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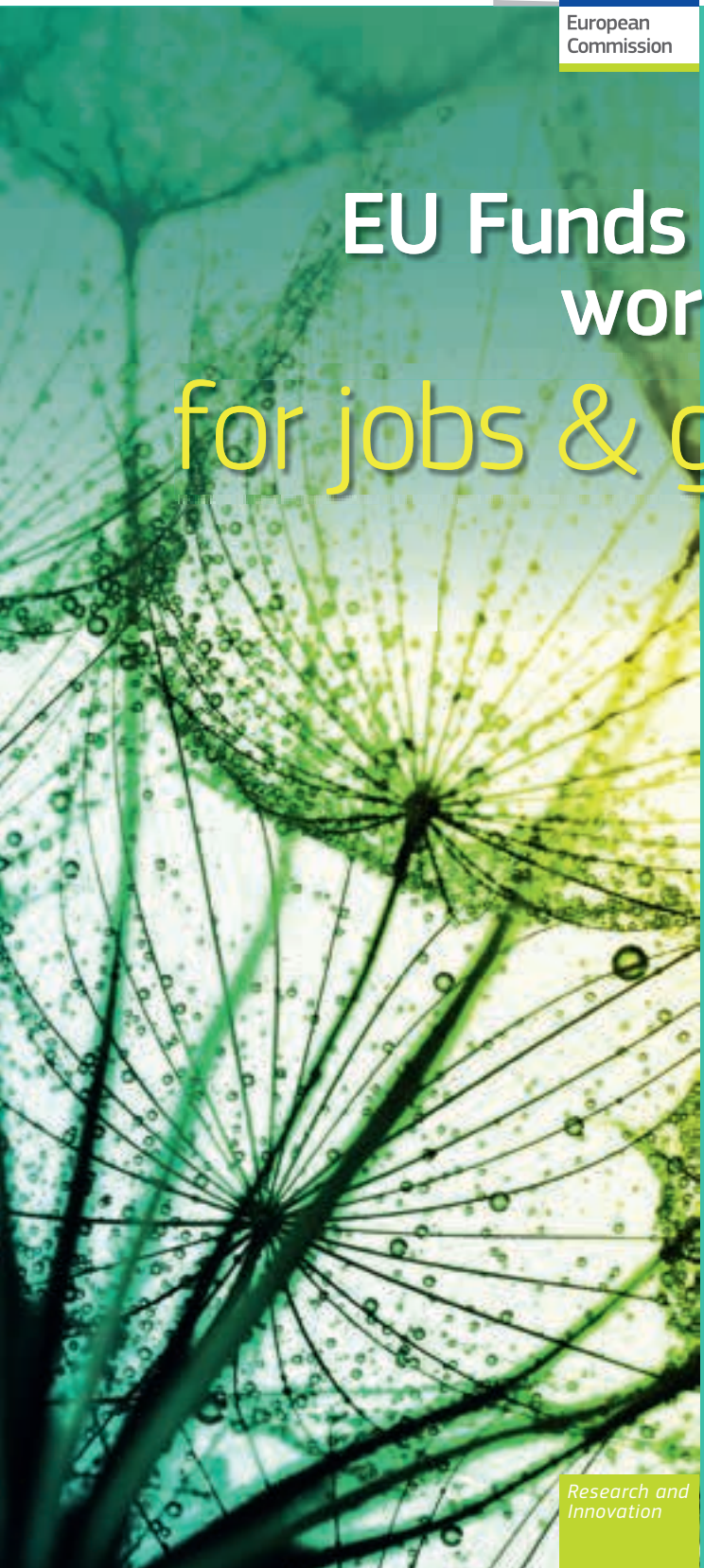

EU Funds working together for jobs & growth

Synergies between the R&I Framework Programmes and the European Structural & Investment Funds

Research and Innovation

EUROPEAN COMMISSION

Directorate-General for Research and Innovation
Directorate B – Open Innovation and Open Science
Unit B.5 – Spreading excellence and widening participation

