly large number of well-performing projects within the programme, the evaluation so far concludes that this is a risk worth to be taken. This is also the case in the light of the alternative of a top-down approach: though this latter approach would mitigate bottom-up approach related risks, it itself bears the risk that it applies a too strict framework for project development, which may miss the actual needs of the local and regional stakeholders.

At the same time, there are also common factors adversely affecting project implementation and thereby the success of projects. These relate first and foremost to **project financing**: the absence of pre-financing was deemed a barrier for the involvement of partners with limited financing capacity; in that regard, the possibility of co-financing/pre-financing offered by national/regional governments for lead partners (e.g. in Poland) has been praised. Moreover, the lengthy process for reimbursements (due to bureaucratic procedures) was thought to compromise the financial capacity of project partners to carry on with their projects, and thereby constitutes a limitation to project activities and the resulting outputs. Likewise, the conditions and administrative requirements (declaration) related to state aid rules (de minimis aid) were often problematic for the involvement of SMEs.

Capacity of beneficiaries

The capacity of beneficiaries to establish transnational partnerships, design and implement successful cooperation projects was **adequate** to produce impactful outputs, even more so as they were actively supported by programme stakeholders (JS, NCPs, etc.) when facing difficulties. At the same time, it is worth mentioning than projects are predominantly led by partners from Western European countries, in particular Germany and Italy. While interviewees observed that projects led by new comers did not end up as less successful than those led by experienced partners, they noted that the former indeed often required greater assistance by the programme stakeholders, and sometimes by external experts as well. Overall, programme stakeholders emphasised that paying particular attention to the capacity of the partners when assessing the project applications was essential to minimise the risk of any deficiency in project implementation.

Furthermore, **active support** from programme stakeholders to beneficiaries and matchmaking activities emerge as key lessons learnt from the programme implementation, especially in Calls 3 and 4. Indeed, 'capacity' remains both a driver of successful project implementation (on the side of beneficiaries) and a primary objective of Interreg CE projects (i.e., capacity-building of end-users, in particular policy-making end-users). Some interviewees stated that more support should be provided to applicants and beneficiaries with regard to the skills and language competences that are necessary to take on lead partner roles, especially for those partners with lower capacity and less experience in Interreg.

Project partnership

A key aspect of project success is the composition of the **project partnership**. The case studies emphasised the importance of having a good and balanced mix of skills and expertise within the project partnership; partners' skills were often mapped, in order to have the 'right' partner for the 'right' task, also ensuring that each partner would benefit from the project activities implemented (understanding partners' needs and interests and tailoring project activities thereto). Thus, involving a variety of partner institutions, e.g. a mix of public, private, academia, increases the projects' outreach and increases the relevance of the outputs produced. Having policy-oriented stakeholders, scientific institutes and development agencies entering project partnerships together with the local community was also identified as good practice, as this enables them to closely cooperate in local piloting, and for new-comers to learn a lot.

Stakeholder engagement and tailoring

The analysis indicates that **stakeholder engagement**, in particular vis-à-vis target groups, is **key to ensure a wide dissemination and uptake of project results**. It is essential for the adoption and actual implementation of the strategies and plans developed by the projects by local and regional policy-makers. Through this, the stronger stakeholder engagement is in the project, the higher is the probability that project outputs and results are a) sustainable over a longer period of time and b) rolled-out and up-scaled to increase the projects' benefits beyond their initial target groups. To this end, projects have dedicated significant efforts to mobilising stakeholders, empowering local decision-makers and training end-users. For example, in the UGB project, project partners, together with nearly 300 stakeholders, studied the effectiveness of the models and designed local pilot activities. Community meetings, workshops and study visits have proved effective in this respect. Tailoring activities and communication to territorial characteristics (e.g. using national language) and target groups' needs and interests (e.g. identifying financing opportunities for SMEs) was crucial for activities to be impactful.

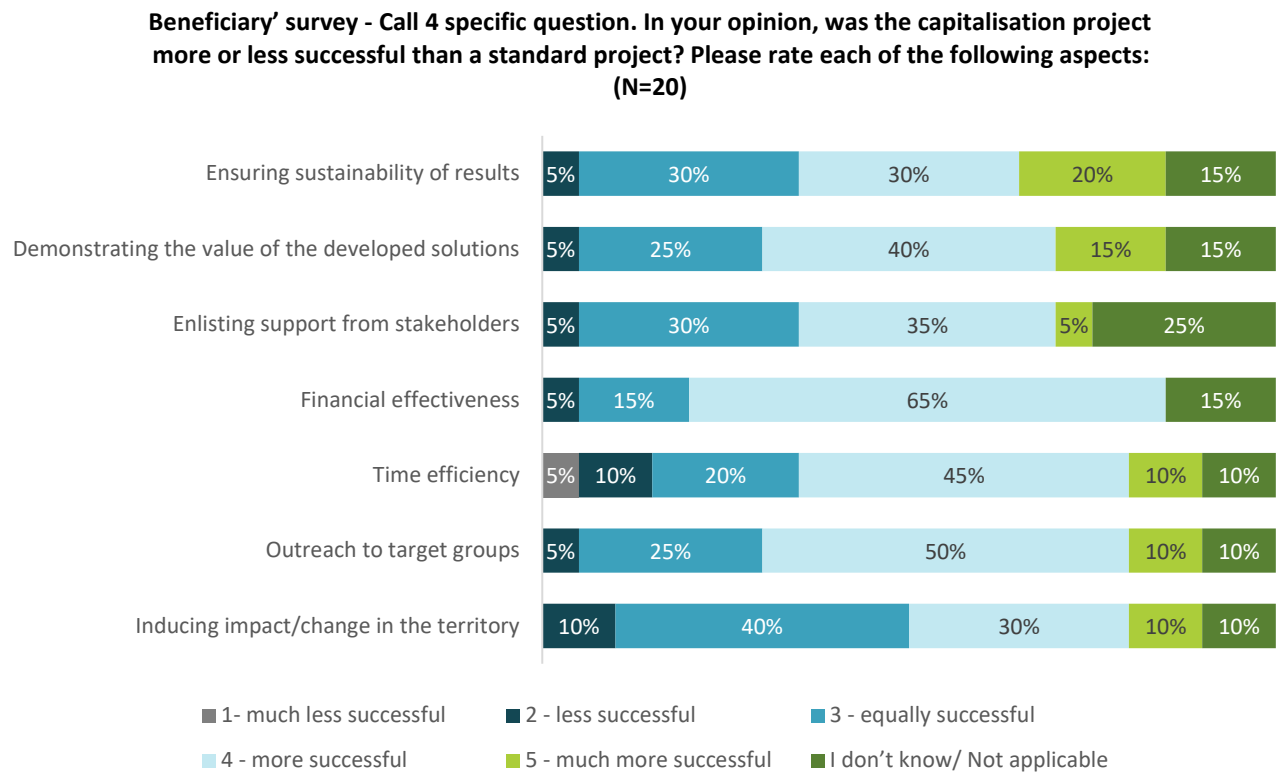
Capitalisation: the particular case of Call 4

A common observation made in the evaluation is that capitalisation of results is generally more limited (in Calls 1, 2 and 3) when it is not meant to be the primary focus of the project (as it is in Call 4 projects). In other words, Call 4 was largely appreciated as an effective experimentation that prompted beneficiaries to:

- broaden their partnerships by taking on new types of partners,
- widen the knowledge base of the partnership,
- gain in efficiency through capitalisation of outputs and results already achieved, i.e. by producing an often comparable or sometimes even larger number of outputs with less time and funding. For instance, TARGET-CE produced 10 strategies and actions plans, 9 tools and services, 6 pilot actions and 1 training, while for two Interreg CE projects it capitalised upon, namely ENERGY@SCHOOL and eCentral, these numbers were 10 and 4, 6 and 5, 8 and 3, and 24 and 12, respectively.

With more limited time and funding, Call 4 projects were also deemed particularly successful with regard to their outputs and outreach, owing to 1) the down streaming approach widely taken by these projects and 2) the preparation ahead of project implementation to clearly identify which results can be taken and re-used, how they can be capitalised upon and/or upscaled, etc., also in view of e.g., property rights that are often understated or overlooked. The beneficiary survey confirms this experimentation call as a mechanism that 'works best' - or at least better than standard calls - across many different aspects of project implementation:

FIGURE 21 BENEFICIARY' PERSPECTIVE ON THE SUCCESS OF CAPITALISATION PROJECTS



Source: Survey targeting project beneficiaries from call 4

At the same time, Call 4 was deemed attractive first and foremost for (experienced) Interreg beneficiaries, as Horizon 2020 beneficiaries are used to working in significantly longer timeframes and with significantly more budget.

Outputs

Successful projects ensured that the outputs they developed were well-adapted to the needs of the end-users, easily applicable, transferable, and possible to use in a variety of contexts. Engaging stakeholders in their development and checking for feedback from users, enlisting the support of experts, as well as testing in a variety of contexts seem to be effective methods for ensuring quality and relevance for the outputs developed.

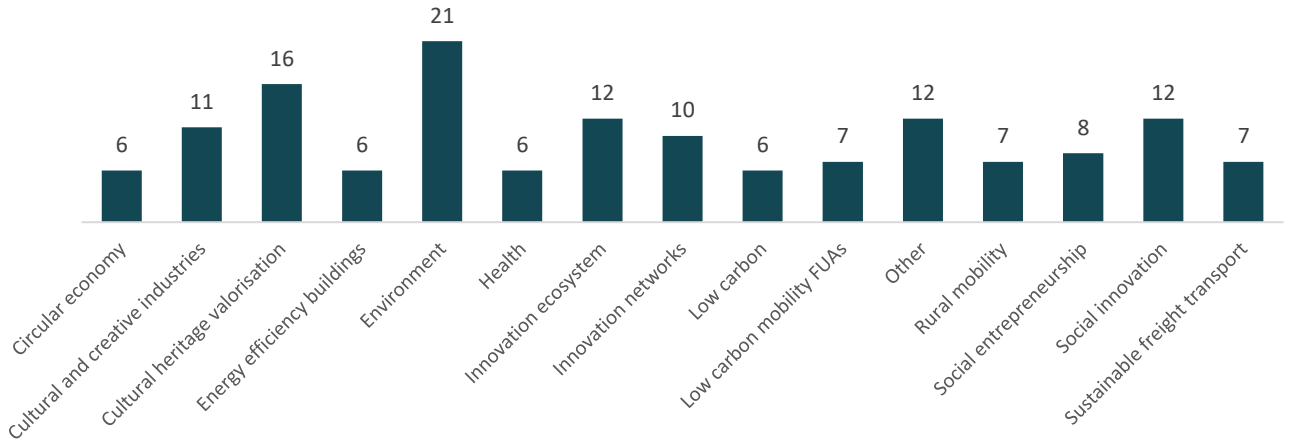
For a more detailed analysis of which types of outputs worked best, a quantitative analysis was performed, assessing the effectiveness and the costs of the outputs produced by the funded projects. These projects were grouped in 15 thematic clusters (more details on the definition of clusters can be found in Annex 4). Depending on their characteristics, the projects can enter more than one cluster, so that in total the clusters include 147 projects, i.e. 9 projects are allocated to two clusters.

Figure 22 shows the number of projects by cluster. The clusters include between 6 and 21 projects, so that despite this variation, each cluster is well represented by projects. The clusters with the highest numbers of projects are: Environment (21 projects), Cultural heritage valorisation (16), innovation ecosystems (12), social innovation (12) and Cultural and Creative Industries (11). On the other end, there is a group of clusters with 6 projects each. This group includes the circular economy, Energy efficiency buildings, health and low carbon clusters.

A final group of 12 projects were grouped into the cluster "Other". Those projects could not readily be allocated to one of the other clusters as their focus was too different. To illustrate, of the 12 projects in this cluster, two focussed on energy efficiency, once specifically connected to public light systems and another in more general, public planning terms. Other projects focussed on sustainable energy, e.g., from geo-thermal sources or waste

heat. Further projects in this cluster supported, skills for advanced manufacturing, matchmaking in business-succession processes, crowdfunding skills, indoor air quality, sustainable transport or sustainable regional mobility.

FIGURE 22 NUMBER OF PROJECTS PER CLUSTER

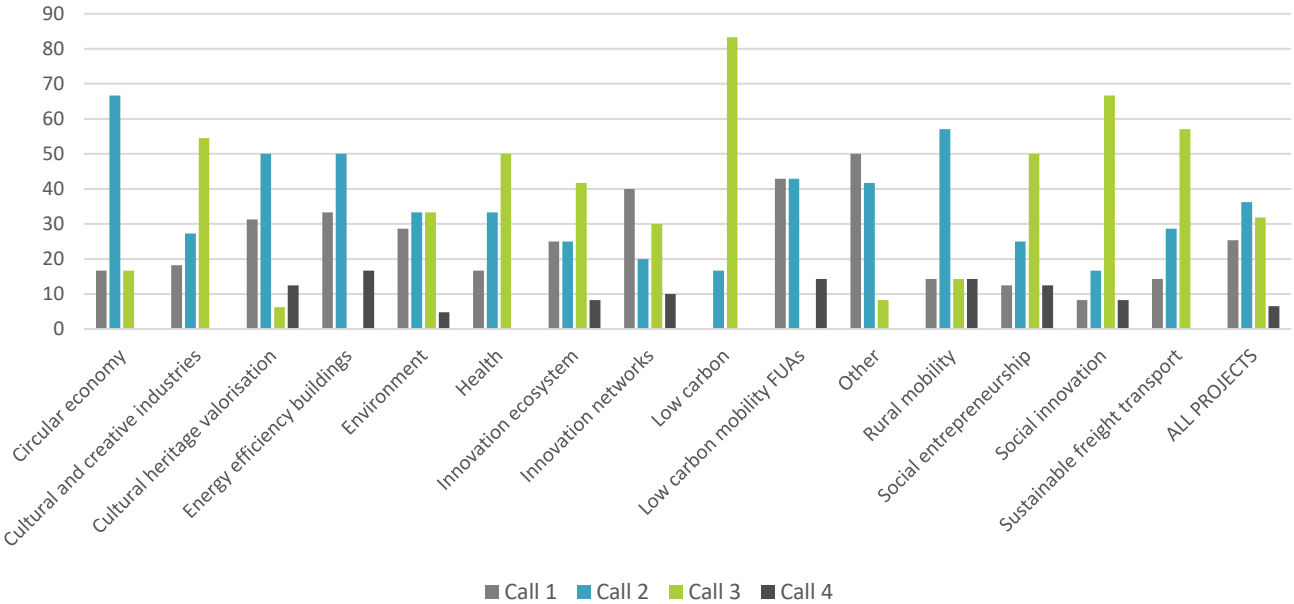


Source: JS data, own calculations

The next figure disaggregates the projects by call for each cluster and for the total number of projects. Starting with the latter, around a quarter of all 138 projects (35) originate from Call 1, 36% (50) from Call 2, 32% (44) from Call 3 and around 7% (9) from the experimental Call 4.

The individual clusters show a more heterogeneous pattern over the different calls. Some clusters, like Circular Economy, Cultural heritage valorisation, Energy efficiency buildings, Low carbon mobility in functional urban areas or Rural mobility got most of their projects through Calls 1 and 2. Other clusters, like Cultural and creative industries, Low carbon, Social Innovation or Sustainable freight transport were more prominent in Calls 3 and 4, so that overall, all clusters had a representative number of projects.

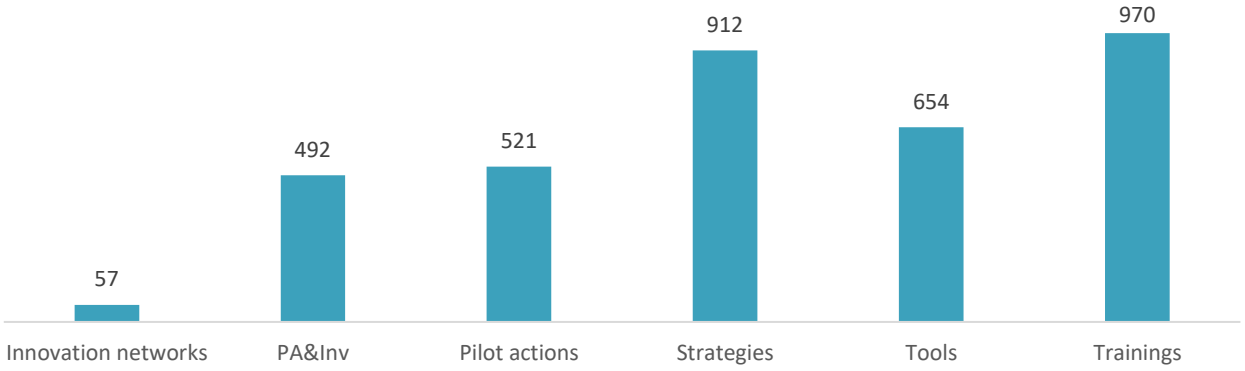
FIGURE 23 SHARE OF PROJECTS PER CALL, BY CLUSTER AND TOTAL PROJECTS



Source: JS data, own calculations

The following section analyses the number and type of outputs produced of the Interreg CE projects, the effectiveness and the costs of these outputs. In contrast to the clustering of the projects above, this analysis includes only 130 projects, as financial data for 8 projects under Call 3 was not available at the time this report was completed[67]. Together, these 130 projects produced 3606 outputs, thereof 970 trainings, 912 strategies, 654 tools, 521 pilot actions, 492 pilot actions in combination with investments and 57 innovation networks. The distribution of these outputs is illustrated in Figure 24.

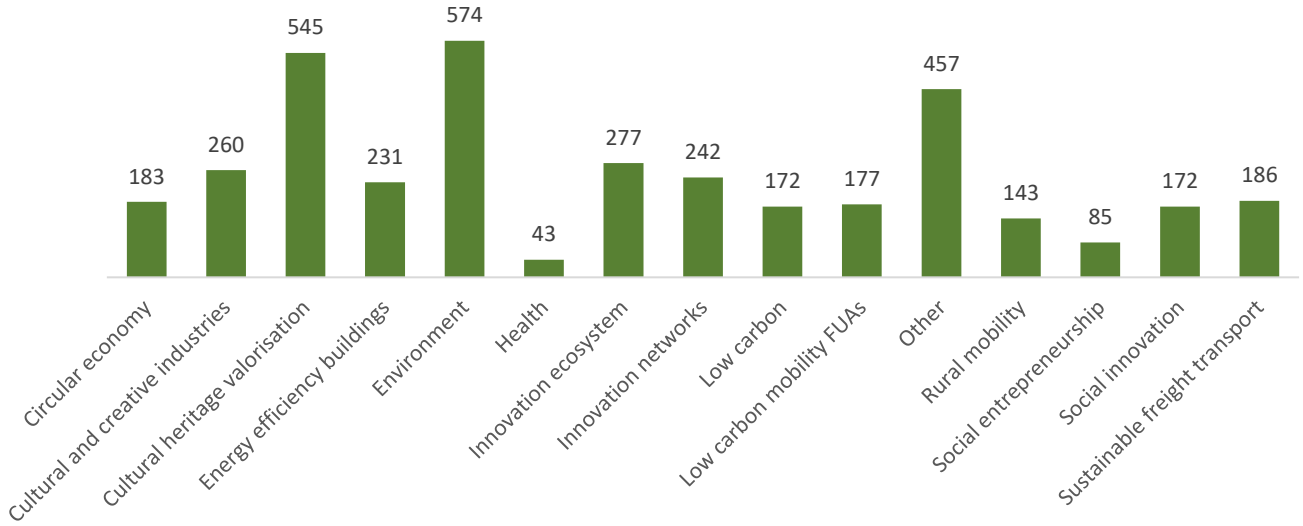
FIGURE 24 NUMBER OF OUTPUTS PER OUTPUT TYPE



Source: JS data, own calculations

The projects in the environment thematic cluster generated the highest number of outputs, i.e. 574, of which 173 were trainings, 127 strategies, 109 tools, 89 pilot actions including investment and 76 pilot actions. The second highest number of outputs (545) was generated by projects in the Cultural heritage valorisation cluster. The other clusters generated fewer outputs. The innovation ecosystem cluster projects produced in total 277, the Cultural and creative industries cluster projects 260, the Innovation networks 242 and the Energy efficiency buildings projects 231 outputs. Social entrepreneurship and Health projects produced the least number of outputs, i.e. 85 and 43, respectively (see figure below).

FIGURE 25 NUMBER OF OUTPUTS PER THEMATIC CLUSTER



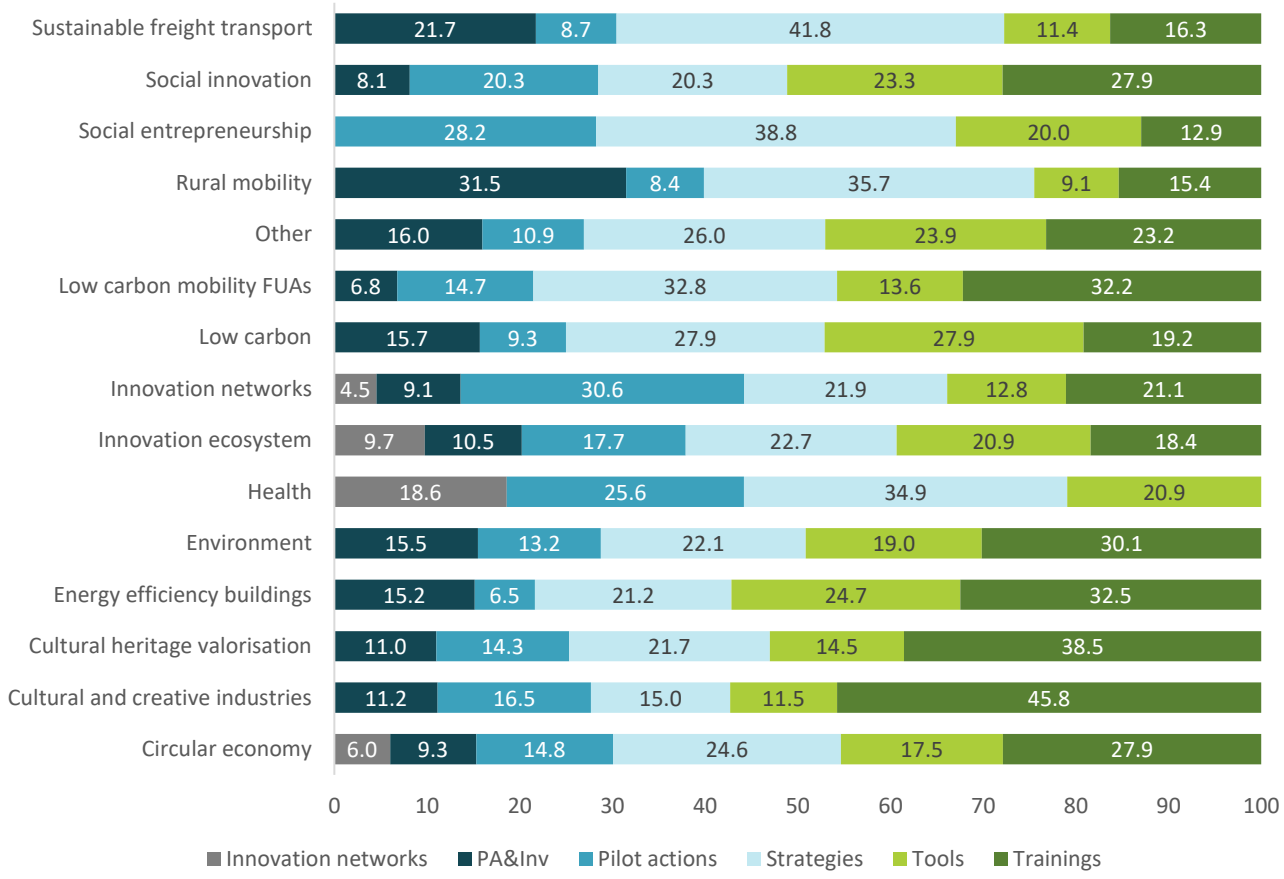
Source: JS data, own calculations

[67] The missing projects are CE1324 CerDee, CE1449 ENES-CE, CE1401 HoCare2.0, CE1516 I-CARE-SMART, CE1581 niCE-life, CE1415 SEE ME IN, CE1345 SIV, CE1550 Transfarm 4.0

Figure 26 illustrates the "popularity" of the various output types by thematic clusters, showing the output types' shares in the total number of outputs by thematic cluster. Overall, strategies and trainings were the most frequent output types. Depending on the cluster, around 13% (Social entrepreneurship) to 46% (Cultural and creative industries) of outputs were trainings[68], while between 15% (Cultural and creative industries) and 39% (Social entrepreneurship) were strategies.

Investments in combination with pilot actions were particularly frequent in Rural mobility projects (ca. 31.5% of all outputs in this cluster), while absent rare in Social entrepreneurship projects. Instead, the latter projects focussed heavily on pilot actions (28.2% of all output). The importance of tools varied across clusters. They were very important for Low carbon, Energy efficiency buildings, Innovation ecosystem, health and social innovation projects (between 21% and 28% of all outputs), while for Rural mobility and Sustainable freight transport projects they played a lesser role (ca. 9% and 11% of total outputs).

FIGURE 26 NUMBER OF OUTPUTS PER MAIN CLUSTER, BY OUTPUT TYPE – IN PERCENT OF TOTAL OUTPUTS BY CLUSTER



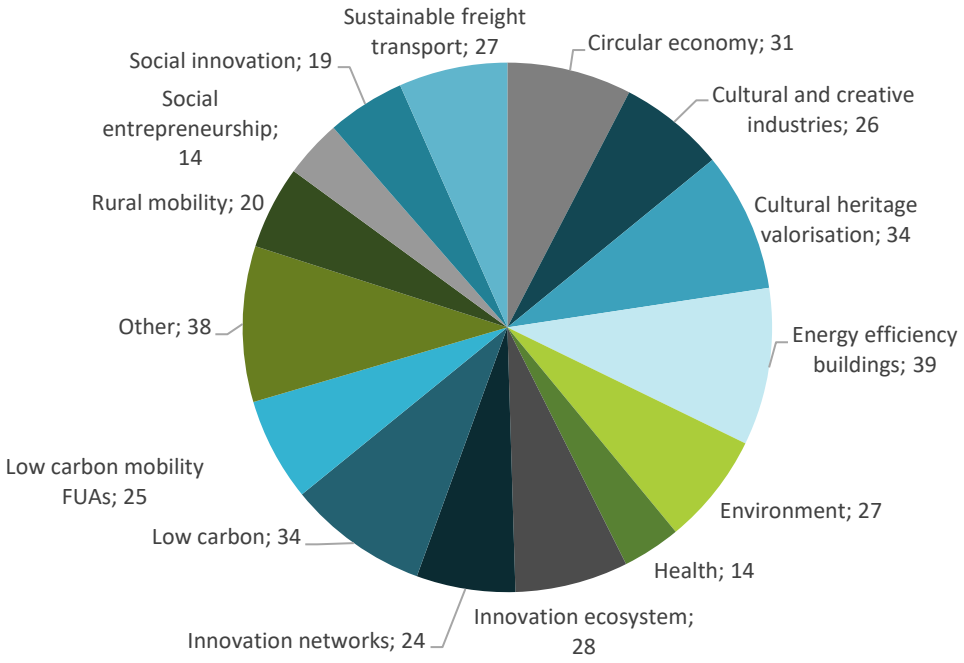
Source: JS data, own calculations

Figure 27 shows the average number of outputs per projects for the thematic clusters. Among these projects, the highest number of outputs per project was produced by the Energy efficiency buildings cluster. Here, the projects on average generated 38 outputs. The average project in the Low carbon, Cultural heritage valorisation, Circular economy, produced between 30 to 34 outputs each. By contrast the average project in the Rural mobility, Social innovation, Health and Social entrepreneurship thematic cluster had between 14 and 20 outputs, respectively.

[68] Except for projects in the health cluster that had no training outputs.

Notably, these averages do not reflect differences in "productivity" of projects by clusters. Rather, they are the expression of the different characteristics of the clusters and the projects within them that cause such differences in the average number of outputs.

FIGURE 27 NUMBER OF OUTPUTS PER PROJECT AND THEMATIC CLUSTER



Source: JS data, own calculations
Note: The total number of outputs in this graph is 3747, as some projects are part of more than one thematic cluster

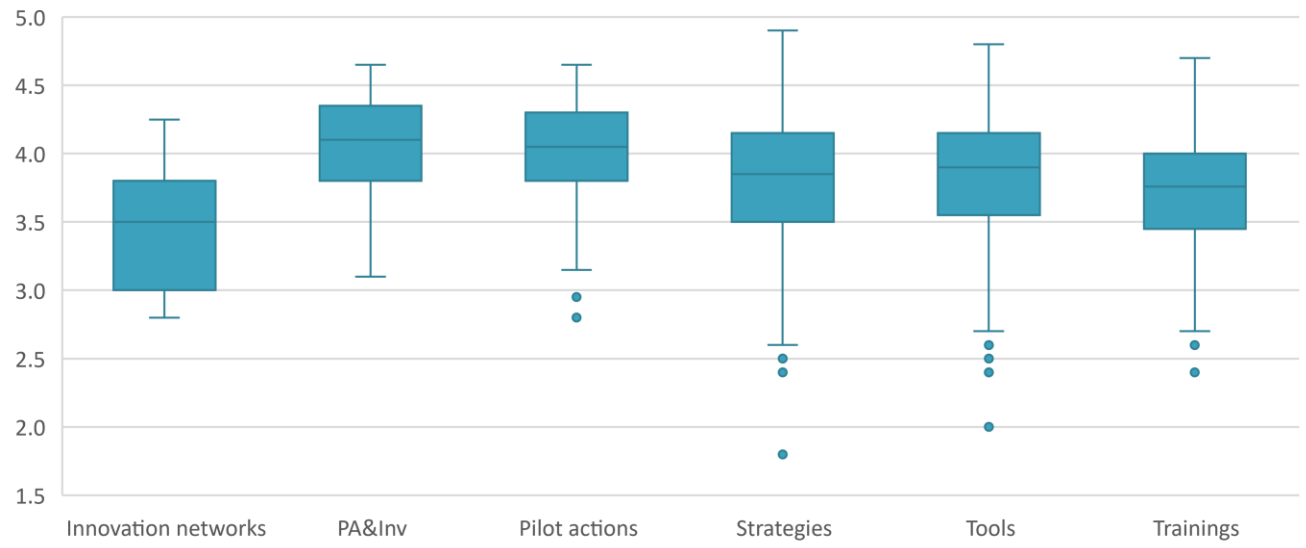
Effectiveness

Turning to the perceived effectiveness of the project outputs, this has been determined by expert assessments (see methodology in Annex 4). Thereby, the JS project managers rated the projects they themselves were working on, while consortium experts rated all outputs. Therefore, the effectiveness ratings contain a strong element of personal judgement, though the instructions provided for the rating process helped to mitigate any bias out of differences in personal opinions. Still, when interpreting the results, the reader needs to be aware that the ratings are based on expert judgement, which in this case is the best available data as there is no "objectively" measurable data available to measure the outputs' effectiveness.

The results of the rating process are shown in Figure 28 for the aggregated outputs. They provide the following insights:

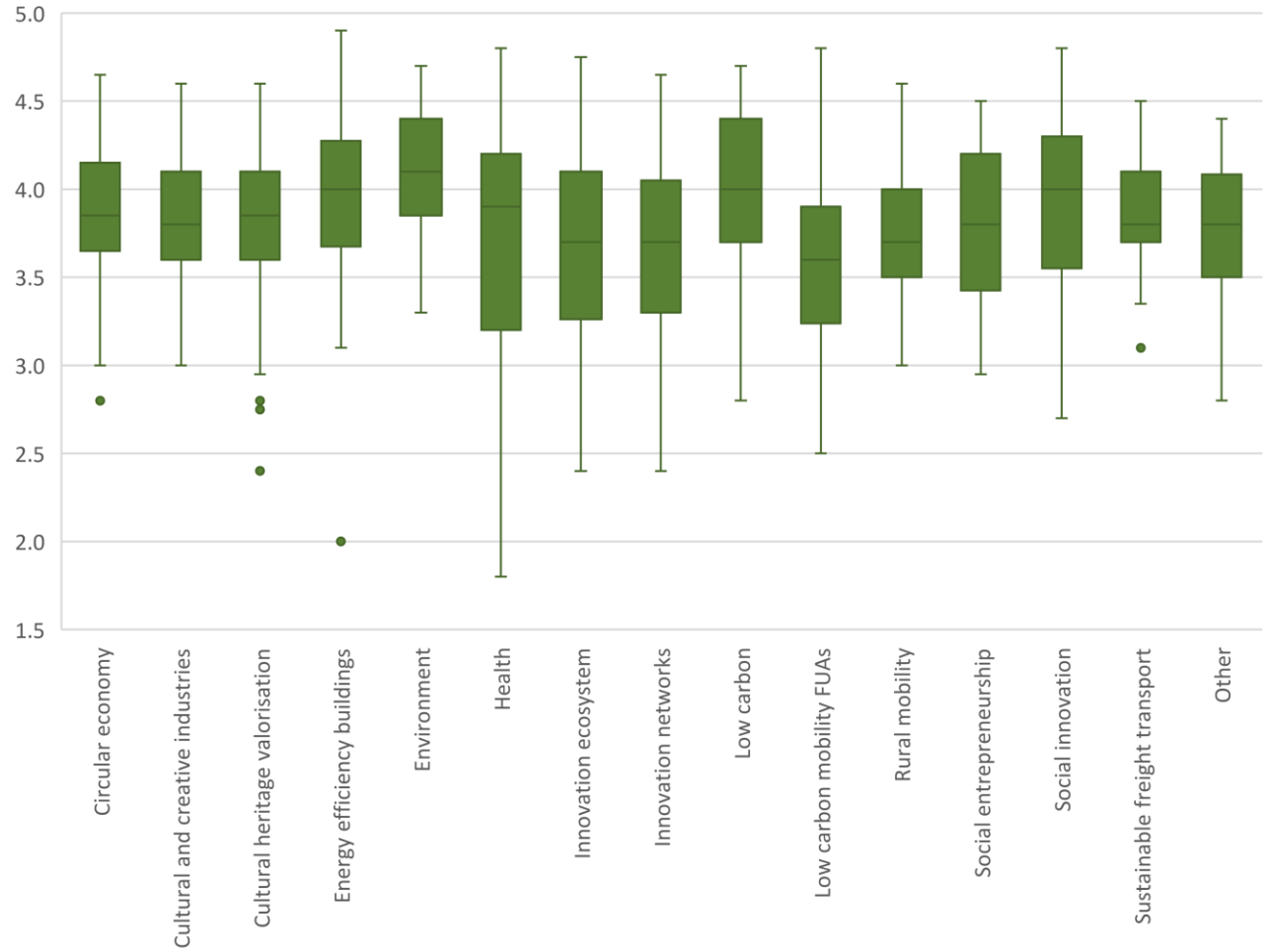
- Pilot actions in combination with investments or without investments are considered to be the most effective type of output.
- Strategies and tools are considered slightly less effective to promote the goals of the Interreg CE programmes than pilot actions. Trainings have, on average, a - though only slightly - lower effectiveness than the outputs above.
- Innovation networks are considered the outputs with the - on average- lowest effectiveness.
- Almost all outputs have an effectiveness rating of three or above (on a scale from 0 – worst, to 5 – best). This indicates that these outputs produced a satisfactory level of effectiveness, with their main difference being whether they were highly or "only" satisfactory.

FIGURE 28 AVERAGE EFFECTIVENESS RATING



Source: JS data, own calculations

FIGURE 29 AVERAGE EFFECTIVENESS RATING, BY THEMATIC CLUSTER



Source: JS data, own calculations

Looking at the output effectiveness by thematic clusters the following stylized effects can be detected (see Figure 29).

- The median effectiveness rating for all thematic clusters ranges between 3.6 and 4.1. That is, on average the projects produced outputs with a high degree of effectiveness.
- Environment, Low carbon, Energy efficiency and Social innovation outputs had, on average the highest effectiveness scores, while Low carbon mobility in FUAs, Innovation networks, Innovation ecosystems and Rural mobility outputs were, on average, on the lower end of effectiveness ratings.
- All thematic clusters are characterised with a strong variation in output effectiveness. That is, all thematic clusters produced very effective but also comparatively less effective outputs.

Costs

Turning to the cost measure, this is defined as ERDF expenditures by output. This definition takes into account that project work-packages may produce more than one output of the same type. In these cases unit costs are calculated, i.e. the average ERDF expenditure for one unit of output.

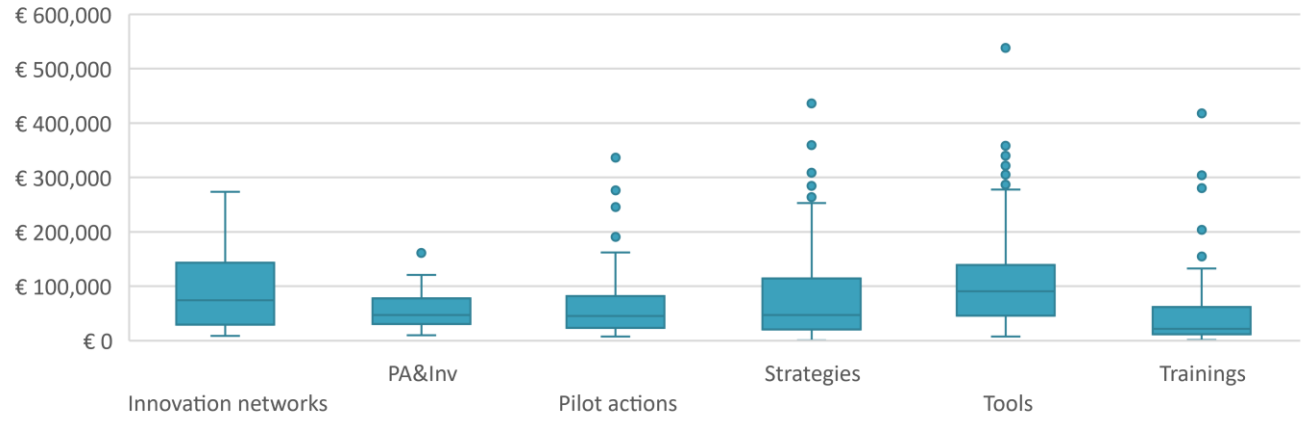
The distribution of costs across outputs is illustrated in Figure 30 and across thematic clusters in Figure 31. Both figures use box-and-whisker plots. They show the following facts:

- Trainings have the lowest expenditures, their median expenditure is around 22 thousand EUR, hence 50 percent of all trainings costed less than this amount. Nevertheless there are also outliers, like for example one training output in the Social(i)Makers project with ERDF expenditures over 418 thousand EUR or the YouInHerit project (over 304 thousand EUR) and the INNO-WISEs project (over 280 thousand EUR)[69].
- Pilot actions with and without investments also tend to have low unit costs. The median expenditure for pilot actions with investments was slightly less than 47 thousand EUR, and for pilot action without investment around 45 thousand EUR. While the former output shows no outliers, there are some for the pure pilot actions, such as in the FEEDSCHOOLS project (336 thousand EUR) or the SURFACE (275 thousand) and the ROSIE (245 thousand) project.
- Strategies, on average, have a middle position in terms of expenditures. The median expenditure is slightly more than 60 thousand EUR. However there is a wide upward variation culminating in high expenditure strategies such as those from the ECRR project (436 thousand EUR) or the SMART_watch strategy output (360 thousand EUR).
- Innovation networks and tools are the outputs with the, on average, highest expenditures per output unit. The median innovation network is around 74 thousand EUR, while the median tool costs even more than 90 thousand EUR. Both show a high upward variability, i.e. more than 25% of the innovation networks costed 143 thousand EUR; for tools the respective number is 139 thousand EUR. Thereby, tools feature the single most expensive output, i.e. the AIR TRITIA tool for almost 538 thousand EUR.
- From a cluster perspective, Energy efficiency buildings, Low carbon, Circular economy or Cultural heritage valorisation project outputs tend to require less funds than for other clusters, the median expenditure in those clusters is 30 thousand and 43 thousand EUR respectively. On average outputs in the Health and Social entrepreneurship cluster have the highest costs, i.e. 87 thousand and 118 thousand EUR median expenditures, respectively.

[69] These numbers may overestimate the "true" costs of providing the respective trainings, as the respective workpackages contain e.g. preparatory work for the trainings, and methodological developments that are included in the total expenditures. However, from the available data these elements cannot be distinguished from each other, so only the total sum is available. To get a clearer view of the actual costs of the outputs it is thus recommended to provide a more detailed breakdown of workpackage contents and the related costs. Although this is at odds with the desire to simplify procedures for the project participants, a more accurate data would allow for a better ex-post analysis of the projects' and programme's outputs, their effectiveness, the existence of potential cost outliers and the identification of the reasons for this.

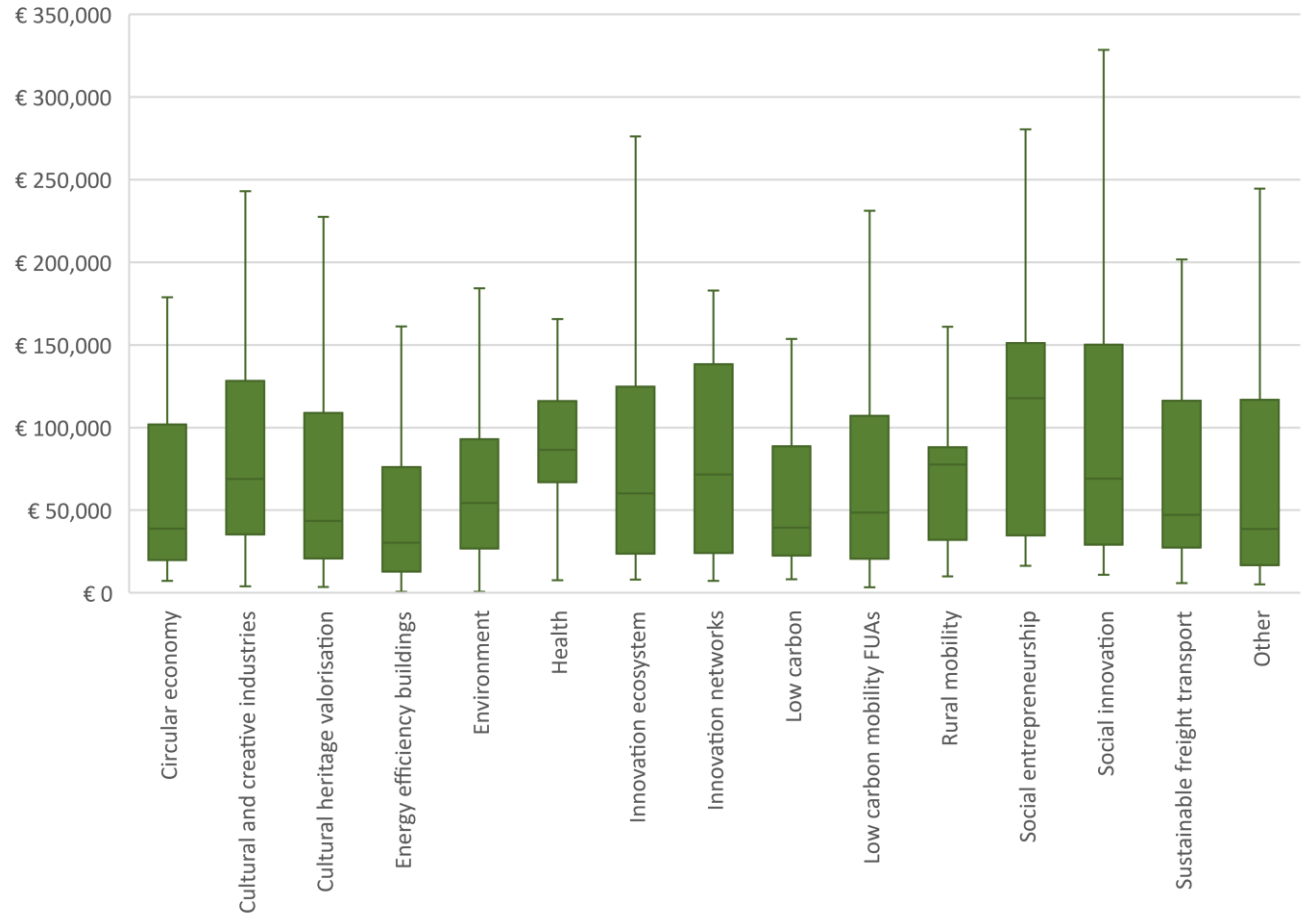
- All clusters have a high variability in costs per output, i.e. as both very low cost and very high cost outputs are produced in each cluster.

FIGURE 30 DISTRIBUTION OF EXPENDITURES, BY OUTPUT TYPES



Source: JS data, own calculations

FIGURE 31 DISTRIBUTION OF EXPENDITURES, BY THEMATIC CLUSTER



Source: JS data, own calculations

Cost-effectiveness

The results of the analysis indicate that **pilot actions** with and without investments seem to be more cost-effective than other outputs, as both have high score for effectiveness and comparatively low unit costs. Strategies are rated slightly below, as their effectiveness is rated lower, but their costs are approximately comparable to that of pilot actions. Trainings are more difficult to judge: on the one hand, their effectiveness is rated lower than that of other outputs, yet their unit costs are - on average – the lowest. Innovation networks have - on average - the lowest performance in terms of effectiveness rating, while in terms of costs they are more on the expensive side. Thus, they seem to be less attractive outputs than others.

Notably, all these points are *trends* rather than *stylized facts*. For all outputs - pilot actions, trainings, tools etc.-, there are highly effective and less effective as well as highly expensive and less expensive examples. Therefore, there is no definite judgement as to which outputs can be recommended or advised against. Indeed, the immediate effects of outputs are much less tangible for trainings, networks, strategies or tools than for pilot actions. Yet, they may have **strong longer run effects** that are not yet visible. For example, it may be sufficient to train one person that uses this knowledge to move things at larger scale. Similarly, strategies may enter local, regional or even national planning considerations, but because of the inertia of political processes this may materialise only (long) after project completion (cf. Annex 4 for more detailed explanations on the results, caveats and key lessons learnt from the CEA).

3.4.2. PROJECT-SPECIFIC RESULTS

The following section lists project features that were observed to be an important part for the respective project's success. Compared to the above points they are more specific in nature and were thus observed for projects in specific thematic areas. However, this does not exclude that a) in many cases these features were observed for projects of two or more thematic areas and b) these features can be applied by projects in other thematic areas as well. The features are briefly described below.

First, projects **developing skills for the market** showed to be highly successful. Thus, such projects enabled local policy-makers and stakeholders to bridge the gap between economic and social development needs and the economic viability of certain policy measures, thus making them sustainable in the long term. Examples come from the social, cultural or innovation thematic areas. As far as the social area is concerned Social(i)Makers contributed to building up social innovation operational skills and entrepreneurial competences for social and commercial SMEs, start-ups and companies, social investors, public authorities and NGOs. In the cultural area the RESTAURA project increased the public sector's capacity to sustainably run and use cultural heritage sites via Public-Private-Partnership schemes.

Regarding innovation, the KETGATE project supported SMEs to get access to and use Key Enabling Technologies, thereby increasing their and the respective regions' competitiveness. Other projects **linked policy-making to practice**, particularly in areas where this was not straightforward and highly complex such as innovation. A good example for this is the SMART_watch project that created links between Regional Innovation Strategies, their monitoring practices and the actual needs of smart specialisations' end-users. Related to this are projects that strengthened the cooperation of various stakeholders in order to tackle certain challenges that otherwise could not be easily dealt with. One such example is the BIOCOMPACK-CE project that involved stakeholders at all levels to promote ecologically sustainable paper-bioplastics packaging solutions.

Other successful projects provided **integrated solutions to complex challenges**. Such projects managed to integrate a multitude of factors that characterise the respective challenge into a single output framework and thus contributed significantly to address those challenges. For example, in transport related areas the LOW-CARB project supported integrated and low-carbon mobility solutions for public transport in Central Europe and thus helped to make regional transport networks in FUAs more CO2-efficient. Similarly regarding environmental topics, the GreenerSites project managed to reconcile the need to rehabilitate brownfield sites, increase the environmental quality and strengthen economic development in CE FUAs.

In a similar manner, other projects contributed to regional/local policy-making by **emphasising cross-over relationships**, i.e. by combining and providing solutions to two or more challenges simultaneously. As an

illustration, the PROLINE-CE project introduced integrated land use management approaches to improve the protection of drinking water resources, on the one hand, and simultaneously protect against floods/droughts, on the other.

Some successful projects are also characterised by their **introduction of highly innovative actions or methods** to local and regional policy-making. Thus, they provided local and regional stakeholders with solutions that usually have a high technological barrier and therefore need specialised knowledge to get access to. There are a number of examples for this, like the FIRECE project that supported low-carbon transition by introducing innovative financial instruments to help putting the Regional Energy Plans into practice. Likewise, the GeoPLASMA-CE project supported the use of shallow geothermal energy for heating and cooling, while the AMIIGA project inter alia used modelling and statistical methods to tackle the groundwater contamination challenge at FUA level in CE. In TEACHER-CE, project partners employed the specialised knowledge of the industry stakeholders in order to develop a set of indicators that are meant to effectively aid various types of decision-makers, practitioners and policy-makers whose work focuses on climate proof design of water(-related) infrastructure or land use planning.

Last but not least, there are also important examples of successful projects that supported **equal opportunities** in CE. One of these projects is COME-IN! that contributed to equal opportunities by making cultural heritage sites and experiences accessible to disadvantaged groups of the society, or Arrival Regions that aimed to improve the integration of non-EU nationals into CE communities.

3.5. ADDITIONAL EVALUATION QUESTIONS

3.5.1. AEQ1. SYNERGETIC AND MULTIPLICATION EFFECTS

The evaluation showed that projects succeeded in securing additional funding for ensuring the continuation of activities, for expanding the work done to other regions, reaching new target groups and applying the results in related topics. The funds leveraged amount to 2,7 bn EUR (525% of the values forecasted by projects in their application forms). However, when removing outliers, both total value (around 990 mil. EUR) and progress towards forecasted values (as set in the AF) is much smaller, yet significant (i.e. 192% - as outlined in Section 3.3.2).

TABLE 9 FUNDS LEVERAGED, PROJECTS UNTIL CUT-OFF DATE

	Amount of funds leveraged based on project achievements	No. of completed projects until cut-off date	Average amount of funds leveraged per project
SO1.1	125,482,728	25	5,019,309
SO1.2	68,045,579	20	3,402,279
SO2.1	139,709,967	9	15,523,330
SO2.2	186,866,515	9	20,762,946
SO2.3	183,402,374	7	26,200,339
SO3.1	32,743,026	15	2,182,868
SO3.2	92,055,681	24	3,835,653
SO3.3	44,315,257	10	4,431,526
SO4.1	82,984,800	9	9,220,533

SO4.2 [70]	33,013,205	7	4,716,172
TOTAL OVER ALL SOs	**988,619,131**	**135**	**7,323,105**

Source: Own calculations based on Interreg CE data provided by the JS on 135 projects completed until cut-off date 17th of April 2023. Achievements are expected to be even higher when considering outputs from the 3 missing projects.

There are however significant differences across Thematic Priorities, SOs and even projects within SOs in terms of funds leverage:

- Innovation (SO 1.1 and SO 1.2) projects leveraged between 3.4 and 5.1 million EUR on average,
- Environment SO 3.1 projects focusing on natural heritage leveraged 2.1 million EUR on average,
- Culture (SO 3.2) and Environment SO 3.3 projects leveraged between 3.8 and 4.4 million EUR on average,
- Low-Carbon SO 2.1, SO 2.2 and 2.3 projects leveraged between 15 and 26 million EUR on average,
- Transport SO 4.1 projects leveraged around 4.4 million EUR on average, and
- Transport SO 4.2 projects leveraged 250 million EUR on average, with one project (out of seven) reporting no leverage of fund and one outlying project (TRANSTRITIA) reporting a 1.7 billion EUR of funds leveraged, thereby significantly driving the SO- and programme-averages upwards.

Out of the 135 projects analysed, 37 reported funds leveraged beyond the AF targets, most of them in SOs 1.1., 1.2. and 3.2. At the same time, 8 projects did not report any additional funds leveraged (Focus IN CD, INNO-WISEs, ChemMultimodal, ENTeR, ECOS4IN, InNow, ProsperAMnet, CerDee). Compared to TRANSTRITIA, these results show great variation across projects. According to the documentary analysis, most projects rely on additional funding sources at the local or national level, as well as on other EU programmes (e.g. LIFE, other Interreg programmes).

Documentary analysis showed that **most projects built upon the previous experience and knowledge** acquired by the partners, in different contexts (for example AMIIGA, which built on and capitalized on the results of previous projects, especially MAGIC and FOKS). However, evidence suggests that within Interreg CE, beneficiaries have been more inclined to develop new tools, rather than to replicate the results of other projects. This occurred especially within the Environment projects, due to potential constraints of political, regulatory and financial nature, as well as the overall contextual governance disparities that impede the capitalization of results.

Overall, projects made use of **synergies and coordination** with other initiatives, involving a wide range of stakeholders and sharing of project learning and results. The collaborations helped the organizations achieving common goals and projects seemed to build on each other's success and learning, resulting in improved outcomes and increased impact. Moreover, the analysis shows that synergies helped in increasing the visibility of the interventions, facilitating the association with important experts and key thematic networks.

Evidence suggests that most projects are implemented in **synergy** with other Interreg and EU-level programmes, such as LIFE, Horizon or Urbact. Such an example is the case of the SYNERGY project, which linked up with the Knowledge Transfer Upper Rhine (KTUR), Interreg V Upper Rhine and several Interreg CE projects. Another example is the FORGETHERITAGE project, which worked together with ARCHES, CLIC, EUCANET, I-Media-Cities, Open Heritage, REACH, ROCK, RURITAGE to provide inputs into the concept for the White paper and recommendation to the EU Urban Agenda partnership on culture and cultural heritage, drafter by ICLEI & EUROCITIES. The ECOS4IN project enabled knowledge sharing with other Interreg CE projects, including Boost4BSO, helping in defining services for the Industry 4.0 ecosystem. The project results were used to prepare

[70] Without TRANSTRITIA (i.e. 1.7 bn EUR), the average funds leveraged across all remaining 135 projects for which data was available would amount to **7.3 million EUR**. In that context, low-carbon projects (SOs 2.1, 2.2 and 2.3) and passenger transport projects (SO 4.1) are demonstrating above-average fund leverage capacity.

documents for utilizing different EC funds, and partners used the results to establish consortia for future international projects. Other projects were implemented in synergy with national funds (for example LUMAT).

Interreg CE projects financed under the 4th Call aimed to enhance synergetic effects within the programme itself as this call was *"devoted to the exploitation of outputs and results being delivered by projects funded by the programme within the first two calls"*[71]. Call 4 case studies show that projects managed to bring together complementary thematic information, organizations, and results developed separately in previous projects. These allowed for the elaboration and distribution of several materials (reports, databases, handbooks, strategies, etc.) to stakeholders, as well as the development of subsequent support tools and pilot actions. For example, the CERUSI project managed to develop social innovation and entrepreneurship skills through various initiatives, and capitalized on previous projects to support rural communities in developing their business ideas in a socially innovative way. The project successfully targeted citizens and local innovators, and the involvement of Local Action Groups led to increased trust and interest from participants. Another case study - TARGET-CE - used technical and non-technical solutions from eight previous international projects, delivering a Onceplace platform, which collects best practices, databases of experts, strategies, action plans, tools, educational material, etc. to support public authorities, citizens, and energy planners.

From a thematic perspective, examples of synergetic effects are numerous, for instance:

- In **Innovation**, 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, 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 linked up with the Knowledge Transfer Upper Rhine (KTUR), Interreg V Upper Rhine and several Interreg Central Europe projects.
- In **Low-Carbon**, examples include Dynamic Light, where cooperation with the Horizon2020 Project "Premium Light Pro" and with the Nature Park authority Nossentiner Schwinzer Heide in Germany were established. TOGETHER cooperated with other ETC initiatives and projects as well as Horizon projects. Similar experience is observed for other projects, including ENERGY@SCHOOL, BOOSTEE-CE, CE-HEAT and others. Programme stakeholders highlighted the potential for synergies between Low-Carbon and other Interreg priorities (e.g. Transport), as well as other EU-funded programmes and initiatives (e.g. circular economy).
- In **Environment**, most examples show that partners from the current projects went on to develop new ones. This is the case of RAINMAN, FramWat, PROLINE-CE and SUSTREE project partners, who implemented TEACHER-CE project, also financed through Interreg CE.
- In **Culture**, the Guidelines and Handbook developed in the COME-IN! project were used as a base for increasing accessibility of the UNESCO sites (USEFALL project, Italy-Croatia CBC Programme). Additionally, the project results were capitalised in the Horizon project ARCHES. Furthermore, the ForgetHeritage worked together with ARCHES, CLIC, I-Media-Cities, Open Heritage, REACH, ROCK, RURITAGE (all funded through Horizon), EUCANET (co-financed by Europe for Citizens Programme), to provide inputs into the concept for the White paper and recommendation to the EU Urban Agenda partnership on culture and cultural heritage, drafted by ICLEI & EUROCITIES.
- In **Transport**, examples of synergies are to be found between CONNECT2CE, TRANS-BORDERS and PERIPHERAL ACCESS projects. These were mainly facilitated by the Programme authorities and encouraged exchange of experience between the partners.

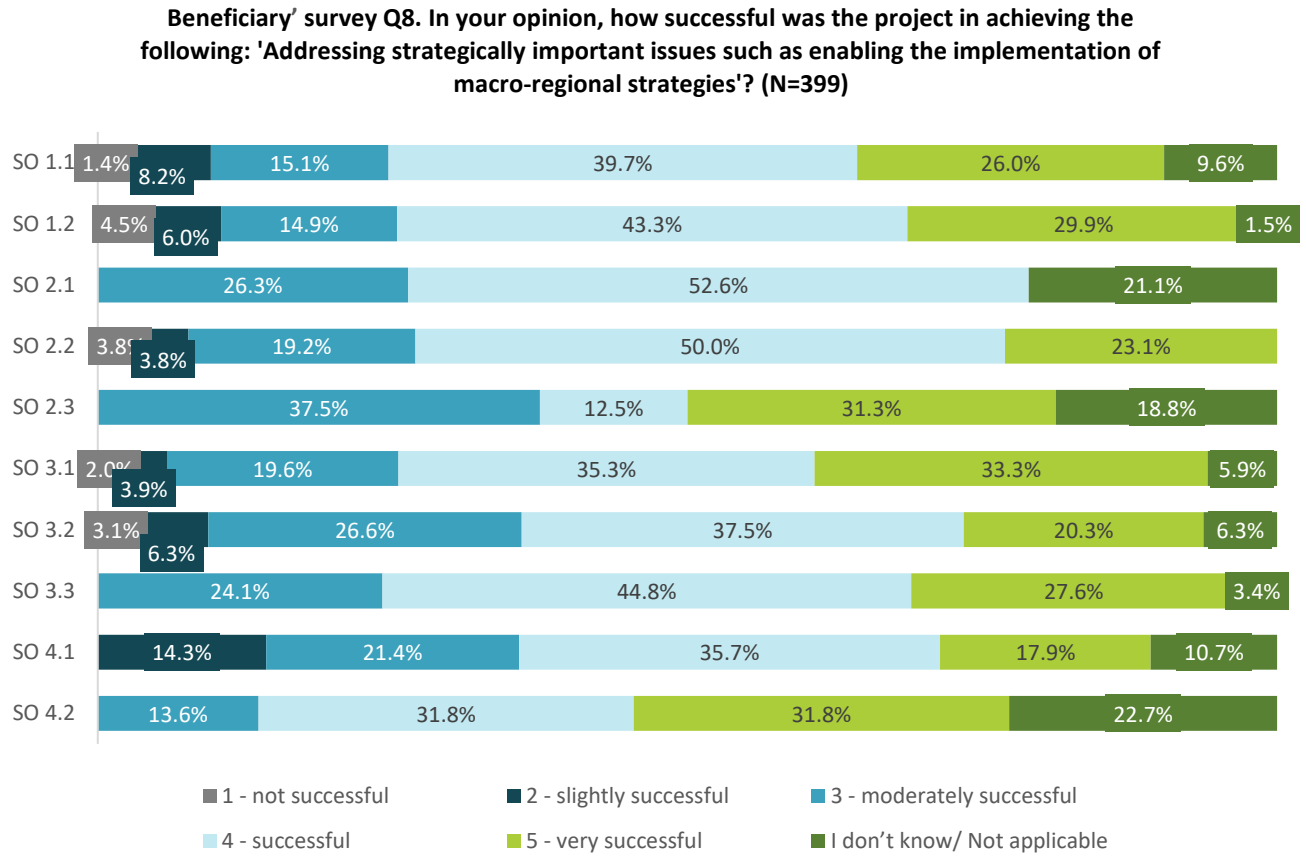
Documentary analysis and interviews showed that Interreg CE projects are generally **aligned with local and regional strategies**. Evidence suggests that most projects are implemented in synergy with other European,

[71] Interreg CE fourth call documentation, 4 March 2019.

national and regional initiatives, including, for example, Horizon, or relevant Macro-Regional Strategies, with particular reference to EUSALP, EUSAIR and EUSDR. Furthermore, interactions and synergies were activated with projects funded from Interreg Adrion[72], Interreg Italy-Slovenia or mainstream projects funded through the Cohesion Policy (for example the Szczecin Metropolitan Railway[73], in Poland).