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EUROPEAN COMMISSION

EU Funds working together for jobs and growth

Examples of synergies between
the Framework Programmes for
Research and Innovation (Horizon 2020)
and the European Structural and Investment Funds (ESIF)

2016

Directorate-General for Research and Innovation
Spreading excellence and widening participation

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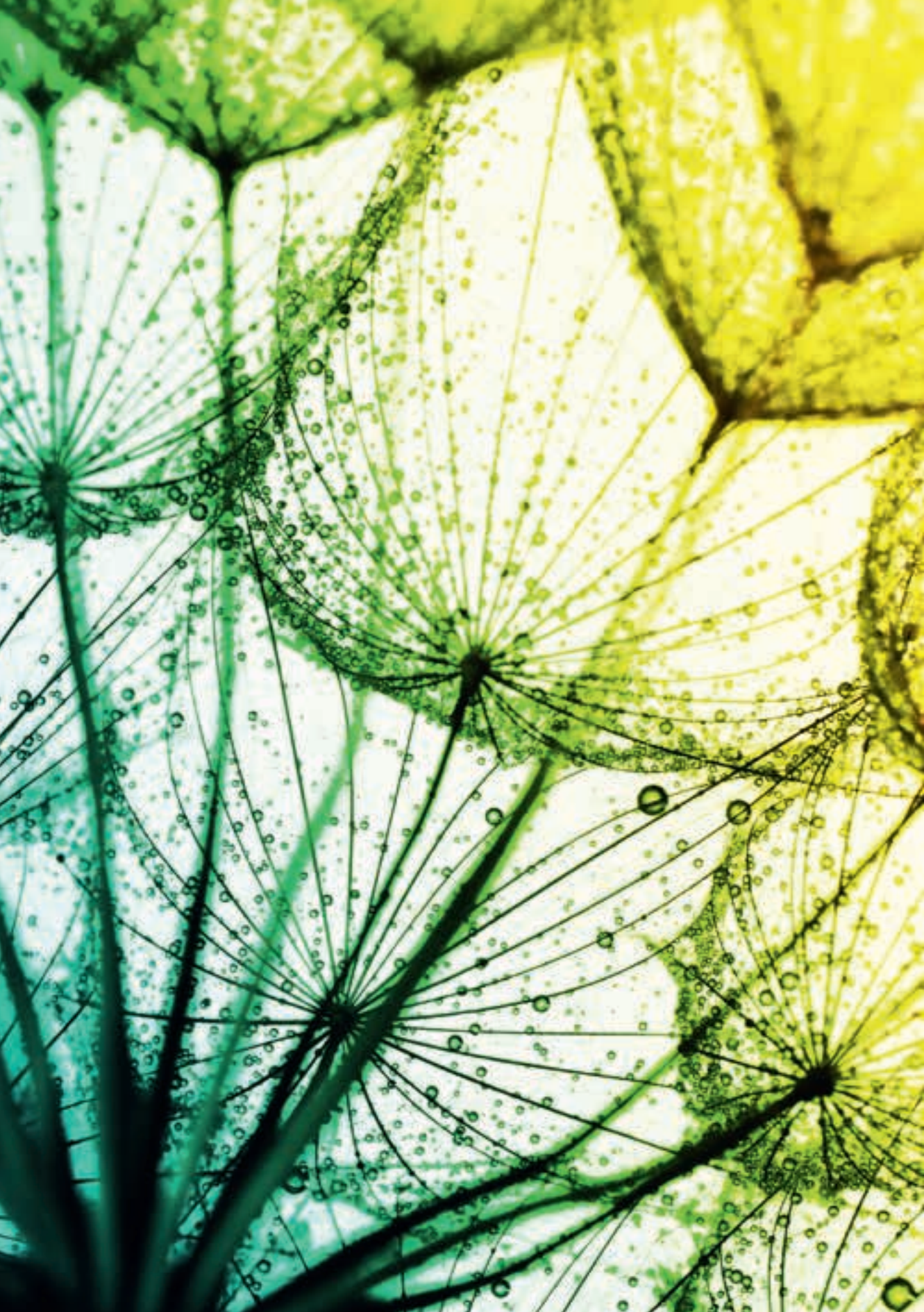


FOREWORD

To boost job creation, growth and competitiveness across Europe's diverse regions, we need to maximise the quality, quantity and impact of our research and innovation investments. Exploiting the potential for synergies between Horizon 2020, the European Structural and Investment Funds (ESIF) and other innovation and competitiveness-related EU Programmes can help us to achieve this objective.