On average, the beneficiary survey confirmed that the projects were successful (39.2%) in addressing strategically important problems, these having a positive role in enabling the implementation of macro-regional strategies from the perspective of the beneficiaries. The most effective SOs in this regard were 1.2, 2.2 and 3.3 (over 70% successful and very successful).

FIGURE 32 BENEFICIARY' FEEDBACK ON PROJECTS' SUCCESS IN ADDRESSING STRATEGICALLY IMPORTANT ISSUES AND ENABLING THE IMPLEMENTATION OF MACRO-REGIONAL STRATEGIES



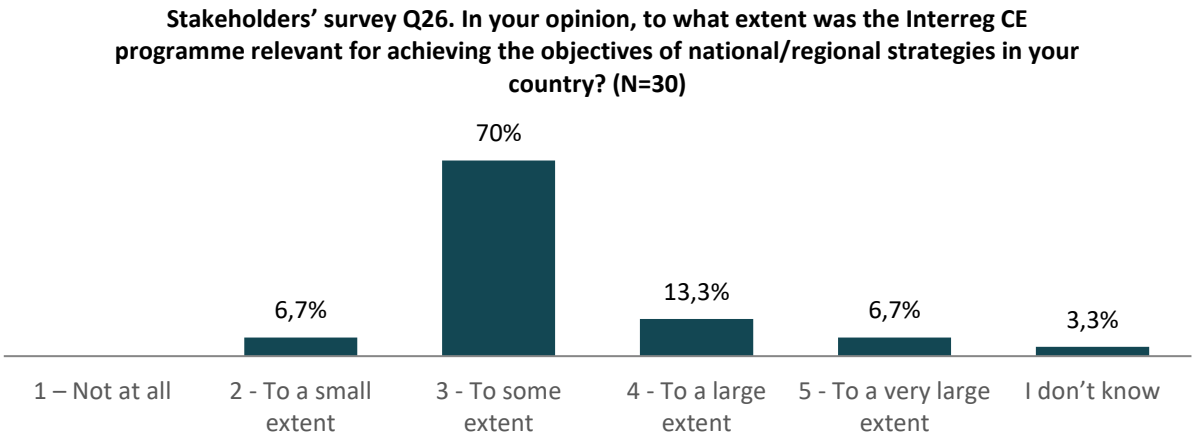
Survey targeting project beneficiaries

The stakeholders' survey confirmed that the Programme has contributed to some extent to achieving objectives of national or regional (sub-national) strategies (Figure 33), for example, by using the outputs produced in projects to update regional policies and programming (INDUCULT2.0, LUMAT).

[72] https://www.adrioninterreg.eu/

[73] (2019. April 2). European Commission announces four-billion-euro infrastructure package, much of it destined for emerging Europe. *Emerging Europe Staff*. https://emerging-europe.com/news/european-commission-four-billion-euro-infrastructure-package-much-of-it-destined-for-emerging-europe/

FIGURE 33 STAKEHOLDERS' FEEDBACK ON THE PROGRAMME'S CONTRIBUTION TO ACHIEVING THE OBJECTIVES OF NATIONAL/REGIONAL STRATEGIES



Source: Survey targeting Programme stakeholders

In general, the fruitful cross-border cooperation and the developed synergies helped produce consistent **spillover effects.** Such effects emerged since the projects enabled the stakeholders with the knowledge, capacity and resources needed to replicate the developed solutions or actions in areas and countries outside the project regions, where similar issues have been found. Such cases of projects being expanded to other areas than initially planned (e.g. policy uptake across regional borders), are presented below**.** For example, TRANS³NET project partners 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. Alignment with local and regional strategies is assessed during project appraisal. In TEACHER-CE project, the effects expanded not only geographically, but also from a durable and lasting manner, as the assessment of the water management policy documents provided sustainable and lasting solutions. As a whole, the TEACHER-CE project enabled fruitful and lasting results which were also integrated in a strategy comprising a set of guidelines that are applicable for the entire CE region.

Many projects are highly relevant also for regions outside the Interreg CE area. For example, the results of the BHENEFIT project were transferred to stakeholders in the Western Balkans region and used to train professionals dealing with planning and management of historical built areas, even though no project partner was located in the region. Concepts, data and models developed in the SUSTREE project were used within the Interreg Danube project REFOCUS, and thus, SUSTREE results will be applied outside of the CE region.

Multiple examples also confirm that projects have been **successful in generating other partnerships** or **cooperation contexts**. Such is the case of the SMART_WATCH project, whose results were passed on to several institutions linked to the Baltic Sea Region, the Interreg ADRION Programme and S3 Platform. Another example is that of the COME-IN! project, where the Guidelines and Handbook developed as part of the project was used as a base for increasing accessibility of the UNESCO sites (USEFALL project, Italy-Croatia Cross Border Cooperation Programme). The COME-IN! partnership coordinated with the European Disability Forum and developed points for common contribution in consultations for new Strategy for the rights of persons with disabilities 2021-2030. Additionally, the project results were capitalized upon in the Horizon project ARCHES.

Securing the continuation of activities and capitalisation of results has been strongly promoted by the CP, through the Application Manuals of Calls 1 and 2 and through Calls 3 and 4. The generation of new partnerships and cooperation opportunities is strongly confirmed (over 70%) by beneficiaries in all SOs, except for SO2.3., according to the survey. The respondents highlighted various partnerships and cooperation contexts such as partnerships with SMEs, cooperation with crowdfunding actors, and cross-sectoral cooperation opportunities. In general, the programme helped partners in exploring opportunities for further cooperation, finding partners

for potential future projects and strengthening their cooperation with local stakeholders and community members.

Evidence gathered during the evaluation nonetheless points to the observation that **more could be done** in terms of supporting synergies and multiplication effects. Several interviewees pointed out that Interreg CE projects often deliver locally (e.g. through pilot actions), though widely useful results that could be taken into consideration when national strategies and action plans are developed. That is why when the projects are over, they are "forgotten" and people do not use those results anymore, unless another similar project is implemented.

At the same time, stakeholders indicated that greater synergies could be ensured between different EU-funded programmes which have a territorial overlap, by strengthening and formalising information exchange between the programme authorities, organising joint events, facilitating knowledge sharing between projects, and capitalising on the knowledge and experience of entities which participate in more than one programme. Similar achievements could be encouraged between Interreg CE and national/ mainstream programmes, particularly with the support of NCPs, but also with the support of relevant stakeholders, including, for example members of the European Parliament.

Some beneficiaries pointed out that while leveraging additional funds or achieving synergies with other initiatives is important, these objectives are secondary for their projects.

The evaluation validated the following assumptions:

(1) Transnational cooperation enabled regions and cities to jointly tackle challenges that go beyond borders

(2) Implementation mechanisms were able to trigger multiplication and synergetic effects / spillovers / capitalization/ leverage effects

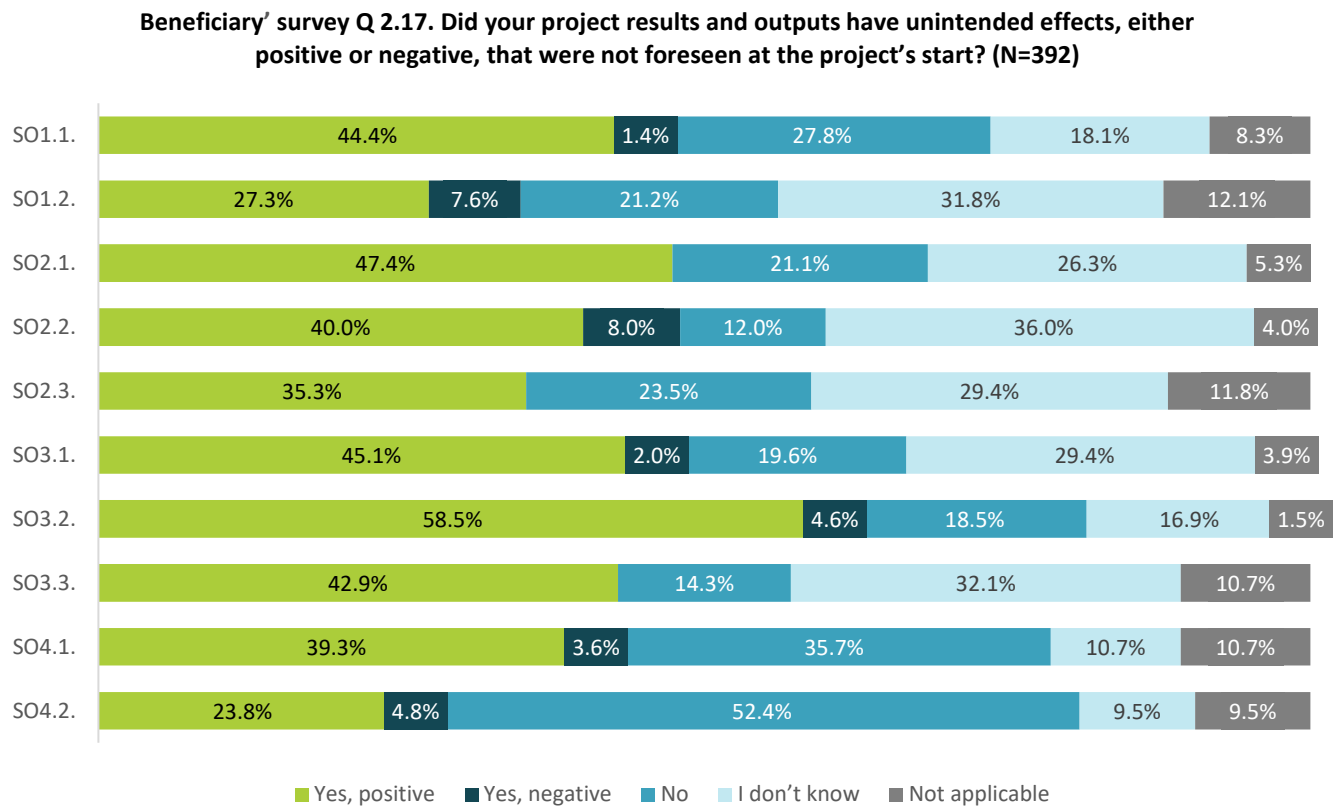
3.5.2. AEQ2. UNINTENDED EFFECTS

Unintended effects were explored through document analysis, interviews and the surveys carried out as part of the evaluation process. Findings were then validated during the focus groups with key stakeholders.

The initial review of documents showed that no unintended effects or risks which might lead to unintended effects have been anticipated at programming stage. Beneficiary survey results show that experiences regarding the identification of possible unintended effects are very varied. Beneficiaries under SO 2.1, SO 3.2 and SO 4.1 mostly consider that their interventions produced unintended effects, either positive or negative. On the other hand, those in Innovation, as well as in SOs 2.3, 3.3 and 4.2 rather indicate that the projects either had no unintended effects or are not aware of any. In general, interviews confirm the results of the survey, concrete unintended effects are difficult to identify.

However, where they occurred, unintended effects were mostly positive. Moreover, the negative unintended effects were not identified in all SOs, as it is the case of SOs 3.3, 2.3, or 2.1.

FIGURE 34 BENEFICIARY' FEEDBACK ON THE UNINTENDED EFFECTS OF THE PROJECT RESULTS AND OUTPUTS



Source: Survey targeting project beneficiaries

- For **Innovation**, almost half of respondents in SO1.1. (44.4%) consider that there were positive unintended effects, mentioning cooperation with SMEs, or implementing further initiatives, as example. For SO1.2, this opinion is shared by only 27.3% of respondents. Some examples provided refer to increased technological skills, obtaining specific certifications by partners, developing strong cooperation networks, or enabling partners to take a leading role in further projects. On average, approx. 36% of respondents are unaware of unintended effects, while nearly 25% consider that no unintended effects were produced by their projects. On the other hand, negative effects were reported more in SO 1.2 (7.6%), compared to SO 1.1 (1.4%). Some reasons for the negative unintended effects include the Covid-19 outbreak, or the fact that "[partners] needed too much time to understand the opportunities of the project (too [little] administrative understanding by few partners, who did not exploit full potential offered)".
- For **Low carbon**, positive effects are indicated by 47.4% of respondents (SO2.1.), and between 35-40% for SO2.2. and SO2.3. In case of SO2.2., only 8% of respondents indicated that there were negative unintended effects. This overall positive opinion is reflected in a few examples: "It was not foreseen that some project outputs will be used to launch a new innovative programme", or "Interest in waste heat utilization increased at all relevant stakeholders during project implementation - perfect timing."
- For **Environment** SO 3.1, approx. 20% of respondents consider that there were no unintended effects, while even more mentioned that they are not aware of them (also 29.4%). Positive unintended effects are acknowledged also in 45.1% of responses, while only 2% respondents encountered negative unintended effects. Regarding the later, the examples provided by respondents indicate the high administrative burden of project implementation or the need for better coordination at the national level regarding brownfields regeneration. Other responses simply consider that the effects "were known and predictable". For SO 3.3, there were slightly less respondents who reported positive unintended effects (42.9%) as those who were not aware of them (32.1%). Another 14.3% believed that

there were no unintended effects at all. No respondent reported negative unintended effects. The unexpectedly high level of interest of the stakeholders was mentioned as a main positive result of the interventions in SO 3.3.

- Among all SOs, the most respondents who reported positive effects were under **Culture** SO 3.2 (58.5%). Only 18.5% of respondents reported no unintended effects. Some unintended effects mentioned indicate: "we took collaboration to the next level, from regional to cross-border or transnational [level]", or "further interest for the topic and invitations to participate in knowledge transfer". The identification of new target groups, or higher involvement and collaboration with public authorities in sustainable valorisation of cultural heritage, are also among the positive unintended effects highlighted.
- For the **Transport** Thematic Priority, 39.3% of respondents in SO 4.1 and 23.8% of respondents in SO 4.2 believe that projects had positive unintended effects, outlining the potential for further cooperation, additional funds leveraged, and the uptake of pilot actions into more concrete projects. However, SO 4.2 contains the highest number of respondents who consider that the projects had no unintended effects (52.4%).

3.5.3. AEQ3. CONTRIBUTION TO BETTER GOVERNANCE

Multi-level governance is one of the cross-cutting themes of the Cohesion Policy. According to the EU Territorial Agenda, *"Multi-level governance formats are required to manage different functional territories and to ensure balanced and coordinated contribution of local, regional, national and European actors in compliance with the principle of subsidiarity. This needs vertical and horizontal coordination between decision-making bodies at different levels and sector-related policies to secure consistency and synergy. "*

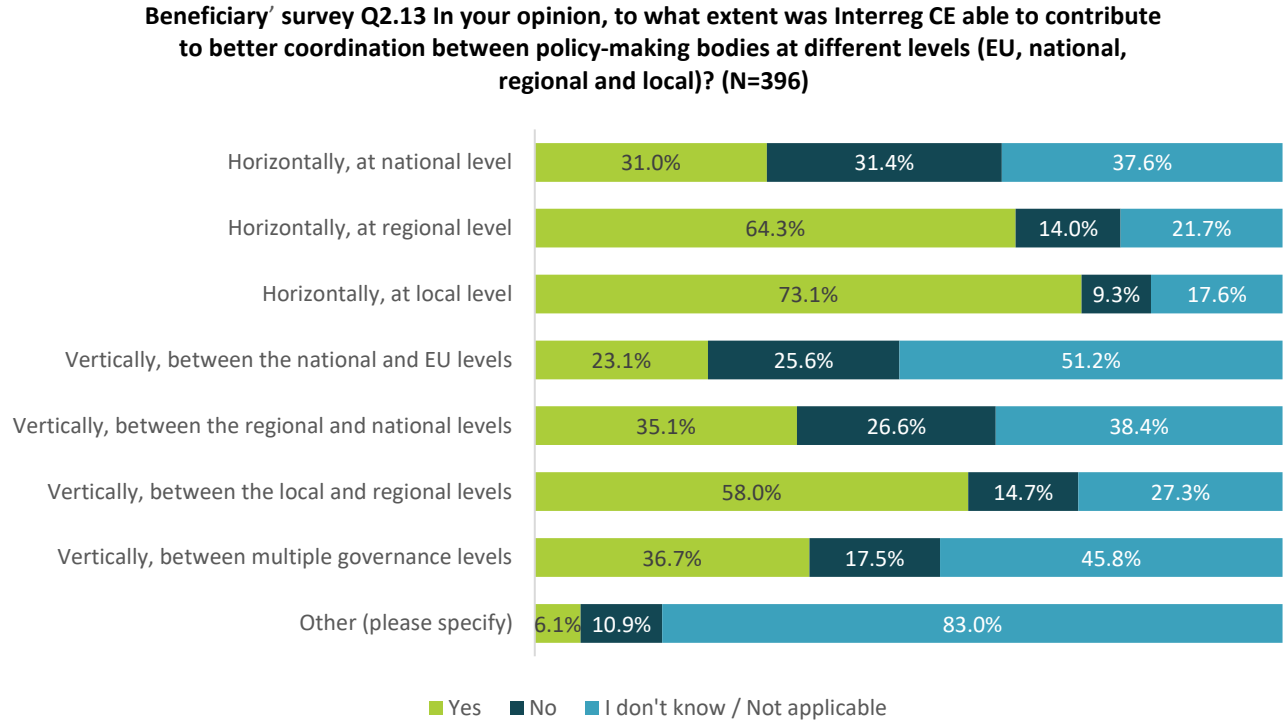
Multi-level governance is closely associated with the successful achievement of the cohesion goals, as it contributes to improve governance and build stronger institutional structures. Generally, multi-level governance implies that different actors, at EU, national, regional and local levels are involved in the EU policy implementation cycle. Multi-level governance is especially encouraged in urban development and regeneration policies.

Documentary analysis showed that **the design of the programme and of the call documents ensured the necessary framework for implementing/ mainstreaming/ testing different governance formats.** The programme allowed for fostering cooperation and exchange of experiences among regions, supporting place-based approaches and encouraging the involvement of local stakeholders in project development and implementation. While supporting place-based approaches, the programme also encouraged collaboration and coordination between actors at different levels, focusing on building local capacities and networks.

The programme contribution to a better governance was also achieved through promoting integrated territorial development, addressing common challenges and opportunities in a coordinated and comprehensive way and emphasizing the importance of cross-sectoral cooperation. The programme also supported functional urban areas (FUAs) are particularly conducive to enabling multi-level governance, as it was confirmed through the surveys, interviews and case-studies.

Findings from the survey (Figure 35) show that **most beneficiaries consider that projects contributed to enhancing horizontal cooperation, especially at local level (73.1%), but also at regional level (64.3%).** Strong contribution to vertical coordination between the local and regional levels (58.0%) was also reported by beneficiaries, reflecting the bottom-up design of Interreg CE projects.

FIGURE 35 BENEFICIARY' FEEDBACK ON THE EXTENTS INTERREG CE WAS ABLE TO CONTRIBUTE TO BETTER COORDINATION BETWEEN POLICY-MAKING BODIES AT DIFFERENT LEVELS



Source: Survey targeting project beneficiaries

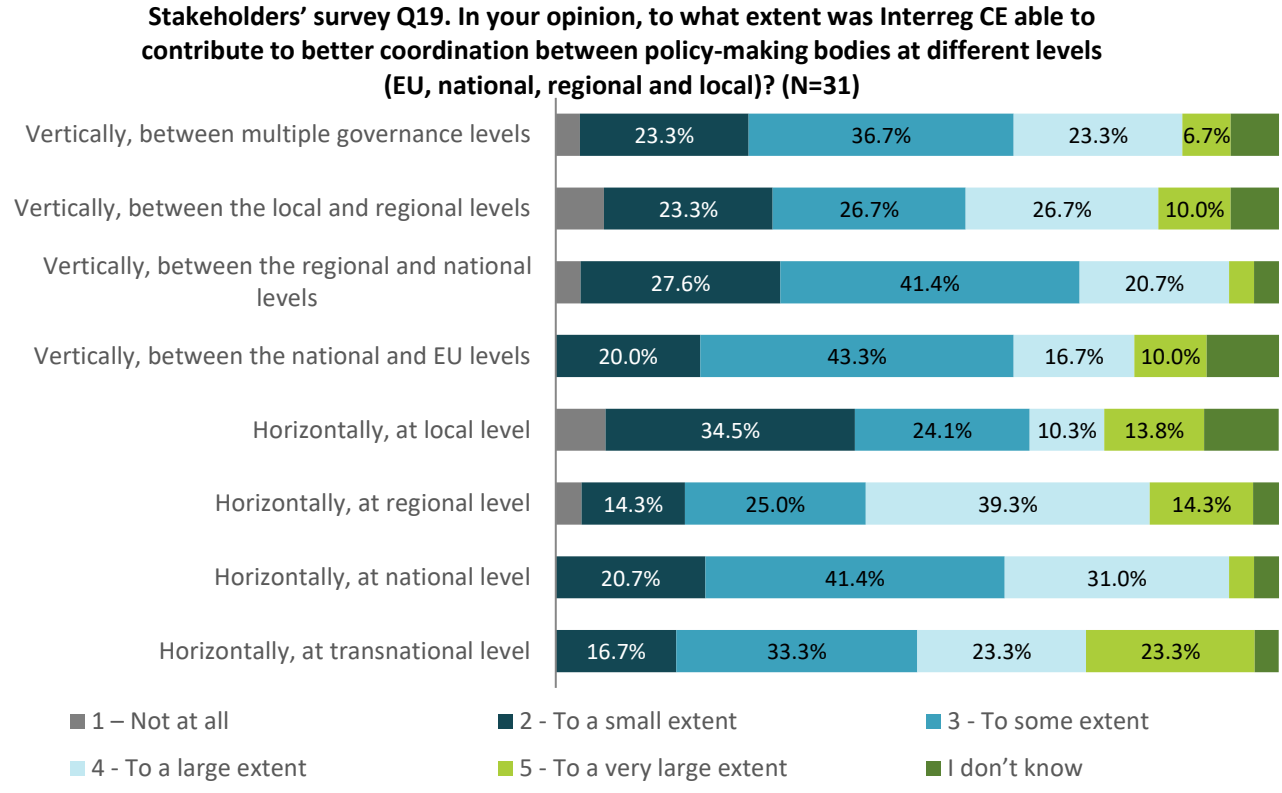
- For the **Innovation** Thematic Priority, horizontal coordination at local, regional and national level as well as vertical coordination between the local and regional levels is positively assessed by a majority of beneficiaries in SO 1.1. One of the main reasons for this positive impact on policy coordination both horizontally and vertically is likely to stem from the specific focus and good performance of SO 1.1 projects in strengthening the linkages (leading to coordination) between all actors of the innovation systems, including policymakers. This is notably illustrated by the example of one specific project: *"increased visibility of concrete interregional collaboration and motivated decision-making bodies for using similar models and concrete personal relationships created within the project"*. For SO 1.2 projects, only horizontal coordination at the local and regional levels was positively assessed by a majority of beneficiaries. This more limited impact on policy coordination is likely to be explained by the stronger focus of SO 1.2 on the private sector (entrepreneurs, market needs, etc.) in comparison to SO 1.1 on the public sector.
- For the **Low carbon** Thematic Priority, there is general consensus among beneficiaries that projects improved coordination between decision-making bodies at the local level, at the regional level, and between both levels. In this regard, the most noticeable was the improvement of horizontal cooperation at local level, with a vast majority of over 90% of respondents indicating this in SO 2.3. Horizontal coordination at the national level and vertical coordination between the national and EU levels is regarded as less improved than other levels, in line with the bottom-up approach (starting at the local and regional level) widely taken in Interreg CE projects.
- For the **Environment** Thematic Priority**,** horizontal coordination at the local and regional levels as well as vertical coordination between both levels was positively assessed by a majority of beneficiaries under SO 3.1, as in other themes. All the beneficiaries under SO 3.3 considered that their projects contributed .to improving horizontal coordination at the local level, with 78.9% also indicated improved horizontal cooperation at regional level. The cooperation between local and regional levels as well as cooperation across multiple governance levels, except between the national and EU levels, was also highlighted in

high numbers. This finding of a stronger impact on better governance is consistent with one of the project results indicated as mostly successful: improving coordination of policy-making for integrated environmental management in FUAs (see above).

- Likewise, a majority of respondents under SO 3.2 (**Culture**) agreed that their projects contributed to improving coordination at the local level, at the regional level and between these two levels. Coordination at and from the national level (to the EU level) was largely negatively assessed. This could be explained by the fact that cultural heritage and resources are locally anchored, while innovation and low-carbon issues (e.g. improving energy efficiency) are more widely relevant.
- For the **Transport** Thematic Priority, respondents under SO 4.1 were largely positive about improved coordination at the local level, at the regional level and between these two levels, a similar finding than in most other SOs. More interestingly, a majority of beneficiaries under SO 4.2 stated that their projects improved horizontal coordination at the local, regional and national levels, as well as vertical coordination between the regional and national levels, and between the national and EU levels. This finding of a much stronger impact on policy coordination both horizontally and vertically is to be interpreted in line with the cross-regional, often cross-border nature and scale of the freight transport systems addressed in this SO. Although 'only' 40.9% of the respondents mentioned improved vertical cooperation between multiple governance levels, the beneficiaries highlighted the positive impact on establishing cooperation among various level authorities in the transport sector, which in some cases represented a first and set a basis for further cooperation.

The stakeholders' survey shows that 50% of the respondents consider that the Programme was generally successful at improving coordination and cooperation across governance levels (Q6). More in detail, respondents acknowledge that **the Programme had some contribution to improving coordination between policy-making bodies, but that it was more successful in doing so horizontally than vertically**. National level horizontal coordination seems to be least impacted by the projects funded through Interreg CE. (Q19, shown in Figure 36).

FIGURE 36 STAKEHOLDERS' FEEDBACK ON COORDINATION BETWEEN POLICY-MAKING BODIES



Source: Survey targeting Programme stakeholders

Examples of positive, although sometimes modest contributions, refer to:

- supporting the creation of new governance systems for integrated mobility concepts in functional urban areas, through the horizontal and vertical coordination of stakeholders and policies,
- enhancing governance and improving vertical and horizontal coordination of policy-making for integrated environmental management in functional urban areas,
- linking different policies, sectors and administrative levels to adopt sustainable, long-term strategic visions.

Interviews with programme stakeholders confirmed that **participation in Interreg CE is a driver of multi-level governance** because of the nature of cooperation in Interreg CE projects, i.e. vertical cooperation between institutions from different governance levels within the same country and horizontal cooperation across borders, involvement of citizens in a bottom-up approach, etc.

> *"The key features of the Interreg CE programme are: cooperation, synergy, and coordination. To the greatest extent this programme describes the term 'cooperation', in particular between project partners at different management levels."*
>
> Stakeholder interviewed during the evaluation

It is however noteworthy that the Programme was generally successful in promoting multi-level governance in those regions and countries where the legislative and administrative frameworks were already conducive to such arrangements and where the links between regional and local authorities are stronger. Therefore, some programme stakeholders expressed a more reserved opinion on the contribution of the programme to policy coordination and multilevel governance. More specifically, the limited institutional capacity and/or institutional willingness to engage in some projects, on the one hand, and the limited means of Interreg CE projects for achieving vertical policy coordination across more than two governance levels, on the other, are constraints to the ambition of achieving multilevel governance - even though the importance of that ambition is widely acknowledged.

Pilot actions have been cited as the most notable example of multilevel governance, where regional authorities – in their role as project partner - reach out to local authorities and entrepreneurs to join the project/activities. This aspect was also confirmed through the case studies (RAINMAN, LUMAT).

The evaluation can confirm that the programme contributed to better governance in various ways, producing an improved coordination among various actors and regional actors, particularly at the local and regional levels, and between multiple levels of governance. According to the qualitative data collected, one may notice that low-carbon and transport projects have been generally successful in achieving better coordination and management of resources, while innovation projects have increased visibility of inter-regional collaboration and motivated decision-making bodies to use certain models. In transport, the programme facilitated the development and application of new tools and approaches to address challenges related to lacking connectivity, infrastructural bottlenecks, and discontinuities in regional networks. Projects such as REIF, TransTritia, TRANS-BORDERS and TalkNET have contributed to better governance by leveraging enhanced coordination and governance within and between regional contexts, with a focus on addressing the transnational dimension.

Overall, the Interreg CENTRAL EUROPE Programme has played a key role in promoting better governance in the region, with its projects contributing to improved coordination and management of resources, promoting cross-border cooperation and harmonization, and facilitating the development of new tools and approaches to address complex challenges.