The development of smart specialisation strategies at national and regional levels required the mobilisation of actors at all levels to make the most of the different EU funding opportunities, and to explore possibilities for synergies. The entrepreneurial discovery process that had to be used to develop such strategies built new and closely-knit relationships between local, regional and national innovation ecosystems and connected citizens, public organisations, academia and business. Now that these smart specialisation strategies are operational, synergies will thus give a greater push to open innovation in the European Union.

This publication describes the rationale for developing links between the different funding sources and explains how they can be combined. It showcases examples of synergies that have emerged at strategic, programming and project implementation levels and also highlights initiatives with a high potential for synergies.

We therefore recommend this publication as an important evidence-based contribution to the Commission's strategy for addressing some of the key challenges facing the Union today.

Corina Crețu

Commissioner for Regional Policy

Carlos Moedas

Commissioner for
Research, Science and Innovation

1. Synergies aim at maximising the impact of investment on research and innovation

The strategic priorities of EU research and innovation (R&I) policy for the years to come include actions aimed at capitalising on research results to create vibrant innovation ecosystems in Europe. This is in particular set out in the over 120 smart specialisation strategies that were developed to define the Member States' and regions' strategic policy frameworks for research and innovation and their priority areas where they have identified the best chances to gain competitive advantage by combining research and business strengths. These strategies had to be developed at national or regional level in an entrepreneurial discovery process, involving academia, business, public bodies and civil society and other actors in their innovation eco-systems. All strategies had to explore how to make the most of innovation impacts of Horizon 2020 – the EU Research and Innovation Framework Programme (FP) for 2014-2020 – and create synergies with the European Structural and Investment Funds (ESIF).

Synergies between Horizon 2020 and ESIF aim at maximising the quantity and quality of investments and at pulling together the research (Horizon 2020) and business communities and relevant national and regional policy designers and implementing bodies like ESIF Managing Authorities, and thus ensuring a higher impact of the funds for a knowledge-based economic transformation.

This publication showcases examples of synergies between the Framework Programmes[1] and the Structural Funds that have emerged in the past across Europe. The development of synergies is now expected to gain strength as both Horizon 2020 and the Common Provisions Regulation of ESIF include for the first time a legal mandate to maximise synergies, not only between these two instruments, but also with other

[1] In this publication, the term 'Framework Programmes' refers to previous Framework Programmes for Research and Technological Development (notably FP7) and to the current Framework Programme for Research and Innovation: Horizon 2020

programmes, such as COSME, Erasmus+ and Connecting Europe Facility. Building meaningful interactions between the two policy frameworks and their investment strategies can have significant impacts on the economy, combining place-based innovation investments in smart specialisation priorities with world-class research and innovation initiatives, thus ensuring that the fragmentation of research and innovation investments is overcome and that critical mass for innovation projects is attained.

Developing synergies will not only bring about more efficiency. It will ultimately lead to a positive impact on jobs, growth and competitiveness across Europe's diverse regions as a result from investing more in developing national and regional research and innovation capacities, the drivers of economic growth in the Union.

Synergies will also give a greater push to open innovation in the Union. Developing synergies will assist in capitalising on the results of European research and innovation, creating the right ecosystems, and bringing more companies and regions into the knowledge economy. Europe must move further and faster towards this objective.