3.5.4. AEQ4. CONTRIBUTION TO WIDER STRATEGIES

Contribution to the Europe 2020 Strategy for smart, sustainable and inclusive growth

Interreg CE projects mainly target the smart and sustainable growth objectives of the Europe 2020 Strategy. The direct, incremental contribution of the Interreg CE programme to achieving the Europe 2020 strategy targets cannot be quantified, in terms of outputs and funds leveraged, as most project documents do not include enough details to link achievements to the targets of the Europe 2020 Strategy. Most often, **indirect**

contributions can be observed, through improved policies which subsequently help to fund projects or measures that positively change values towards the relevant target. Generally, **Innovation** projects contributed to the EU2020 Strategy with regard to its R&D and climate change objectives, in particular those innovation projects aiming at sustainable and resource-efficient solutions (i.e. BIOCOMPACK-CE and ENTeR). Projects financed under SO 2.1, SO 2.2, SO 3.1, SO 3.3, SO 4.1 and SO 4.2 also contributed to achieving the climate change targets of the Europe 2020 Strategy.

At the same time, Interreg CE projects were not directly addressing socio-economic issues linked to labour markets and income, and were therefore less relevant to the employment, education and poverty reduction targets of the Europe 2020 Strategy.

Contribution to the Macro-Regional Strategies

Projects financed under SOs 2.1, SO 2.2, as well as under the Environment and Transport priorities contributed to the climate change, energy and biodiversity priorities of the respective Macro-Regional Strategies (MRS). In addition, many Low-Carbon (SO 2.1, SO 2.2, SO 2.3) projects had a significant impact on local and regional strategies and policy-making, as their actions were more locally rooted (e.g. in schools) and therefore were less impactful at macro-level. As an illustration, FIRECE results found their way into the implementation of Regional Energy Plans in Germany, Italy, Poland, Hungary, Czechia and Croatia. Likewise, SULPiTER results entered into the policy documents of 7 functional urban areas (Brescia, Bologna, Maribor, Budapest, Poznan, Stuttgart, Rijeka).

Innovation projects aimed to improve innovation capacities for smart specialization strategies by supporting the development and transfer of innovative solutions in participating regions. The evidence suggests that most of the projects funded under this thematic priority addressed strategically important issues and managed to support the implementation of EUSDR and EUSAIR, contributing to an improved innovation ecosystem in the CE region by improving the cooperation between research institutions, businesses, and public authorities. However, according to the beneficiaries, it seems that projects funded within SO 1.2 managed to better reduce regional disparities with over 52% of beneficiaries agreeing that interventions were successful and very successful in this regard, comparing to only 43% in SO 1.1.

A number of innovation 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.

Many **Low-carbon** projects had quite a significant impact on local and regional strategies and policy-making. As an illustration, FIRECE results, supporting the energy low-carbon transition in CE areas with innovative financial instruments, found their way into the implementation of Regional Energy Plans in Germany, Italy, Poland, Hungary, Czechia and Croatia. Thanks to CE-HEAT results, waste heat utilisation is now getting higher visibility in energy policies, strategies and actions plans. Likewise, the Thuringian regional government decided to support further feasibility studies in connection with district heating systems. In Friuli Venezia Giulia 24 municipalities included waste heat topic into their action plans. Overall, beneficiaries declared that Low-carbon projects were relatively successful in addressing strategically important issues, such as enabling the implementation of Macro-Regional Strategies, and more moderately successful in reducing regional disparities. According to the beneficiary survey results, most beneficiaries in SO 2.1 and SO 2.3 are considering that projects were moderately successful in reducing regional disparities, while most of the beneficiaries in SO 2.2 are considering that projects were successful in this respect.

Environment projects were highly relevant for tackling the pervasive challenge of climate change. In particular, pilot actions in Environment projects are praised for directly contributing to solving specific problems in relation to climate change adaptation, risk management, urban planning, etc. For example, the AMIIGA project contributed to the Strategy for the Baltic Sea Region by having provided solutions to key challenges identified in policy area “hazards”. The results of the survey show that there are more beneficiaries who consider that the interventions of SO 3.3 were more successful than those of SO 3.1, in terms of reducing and counterbalancing regional disparities.

In the case of **Culture**, most tangible contributions to wider strategies are to be found in the pilot actions which implemented investments in revitalising heritage sites, better valorising them for tourism, one of the core priorities of the EU Strategy for the Adriatic and Ionian Region. Overall, beneficiaries of SO 3.2 declared that projects were successful in addressing strategically important issues, such as enabling the implementation of Macro-Regional Strategies. This reflects around 38% of survey responses. In terms of projects' contribution to reducing and counterbalancing regional disparities, nearly 39% of respondents believe that the projects were successful, and only around 26% consider them moderately successful.

Transport projects also contributed to promoting sustainable transport and better transport connections, thereby supporting transport-related priorities across all four MRS (i.e. 'Connecting people in the region' in the EU Strategy for the Baltic Sea Region, 'untapped shipping potential and lack of modern road and rail transport connections' in the EU Strategy for the Danube Region, 'Intermodal connections to the hinterland' in the EU Strategy for the Adriatic and Ionian Region, and 'Environmentally friendly mobility' in the EU Strategy for the Alpine Region). Overall, beneficiaries declared that projects were successful and very successful in addressing strategically important issues, such as enabling the implementation of Macro-Regional Strategies, by addressing key challenges related to transport, mobility, and accessibility, and promoting sustainable and integrated transport solutions and services. All solutions developed under the Transport thematic area were found to be particularly relevant from the environmental perspective of supporting clean transport. Furthermore, the transnational strategies and tools outline further actions to be taken in the macro-regions. With regards to the impact of the projects in reducing and counterbalancing regional disparities, around 68% of the respondents within SO 4.1 considered the projects as being successful and very successful, while the most beneficiaries in SO 4.2 considered them only moderately successful.

More generally, the CE area overlaps with all four MRS but is not linked to any of them in particular. However, it can be argued that these contributions are made by design of the programme, as it is the only transnational cooperation programme covering all four MRS and its focus has been developed against the background of the EU2020 Strategy and the Territorial Agenda 2020. At the level of Interreg and MRS bodies, there was consensus around the alignment of Interreg CE Thematic Priorities with the priorities of other Interreg programmes and MRS, allowing for possible synergies. An example of a project's contribution to MRS is presented in Box 2.

BOX 2 EXAMPLE OF PROJECT CONTRIBUTION TO WIDER STRATEGIES

The RUMOBIL project aimed to support public authorities and providers of public transport services in remote rural areas. While local contexts are quite different, all participating regions share common needs. These include demographic change, depopulation, lower population density, isolation. Against the backdrop of low demand and under-utilization, the quality of public transport services is low and the costs are unsustainable for the local municipalities. Lack of access to proper mobility services leads people to migrate towards urban areas, further deepening structural problems. To address the challenges, the project aimed to identify innovative, suitable solutions, which could be implemented with limited resources.

The project responded to these challenges by providing local authorities and transport operators with a platform to exchange knowledge, to generate learning through launching pilot applications of state-of-the art tools and solutions, and to revise local transport policies to better suit changing mobility needs. Main outputs of RUMOBIL therefore are pilot actions, the elaboration of a RUMOBIL strategy and policy decisions to implement this strategy in the eight partner regions through an improvement of their transport plans.

The Urban Mobility Package of the EU (2013) provided the wider policy framework to enhance commitment towards green and inclusive public transport. The EU 2020 Strategy promotes the reduction of the carbon footprint in the EU. RUMOBIL's activities to promote public and collective transport contributed to that objective and both the strategy and the pilot actions had a strong focus on changing attitudes and decreasing the use of private cars, in favour of public transportation.

The pilot action in the Mazovian voivodship as well as the project's Transnational Strategy contributed to the Baltic Sea Region Strategy's objective to "improve internal and external transport links". By implementing a passenger information system and app for mobile devices, regional rail transport services have improved and can provide in-time information about service changes, connections and delays.

Pilot actions in two Czech Regions, Croatia, Hungary and Slovakia and the Transnational Strategy have contributed to the Action Plan for the Danube Region, which prioritises actions with respect to increasing accessibility of rural areas. Pilot actions in Modena (Emilia Romagna) and Croatia and the Transnational Strategy have contributed to the socio-economic pillars of the EUSAIR.

To promote the project results and encourage transfer beyond the CE area, presentations were given by the project partners at several international events in the macro-region.

Documentary analysis of the project reports showed, however, that beneficiaries cannot always assess the contribution of their projects to the MRS and, often, this topic is regarded as beyond the scope of their projects. Interviews confirmed that sometimes beneficiaries are unintendedly contributing to some macro-regional strategies without necessarily being aware of it or planning for it. Others acknowledged that having a MRS in the Programme area is a strong advantage as it indirectly supports better coordination between the various relevant decision-making bodies and facilitates implementation of the projects.

The beneficiary survey shows that, in general, beneficiaries considered the projects as being successful (39.2%) and very successful (25.3%). The most positive reactions in this regard were received from SO 1.2 and SO 3.1 beneficiaries.

FIGURE 37 BENEFICIARY' FEEDBACK ON THE PROJECTS' SUCCESS IN ADDRESSING STRATEGICALLY IMPORTANT ISSUES SUCH AS ENABLING THE IMPLEMENTATION OF MACRO-REGIONAL STRATEGIES

Source: Survey targeting project beneficiaries

Interviewees also highlighted the role played by **Interact** in coordinating the different programmes and strategies. An important aspect for MRS is the so-called 'embedding process' to establish a consensus for flagship priorities, which could then be taken up by Interreg programmes. **More coordinated and harmonised policymaking could be achieved** in that regard, looking at capitalisation *across* and not only *within* EU-funded programmes (e.g. development of common tools, synchronisation of call, etc.). Indeed, still unresolved or misunderstood aspects regarding the MRS, such as their governance and financing structure, are curbing territorial synergies between Interreg programmes and MRS. The new CPR requirements and the emergence of Managing Authorities networks could help exploit the potential for more synergies in the 2021-2027 programming period.

3.5.5. AEQ5. TRANSFERABILITY OF RESULTS

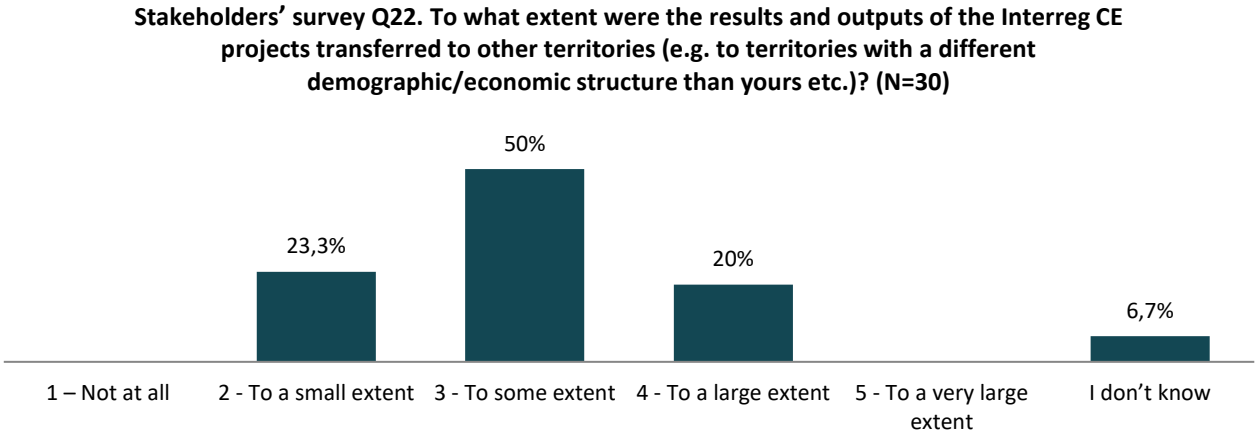
Transferability of outputs is generally regarded as a mark of quality in projects, assuming that if the outputs of the projects are of good quality, it is more likely that they will be transferred. While not all outputs and results can be transferred, the evaluation **showed that most tools developed with Interreg CE support are easily transferable and adaptable to a variety of contexts**, making them highly relevant for target groups and users beyond the projects and even the Programme area.

In general, this effect was produced because the programme had a great emphasis on implementing pilot actions and developing and testing innovative solutions to common challenges faced by Central European

regions. As such, from the programme design phase, many results have been expected to be transferable to other regions. However, the programme was also based on a bottom-up perspective, meaning that the solutions developed and tested were tailored to the specific needs and contexts of the regions involved as well, this approach ensuring that the results were relevant and applicable to the regions where the projects were implemented. However, this also brought some inherent challenges since the transferability of the results to other regions required further adaptation to other local contexts and needs.

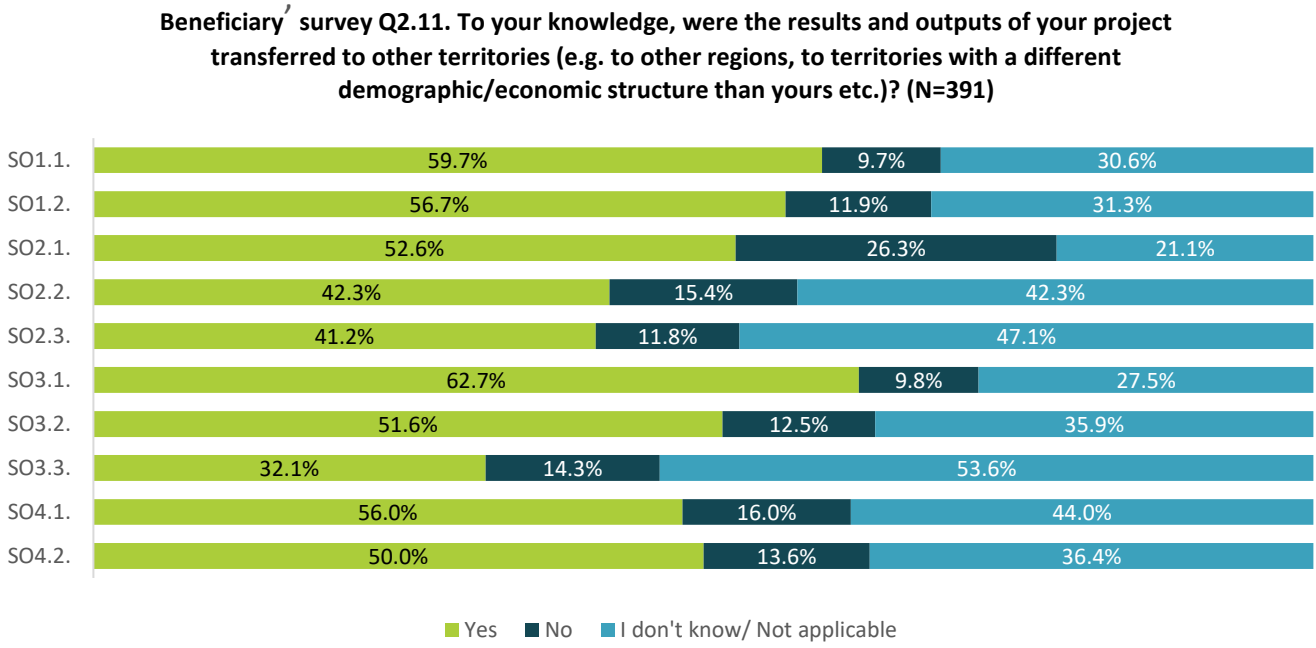
In particular, transferability to other territories was expected to be supported, at the application stage, through wide-ranging **stakeholder engagement and dissemination activities** (e.g. publications, conferences) across CE regions as well as further capitalisation activities and synergies sought with other programmes and initiatives. In terms of transferability to other territories, beneficiaries and Programme stakeholders consider that **projects results were averagely transferred to other territories** (Figure 38).

FIGURE 38 STAKEHOLDERS' FEEDBACK ON TRANSFERABILITY OF RESULTS TO OTHER TERRITORIES



Source: Survey targeting Programme stakeholders

FIGURE 39 BENEFICIARY' FEEDBACK ON TRANSFERABILITY OF RESULTS TO OTHER TERRITORIES

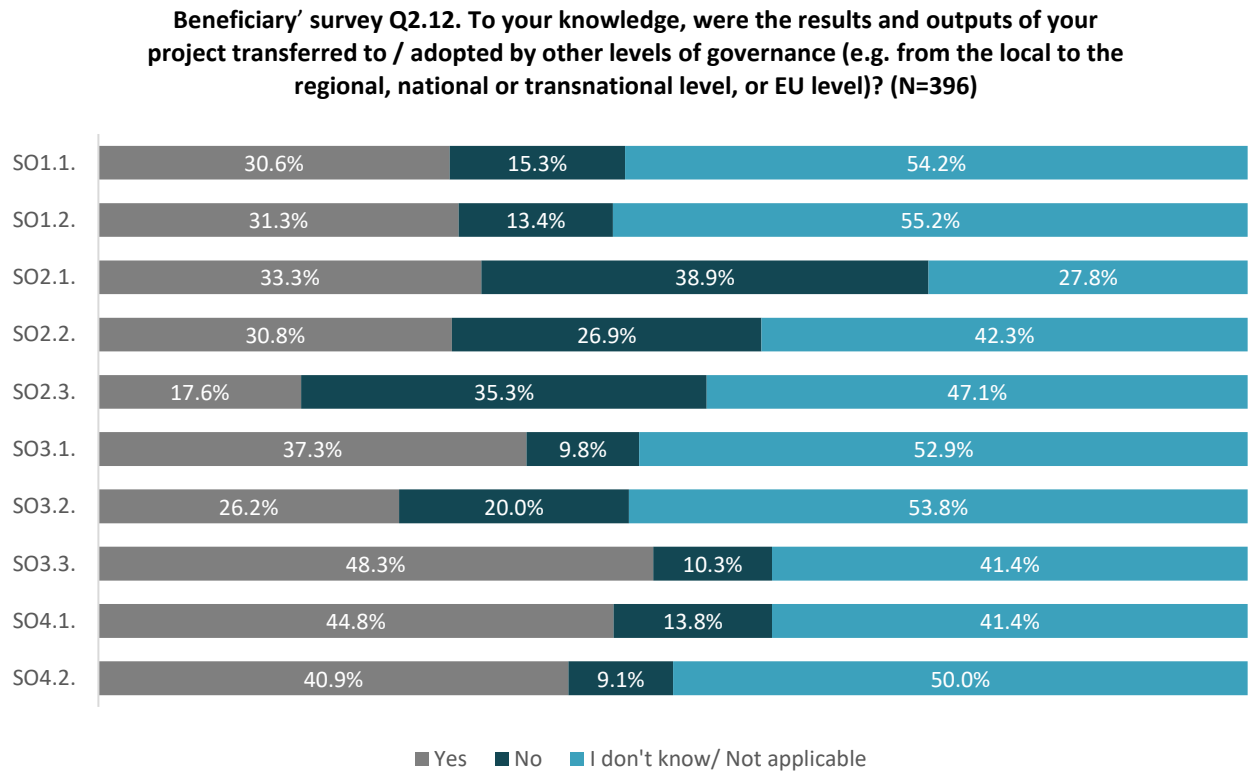


Source: Survey targeting project beneficiaries

Stronger transfer to other territories was reported for SO1.1 and SO1.2 (Innovation), thereby providing a key contribution to closing the innovation gap between CE territories, for SO3.1 (natural heritage and resources under Environment) and SO4.1 (freight transport systems under Transport) and SO2.1 (increasing energy efficiency under Low Carbon). Specific examples refer to *"Massive Open Online Courses (MOOC) [which] spread in 78 countries",* transfer of results to Interreg MED regions, or the adoption of tools developed in the project in pan-European initiatives (SO1.2), transfer of results to other watersheds (SO3.1) and the exploitation of results on a national and international scale (SO4.2) in all Thematic Priorities (Figure 39).

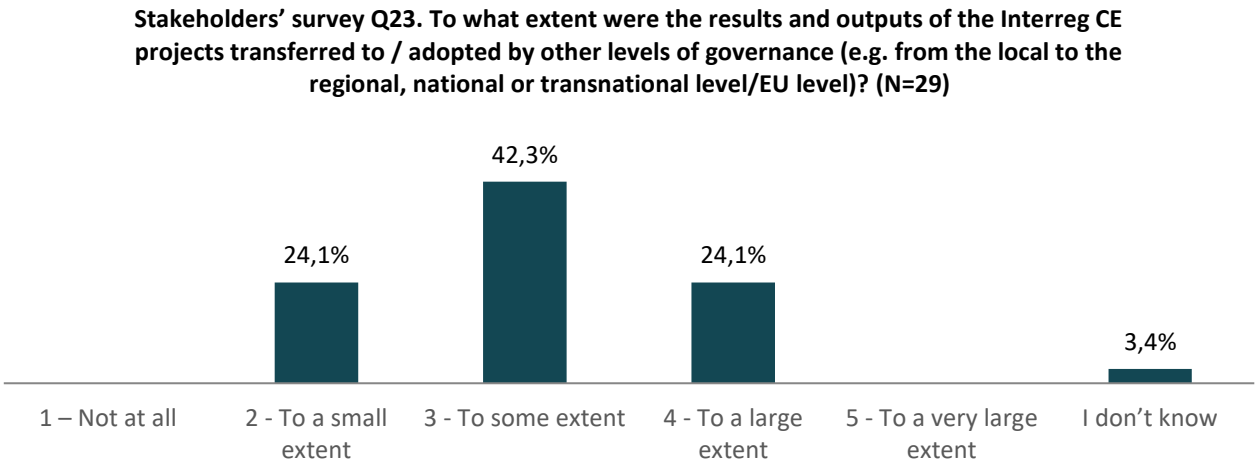
More moderate outcomes were reported in relation to the transferability to other levels of governance (Figure 40 and Figure 41). Beneficiaries from most SOs mentioned that they are not aware if the results and outputs of the projects were transferred or adopted by other levels of governance. Only in SOs 3.3 and 4.1 the beneficiaries answered moderately positive to this question (44-48%). Beneficiaries' examples included both horizontal and vertical transfer, from national and regional level to municipalities, across borders or towards the national level. Disagreement is mostly mentioned by beneficiaries under Low carbon SOs, as well as on SO3.2. In the same time, the stakeholders' feedback on transferability of results to other levels of governance was rather a moderated one, with most of them mentioning that results and outputs were transferred to/ adopted only to some extent.

FIGURE 40 BENEFICIARY' FEEDBACK ON TRANSFERABILITY OF RESULTS TO OTHER LEVELS OF GOVERNANCE



Source: Survey targeting project beneficiaries

FIGURE 41 STAKEHOLDERS' FEEDBACK ON TRANSFERABILITY OF RESULTS TO OTHER LEVELS OF GOVERNANCE



Source: Survey targeting Programme stakeholders

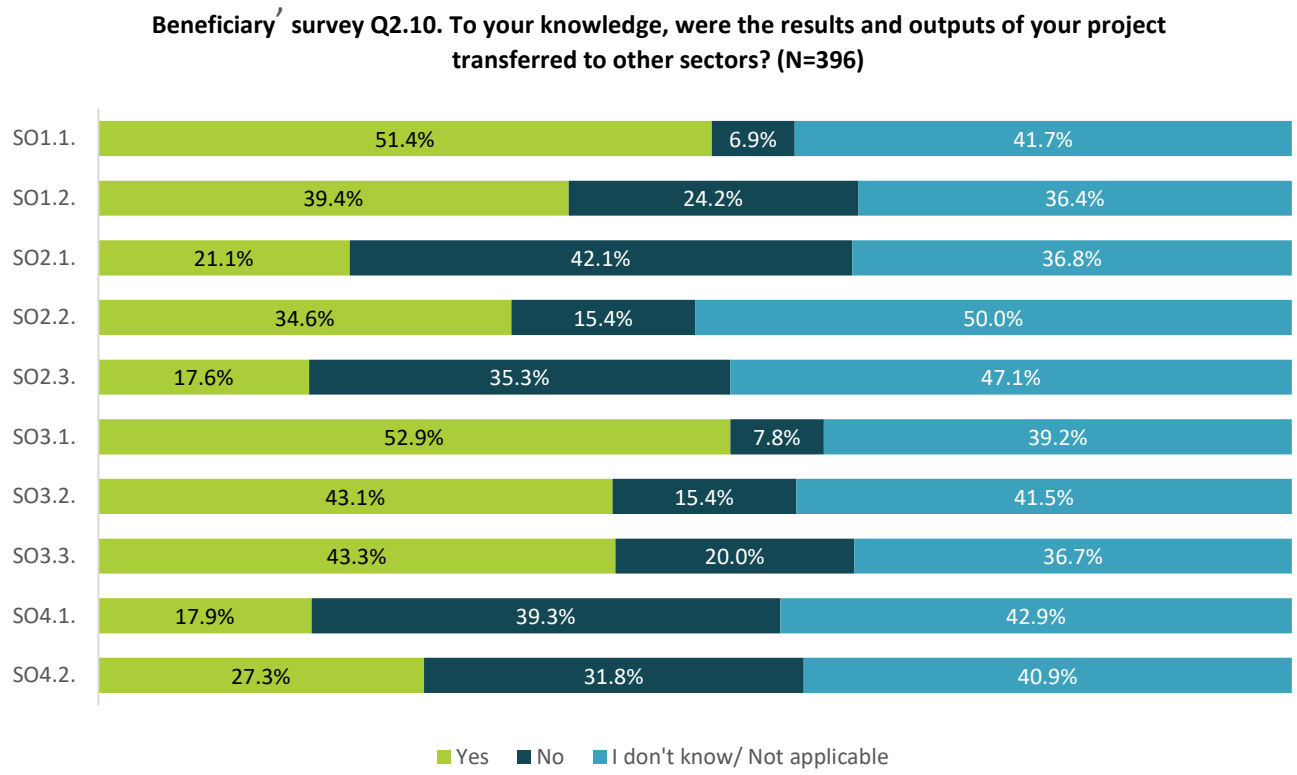
Even when it comes to transferability of results to other sectors, the aggregate survey results indicate a lack of awareness from project beneficiaries, with wide variations across themes and SOs. The most positive results were encountered within the **Environment** Thematic Priority, where beneficiaries were moderately positive with regards to the transferability of results to other sectors (37.3% in SO 3.1 and 48.3% in SO 3.3), and mentioned the transferability potential of the results to the public sector. The SO 3.2 (**Culture)** also registered around 43% positive responses, beneficiaries mentioning methodologies and tools developed within projects that could be adapted and transferred in different sectors, with the involvement of public authorities, policy makers and private operators. Similar positive results were recorded for **Innovation** SO1.1. (51.4%). More moderate answers were registered in SO1.3. from Thematic Priority **Innovation**, in both the number of respondents who considered that the results and outputs were transferred to other sectors, being only a few percentages higher than that of the beneficiaries who checked the option "I don't know/ Not applicable". Beneficiaries within **Innovation** mentioned different types of technologies that may very easily have a potential high impact on other sectors too. On the other hand, for **Low carbon,** beneficiaries think that results were not transferred to other sectors in 42.1% of responses for SO 2.1 while SO 2.3 the negative outcome is reflected in 35.3% of responses. Similarly, in **Transport**, the majority of the beneficiaries declared themselves unaware of the transferability of the results to other sectors, followed by over 30% of the beneficiaries who considered that such a transfer did not happen.

In general, the survey results are confirmed by document analysis, interviews and case studies, Interviews showed that the **integration of project results into policy-making is project-specific and depends on the degree of policy-orientation of the project partners as well as a number of other factors**, with however **stronger policy uptake at the local and regional levels** than at the national and EU levels – in line with the focus of the programme. There are good examples of how Interreg CE project results fed into strategic planning at the local/regional level (e.g. smart city concepts, urban revitalisation) or the design of new support programmes (e.g. climate strategy). Policy uptake is facilitated by the endorsement of strategies and action plans by the respective institutions. Moreover, Call 4 projects enabled the transfer of project results to other programmes and partnerships, ensuring the sustainability of the learning effect of the Interreg CE experience.

The tools and solutions developed within Interreg CE were generally easily transferable and adaptable to other regions, making them highly relevant beyond the projects and program area. For example, CONNECT2CE, Peripheral Access, and ENERGY@SCHOOL provide examples of solutions demonstrating transferability. Similarly, the tools developed in the **Culture** area were highly transferable and adaptable to a variety of contexts and sectors. The evaluation confirmed that the results and outputs were already transferred to other sectors, with examples such as guidelines and training tools from COME-IN being used for accessible itineraries and designing a label for Inclusive Museums. However, the active involvement of project partners remains a key

factor in ensuring the adaptation and transferability of methodologies and tools and the awareness of project results is mostly residing with the organizations directly involved in the projects. In some cases, the outputs and results have also become outdated after the project has ended, this hindering the capacity for transferability.

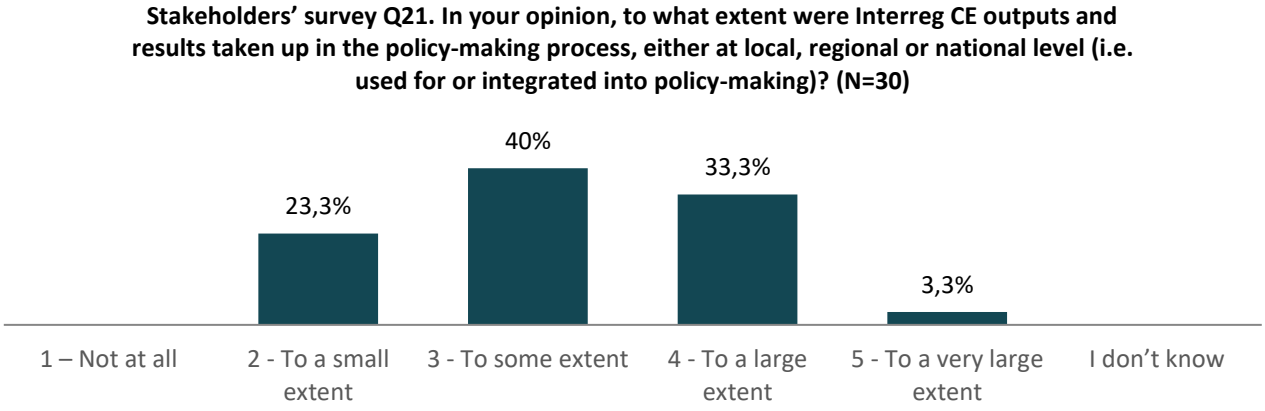
FIGURE 42 BENEFICIARY' FEEDBACK ON TRANSFERABILITY OF RESULTS TO OTHER SECTORS



Source: Survey targeting project beneficiaries

Overall, stakeholders acknowledge that the **Programme results have been taken up in the policy-making process**, with around 37% of respondents reporting an uptake to a large or very large extent, and 40% to some extent (Figure 43).

FIGURE 43 STAKEHOLDERS' OPINION ON POLICY UPTAKE

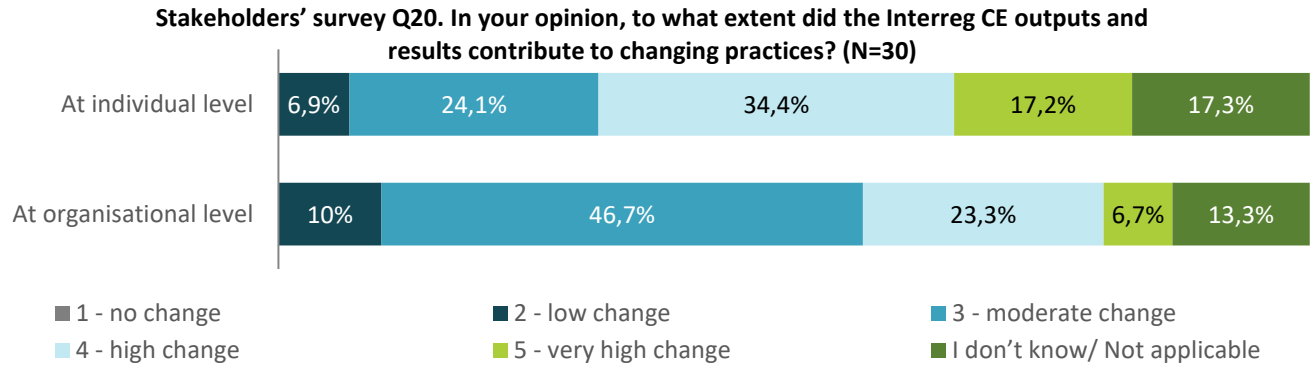


Source: Survey targeting Programme stakeholders

3.5.6. AEQ6. CONTRIBUTION TO CHANGE OF PRACTICE AT ORGANISATIONAL AND INDIVIDUAL LEVEL

The results of the beneficiary and programme stakeholders' survey overall report a **moderate to high change of practices at both individual and organisational level**.

FIGURE 44 STAKEHOLDERS' FEEDBACK ON CONTRIBUTION TO CHANGE OF PRACTICES



Source: Survey targeting Programme stakeholders

In more detail, the combined beneficiary survey indicates some nuances between priorities and even SOs (see below for thematic insights), but generally a **slightly lower change of practices at individual level than at organisational level** (i.e., the sum of reported 'moderate', 'high' and 'very high' change).

Interviews with programme stakeholders indicate that change of practices at the organisational and/or individual level are most likely triggered by the policy learning and capacity-building effects of the projects. This is reflected for example in a reported increase in the quality of governance, increased trust in more 'knowledgeable' and 'capable' authorities or the inclusion of Interreg CE outputs in regional/local strategies and policies. More specifically, interviews indicate that a change of practices at the organisational level was observed in respect of numerous project partners, particularly those from less experienced countries and regions, and case studies report that exchanging on best practices within the project partnership indeed contributes to changing practices for project partners – thereby confirming the survey result that Interreg CE contributes to **changing practices for beneficiaries**.

On the other hand, **change of practices at target group level is not monitored** and can only be assumed from the success of the project activities. The translation of awareness-raising and capacity-building outcomes into concrete change of practices cannot be determined for sure. Taking the Innovation theme as an illustration, almost half of the SMEs answering the end-user survey considered change of practices as a significant benefit (i.e., rating the benefit on 4 or 5 on a scale from 1-least to 5-most) for their organisation.

If change of practices could not be ascertained for target groups, examples of **project-enabled drivers of changes of practices** are numerous. These include newly created capacities to engage in public-private partnerships to finance projects of public interest and make them economically sustainable – like in the RESTAURA project on preserving cultural heritage. They also include awareness on and knowledge of available technical solutions to tackle local problems, such as increasing the energy efficiency of public buildings as shown by various Interreg CE projects. Importantly, Interreg CE projects positively affect public management practices, enabling public services through the provision of knowledge, capabilities and tools to address pressing needs. Examples include the improvement of environmental management capacities to protect drinking water resources (PROLINE-CE), or the management of environmentally sustainable transport like in the SULPiTER, SOLEZ or MOVECIT projects.

From a thematic perspective, some nuances can be mentioned, in particular:

- **Innovation** projects had overall a rather strong impact on change of practices at both individual and organisational level across both SOs, that materialised e.g. in generating cross-border innovation

mindsets and opportunities, new innovation methods (FabLabs) or improvements of innovation management. This was achieved inter alia through 'learning by doing' and fostering networking abilities, the acquisition of new practices, access to expert knowledge, the change of mindset or the adoption of tools put in place in successful pilot actions as a few examples. As evidenced by the case studies, change of practices among target groups is however not monitored and can only be assumed from the experience and observation made during project activities.

- **Low-carbon** projects induced changes of practices at both individual and (to a slightly lesser extent) organisational level, and this reported change was particularly high in SO 2.2. At the same time, these changes tend to be more gradual as beneficiaries reported a low influence at the organisational level and the need for "much longer projects […]". Projects were also beneficial in relation to awareness-raising in the wider public (e.g., pupils in schools), and this led to changes of behaviour at the local level and initiated a bottom-up process of change from citizens to local authorities. The projects developed, among other outputs, planning and self-assessment tools which, together with the action plans, are expected to bring about changes within public authorities, as well as in the perception of low-carbon topics.
- Likewise, **Environment** projects induced changes of practices at both individual and (to a slightly lesser extent) organisational level. Interviews also report that changes could be already observed from the implementation of some projects, because pilot actions as well as other project activities were going in the direction of testing equipment which supports the uptake of results and/or behavioural change. For some countries, especially in the eastern part of the CE area, the projects created awareness and educated beneficiaries and other stakeholders in respect of climate change and green infrastructure solutions, among others.
- The participative approach of taking the target groups on-board in the development as well as implementation of the new solutions in **Culture** projects is regarded as highly effective. The combined beneficiary survey indeed reports an overall stronger change of practices than in other priorities and SOs at organisational level and even more so at individual level. At individual level, the learning materials, trainings and awareness-raising activities are likely to have contributed to changing practices. Moreover, projects financed under call 3 managed to change attitudes and raise awareness regarding the role that CCI can have in mid- and small-sized cities. Interviewees considered this paradigm shift as an important aspect, and something upon which more can be invested in the future.
- **Transport** projects have effectively contributed to change of practices at organisational level, for example with respect to freight transport (ChemMultimodal) and at individual level, in relation to using public transport services (CONNECT2CE, Peripheral Access and RUMOBIL), with an overall stronger impact in SO 4.2 than in SO 4.1. Beneficiaries however noted moderate changes in relation to end-users' attitudes towards public transport services. Important challenges still remain, in this respect, as noted by one survey respondent: "*Some more people are aware of public transport in these areas and cross-border trips but still the public transport is not enough attractive in terms of price and flexibility to private car use".* This also confirms the need for long-term sustainability of results, to ensure long-lasting effects and durable changes. Still, interviewees noted that there was institutional learning regarding demand-responsive transport services to add more flexible and cost-efficient solutions in low-demand regions, or during low-demand periods in any region. Change of practices in the ports of Central Europe was also observed.

3.5.7. AEQ7. ADDED VALUE OF TRANSNATIONAL COOPERATION

Interviews with programme stakeholders indicate that transnational cooperation produces added value first and foremost in the **(multidirectional) sharing of knowledge and experiences** (best practice examples), thereby helping to achieve more harmonised and more efficient approaches within CE territorial units. In particular, transnational cooperation allows for regional stakeholders to overcome their rivalries and competitive states of mind that sometimes prevail in a national cooperation context and let them think 'in a broader way'. The possibility offered by the programme to **'pilot' and 'trial' solutions** in an international environment was also

considered as an added value compared to national funding schemes or other funding sources, including Horizon 2020 programme, albeit the fact that the latter does support pilot actions, as well. The focus of the programme on developing and testing new, innovative solutions gives a visionary perspective to the projects, and the 'experimental' dimension of the Interreg CE Programme differentiates it from other programmes. The innovative and experimental dimensions of the programme can be seen across all calls, but most particularly in call 4 that offered a novel vision of *what* can Interreg programmes achieve, and *how* (i.e., through capitalisation and synergies).

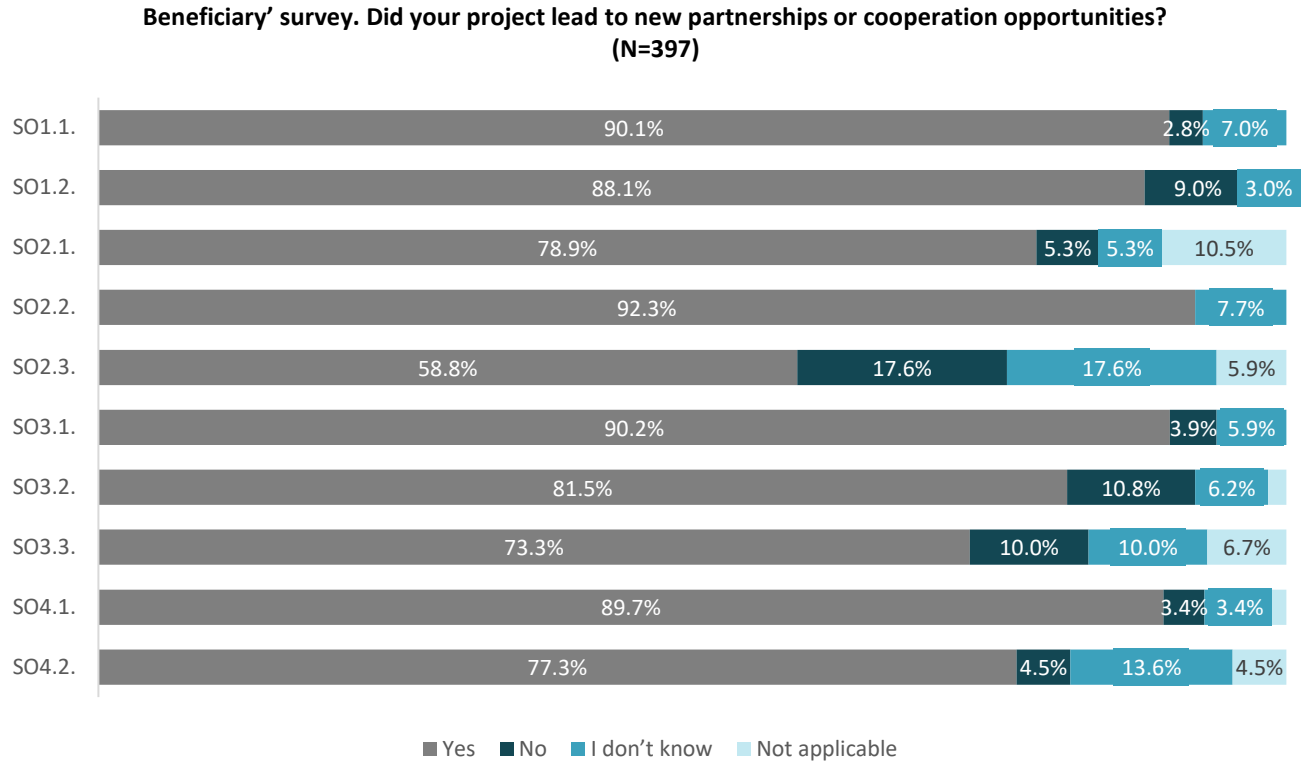
Examples from case studies also highlight the added value of the transnational dimension of the partnerships to achieve more impactful results and/or more efficiently. For instance in TARGET-CE, transnational collaboration was important for the project's success as it brought **interdisciplinarity** into the project and thus allowed for better results to be produced (i.e., the outputs were fed with multiple experiences coming from different fields of expertise and territories). In PROSPECT2030, project outputs and results were developed and delivered thanks to **mutual learning** activities like experience-sharing workshops (from different countries) within the partnership.

Furthermore, while Interreg CE overlaps with many other transnational and cross-border programmes, the programme allows for a unique opportunity of transnational cooperation between several Member States, i.e. between Italian, Hungarian, Slovak, Czech, Polish and German stakeholders, because no other Interreg programme allows for such patterns of cooperation linking these Eastern and Western countries in particular. Building **trust** across stakeholders and territories beyond the former Iron Curtain was mentioned as a key added value from and for transnational cooperation, as a self-reinforcing outcome of the programme whereby increased trust through positive cooperation experience between partners from different countries strengthens the willingness to cooperate further.

Additionally, the establishment of **interpersonal relationships and lasting cooperation structures** were also mentioned as key benefits from transnational cooperation, with strong learning benefits for local and regional actors. Examples from case studies indeed show that cooperation between partners was, in many cases, sustained after the respective project ended, through the direct involvement of one or more partners in another partner organisation's activities (e.g. for teaching activities in the case of digitalLIFE4CE) and/or through participation in a follow-up project consortium (e.g. for another Interreg programme also in the case of digitalLIFE4CE). Therefore, participation in Interreg CE allowed for beneficiaries to not only build a new or strengthen an existing partnership, but also to widen their network of potential partners for future collaborations. This was confirmed by beneficiaries, from which an overwhelming majority stated that their project led to **new partnerships** or **cooperation opportunities**.

One point to consider when talking about cooperation concerns the differences in intensity of cooperation that the projects analysed have shown. On one extreme, projects showed strong cooperation – in the literal sense of working together, to solve common problems. On the other extreme, some projects' cooperation pattern was of more limited nature, mostly focused on setting up a partnership of institutions facing similar challenges, yet tackling them mostly on an individual basis. Importantly, the second type of projects still did a) contribute to tackle important issues and b) also benefit from the more limited exchange by at least learning that "*problems are similar across borders*", thus reducing mental barriers and bringing people closer together. One key learning here is that some sensitivity is required when talking about cooperation. Nevertheless, the added value of the programme as a way to developing (innovative) solutions through transnational cooperation was undoubtedly praised by beneficiaries, independently from the intensity of cooperation. Indeed, the overwhelming majority of respondents to the beneficiary survey from all priorities and SOs stated that their project results would not have been achieved without Interreg CE funding.

FIGURE 45 BENEFICIARY' FEEDBACK ON WHETHER THEIR PROJECT LED TO NEW PARTNERSHIPS OR COOPERATION OPPORTUNITIES



Source: Survey targeting project beneficiaries

3.5.8. AEQ8. ADDED VALUE FOR SPECIFIC TARGET GROUPS

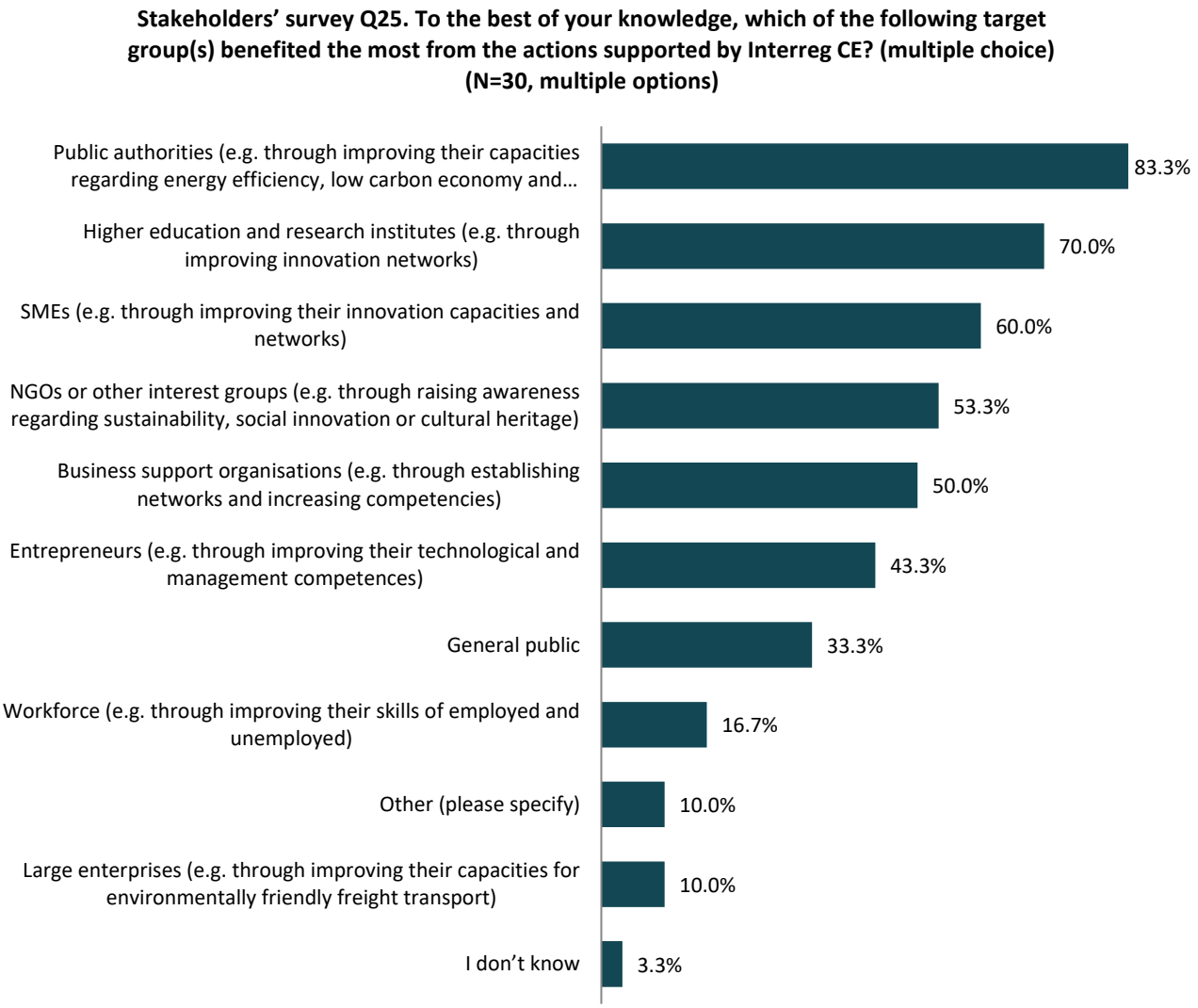
Overall, the programme – just as the projects taken individually - addressed a **wide range of target groups** and reached high numbers of target groups from both the private and public sectors across different sectors and governance levels, as shown in Table 8. Therefore, the programme did not, by design, aim to benefit more to a specific type of stakeholders, even though the projects may have focused on one or more target groups based on the identified needs (e.g., school teachers and pupils in ENERGY@SCHOOL, young people in YOUMOBIL or elderly people in care-related projects).

At thematic level however, some target groups were reported to have benefitted more, based on the focus of the thematic priority. In Innovation for instance, **SMEs** were more recurrently mentioned by project beneficiaries, while **local and regional authorities** were more often mentioned in the other Thematic Priorities. Indeed, interviewees observed that public sector organisations were overall more present in the programme and that more could be done to attract higher participation of private partners. In call 4 particularly, the interest from public authorities was higher because they were the ones meant to take up the results.

Nevertheless, **education centres, universities and research institutes** were also frequently mentioned by project beneficiaries and interviewees alike, given the innovative character of the programme that was believed to have unintentionally benefitted those stakeholder types more (not necessarily as target groups but as beneficiaries), because they know better how to apply, what to write and how to do it well in English, they have appropriate human resources and probably less time constraints compared to other organisations such as public authorities. This is particularly visible in call 4 through the very high rate of beneficiaries overlap (i.e., call 4 beneficiaries have already been part of EU-funded projects). More specifically, previous knowledge of the programmes generally helps a lot in putting together call 4 project applications: innovative SMEs or research groups from universities with former experience of Horizon 2020 or Interreg are therefore better placed to put together the best call 4 applications.

The answers to the stakeholders' survey align with this latter finding, mentioning **public authorities, higher education and research institutes, and SMEs** as the three most-benefitting target groups.

FIGURE 46 STAKEHOLDERS' FEEDBACK ON BENEFITS TO SPECIFIC TARGET GROUPS



Source: Survey targeting Programme stakeholders

Furthermore, it is estimated that the **general public** has been widely reached by funded projects, and that many more citizens and local communities should have indirectly benefitted from the achievements of the projects (through e.g. more sustainable transport systems, more accessible cultural heritage, etc.).

Therefore, Interreg CE projects have brought about benefits to a wide range of target groups, in particular local and regional authorities, SMEs, research institutes and the general public, in line with the quadruple helix approach that several project beneficiaries highlighted in the surveys and interviews.

More detailed thematic insights show that:

- **Innovation** projects showed a high added value for its target groups, through e.g., supporting quadruple helix approaches benefitting each member of the helix. For research institutions, cooperation reduced 'country-focused' behaviour, built mutual trust, and started real collaboration and coordination. For SMEs, the projects offered open opportunities for implementation of new (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 benefitted through inputs to their smart specialisation strategies. The main target groups for SO 1.1 were SMEs and business support organisations (as also reflected by the beneficiary survey findings), while SO 1.2 projects targeted a wider diversity of end-users.

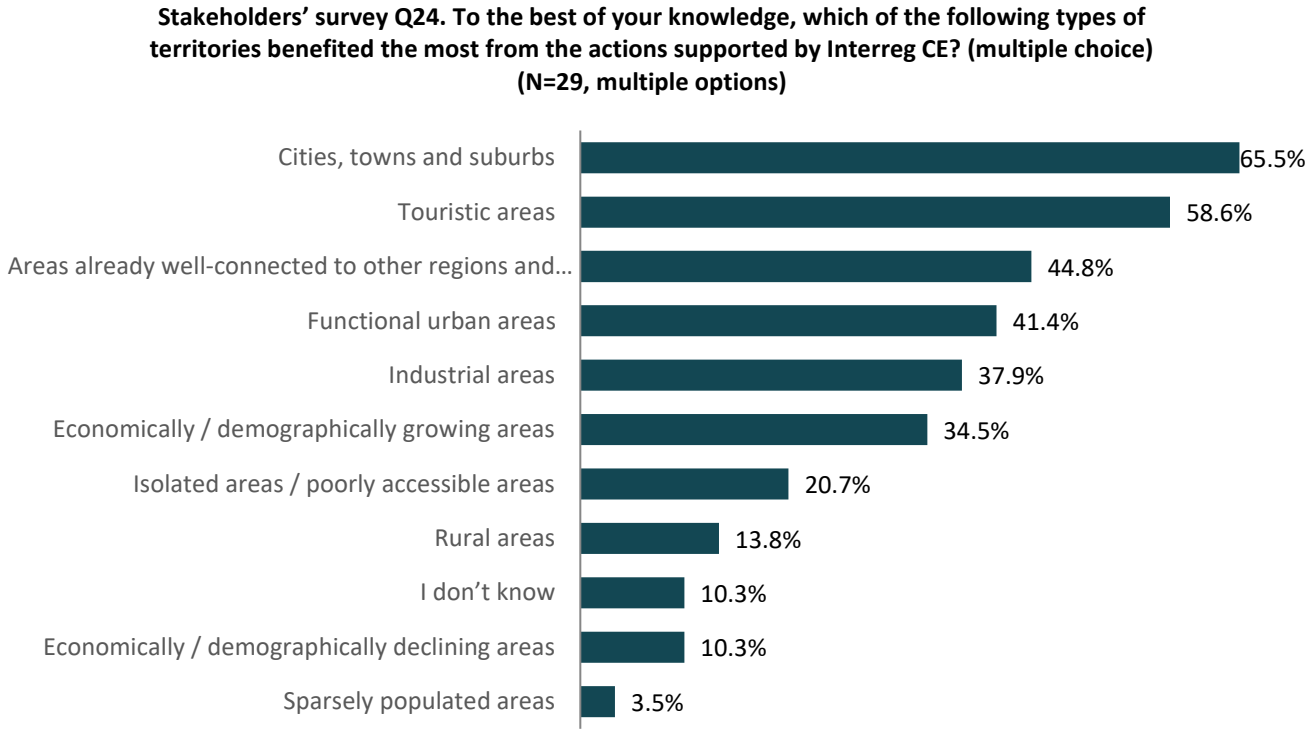
- **Low-Carbon** projects provided value-added for many different target groups, with an overall stronger representation of local public authorities have indeed been very often mentioned by beneficiaries across all SOs) and sectoral agencies as compared to other types of target groups (with some exceptions like SMEs for the SULPiTER project). Amongst others these include: a) local authorities in charge of public buildings, through reducing their energy and water bills, b) ministries, c) energy and urban planners, d) local public authorities, who benefitted from trainings and pilot actions, and e) schools and public institutions, which benefitted from the project as they improved their skills in managing energy efficiency in public buildings.
- All projects under the **Environment** theme focused on developing the capacity of local and regional public authorities, acknowledging their central role in developing and implementing environmental management strategies and plans and embedding climate change adaptation and mitigation in the overall strategies and plans of their communities. In the context of FUAs, capacitating local actors and supporting cooperation between the core cities and surrounding areas, particularly in the absence of a clearly established regulatory framework, is essential for successfully tackling environmental challenges. In the beneficiary survey, respondents indeed repeatedly mentioned local and regional authorities, alongside other target group types depending on the project focus.
- **Culture** projects focused on developing the capacity of both the public and private sector with respect to supporting the sustainable use of cultural heritage and resources. As such, a wide variety of target groups were engaged in the implemented activities, from local, regional and national public authorities to cultural and tourism operators, businesses, special interest groups, education and research institutions. No particular target group was found to have benefitted more, although most projects focused on small and medium sized entities (public or private). This diversity was also found in the results of the beneficiary survey, whereby respondents mentioned a large array of target groups ranging from public authorities and businesses to NGOs, education and training centres, universities, museums as well as cultural entrepreneurs.
- In **Transport**, the main target groups were local and regional public authorities, transport operators and freight transport stakeholders. Along these lines, a wide array of target groups were engaged or benefited directly from the project activities, such as: business support organisations, infrastructure and (public) service providers, sectoral agencies, and enterprises, as well as the commuters and citizens in the pilot locations. Universities, research institutes, education and training centres were also mentioned by beneficiaries, though to a lesser extent than local, regional and national authorities (in particular with regard to transport planning) as well as transport service providers. Interviews highlighted the particular benefit for smaller, less visible or less financial capacity organizations, as they especially were able to access knowledge and expertise which would have been otherwise unaccesible.

3.5.9. AEQ9. ADDED VALUE FOR SPECIFIC TYPES OF TERRITORIES

In principle, the programme has supported a **wide diversity of territories**, as demonstrated by the geographic location of project beneficiaries and their target groups. Yet, **small and mid-sized cities** have been mentioned by interviewed programme stakeholders as being proportionately more involved in Interreg CE projects, because partnerships with such types of cities are more easily established and project results are more easily visible – the visibility of 'pilot actions' in particular is appealing to municipalities and their communities. Likewise, cities with established networks are benefitting more, as they are more 'attractive' in terms of cooperation opportunities. In addition, some large cities such as Budapest, Krakow, Ljubljana or Maribor have demonstrated a higher propensity to attract funding and projects, also due to the institutions settled there. The focus of the programme on functional urban areas also made them privileged territories.

This finding was corroborated by the stakeholders' survey (see Figure 47) which reported cities, towns and suburbs as the most-benefitting types of territories, followed by touristic areas.

FIGURE 47 STAKEHOLDERS' FEEDBACK ON BENEFITS TO SPECIFIC TYPES OF TERRITORIES



Source: Survey targeting Programme stakeholders

At the same time, some types of territories (including non-urban territories) were reported to have benefitted more as a result of the thematic focus of the SOs. In Innovation under SO 1.1 for instance, industrial areas were reported by project beneficiaries to have benefitted more, while functional urban areas have been more frequently mentioned under SO 2.3 and SO 3.3, since addressing FUAs was a requirement of these SOs; similarly, rural areas were addressed more frequently under SO 4.1, as peripheral areas were by design the focus of the interventions. Touristic areas were more frequent across SOs 3.1 and 3.2, as many natural and cultural sites also have significant touristic importance.

In conclusion, findings point to a wide and **fairly balanced coverage of territories across the CE** area when looking at absolute numbers of beneficiaries, but also to a more intense cooperation hub concentrated around the Eastern Slovenia NUTS-2 region (i.e. a hot spot covering the neighbouring Slovenian, Croatian, Italian, Austrian and Hungarian regions) when looking at beneficiary numbers relative to population. Interviews conducted in the first phase of the impact evaluation have also raised a **potential risk of territorial fragmentation** if existing links between urban and rural areas are not maintained and new links to the more peripheral regions of the programme are not established, as these latter regions often suffer from more limited implementation capacity and fewer institutional seats of relevant organisations, hence the importance for the programme to continue supporting **functional approaches** (in particular between urban areas and their hinterlands). At the same time, the second phase of the impact evaluation noted the focus given by some projects funded under calls 3 and 4 to more remote and shrinking territories, in particular rural areas, including in the thematic priorities and SOs that were so far more prone to favour urban areas acting as magnets of cooperation (typically Innovation). For instance, the project CERUSI aimed to build skills and capacities for social innovation and social entrepreneurship in rural areas, while the project Arrival Regions aimed to 'enhance the capacities of decision-makers in nine rural areas previously subject to declining and ageing populations to successfully integrate young non-EU nationals into social life and employment to stabilise their demography'. Still, interviewees also acknowledged that more project partners from calls 3 and 4 are located in urban areas

than in other types of territories[74] (again because urban areas are home to the institutions with larger capacities, e.g., prominent research institutes) whereas smaller cities and villages do not have – or have less - the capacity, despite the motivation, to write an application or lead a project partnership. Consequently, **smaller, less densely populated regions** still face most difficulties in relation to logistics, resources and administration, while **urban areas and cities** in particular might still unintentionally benefit more, as beneficiaries located there have more opportunities to scale up the results and access a wider audience, more knowledge and resources. In particular, urban areas were better placed than rural areas in exploiting the opportunities offered by call 4 – and future capitalisation calls -, thanks to their capacity and their proximity to policy-making institutions (i.e., local and regional authorities). From the perspective of the NCPs, it is difficult to attract partners from rural areas since they are not as well connected as those in cities and the NCPs themselves would need significant resources and networks to reach them. This demonstrates a persisting – though slowly narrowing - **knowledge and capacity gap** to participate in the programme. All interviewees agreed that more efforts are needed to reach stakeholders in those territories (as an intermediate solution, stakeholders from rural areas could be involved as associated partners, for learning and networking purposes).