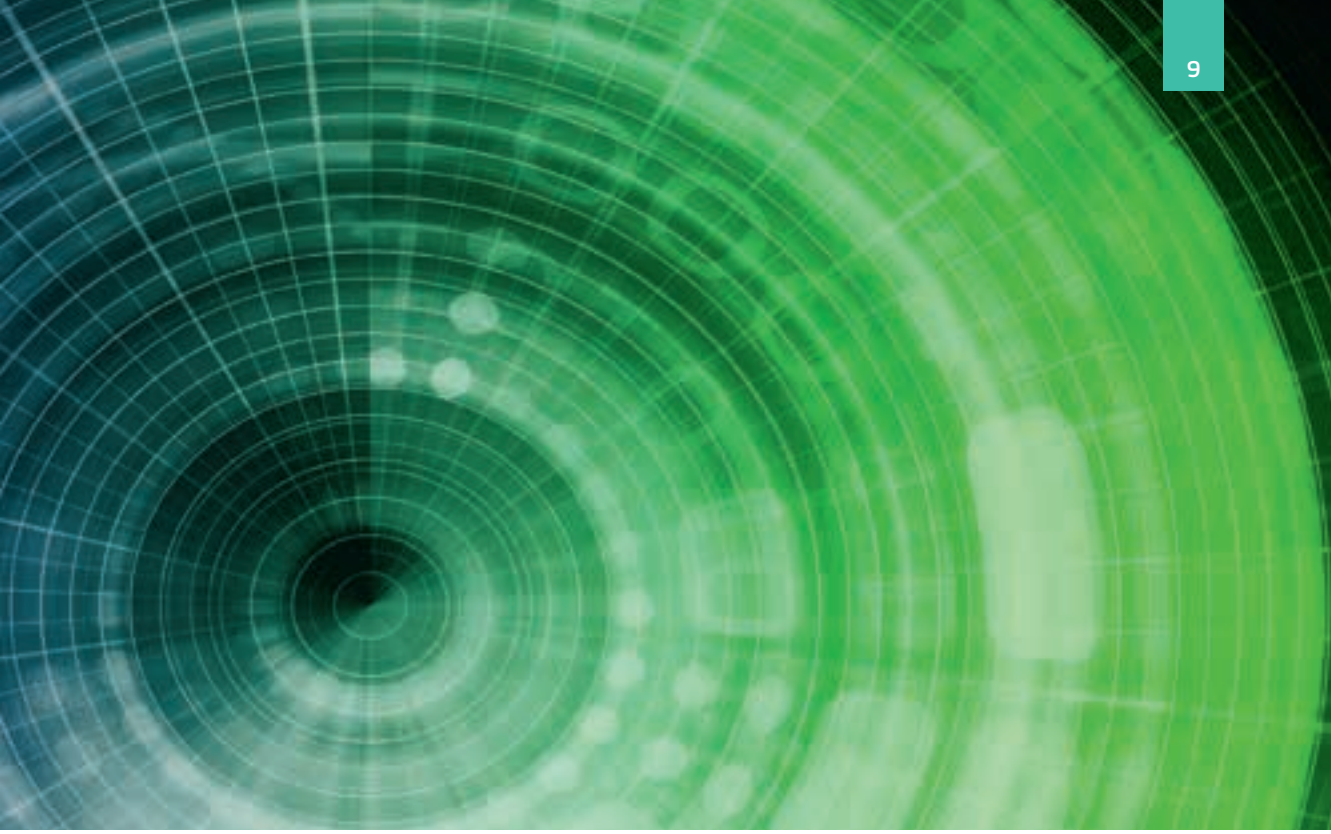
2. How can support from Horizon 2020 and ESIF be combined in a synergetic manner?

In the process of developing synergies, three levels of action have to be considered in a combined way: strategic, programming and project. The strategic and programming levels are of crucial importance to secure continuity in policy, a long-term vision and effective implementation of the strategy. In developing synergies, the stimulation of strategic cooperation between public authorities responsible for the design of programmes is indispensable as is coordinated investment in research and innovation in the identified priority fields supporting competitiveness and growth. The Common Provisions Regulation for ESIF[2] stresses the importance of synergies; in particular, it encourages synergies between ESIF and Horizon 2020 including in the design and implementation of the smart specialisation strategies that outline the priorities for ERDF[3] investments in the current programming period. The new Operational Programmes of ERDF (including INTERREG programmes) show an overwhelming interest in more synergies with Horizon 2020 and sketch out actions ranging from building or up-grading research infrastructures, attracting European Research Council (ERC) grant holders to supporting participation in international innovation networks and dissemination of FP7 and Horizon 2020 results as well as technology transfer.