3.5.10. AEQ10. SUSTAINABILITY AND VIABILITY OF RESULTS

At project level, Interreg CE outputs tend to have a long sustainability, with the majority of outputs being expected to last for **more than three years** after the respective project has been completed, according to results of the beneficiary survey. This assessment holds pretty much across all SOs (though with some nuances depending on the type of outputs, as e.g. trainings are generally expected to last shorter; and so are pilot actions from Innovation projects). The review of the final reports has corroborated this finding: for the few projects where a specific number of years for maintaining project outputs/results was mentioned, this was generally in the range of 3-5 years with no strong variation across SOs. Importantly, the beneficiary survey indicates that the acquisition of **additional funds**, **synergies** with other initiatives (e.g. other EU-funded, national or regional programmes), the **durability of the project partnership** and an **increased interest from citizens/businesses** play a key role in ensuring the sustainability of project outputs and results. Conversely, changes in the political scene at the local and regional level are more likely to damage the continuity of human resources and financing, thereby potentially undermining the capacity of beneficiaries to sustain their projects' results. Likewise, changes within the organisations involved in the partnership (e.g., staff turnover) are factors negatively influencing the sustainability of the project results, but this did not occur widely over the overall implementation of the programme.

At project level, examples of results sustainability are numerous. For instance, results of the KETGATE project are sustained in a Horizon 2020 project for coordination and support action, while DIGITALLIFE4CE results are capitalised upon thanks to funds leveraged through various financing schemes. Another example is provided by the RAINMAN project, which supported the establishment of a network of experts in the field of heavy rain risk management, committed to present the project in the scientific community for five years following project completion. The COME-IN project is maintained and extended through calls addressing other museums to apply the accessibility standards and gain the COME-IN Label. More generally, the final reports of completed projects confirm the results of the beneficiary survey by outlining the key actions taken to foster sustainability: participation in follow-up projects (partnership sustainability), leverage of funds (financial sustainability) and policy uptake (institutional/political sustainability). Yet, a more systematic review of final reports provided slightly more nuance across themes: for Environment and Culture projects, the dissemination of project results for community and institutional engagement seems to play a more important role for ensuring sustainability than what follow-up projects and funds leverage do in Innovation and Low-Carbon projects. For Transport (SO 4.1, SO 4.2) and mobility (SO 2.3) projects, institutional and political uptake (e.g. integration of project results into transport planning strategies) and dissemination of results also play a prominent role.

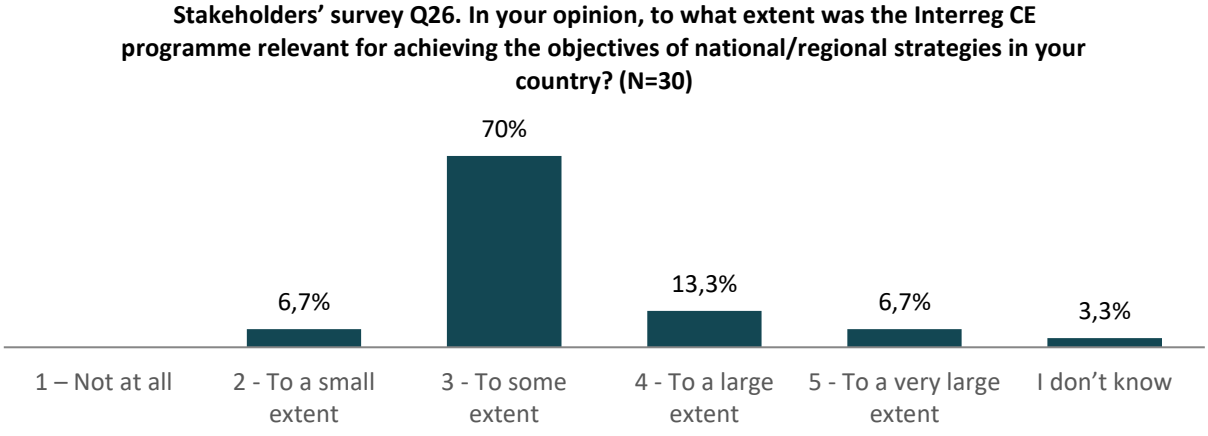
[74] It should however be noted that the partners' location (e.g. city) is not necessarily the targeted territory of the project (e.g. a regional authority in charge of managing protected natural areas will be located in a city, but the activities are targeted at protected natural areas located in rural territories), so that the location of the partners is not necessarily reflecting the (type of) territory that benefited most.

When investigating the issue of sustainability a few months or years after projects ended, case studies reveal that beneficiaries often refer to the *expected* sustainability of projects results rather than their *actual* sustainability. As in the final reports, interviewed beneficiaries mentioned the factors (e.g. application for a follow-up project, integration of project results in a local strategy, etc.) that *should* ensure sustainability, as they were not able to provide a definitive answer on the actual sustainability of their project results. The sustainability of results of capacity-building oriented projects actually materialises in the longer term (e.g. linked to policy cycles). In this case, sustainability can only be assessed several years after the project ended.

At programme level, interviewed programme stakeholders generally consider that there is **no specific pattern of sustainability** across Interreg CE projects. While the sustainability of project outputs in terms of availability should be guaranteed by project partners already during the application phase, in reality it depends on both internal (e.g. capacity of project partners) and external factors (e.g. political context). The sustainability of project results in terms of outreach and uptake is mainly driven by the commitment, motivation and expertise of the project partners, in particular the lead partner, as well as the maturity of project partnerships and the intensity of cooperation. Participation in European networks is also associated with higher sustainability.

Likewise, sustainability increases as projects are capitalised upon, supported by other instruments, funds are leveraged, project results are 'visible' to target groups – especially those located in other territories - or become institutionalised (political buy-in). With regard to the first aspect (**capitalisation**), the experience of call 4 shows that results from projects funded as part of the first and second calls were re-integrated in projects funded in the fourth call, thereby extending both their utility and sustainability. Examples include RegiaMobil, capitalising on RUMOBIL, SubNodes, SHAREPLACE and CONNECT2CE; STRENCH, capitalising on BhENEFIT, RUINS, ProteCHt2save, and HICAPS; or TARGET-CE, capitalising on BOOSTEE-CE, ENERGY@SCHOOL, FEEDSCHOOLS, eCENTRAL and CitiEnGov. With respect to the last aspect (**institutionalisation**), sustainability can be observed, among other things, through the uptake of these results by other regions or cities, or through the permanent adoption of project results (e.g. bus line) by local authorities. Project-level evidence shows that this is better achieved when project partnerships include (and not only target) policy stakeholders, such as municipalities and ministries. In that regard, it is noteworthy that project outputs and results were only moderately taken up by policy stakeholders (cf. above), according to results of the stakeholders' survey. This points to some discrepancy between what beneficiaries (self-)reported at the end of their project in terms of policy uptake (i.e. a total number of institutions adopting new and/or improved strategies and actions plans and institutions applying new and/or tools and services) and what policy stakeholders actually observed at the institutional level. Two key reasons explaining that mismatch are that: 1) Interreg CE, while fostering place-based, locally embedded initiatives, is only 'to some extent' relevant for achieving the objectives of CE national/regional strategies, and 2) policy uptake takes longer than the observation phase of this evaluation, while the use and uptake of project results is primarily guided by their immediate utility.

FIGURE 48 STAKEHOLDERS' FEEDBACK ON THE RELEVANCE OF INTERREG CE FOR ACHIEVING NATIONAL/REGIONAL STRATEGIC OBJECTIVES



Source: Survey targeting Programme stakeholders

These findings contribute to the overall conclusion that sustainability is more **project-specific** than theme-specific as it depends on three main components - **partnership sustainability** (i.e. continued cooperation)**, financial sustainability** (i.e. leverage of public or private funds) and **institutional sustainability** (i.e. policy uptake) – that differ from one project to another with no clear distinct pattern within thematic priorities or SOs, with the notable exception that 'forward-looking' project outputs such as those from Low-Carbon projects targeting the 2030 and 2050 horizons are naturally more likely to be sustained in the longer term.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1. CONCLUSIONS

4.1.1. AT PROGRAMME LEVEL

- The evaluation of the Interreg CE Cooperation Programme for the period 2014-2020 indicates **positive developments in addressing the initial challenges** identified in the programme area across all thematic priorities. The evidence gathered during the evaluation clearly shows that the programme played a significant role in enhancing stakeholder capacity, building trust, and delivering innovative and high-quality products and services, thus contributing to strengthening the foundations for economic, social, and territorial cohesion in the Central European region. The programme effectively acted as a catalyst for introducing new solutions to regional challenges linked to innovation, low-carbon, environment, culture, and transport.
- The Interreg CE programme **effectively facilitated transnational cooperation in Central Europe**, as originally intended. It played a crucial role in enhancing policy frameworks, developing managerial systems, human resources, and institutional structures across all thematic areas. However, it should be noted that the extent of these effects varied depending on contextual factors, regulatory aspects, policy priorities, and financial capacity.
- The evaluation confirmed that the Interreg CE programme **effectively addressed challenges** specific to the programme territory, allowing regions and cities to collaboratively find common solutions across all SOs. The programme also demonstrated adaptability to evolving developments and effectively addressed emerging challenges, such as migration and increasing thematic priorities like environmental protection.
- The evaluation also noted the **significant progress achieved** compared to the baseline for all programme-specific result indicators, which reflect the status of specific aspects targeted by each SO. While these indicators may have been influenced by external factors, they provide compelling evidence of the programme impact.
- The evaluation findings indicate that the majority of output and result indicators were not only achieved but surpassed. By the end of the fourth call in 2023, targets were significantly exceeded, apart from "jobs created," for which it is still early to see full results, as beneficiaries had a five-year period to reach the target, after the project end. At the project level, **beneficiaries generally met or exceeded their targets**, demonstrating the success of the projects and the overall quality of their management. Moreover, the overall programme performance exceeded initial expectations.
- The Interreg CE programme exhibited four distinctive features: its unique territorial and thematic coverage, **accessibility for smaller organizations compared to other EU-level programmes**, project partnerships that encouraged diverse participation, and innovative interventions through pilot actions. The programme fostered cooperation and trust among stakeholders, including across territories formerly divided by the Iron Curtain. It also expanded beneficiaries' networks for future transnational collaborations.
- While the transfer of project outputs to other contexts varied, the evaluation identified numerous positive examples. The programme contributed to changing practices at the individual and organizational level, showcased the value of transnational cooperation, and brought benefits to a diverse range of beneficiaries and target groups. **Outputs and results were generally sustainable**, with additional funds, synergies with other initiatives, consolidated partnerships, and increased interest playing key roles.

- The funded **projects have demonstrated good quality, sustainability, visible contributions to supporting transnational cooperation** and developing transnational solutions, capacity-building and policymaking, including for local, regional and wider strategies.
- Pilot actions and tools **usually produce the most visible results**, with immediate, tangible effects for wider audiences. Other outputs (such as trainings or strategies) are either likely to produce longer-term results or lose importance in time.
- The structure of the partnership and the technical/financial capacity of the partners are key factors for a successful project implementation and the sustainability and transferability of project results. In this regard, smaller organisations are often at disadvantage.
- In particular, the financial capacity of the partners is crucial for the sustainability of the project outputs and results. Interventions are highly dependent on the capacity of the involved stakeholders to maintain the results and attract further resources, particularly in the worsening economic climate. The transferability of the results could thus be negatively affected by constrained finances.
- Involving the relevant stakeholders from the onset of the projects has increased the quality and effectiveness of the outputs produced. Support from programme stakeholders improves efficiency and support from policymakers improves sustainability.
- Call 4 **was widely considered** as a successful experimentation that **achieved greater capitalisation** and enabled a shift in the mentality of project applicants as well as a smooth transition to the 2021-2027 programme. In particular, call 4 projects were deemed successful with regard to their outreach – but support from programme stakeholders remained essential. It also enabled the transfer of project results to other EU programmes.
- Interreg CE generated synergetic effects, leveraged follow-up funding, and created further cooperation opportunities. Positive unintended effects were observed, although the pandemic also had negative impacts on project implementation. The **programme contributed to better policy coordination horizontally**, but less vertically.
- Success factors in project delivery included a bottom-up approach tailored to local and regional needs, complementary skills within project partnerships, target group engagement activities, and the cost-effectiveness of pilot actions as "living laboratories." However, administrative requirements and sector-specific provisions were sometimes burdensome for project implementation.
- External factors, including digitalization, emerging technologies, and climate change awareness, became more prominent over time within the programme area. The COVID-19 crisis and its aftermath significantly impacted programme implementation in the later stages. This highlighted the need for flexibility, resilience, and innovation to overcome unforeseen challenges. The long-term consequences of the pandemic on the region's development remain uncertain. Nonetheless, the shift to the digital space enabled the opening of the programme to stakeholders outside its original scope, thereby widening outreach and project impact.
- Overall, the **programme produced a** far-reaching, balanced impact **both in terms of** target groups and territories. More specifically, the funded projects reached a wide diversity and large numbers of target groups, in particular SMEs and research and education institutions, as well as the general public. They also covered many different types of territories, even though urban areas have been found to unintentionally benefit more, owing mainly to the knowledge and capacity gap between more urbanised areas and more remote, rural areas.
- The evaluation confirmed the validation of programme design assumptions, including transnational cooperation, bottom-up approaches, and effective implementation mechanisms. The programme successfully addressed cross-border and transnational challenges, provided innovative solutions through pilot actions, and engaged relevant actors at all governance levels. Communication efforts promoted projects, raised awareness, and increased stakeholder interest in the covered topics.

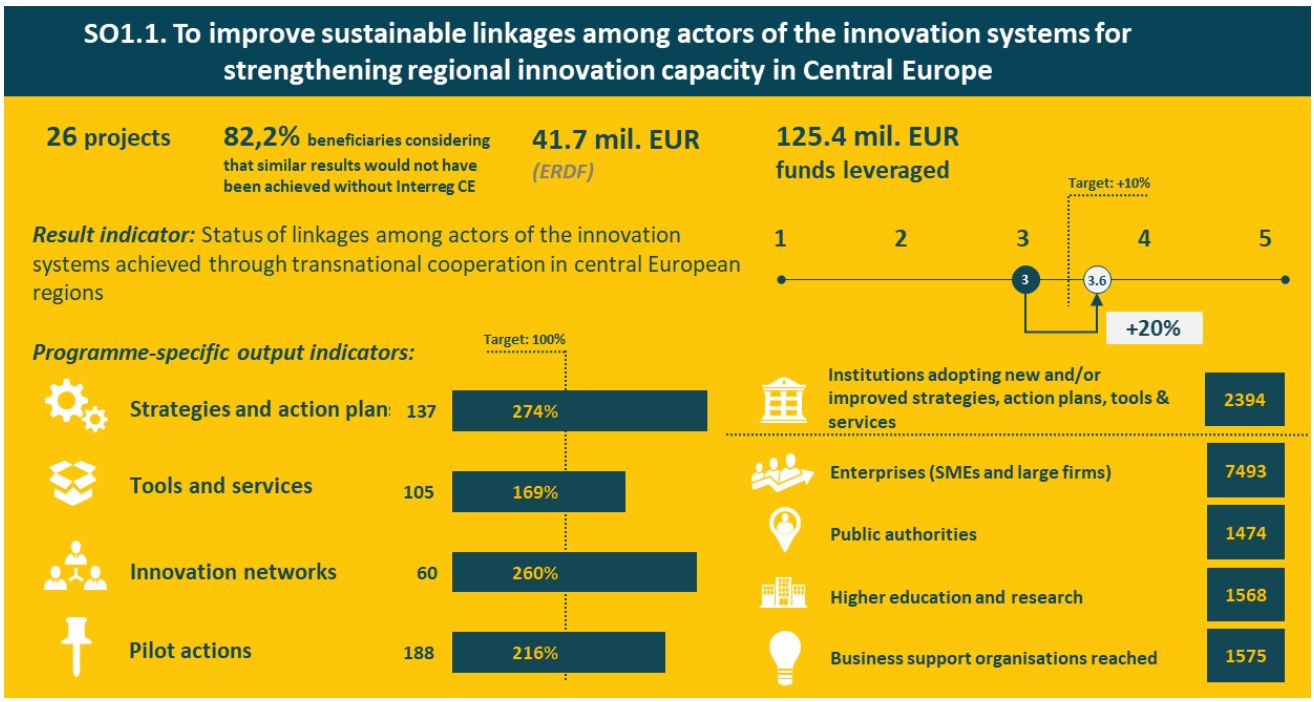
4.1.2. INNOVATION

- Innovation projects were implemented in the context of Industry 4.0, Digital Innovation Hubs, the Internet of Things and 'mega-trends' such as climate change and migration 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 (including elderly care through quadruple-helix based, co-creation approaches), 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, creating social innovation hubs to offer professional, business-oriented support to disadvantaged persons or fostering social inclusion and cohesion within local communities.
- 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 SOs, **businesses** were the target group most reached (leaving the general public aside), with SMEs representing the bulk of this group. The second most reached target group – though far behind businesses in total numbers - was business support organisations and higher education and research organisations for SO 1.1, and interest groups including NGOs for SO 1.2.
- 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 eco-system** in CE, i.e., projects whose scope was very narrow (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.
- More specifically, the projects were particularly successful in:
    - addressing the full innovation cycle (i.e., from research to product and from product to users) across many different innovation topics (both SOs),
    - contributing to increasing the number of sustainable linkages between actors of the innovation system (SO 1.1),
    - contributing to increasing knowledge and technology transfer between research organisations and businesses (SO 1.1), and
    - contributing to supporting (innovative) SMEs (both SOs).
- The projects were also successful (though to a reportedly lesser extent) in:
    - improving capacities of the public and private sector for skills development and entrepreneurial (SO 1.2), and
    - supporting entrepreneurship through the development of technological and managerial competences and entrepreneurial mindsets (SO 1.2).
- The stakeholders participating in both SO 1.1 and SO 1.2 projects under the innovation priority have particularly benefitted 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 very difficult or even impossible to finance nationally.

- **Pilot actions** seem to be highly effective means for showcasing project results. More concretely, SO 1.1 projects implemented 7.2 pilot actions on average (per project), and SO 1.2 projects implemented 5.2 pilot actions on average (per project), pilot actions being in both cases one of the most common outputs. Likewise, **transnational networks** of innovation actors are an important achievement of the programme and a key driver of further capitalisation and innovation – and 60 innovation networks were created under SO 1.1.
- However, there is still **potential for more policy uptake** (and transfer to other governance levels) across both SOs. Furthermore, the transfer of project results to other territories was very high for both SOs, and the transfer of project results to other sectors was very high for SO 1.1, and rather high for SO 1.2, thereby leaving some room for more **cross-sectoral fertilisation** of results within projects targeting innovation skills and entrepreneurial competences.
- Finally, it is worth noting that the **green and digital transition** comes about with both opportunities and challenges for the programme area.

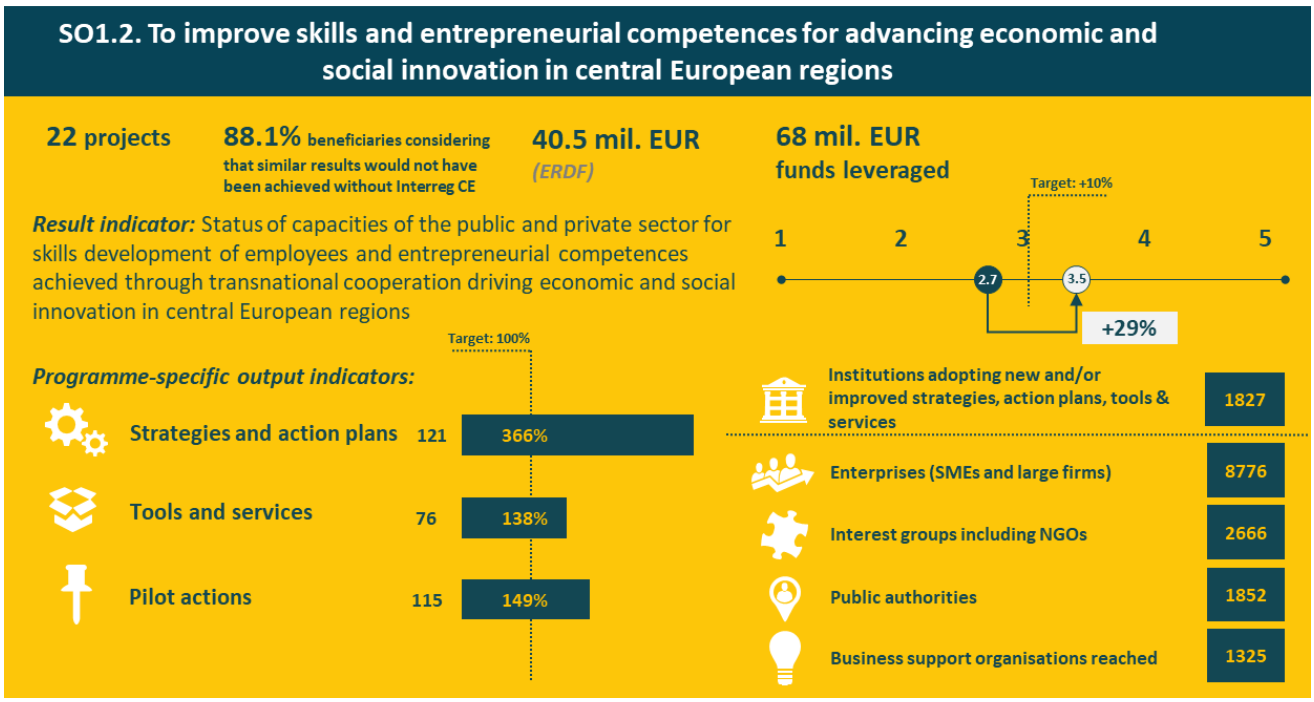
Specific Objective 1.1

- Projects funded under SO 1.1 responded to the need to connect innovation actors better and more sustainably within the CE area by producing a wide range of different outputs, including innovation networks. This also helped to address deficient coordination of innovation policies both across territories and across governance levels – especially between the local and regional levels - in the programme area.
- In particular, accessing knowledge and funds which are not available nationally was reported by beneficiaries as a major benefit from participating in an Interreg CE project, further highlighting the added value of the programme in comparison to regional and national initiatives. As a result, increasing knowledge, capacity and competences as well as building trust beyond borders were among the key achievements of the programme for SO 1.1 project beneficiaries. Importantly, accessing knowledge and good practices was also a key benefit for end-users of SO 1.1 projects, who were overall satisfied with their participation in project activities.
- The evaluation confirmed that operations were in line with the Theory of Change established initially, by tapping into locally embedded innovation potentials, fostering knowledge and technology transfer between regions and between actors (i.e. research organisations and businesses, in particular SMEs), and building stronger links between them through long-standing cooperation partnerships, sustainable outputs (in particular innovation networks) and newly created cooperation opportunities.
- The main target groups for SO 1.1 projects were SMEs and business support organisations, however a wide range of other innovation actors also benefitted from the projects, in line with the quadruple helix approach widely taken in these SO. Industrial areas were also reported to have benefitted more, but project outputs and results were very often transferred to other sectors and territories, thereby expanding the benefits of the programme to a wider range of actors.
- Finally, projects also contributed to better policy coordination horizontally at the local and regional levels in particular, as well as vertically between these two levels, while supporting the implementation of wider strategies such as the Europe 2020 Strategy (with regard to its R&D and climate targets) and Macro-Regional Strategies. At the same time, challenges remain in relation to disparities between “innovation leader regions” and “moderate and emerging innovator regions”. As many CE regions saw a decrease in their innovation performance in recent years, the added value of the programme becomes more evident.



Specific Objective 1.2

- Projects funded under SO 1.2 responded to the need to build and reinforce the skills and entrepreneurial competences of innovation actors by producing a wide range of different outputs. Accessing knowledge and good practices as well as networks which are not available nationally were reported as key benefits by a vast majority of beneficiaries. As a result, increasing knowledge, capacity and competences as well as building trust beyond borders were considered as the most successful achievements of the programme.
- The evaluation confirmed that operations were in line with the Theory of Change established initially, by responding to skill development needs stemming from labour market transformations and more global trends. More specifically, SO 1.2 projects were considered particularly successful in improving capacities of the public and private sector for skills development and entrepreneurial competences as well as for supporting entrepreneurship through the development of technological and managerial competences and entrepreneurial mindsets. Social entrepreneurship and social innovation were also envisaged by the supported projects.
- A wide range of territories (both urban and rural areas) benefitted from the projects, directly through project activities (e.g., pilot actions) and indirectly through the transfer of project results. Likewise, projects funded under SO 1.2 targeted a wide diversity of end-users, with strong benefits for (social) enterprises and entrepreneurs. It also contributed to the labour market and social integration of disadvantaged groups, especially migrants and refugees. Projects were also believed to have contributed to changes of practices among target groups, in particular at the individual level.
- Finally, projects also contributed to better policy coordination horizontally at the local and regional levels in particular, as well as vertically between these two levels, though to a lesser extent than in SO 1.1. Projects also supported the implementation of wider strategies and multiplication effects in terms of newly created cooperation opportunities were also reported.
- Nevertheless, demographic challenges with adverse impacts on the availability of skills and competences such as migration and brain drain persist in Central Europe, and social innovation is only slowly emerging. Even though significant progress has been achieved in the availability of public services for innovation support to businesses and entrepreneurship, further support is needed to embrace the latest innovation trends, here again making the added value of the programme more evident.



4.1.3. LOW-CARBON

- Recent developments linked to climate change aggravation and energy security concerns have increased public awareness around and importance of territorially based low-carbon solutions. The diversity of low-carbon issues tackled by the projects (e.g., heat, lighting, CO2 emissions, etc.) has contributed to addressing low-carbon challenges from different and complementary perspectives.
- More specifically, low-carbon projects contributed to developing low-carbon solutions for, among others, mobility, transport, industry, waste and buildings, both in urban (where the FUA approach proved particularly effective) and rural areas. Low-carbon projects were therefore particularly successful in:
    - contributing to improving the capacity of the public sector in relation to awareness-raising and knowledge-building for low-carbon issues (all SOs),
    - contributing to improving capacity-building to plan and implement territorially based low-carbon solutions (all SOs),
    - helping to improve policymaking and offer new or better services for citizens and companies in this field, although more can be done to translate awareness and knowledge into concrete actions (all SOs), and
    - enabling regions and cities to make better use of limited resources (SOs 2.1 and 2.2 in particular).
- Indeed, projects have contributed to improving capacity-building to plan, implement and coordinate low-carbon solutions at the local and regional levels – as well as between the two -, benefitting to many different target groups and types of territories. Still, there remains room for transferring those results to a larger range of territories and stakeholders, including as part of MRSs. More specifically, the transfer of project results to other governance levels was, for all SOs but particularly for SO 2.3, below their potential, as was the transfer of project results to other sectors for SOs 2.1 and 2.3.
- In terms of outputs, low-carbon projects across all SOs were very prolific with regard to strategies / action plans and pilot actions (they produced between 8 and 10 of such outputs on average per project), and SO 2.1 and SO 2.2 projects produced an even higher number of tools and services (11 on average

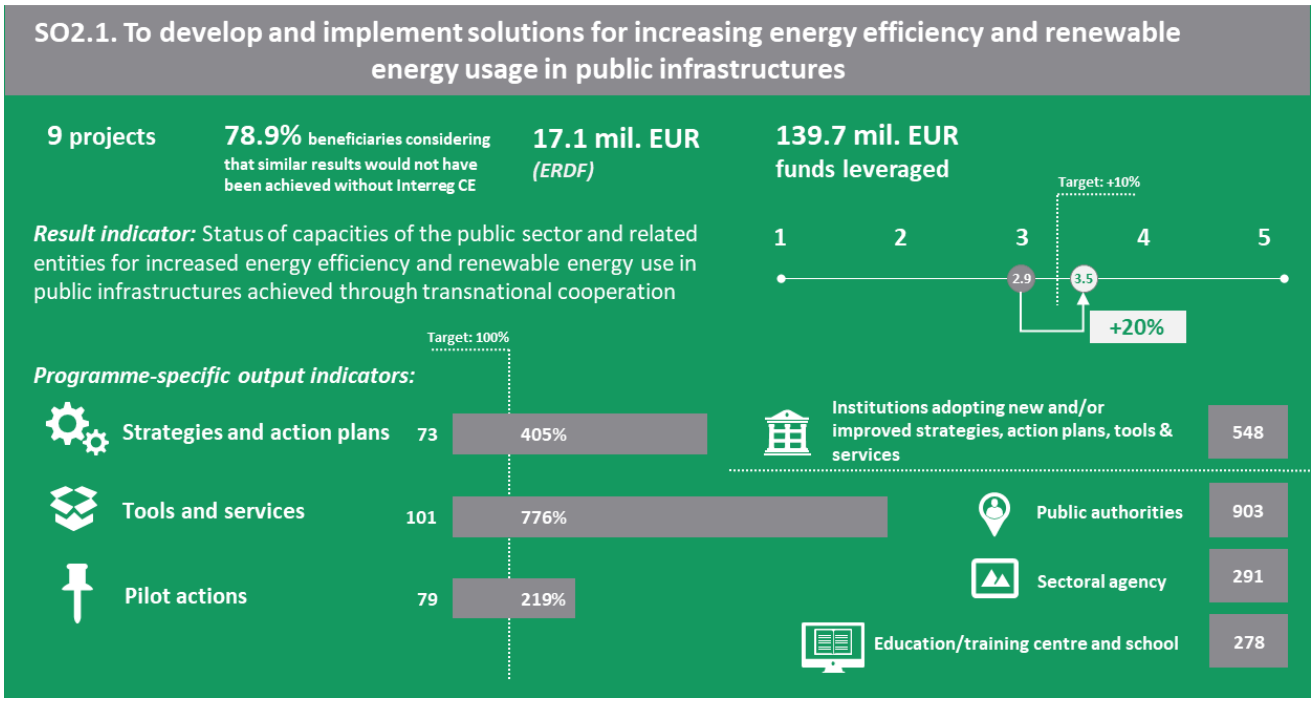
per project). Pilot actions are a particularly effective and efficient type of output for the projects' success.