Concerning the project level, when combining funding from Horizon 2020 and ESIF for synergetic actions, the legal frameworks and the specific rules for the management, project selection and implementation of the respective programmes still apply. In particular, the following basic rules apply:

[2] Annex 1 of the CPR Regulation (Regulation(EU) No 1303/2013 of 17 December 2013)

[3] European Regional Development Fund



- No double funding of the same cost item, i.e. the same cost item cannot be declared for reimbursement under both Horizon 2020 and ESIF grant agreements;
- No substitution of national, regional or private co-funding to Horizon 2020 / ESIF projects or programmes with funds from other instrument;
- No diversion of funding from the purpose of the respective instrument or ESIF programme, i.e. no artificial retrofitting of the aims of the funding instrument/ programme to allow for synergetic actions.

Reinforcing synergies between the two policy frameworks requires a change of mind-set in the strategy and programme implementation. All involved stakeholders have to:

- Think more in a strategic and not only project-oriented manner;
- Involve all interested actors and tools in the process;
- Generate and identify new opportunities in all programmes and areas;
- Set up suitable implementation and monitoring mechanisms.

3. Examples of synergies at strategic and programming level

The following two examples from Estonia and Romania provide insights into the importance of synergies between the Framework Programme and the European Structural and Investment Funds at strategic and programming level that could inspire further enabling of synergies.

Monitoring Report 2014 for Estonia reveals the progress achieved in the improvement of R&I through ESIF investment in recent years

The Monitoring Report 2014 concerning the Estonian Operational Programme for the 'Development of Economic Environment' reveals the progress made in the improvement of R&I in Estonia in the period 2007-2013. In that period Estonia invested 23% of its ERDF allocations into research and innovation, which made ERDF the single biggest source of R&I funding for civilian research in Estonia. At the end of that programming period, the results show that Estonia's research, development and innovation policy system and the level of success of Estonian researchers and engineers is increasing. For example, the volume, effectiveness and quality of Estonian research have increased. Furthermore, Estonia's participation in the EU Framework Programmes has steadily increased.

Concerning the 'R&D and higher education infrastructure' priority axis of the Operational Programme, the substantial targets set in the programme have been achieved. The funds allocated to Estonian research and development organisations and higher education institutions have had a very positive effect, both for the individual institutions and the entire sector's development as a whole. A modernised infrastructure now creates better conditions for more and higher-level science in Estonia and offers good conditions for

both Estonian and foreign researchers. Also, conditions for high-quality cooperation with enterprises have been established and great success has thus been achieved in the field of co-operation between universities, research and development institutions and enterprises. Find more information on the Estonian ERDF Operational Programme:

http://ec.europa.eu/regional_policy/en/atlas/programmes.

Romanian Operational Programme (ERDF) supports different types of synergies

The Romanian 'Competitiveness Operational Programme' financed by ERDF for the current programming period 2014-2020 addresses the challenges stemming from the low support for research and innovation as well as from the under-developed ICT services and infrastructure. By investing in these areas, the programme contributes to bolstering the competitiveness of the Romanian economy. The Priority Axis 1 of the programme includes a dedicated action on 'Creating synergies with the EU Horizon 2020 Framework Programme RDI actions and other RDI international programmes'. From this action, operations in the following categories will be financed: (1) Linking emerging centres of excellence with their counterparts in other EU Member States in order to increase excellence – 'Teaming projects'; (2) Establishing 'ERA Chairs' to attract outstanding academics; (3) Optimising existing structures and, where necessary, establishing new ones to facilitate identification of priorities for different coordination instruments and structures at national level (institutional development); and (4) Supporting research organisations and enterprises, in particular SMEs, in the preparation and implementation of projects under Horizon 2020 and other international RDI programmes.

As part of its operations, the Operational Programme will finance SME projects that have participated in Horizon 2020 Calls under the SME instrument but have not received financing from Horizon 2020, but instead, have received the 'Seal of Excellence' certificate from the European Commission. The programme will also allocate funding for the creation of support centres in research organisations for the preparation of Horizon 2020 proposals and for assisting in the management of ongoing Horizon 2020 projects.

Furthermore, the Operational Programme will finance research and innovation infrastructures for entities which win projects under Horizon 2020 Calls for the 'ERA Chairs' and 'Twinning'. This support will thus be complementary to the 'soft financing' received from Horizon 2020 aimed at building knowledge-related research and innovation capacities.

The projects financed under the Joint Technology Initiatives (JTIs) will also receive financing from the Operational Programme for complementary activities that follow both the objectives of JTIs and priorities for smart specialisation. Moreover, the programme will support successful projects under the JTI 'ECSEL – Electronic Components and Systems for European Leadership'. Find more information on the Romanian Competitiveness Operational Programme:

http://ec.europa.eu/regional_policy/en/atlas/programmes.

The Operational Programme Research & Innovation (ERDF) of the Slovak Republic foresees synergetic and complementary funding for positively evaluated (but not funded) Horizon 2020 proposals

In the Slovak Republic, the smart specialisation strategy (RIS3) is aimed at stimulating a structural change in the economy towards growth by increasing abilities and excellence of the research and innovation performers with a view of supporting sustainable development of incomes, employment and quality of life of the citizens. The RIS3 priorities consist of the deepening of integration and embeddedness of major Slovak industries that increase the local value-added through cooperation in local supply chains and turning them into embedded clusters; the increased contribution of research to economic growth through achieving global excellence and local relevance; the creation of a dynamic, open and inclusive innovation society as one of the preconditions for better quality of life; and improving the quality of human resources for an innovative Slovak economy.

The Operational Programme Research & Innovation is a joint programme of the Ministry of Education, Science, Research and Sports and the Ministry of Economy of the Slovak Republic for granting the support of €2.2 billion from ERDF during the programming period 2014–2020. The programme aims to create a stable and innovation-friendly environment for all relevant entities and to promote the efficiency and performance of the Slovak research, development and innovation system as a basic pillar for reinforcing the competitiveness, sustainable economic growth and employment of the country. The specific actions of the programme focus, inter alia, on supporting the participation of the Slovak performers in the actions of the European Research Area whether they are Horizon 2020 projects or other specific European activities or initiatives.

The programme will also offer synergetic and complementary funding for projects approved and shortlisted under Horizon 2020 or other European initiatives (but not funded under available call budgets) provided that the actions are in compliance with in the priorities of the Slovak RIS3. Furthermore, it includes specific support schemes for new actions of Horizon 2020 such as the 'Teaming instrument' of the Widening actions where national and/or regional authorities (or other private sources) are required to commit financial resources for the implementation of future Centres of Excellence. The programme covers all the regions in Slovakia and is the main tool for implementing the country's RIS3.

Find more information:
http://ec.europa.eu/regional_policy/en/atlas/programmes

The Operational Programme (ERDF) for the Nordrhein-Westfalen State (Germany) encourages synergies in the area of innovation as part of its proposal evaluation and award procedure

The Operational Programme for the Nordrhein-Westfalen Federal State in Germany supports economic growth in the region and contributes to achieving the Europe 2020 targets for smart, sustainable and inclusive growth. The programme with the ERDF funding support of €1.2 billion is expected to create jobs and boost productivity, particularly in SMEs, reduce

CO_2 emissions and introduce integrative concepts for sustainable urban development during the current programming period 2014–2020. A broad number of actors from the economy, research, education and civil society will be involved in the programme implementation. On the basis of the region's innovation strategy, innovative operations and targeted application-oriented research infrastructure will be supported and the transfer of knowledge will be improved. In this context, approximately 480 enterprises will receive support for their activities in the field of research and innovation. Through reducing administrative burdens, in particular for start-ups, and through improving the conditions for business environment and growth, the regional economy will be fostered and better tailored to the needs of SMEs. The programme is thus expected to induce the creation of 14 700 new jobs in the local companies.