- As the impact of low-carbon solutions on the level of carbon emissions takes time to materialise (this applies to both long-term strategies and more immediate behaviour change), the forward-looking dimension of some project outputs (in particular the local and regional strategies developed by project partners in line with the 2030/2050 EU commitments) is very promising for the sustainability of the project results, which has the potential to generate lasting change at the policy level (e.g., Regional Energy Action Plans) and ripple effects observed up to now.
- The stakeholders participating in projects under the low-carbon priority across all SOs have particularly benefitted 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 very difficult or even impossible to finance nationally, thereby demonstrating the added value of transnational cooperation for addressing low-carbon issues.
- Overall, the programme's results contributed to the efforts for reducing carbon emissions levels across central Europe. Importantly, the EU Green Deal has brought and should still bring further momentum to low-carbon projects across Europe, and in particular in CE where several carbon-intensive regions are located.

Specific Objective 2.1

- Projects funded under SO 2.1 responded to the need for low-carbon solutions in public infrastructures by producing a wide range of outputs to help increase energy efficiency and renewable energy usage. This was in particular achieved by improving the capacities and reducing know-how disparities of the public sector in relation to energy efficiency and renewable energy solutions.
- Accessing knowledge and good practices as well as networks which are not available nationally were reported as key benefits by a strong majority of beneficiaries. As a result, increasing knowledge, capacity and competences, delivering higher quality outputs than expected in a national context as well as building trust beyond borders were considered as the most successful achievements of the programme.
- The evaluation confirmed that operations were in line with the ToC established initially, by providing and sharing solutions to reduce energy consumption and related carbon emissions in public buildings. However, the transfer of SO 2.1 project results to other sectors, territories and governance levels was quite limited, and their contribution to better coordination between decision-making bodies was mainly to be observed at the local and regional levels, as well as vertically between the two. More generally, findings of the evaluation point to more locally rooted impacts, in particular where project actions were implemented (e.g. schools), and more limited effects at macro-level (including with regard to wider strategies).
- Urban areas were reported to have benefitted more from projects (as they usually host more and larger public buildings, e.g. schools). At the same time, a wide diversity of stakeholders was targeted, with local authorities and, to a lesser extent, sectoral agencies and infrastructure and service providers being more prominently represented among target groups, in line with the focus of the SO. Nonetheless, the contribution of projects to change of practices was overall moderate and mostly achieved at individual level.
- Importantly, projects have led to strong multiplication effects, in particular through fund leverage (reportedly above the programme average) and new partnerships and cooperation opportunities, two factors which should help make project outputs and results even more sustainable. Over the past years, Central Europe experienced steady increases in both energy efficiency and the production of energy from renewable sources across the CE area. Yet, sustained efforts to make the public sector an inspiring

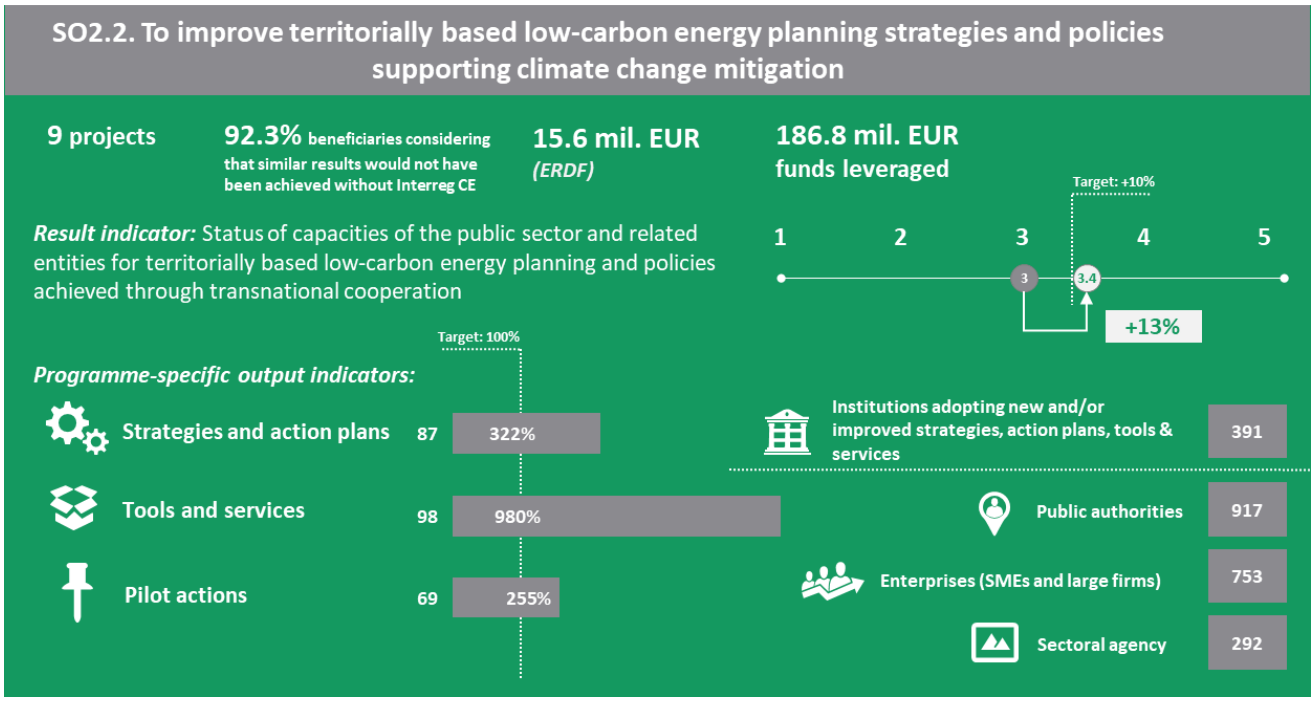
example in the transition towards a low-carbon economy are needed, as the region is still host to several carbon-intensive industries.



Specific Objective 2.2

- Projects funded under SO 2.2 responded to the need for low-carbon energy planning strategies and policies by producing a wide range of outputs. In particular, projects helped improve capacities of the public sector for territorially based low-carbon energy planning strategies and stimulate the exchange of knowledge and experience to help planning, financing and implementing concrete sustainable energy actions. Accessing networks, knowledge and good practices as well as funds which are not available nationally were reported as key benefits by the vast majority of beneficiaries. As a result, increasing knowledge, capacity and competences, building trust beyond borders and delivering higher quality outputs than expected in a national context were considered as the most successful achievements of the programme.
- The evaluation showed that operations were in line with the ToC established initially, by promoting innovative local and regional energy planning strategies (e.g., aiming at the monitoring and optimisation of energy use, or fostering behaviour change) thereby leading to energy savings. A wide diversity of stakeholders was therefore targeted, with SMEs and, to a lesser extent, local and regional authorities as well as sectoral agencies being more prominently represented among target groups.
- Importantly, projects have led to strong multiplication effects, in particular through fund leverage (reportedly well above the programme average) and new partnerships and cooperation opportunities, two factors which should help make project outputs and results even more sustainable. It is noteworthy that the interest of citizens and businesses in the issues addressed by the projects is also a key factor for the uptake and sustainability of project results. Therefore, stakeholder engagement and public outreach play a significant role for the projects' success. Yet, surveyed beneficiaries reported that the contribution of projects to change of practices was overall moderate both at the individual and organisational level.
- Even though the transfer of project results to other sectors and governance levels was quite limited, their contribution to better coordination between decision-making bodies was very strong horizontally at the local and regional levels, as well as vertically between the local and regional levels, and between the regional and national levels. Job creation was another key result reported in the project reports, with 29 newly created FTE jobs on average per project (i.e. twice the programme average). As different

paces in decarbonisation-enabled employment dynamics have been observed across CE regions, it is important to enable further the exploitation of renewable energy sources, the optimisation of energy distribution and the realisation of energy-saving investments, with expected benefits for the regional labour markets. The added value of the programme to achieve results going in these directions was unanimously praised by surveyed beneficiaries.

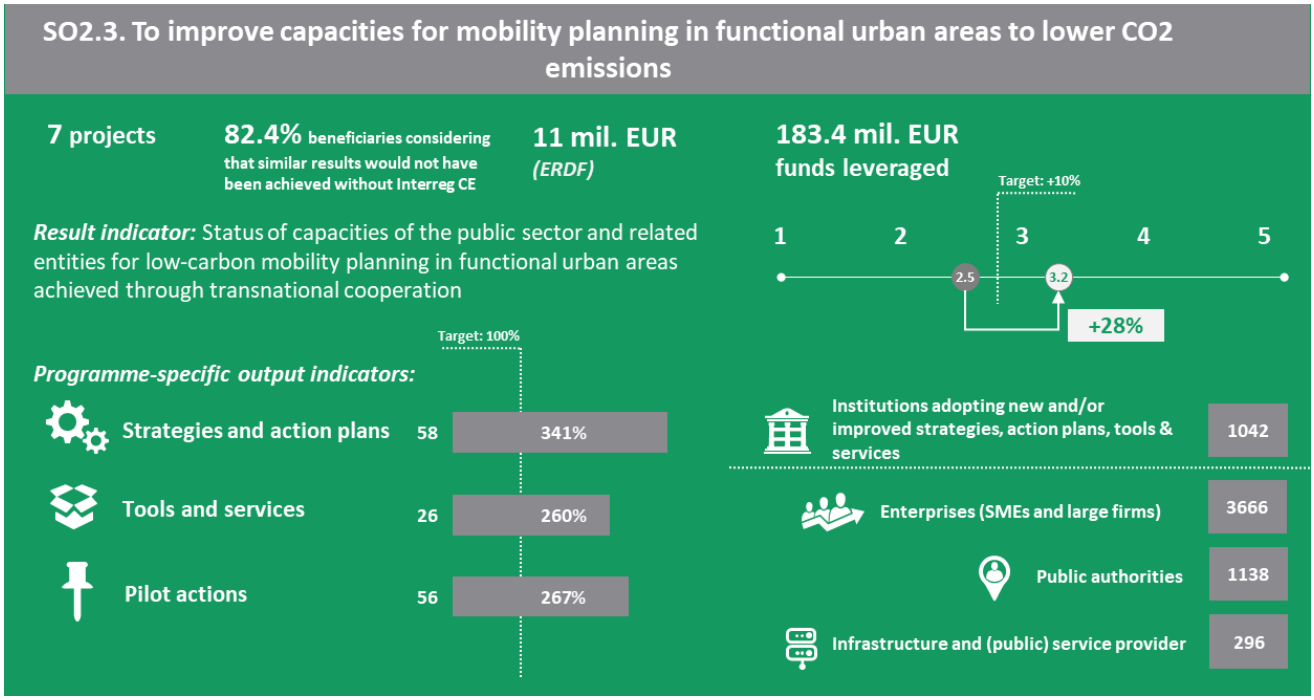


Specific Objective 2.3

- Projects funded under SO 2.3 responded to the need for more efficient and environmentally-friendly mobility planning by producing a wide range of outputs. In particular, projects helped to increase the knowledge and planning capacity of the public sector for integrated low-carbon mobility solutions in functional urban areas, to improve their capacities for low-carbon mobility planning and to foster smart low-carbon mobility in public urban transport.
- Increasing knowledge, capacity and competences, building trust beyond borders, fostering cooperation and enhancing the quality of governance and coordination at all governance levels as well as supporting public authorities to offer new or better services for citizens were reported as key achievements of the projects. Increasing knowledge capacity and competences was also considered as the most successful achievement of the programme.
- The evaluation confirmed that operations were in line with the ToC established initially, by addressing the negative externalities of a high energy-consuming sector through functional approaches. In line with the requirement of the SO, (functional) urban areas are believed to have benefitted more under this SO (e.g., through the contribution of projects to their Sustainable Urban Mobility Plans), as did infrastructure and service providers, local authorities and SMEs among target groups.
- While the transfer of SO 2.3 project results to other sectors, territories and governance levels was reportedly more limited, their contribution to better coordination between decision-making bodies is likely to have been very strong at and across all governance levels. It is however important to note in that regard that the sample of respondents[75] in this SO is very small and therefore not necessarily representative of the experience of all project partners.

[75] For SO2.3, N=12 for all questions related to the degree of transferability to other sectors, territories or governance levels. More details are presented in Annex 8

- Importantly, projects have led to strong multiplication effects, in particular through fund leverage (reportedly well above the programme average), while access to funds was deemed the most important influencing factor for project results sustainability by surveyed beneficiaries.
- As car remains an important transport mode for commuting and air pollution, noise pollution and road congestion are perceived as important problems in some CE cities, continued efforts for low-carbon mobility planning are needed, making the programme's focus on this issue still relevant.



4.1.4. ENVIRONMENT

- Climate change and environment-related challenges are by nature transnational. As such, projects financed are highly relevant for tackling the widely present challenges of climate change, prioritised in all Macro-Regional Strategies.
- Projects under the Environment Priority have been gaining traction since environment has become a strategic priority for both the public sector, as well as the political agendas in frameworks such as the European Green Deal. In line with the increasing challenges and the renewed commitment for green, smart and sustainable development at EU level, the need for action has grown.
- In response to the needs identified initially and in line with the ToC, projects under SO 3.1 provided solutions for the sustainable management of protected or environmentally highly valuable areas, developed tools for sustainably use natural resources and avoid potential usage conflicts and tested the application of innovative technologies and instruments in support of climate change adaptation and environment protection. Projects funded under both Environment SOs provide successful examples of interventions contributing to EU objectives of protecting biodiversity and ecosystems, reducing pollution and supporting circular economy. They also showcase the role of natural heritage as a location factor and the use of its assets as drivers for economic development.
- The evaluation found that projects have effectively contributed to strengthening transnational cooperation among the relevant actors, improving integrated environmental management capacities for the protection and sustainable use of natural heritage and resources and to harmonizing policy frameworks. The evaluation also confirmed that the complexity of the challenges requires integrated approaches based on sustainable long-term strategic visions, linking different policies, sectors and administrative levels. (both SOs)

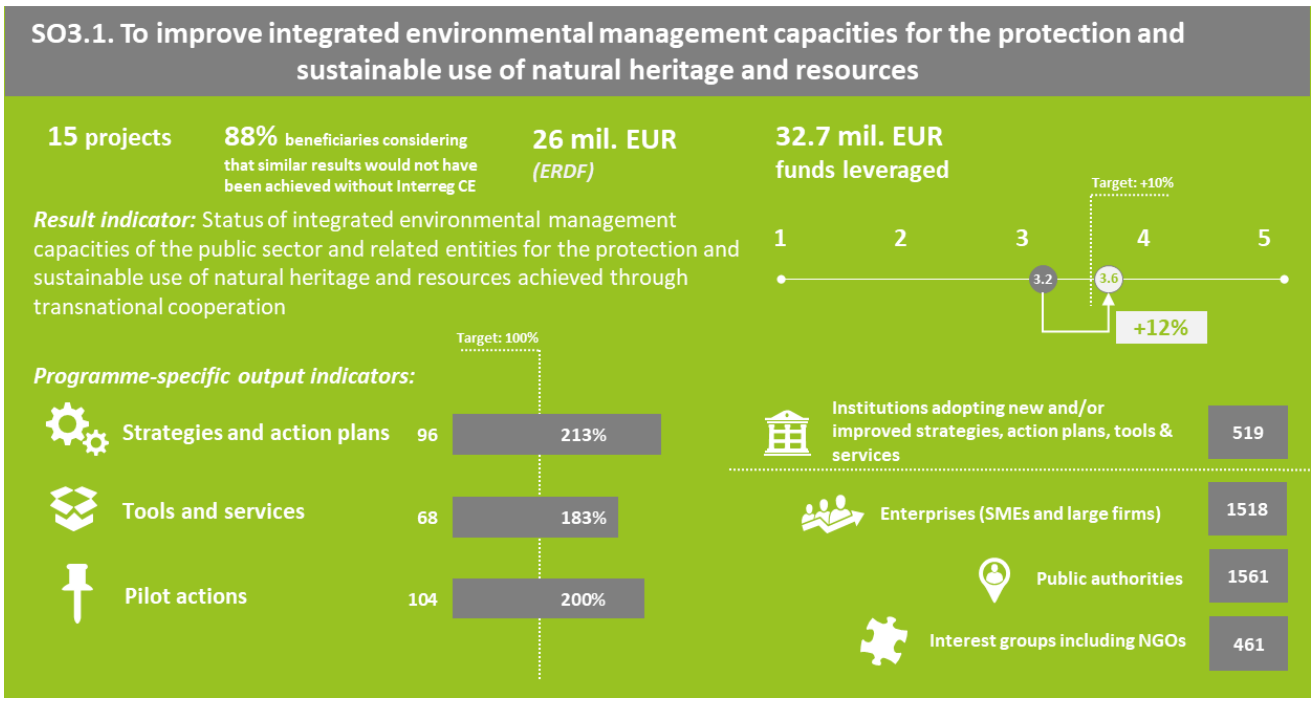
- Projects financed were implemented in a variety of territories, including urban, semi-urban and rural and areas (both SOs). Usually, the territories transcended administrative boundaries, as they followed the natural landscape (for example in the case of river basins for SO 3.1) or covered functional urban areas (SO 3.3). Diversity of local contexts was in many cases key for project success.
- The evaluation confirmed that that the Programme has successfully contributed to developing solutions to common problems and to bringing together stakeholders from different countries, sectors and contexts, to enhance knowledge-creation and knowledge-sharing. Most beneficiaries consider that the Programme has supported them to achieve results which would not have been possible otherwise and has given them access to knowledge, good practices, networks and opportunities which are not available nationally.
- Challenges remain on multiple dimensions. Pollution is a severe problem, mainly generated by transport, energy consumption and waste creation. Improving air quality, reducing high levels of noise, tackling contaminated sites, addressing water scarcity/quality, and fostering efficient waste-management cycles are prominent challenges for urban areas, together with ensuring preparedness and response capacity to climate change phenomena, such as flooding and extreme temperatures.
- At the same time, technical capacity, attitudes, awareness and approach to environmental protection, preventing pollution and mitigating climate change are different across the region, with a pronounced East-West difference, adding up to the need for more coordination. Language barriers are an important constraint in accessing information which needs to be taken into consideration.
- The implemented pilot actions have particularly contributed to empowering local stakeholders and to increasing their capacity, providing them with the opportunity to learn and share knowledge and experience with peers from other countries, confirming the added value of the programme.
- Having access to knowledge, good practices, networks and opportunities which are not available nationally was reported by beneficiaries as a major benefit from participating in an Interreg CE project. Beneficiaries also mentioned that the Programme has contributed to building trust beyond borders, which highlights its added value in comparison to national initiatives.
- In the case of SO 3.3, at FUA-level, decision-making power is often dispersed among the numerous policy-actors and institutional structures often remain focused on the core-centric urban model, placing surrounding areas at disadvantage against the core cities. Efforts and practices dedicated to environmental management are unequal across the Programme area, making it a case for further support.

Specific Objective 3.1

- Under SO 3.1, the Programme demonstrated effective measures in addressing environmental challenges, including climate change, pollution, and natural resource degradation, by focusing on the safeguarding and responsible management of the CE territory's natural heritage and resources. Remarkably, all output indicators surpassed their targets both the Performance Framework and the application forms at project level, highlighting the Program's performance in achieving desired outcomes.
- The supported projects made substantial contributions to the development and implementation of integrated environmental strategies and tools. These projects prioritized the protection of biodiversity, natural habitats, and addressed critical areas such as water management, including flood protection, river basin management, and sustainable water resource practices. Furthermore, they successfully addressed issues related to air quality and promoting circular economy practices.
- The Interreg CE programme has made significant contributions to improving integrated environmental management capacities for the protection and sustainable use of natural heritage and resources. Stakeholders reported the key benefits in terms of enhanced integrated management capacities of the public sector, particularly in the areas of natural resource protection, risk prevention, and climate

change adaptation and successful linkage of different policies, sectors, and administrative levels to adopt sustainable long-term strategic visions.

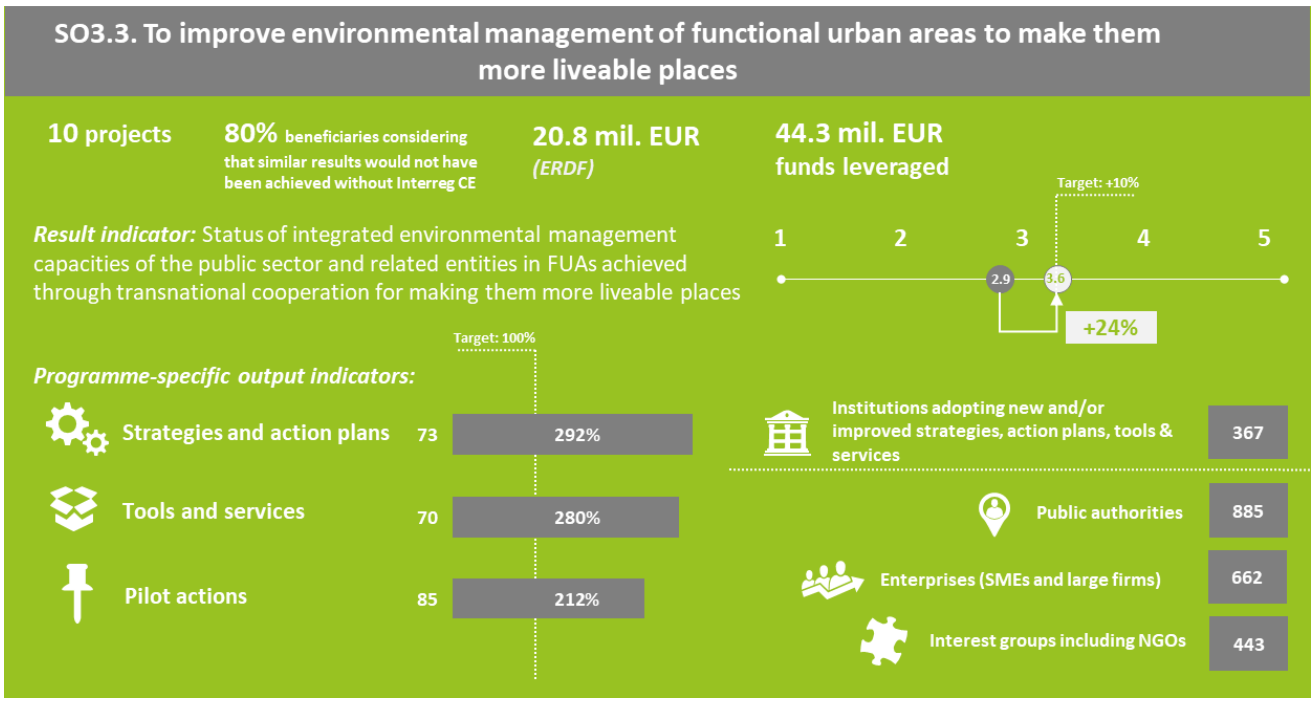
- The evaluation revealed a high level of success and effectiveness, as 68.6% of beneficiaries expressed satisfaction with the projects' ability to address strategically important issues, such as enabling the implementation of macro-regional strategies. Although the leveraged amounts, totalling 32.7 million euros, were comparatively smaller in relation to other SOs, there is promising potential for increased funding during the new programming period.
- Encouragingly, 45% of respondents to the beneficiary survey reported positive unintended effects resulting from their projects. These effects encompassed personal development opportunities, improved tools, scientific cooperation, and the adoption of a more systemic approach to brownfields regeneration. However, some respondents also noted negative unintended effects, such as the administrative burden associated with project implementation and the need for enhanced national-level coordination in brownfields regeneration efforts.
- SO 3.1 received the highest positive response regarding the transfer of project results and outputs to other territories (62.7%) and other sectors (52.9%). This indicates a successful dissemination and integration of project outcomes beyond their initial scope. Notably, SO 3.1 had a substantial digital reach, surpassing its target by more than five times.
- With a 90.2% positive response rate, SO 3.1 ranks first in respect to the beneficiaries' perception on the positive contribution of the programme to facilitating the establishment of new partnerships and cooperation opportunities.
- These conclusions highlight the programme's effectiveness in improving integrated environmental management capacities, fostering strategic collaborations, and delivering tangible benefits to beneficiaries, including access to valuable knowledge, funds, networks, and international opportunities.
- Challenges remain in respect to protecting and valorising natural heritage and resources. Pollution, man-made disasters, and climate change are major factors affecting biodiversity. There are persistent disparities in terms of environmental performance and implementation of environmental policies, determined by the different economic structure and development level, lifestyle, investments in innovation and circular economy of the different countries in the Programme area. Tourism remains one cross-cutting factor impacting natural resources and heritage.



Specific Objective 3.3

- Under SO 3.3, the programme successfully contributed to improving the environmental management of functional urban areas by addressing key challenges such as land use conflicts, air and water pollution, soil contamination, and waste management. The supported projects covered a range of topics, including brownfield rehabilitation, water management, air pollution control, waste management, and integrated management of urban green spaces. These efforts directly contributed to enhancing the quality of life for urban residents, while supporting overall environmental sustainability and regional development.
- The stakeholders' survey revealed significant achievements and positive effects resulting from the Interreg CE Programme's contributions to environmental management in functional urban areas, most notably: improved coordination of policymaking and increased knowledge and implementation capacity of the public sector for integrated environmental management and planning, specifically in reducing land use conflicts and rehabilitating brownfields in functional urban areas.
- The Programme achieved or exceeded its targets for output indicators related to the improvement of environmental quality in functional urban areas, as stated in the Performance Framework (PF). Compared to the AF targets, the number of strategies and action plans developed and implemented reached 98.6%, and pilot actions implemented for environmental quality improvement reached 97.7%.
- While the amounts leveraged for SO 3.3 were smaller than other thematic areas, at 44.3 million euros, there is potential for increased values as the new programming period begins.
- Beneficiaries expressed a high level of satisfaction with the projects, as 72.4% considered them successful and very successful in addressing strategically important issues, enabling the implementation of macro-regional strategies.
- Beneficiaries reported that their projects contributed to improving horizontal coordination at the local level, with 78.9% also indicating improved horizontal cooperation at the regional level. The cooperation between local and regional levels, as well as across multiple governance levels (except between the national and EU levels), was highlighted. Comparatively, more beneficiaries perceived the interventions of SO 3.3 to be more successful than those of SO 3.1 in terms of reducing and counterbalancing regional disparities.

- The Programme had the lowest positive response regarding the transfer of project results and outputs to other territories (32.1%), but the highest in terms of transfer to other governance levels (48.3%) and among the highest for transfer to other sectors (43.3%). Additionally, the positive response regarding the project's ability to lead to new partnerships or cooperation opportunities was the second lowest at 73.3%.
- Positive unintended effects were reported by 42.9% of respondents, primarily related to generating higher-than-expected interest in the project topics. No negative unintended effects were mentioned.
- The supported projects demonstrated high participant engagement, with project event attendance surpassing the target by four times and totalling almost 35 thousand individuals.
- In conclusion, the Interreg CE Programme, through its successful implementation of SO 3.3, has contributed to improving the environmental management of functional urban areas. By addressing key challenges and promoting projects focused on land use conflicts, air and water pollution, soil contamination, waste management, and urban green space management, the Programme has directly enhanced the quality of life for urban residents while supporting environmental sustainability and regional development.
- Although there is room for improvement in certain areas such as project result transfer and new partnership opportunities, the Programme has demonstrated its effectiveness in meeting targets, generating positive unintended effects, and fostering stakeholder engagement. Moving forward, continued support for stakeholder cooperation will further enhance environmental management and contribute to sustainable urban development.



4.1.5. CULTURE (SO 3.2)

- Interventions in SO3.2 played a significant role in consolidating the enabling factors of cultural territorial cohesion, i.e., better cooperation and coordination concerning effectively and sustainably valorising cultural heritage and exploiting the potentials of the CCIs, for generating new economic opportunities. Moreover, the projects have managed to create awareness, build trust and reduce the fragmentation in the creative ecosystems, particularly at the local level.
- The Interreg CENTRAL EUROPE Programme 2014-2020 had a positive impact on the cultural and creative sector in the central Europe region. It contributed to improving the capacity of public authorities and stakeholders to manage cultural heritage and resources for social and economic

development purposes, strengthened the foundations for preserving and promoting cultural heritage, and enhanced the capacity of local authorities and stakeholders to develop and implement strategies for cultural heritage management.

- Projects under SO 3.2 effectively contributed to improving the management and valorisation of cultural heritage, promoting sustainable tourism and cultural industries, and raising awareness of the importance of cooperation between culture and entrepreneurship. The programme also achieved sustainable results, fostering innovation, cooperation, and entrepreneurship in the cultural and creative sector, providing training and capacity building opportunities, encouraging networking and collaboration between cultural actors, and contributing to the development of sustainable and attractive cultural destinations.
- Digital solutions and instruments proved to be highly effective in preserving and valorising cultural heritage and resources, facilitating access and participation for wider audiences and enabling new ways of delivering economic and social value.
- Transferability of project outcomes was relatively high for other territories and sectors, but lower for other levels of governance, suggesting the need for improved cooperation and coordination at different administrative levels.
- SO 3.2 had the highest percentage of positive unintended effects reported by respondents, indicating the projects' success in creating additional benefits such as cross-border collaboration and increased interest in cultural heritage.
- The participative approach adopted by the projects, involving target groups in the development and implementation of solutions, was highly effective in driving practice change at both organizational and individual levels.
- Projects supported under the programme have provided a wide range of tools on topics such as improving the management of cultural assets, developing private-public partnerships, risk-management and making cultural products and services more accessible. They also contributed to enhancing coordination and policymaking, at local and regional, but also at transnational level. In addition, they played a substantial role in improving knowledge and skills for the various private and public stakeholders, through the trainings, exchange of experience and guidelines developed. However, the economic and social effects, the sustainability of the initiatives and the durability of change differ significantly, depending on the local context, the topic, and the stakeholders involved.
- While challenges persist, the Interreg CENTRAL EUROPE Programme provides successful examples of effectively and sustainably valorising cultural heritage and exploiting potentials of the CCIs, for generating new economic opportunities. Moreover, the projects have managed to create awareness, build trust and reduce the fragmentation in the creative ecosystems, particularly at local level. Pilot actions, particularly on-site improvements, seem to be highly effective means for showcasing project results. The cross-cutting role of culture and creativity in delivering smart, inclusive and sustainable growth is increasingly recognised, providing new opportunities.

4.1.6. TRANSPORT

- The Interreg CENTRAL EUROPE Programme 2014-2020 has achieved positive outcomes in the transport and mobility sector by increasing stakeholders' capacity, building trust beyond national borders, improving connections to the TEN-T network and transport nodes, developing environmentally friendly transport solutions and delivering high-quality services for transport and mobility in the central Europe area. Thus, the programme has played a significant role in consolidating the enabling factors of territorial cohesion, i.e., cooperation, coordination and governance, but has also demonstrated the soundness and viability of multiple solutions for improving connectivity and accessibility in the region.
- The Interreg CENTRAL EUROPE Programme has played a significant role in consolidating the enabling factors of territorial cohesion, such as cooperation, coordination, and governance. Through cooperation, projects supported under the programme have provided a framework for improving policy and decision-making, particularly at the planning stage, for developing regional passenger transport systems in peripheral and rural regions, improving transport links for passengers and freight within and across borders, promoting smart mobility systems, and enhancing accessibility for more vulnerable target groups. They also contributed to developing better connections to transport networks and nodes, and to making freight transport more environmentally friendly, including, for example, greening the last mile of freight transport.
- The Interreg CE programme has successfully contributed to enhancing coordination among key stakeholders in the transport sector, including local and regional public authorities, public transport operators (SO 4.1), and freight transport operators (SO 4.2). Most importantly, the projects managed to involve key organisations at national level, such as ministries, which are essential for transposing the results of the projects at policy level, continuing transnational coordination efforts for harmonizing standards and regulations and ensuring that the necessary investments are made to further enhance connectivity and accessibility across the central Europe territory (both SOs).
- Under SO 4.1, projects have improved policy and decision-making for developing regional passenger transport systems, enhancing transport links for passengers and improving connections to TEN-T networks and secondary transport nodes, promoting smart and green mobility systems, and increasing accessibility for more vulnerable target groups.
- In addition, the programme played a substantial role in facilitating collaboration between the academic, private, and public sectors. Through this collaboration, numerous organisations gained access to state-

of-the-art knowledge and solutions that were previously inaccessible, allowing them to develop and test cutting-edge technologies and methods that could be implemented in the market (especially under SO 4.2). Additionally, the programme enabled them to access a network of relevant stakeholders, creating a platform for exchange and cooperation that further increased the capacity of stakeholders in the sector. Thus, the Programme substantially contributed to increasing the capacity of the stakeholders in the transport sector.

- The programme aligned well with the EU's priorities and macro-regional strategies, with some projects providing concrete inputs for shaping policies at the EU level. The interventions successfully addressed various challenges in the CE region, such as those related to better connectivity, rapid urbanization, demographic shifts, economic disparities, environmental challenges, and changing mobility needs. In particular, environmental sustainability is embedded in all Interreg CE projects in the Transport thematic area, with a focus on promoting clean and sustainable transport solutions that minimize negative environmental impacts and contribute to achieving the EU climate and energy goals.
- However, challenges persist, including administrative and legal constraints to transport and mobility, financial capacity for maintaining investments, and embedding proposed solutions in the regulatory framework beyond the projects. Efforts are still necessary to achieve a coordinated and integrated approach to passenger transport systems and multimodal freight transport, particularly in the context of the renewed commitment to green, smart and sustainable transport at EU level.
- Innovation is an important factor for ensuring high quality outputs and results but may be too expensive for smaller actors, outside the project and needs to be well-adapted to end-users. For example, innovative technologies such as intelligent transport systems (ITS) can enhance the efficiency and safety of transport systems by providing real-time traffic information, improving traffic management and reducing the risk of accidents. However, implementing ITS solutions or any other innovative transport technologies can be costly, especially for smaller actors with limited or no financial support, such as local municipalities or small businesses. Furthermore, end-users, such as commuters or transport companies, need to be well-adapted to any new technologies implemented to ensure their acceptance and usability. This requires careful consideration of user needs and preferences and effective communication and training to ensure that users are fully aware of the benefits of the innovations and how to use them effectively.
- The implementation and sustainability of the interventions are highly dependent on the political priorities, legislation and jurisdictions at the national level and on a usually limited number of national stakeholders. Financial capacity and contextual conditions are also crucial for sustainability. The transferability of the results is, in this case, limited.
- Local-level initiatives, such as choosing transport routes, improving infrastructure or implementing ticketing systems are easier to replicate and highly successful. Their sustainability is highly dependent on the capacity of local actors (particularly relevant in relation to SO 4.1).
- Considering the persistent disparities between the different parts of the programme area (West-East and North-South), efforts are still necessary to achieve a coordinated response and an integrated approach, in relation to passenger transport systems and multimodal freight transport, particularly in the context of the renewed commitment to green, smart and sustainable transport at EU level (both SOs).
- Transport demonstrates good capacity to have positive unintended effects, outlining the potential for further cooperation, additional funds leveraged, and the uptake of pilot actions into more concrete projects.

Specific Objective 4.1

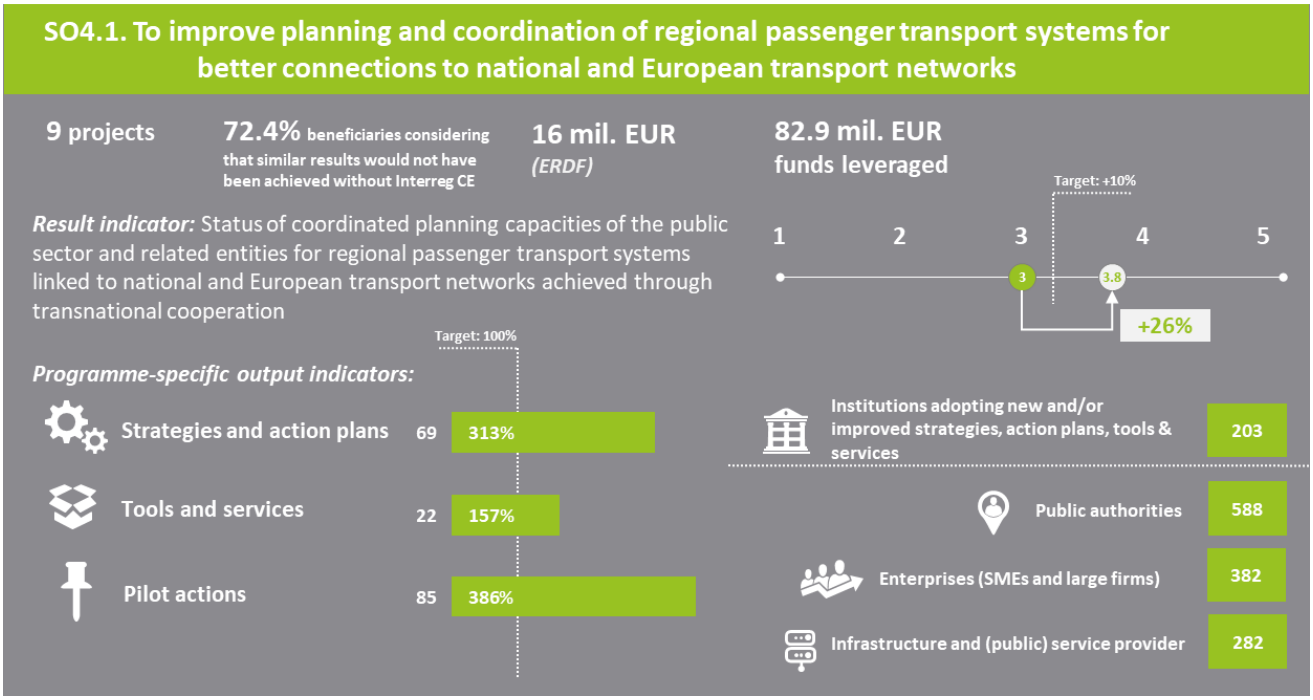
- Under SO 4.1, the Programme successfully improved planning and coordination for regional passenger transport systems, addressing challenges related to transport, mobility, and accessibility in the Central Europe region. Stakeholders confirmed that the Programme increased knowledge and implementation

capacities of the public sector and related entities for linking regional passenger transport systems to national and European networks, resulting in improved and coordinated planning.

- Supported projects achieved significant outcomes, including the development of smart mobility solutions, improved coordination of passenger transport actors, and promotion of sustainable transport and better connections. The projects contributed to addressing strategically important issues, enabling the implementation of Macro-Regional Strategies and supporting transport-related priorities across different regions.
- While there were moderate changes in end-users' attitudes towards public transport services, challenges remain in terms of attractiveness, price, and flexibility compared to private car use. Long-term sustainability is crucial for lasting effects and durable changes.

  The transferability of project results was higher for other territories compared to other governance levels and sectors, indicating potential for further replication and implementation.

  Overall, the Programme interventions in SO 4.1 made significant progress in enhancing regional passenger transport systems, addressing challenges, and promoting sustainable and integrated solutions.

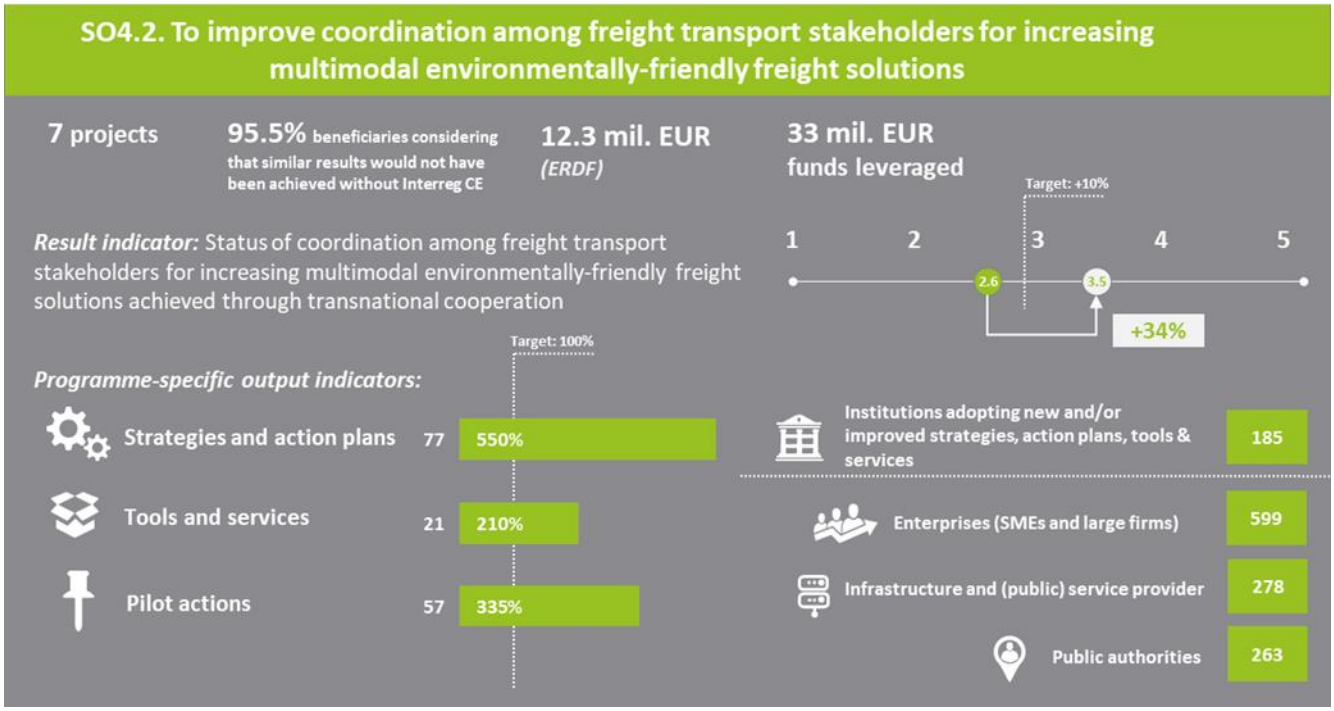


Specific Objective 4.2

- Projects under SO 4.2 focused on enhancing capacities and coordination for intermodal transport, particularly in the context of multimodal environmentally friendly freight transport systems. The projects demonstrated success in developing multimodal platforms, improving coordination among freight transport stakeholders, and increasing knowledge and implementation capacities in this domain. However, the level of contribution in terms of achievements was relatively lower compared to other strategic objectives.
- A significant percentage of beneficiaries (63.6%) considered the projects under SO 4.2 successful in addressing strategically important issues, such as enabling the implementation of macro-regional strategies. This highlights the positive impact of the projects in aligning with broader regional goals and objectives.
- Approximately 50% of beneficiaries stated that the results and outputs of their projects were successfully transferred to other territories, indicating potential for replication and implementation in

different geographical contexts. However, transferability to other governance levels and sectors was relatively lower, emphasizing the narrow specialization of the topics covered.

- The interviews conducted highlighted the significant benefit derived from the projects, particularly for smaller, less visible, or financially constrained organizations. These beneficiaries were able to access valuable knowledge and expertise that would have otherwise been inaccessible to them.
- The projects effectively influenced changes in practices at the organizational level and played a role in promoting sustainable practices and contributing to improved environmental performance within organizations.



4.2. RECOMMENDATIONS FOR THE 2021-2027 INTERREG CE PROGRAMME AND BEYOND

4.2.1. GENERAL RECOMMENDATIONS

1. The programme should keep its focus on the **innovative and experimental aspects** of projects, as these were identified as key added values of the programme, in comparison to the other Interreg programmes mentioned by beneficiaries. This recommendation applies both at project and at programme level. To sustain and enhance the innovative approach, the Programme should continue to support experimentation, testing, and validation at the project level.
2. The programme should continue to support **functional approaches** (in particular between urban areas and their hinterlands) and pay particular attention to the **knowledge and capacity gap** that exists between potential applicants from urban and rural areas, even more so as 'smaller' actors – often located in the latter - are at disadvantage to participate in the programme because of limited financial capacity.
3. The programme should continue to **evolve through its successive calls for applications**, as it was done between the first two calls and the more thematically focused third call, as well as the capitalisation-focused fourth call, as this allowed the funded projects to effectively respond, from a strategic and thematic perspective, to the fast-paced developments and changing needs in CE.
4. Continue current practices to **map, promote, disseminate, and capitalize on the results achieved by the programme**, to ensure the continuity and sustainability of the programme's achievements. These results have proven to be valuable and can serve as a basis for future initiatives and collaborations. Building upon the current comprehensive communication, capitalization and dissemination measures, the programme authorities should continue efforts to organize targeted events and workshops and to set up structured methods of collaboration, to ensure the wider dissemination and exploitation of the programme's outputs and results.
5. On the same note, it is recommended that the programme bodies (MC/MA/NCPs/JS) continue their **actions directed at collecting and disseminating good practices identified in projects**. To this end, the MA/JS should continue to collect and share information on the added value of the identified practices and on how they could be transferred to other contexts. The output library is already an excellent repository, which can be further enhanced to highlight the process, resources, and expertise required for the replication. The NCPs and other stakeholders could support the dissemination of the best practices to wider audiences (e.g. through country-level governmental events). This would enable other projects to benefit and improve their implementation, would increase visibility of results and would potentially increase the overall quality of the outputs and results produced with the Programme's support.
6. Taking into account the challenges identified in relation to policy uptake, it is recommended that more **sustained actions should be carried out in order to engage relevant stakeholders,** which could act as multipliers for the results achieved and could support their use in informing policy decisions, at all levels. Beneficiaries are responsible for advocating policy uptake at local, regional or national levels, but many find it difficult to do so effectively. The MA/JS and the NCPs should continue to support engaging relevant stakeholders (for example national authorities or international agencies), either by increasing their presence in relevant events or organizing such events.
7. Considering the positive results obtained by the Programme through **targeted calls dedicated to producing synergies and capitalizing results** (such as Call 4), this approach should be continued. Further on, Managing Bodies of other programmes (transnational, cross-border or with EU-wide coverage) could be engaged more frequently and purposefully to work together for defining possible areas, mechanisms and possibly timelines for enhanced synergies. The results of these

actions can be then integrated into the design of the calls for proposals, as specific requirements or suggested actions or they could be delivered as guidance for applicants and beneficiaries. Building upon the success and on the lessons learned from the capitalization call, it is recommended to continue joint initiatives with other programmes

8. It is also highly recommended that **pilot actions continue** to be supported at large, as a means to test and validate new solutions, of raising awareness and building engagement at local and regional levels. Careful consideration should however be given to their sustainability, as it depends heavily (if not exclusively) on the capacity of the local actors. In this respect, the programme authorities, with the support of the involved member states (MC members, NCP) could provide further guidance to beneficiaries on how to increase sustainability of the pilot actions. Maintaining the bottom-up approach and building on the best practices identified during the 2014-2020 programming period, beneficiaries could be advised to focus on and choose territories / locations which they have a good knowledge and understanding of, where they can gain full commitment of the local stakeholders and which have reasonable capacity (particularly in financial terms) to maintain/uptake the tested solution. Instruments as simple as a SWOT analysis could provide useful indications when selecting the pilot locations. In order to gain more insights into the direct, tangible benefits produced by the pilot actions for the people and communities in the CE area, voluntary evaluation at project level could also be encouraged, focusing on sustainability and durability of change.
9. Continue the **territorial integration and place-based approach**, building on the positive examples identified in this programming cycle. Integrated territorial development through tailored place-based initiatives and instruments are gaining interest across the EU and are likely to further encourage cooperation beyond administrative borders at local level. In the future, increased awareness and knowledge on the complexity of urban development processes are likely to determine better alignment of investments in the different areas, such as energy efficiency, mobility or land use, among others. In this context and taking into account both the persistent disparities between the urban and rural areas in the Programme regions, and the excellent results obtained by the projects implemented at FUA level, future interventions should continue to focus on creating of functional links between the different territories and on enabling a fair distribution of benefits between them. To that end, the MC could seek to embed sound principles for actions targeting integrated territorial development and urban-rural linkages, such as: balanced partnership (at local level), participatory engagement, financial inclusivity etc. The Territorial Agenda 2030 should be the main framework for designing future operations. Other international sources such as the Framework for Action to Advance Integrated Territorial Development, developed by the United Nations Human Settlements Programme (UN-Habitat), can provide inspiration in this respect.
10. Considering the significant contribution which the **strong project partnerships, the extensive communication efforts and the wide participatory approach** had to the success of the implemented projects, it is recommended that the same approach be kept for future calls. This would also ensure that the proposed solutions are well-adapted to the needs of the final beneficiaries. Depending on the needs at local or regional level and on the needs of the target groups, it is also recommended that beneficiaries take responsibility for providing documentation in the national language, especially for technical documents such as feasibility studies, strategies, and plans developed within the projects.
11. In order to improve the programme's accessibility, it is recommended to **increase support for beneficiaries from less active regions**. To this end, the NCPs should continue disseminating information about the Programme in their countries, by actively engaging and assisting potential beneficiaries, while JS should continue facilitating the exchange of practices between NCPs.
12. Consider the limited lifespan of technical solutions developed and the implications for **sustainability, transferability, and cost-effectiveness**, when financing operations. Programme

authorities are encouraged to consider promoting the use of scalable solutions and choice of technical solutions that adhere to open standards and promote interoperability.

13. **Digital solutions and instruments should be further promoted,** when applicable. These solutions should be made accessible to wider audiences, and they should enable new ways of delivering economic and social value. A comprehensive approach in this respect is necessary, one which encompasses skills development, changing business processes and models, reshaping relations with audiences. This can be achieved through training, capacity building, and knowledge sharing activities.
14. The 2021-2027 interventions should embed the promotion of **European values and central European identity in future projects**, to counter recent surges in political populism, challenging EU legitimacy and hindering further European integration. The selection process could take into account such aspects, and beneficiaries should be encouraged to showcase the added value of cooperation, the direct positive effects towards improving the lives of the citizens and communities, thus also fostering the European identity perspective.
15. In order to increase **future evaluability** of evaluation data the following measures should be considered:
    - The partners who submitted / implemented projects under 2014-2020 period should be given / kept their unique identification code in the 2021-2027 programme, and if possible / relevant, to have a database with future calls with the institutions which submitted the projects, so that the system can use the institutional information already entered in the platform for 2014-2020
    - As data collected on target groups and results assures good input data for the evaluation, the practice should be kept, but considering the exceeded targets both at project and programme level, it is recommended that, based on the experience of the 2014-2020 projects, a more rigorous / details system is put in place in terms of additional verifications of achievements, especially since some of them indicate an extremely large number of target groups reached for very localised activities.
    - For the 2021-2027 programme it might be worthwhile considering collecting longitudinal data. That is, some of the programme's outputs, like strategies and trainings, may have either long run effects or their benefits may materialise only after the project, or the programme has ended. Thus, it would be interesting to follow up the effects of these types of outputs over a prolonged period, by for example evaluating their immediate effects and their effects after one, three and six years. While such an approach is highly interesting for evaluation it is equally difficult to implement, as it requires a long-term planning and commitment (including financial) from the programme to follow up their projects after they have ended.

4.2.2. THEMATIC RECOMMENDATIONS - INNOVATION

- The programme should keep its **open, flexible approach** with regard to the innovation topics and innovation cycle stages addressed by the calls, as this allows project partners to develop more or less complex innovative solutions depending on the needs identified in the concerned territories.
- The programme should further encourage the use of **integrated approaches** (such as quadruple helix approaches) within projects with innovative components across all SOs, as this allows all innovation actors, including businesses, local entrepreneurs and innovators, to benefit from transnational solutions.
- The programme should strive for **more synergies and capitalisation** not only between innovation projects but also across the **innovation, low-carbon or environment priorities** (i.e. the priorities 'Cooperating for a smarter central Europe' and 'Cooperating for a greener central Europe' in the 2021-

2027 programme), as the twin transition (i.e., the green and digital transition) is expected to bring about both major opportunities and challenges for CE regions depending on their innovation and adaptation potentials.

- The programme should continue to actively encourage **policy uptake** and **transfer of project results to other governance levels** within innovation projects. The presence of policy-oriented partners and/or policy-making stakeholders (e.g. municipalities - even if they do not design innovation policies per se but they do take up innovation projects' results as demonstrated by the target group indicator for 'local public authorities' and the type of outputs produced) in the project partnership was identified as a factor facilitating policy uptake. In addition, the programme could encourage the transfer of innovation projects' results to other sectors.
- For SO 1.1 more specifically, the availability of public services for innovation support to businesses deserves particular attention, as it was found by beneficiaries to be below potential.
- For SO 1.2 more specifically, the programme should further promote efforts towards the roll-out of smart specialisation strategies through the adaptation of the workforce skills to market needs and innovation processes, as it was found by beneficiaries to be below potential.

4.2.3. THEMATIC RECOMMENDATIONS - LOW-CARBON

- Given the pressing and mounting challenges linked to the transition to a climate-neutral economy, the programme should continue to support low-carbon projects across a **wide diversity of topics**, building on the local needs and **potentials** (e.g., renewable energy potential).
- The **forward-looking dimension** of some low-carbon projects (e.g., outputs embedded in strategies setting targets for 2030/2050) has been identified as a best practice for sustainability and should therefore be pursued in the 2021-2027 programming period.
- **Pilot actions** - with or without investments - are highly effective for supporting a) the usage of renewable energy, b) the introduction of energy efficient solutions and c) sustainable mobility in functional urban areas in CE territories and should therefore be further promoted in the 2021-2027 programme.
- The programme should strive for **more synergies and capitalisation** not only between low-carbon projects but also across the **innovation and low-carbon priorities** (i.e. the priorities 'Cooperating for a smarter central Europe' and 'Cooperating for a greener central Europe' in the 2021-2027 programme), as the twin transition (i.e., the green and digital transition) is expected to bring about both major opportunities and challenges for CE regions depending on their innovation and adaptation potentials.
- The programme should pay particular attention to the **transfer of project results to other territories, sectors and stakeholders across different governance levels** within low-carbon projects, especially under SOs 2.1 and 2.3, as this was found to be below their potential. In particular, a more detailed approach of how the project results will *in practice* be replicated, adapted and integrated in other territories through dedicated project activities should strengthen the contribution of low-carbon projects to wider, national and transnational EU-level strategies.
- For SO 2.1 more specifically, the programme should keep a strong focus on increasing the knowledge of the public sector on financing schemes for energy efficiency and renovation measures to leverage further investment, as it was found by beneficiaries to be below potential.
- For SO 2.2 more specifically, the programme should keep a strong focus on linking approaches between the demand and the supply sides, taking into account the quality and capacity of energy distribution grids, as it was found by beneficiaries to be below potential.
- For SO 2.3 more specifically, the programme should keep a strong focus on supporting the creation of new governance systems for integrated mobility concepts in FUAs, in particular through the horizontal

and vertical coordination of stakeholders and policies, as it was found by beneficiaries to be below potential.

4.2.4. THEMATIC RECOMMENDATIONS - ENVIRONMENT

- Continue reinforcing and encouraging **green, smart, and sustainable development** in the supported projects. Specifically continue supporting long-term changes in attitudes and practices towards environmental protection at both individual and organizational levels.
- **Prioritize supporting underperforming regions**, (types of) organizations or sectors which often have lesser capacity and face more challenging trade-offs in meeting the ambitious environmental objectives at the EU level. This will help ensure that environmental efforts are directed towards those areas where they are most needed and can have the greatest impact, while also contributing to a more equitable and sustainable future for all regions.
- **Encourage knowledge transfer from research institutions and other relevant stakeholders, towards local and regional administrations**, particularly those without access to their services, through pilot actions that provide knowledge and technical solutions to local communities in environment-focused priorities.
- **For SO 3.1**, whenever appropriate, programme could consider an **integrated and holistic approach to preservation of both cultural and natural heritage**, recognizing their interdependence and interconnected values. To this end, in suitable contexts, the programme could support interdisciplinary collaboration and coordination among heritage management authorities, cultural institutions, environmental agencies, local communities, businesses and other relevant stakeholders. Preserving natural habitats can support the preservation of cultural sites, while cultural heritage can enhance the value and appreciation of natural landscapes. This approach can create sustainable tourism opportunities and can lead to economic development, job creation, and community empowerment while promoting responsible and sustainable tourism practices.
- **For SO 3.3**, it is also recommended that the programme continue to support the **integrated environmental management of functional urban areas,** by:
    - Facilitating collaboration and partnerships among key stakeholders, including government authorities, urban planners, environmental agencies, community organizations, businesses, and residents.
    - Promoting the integration of environmental considerations into urban planning processes
    - Promoting cross-sectoral coordination and cooperation between different sectors, such as transportation, housing, energy, and waste management, to achieve synergies and avoid conflicts.

4.2.5. THEMATIC RECOMMENDATIONS - CULTURE

- Taking into account the **cross-cutting roles of creativity for regional resilience**, confirmed by the numerous positive examples provided by the projects implemented through Interreg CE, it is recommended that future interventions **embed these topics horizontally**. To this end, the Programme authorities could support an integrated approach and ensure that future projects, irrespective of their thematic focus, would foster creativity, as well as innovation. Including culture and creativity in other thematic operations, such as business support, innovation, urban development, environmental actions, education, social inclusion etc., would contribute to delivering smart, inclusive and sustainable solutions to current challenges, including in the context of COVID recovery efforts.
- Along this line, it is recommended that the Programme authorities explore the opportunity of supporting operations to promote links between cultural and natural heritage, particularly in relation to nature conservation and valorisation efforts. Equally, considering the significant impact of culture

and heritage on tourism in the CE area, it is highly advisable to prioritize the integration of cultural development and heritage preservation in tourism-related operations.

4.2.6. THEMATIC RECOMMENDATIONS - TRANSPORT

- Continue **supporting the cooperation between the key stakeholders in the transport sector**, including local and regional public authorities, public transport operators, and freight transport operators. This will enhance the effectiveness and sustainability of transportation systems, leading to improved mobility, reduced environmental impact, and enhanced connectivity within the region. Additionally, continued support for stakeholder cooperation will enable the sharing of best practices, expertise, and resources, ultimately contributing to the overall economic growth, social well-being, and environmental sustainability of the CE territory.
- Continue fostering **user-centred approaches**, to ensure that innovative technologies are well-adapted to the end-users by taking into consideration their needs and capacities. Effective communication and wide engagement of stakeholders, accessible materials (including digital and language wise) and trainings will contribute to ensuring that users are fully aware of the benefits of the innovations and how to use them effectively.
- Continue focusing on **strengthening collaboration among stakeholders in the transport sector** for improving harmonization of standards and regulations, and facilitating necessary investments in strategical critical points, to further enhance connectivity and accessibility across the central Europe territory and consolidating the enabling factors of territorial cohesion.
- For SO 4.1, the programme should continue supporting the improvement of regional passenger transport systems in Central Europe (CE) and encouraging a coordinated and integrated approach by promoting collaboration among different sectors and disciplines. The programme should continue to facilitate knowledge exchange and joint initiatives between transport authorities, urban planners, environmental agencies, and technology providers, particularly for the benefit of smaller actors in rural and remote areas. Additionally, particular focus should be placed on leveraging additional resources for long-term infrastructure development and maintenance.
- For SO 4.2, the programme should keep a strong focus on supporting innovative transport technologies, reaping the benefits of digitalization. Also, for SO 4.2, the programme could continue to support and encourage the development of sustainable transport solutions, including through innovative financing models for clean and green freight transport, such as green bonds or public-private partnerships.

5. ANNEXES

Annex 1 – Methodology

Annex 2 – Theory of Change

Annex 3 – Case studies

Annex 4 – Cost-effectiveness analysis

Annex 5 – Surveys

Annex 6 – Interviews

Annex 7 – Focus groups

Annex 8 – Survey Reports

Annexes can be found in separate documents.