The programme will continue its established approach of selecting projects through competitions to finance the best operations. The selection procedure will be transparent and the applications will be evaluated by independent experts. As a specific feature, in the competitions for innovation projects the programme will give preference to proposals that have synergy aspects. Applicants have to explain, if applicable, to what extent in the scientific/technological field of the ERDF application projects were already implemented with prior funding by FP7 or Horizon 2020 and thereby cross-references to the proposed ERDF project should be outlined. In addition, if applicable, the applicant has to explain to what extent further applications under Horizon 2020 in the domain of the proposed ERDF project are either concurrently or subsequently planned. In case of the equal value of two ERDF project proposals, priority will be given to the one that demonstrates synergies with FP7 or Horizon 2020.

Find more information:
http://ec.europa.eu/regional_policy/en/atlas/programmes

4. Examples of synergies at project implementation level

Synergies can take many forms at the project implementation level, as the modes of planning and delivery vary between the Framework Programme/Horizon 2020 and ESIF. The 'Guide on Synergies'[4] provided a taxonomy of synergy actions at the project implementation level:

- Bringing together funding from Horizon 2020 and ESIF in the same integrated research and innovation project (that could be a single action or a group of coordinated actions/operations, but always provided that there is no double funding of the same expenditure item) in view of achieving greater impact and efficiency (for examples see section 4.1);

- Combining funding from the Framework Programme/Horizon 2020 and ESIF for successive projects that build on each other:

  - *Funding actions that build research and innovation capacities of actors aimed at participating in the Framework Programme/Horizon 2020 or other internationally competitive research and innovation programmes (sequential – upstream; for examples see section 4.2);*

  - *Funding actions that capitalise on already implemented Framework Programme/Horizon 2020 research and innovation actions aimed at market up-take (sequential – downstream; for examples see section 4.3);*

- Combining funding from the Framework Programme/Horizon 2020 and ESIF for coordinated parallel projects that complement each other (for examples see section 4.4);

- Providing funding from alternative sources for positively evaluated Framework Programme/Horizon 2020 proposals but not

[4] Find more information on the Guide in section 'Useful sources for further guidance'

funded due to available Call budgets (for examples see section 4.5);

In the following sections, examples of synergies between the Framework Programme/ Horizon 2020 and ESIF are showcased at project implementation level in each of the above-mentioned categories. These synergy examples emerged in the past and such synergy development is expected to gain strength in the current programming period 2014–2020 as a result of enhanced policy design. Identification of the synergy cases was a complex task since there was no systematic monitoring of synergies in the past. However, the identified profiles are very instructive and can provide inspiration for the future.

4.1 Bringing together funding from Horizon 2020 and ESIF in an integrated research and innovation project

Combining funding from Horizon 2020 and ESIF in an integrated research and innovation project is a novelty in the current programming period 2014–2020. Both Horizon 2020 and ESIF regulations allow for the first time bringing together support from both the policy frameworks for a single action or a group of coordinated actions or operations. This could take the form, for example, of a project where research activities are funded by Horizon 2020 and region-specific demonstration activities are supported by ESIF.

However, the combination of funding in one project is subject to strict rules to avoid both double funding for the same cost item, and situations where the Union funding is used to replace any national, regional or private co-financing required for a project. The combination of funds from Horizon 2020 and ESIF can thus happen within an integrated research and innovation project provided that strong efforts are deployed to identify clearly and in advance which cost items are supported through which funding instrument.

Theoretical example: Bringing together funding from Horizon 2020 and ESIF in an integrated research and innovation project

A transnational consortium composed of several universities and companies specialised in microelectronics, is awarded a Horizon 2020 grant to work on a complex research project on embedded systems. The coordinator is a German university which has a substantial part of the project to be deployed in its region. The ESIF Operational Programme of the German region where the coordinator is located foresees a substantial policy support measure for the theme of microelectronics R&I that also provides support for research infrastructure and equipment. Substantial support is also foreseen in the Operational Programme from the European Social Fund (ESF) for training in microelectronics skills for researchers but also for technical staff. The coordinator approaches the ESIF Managing Authority and learns the process through which the Horizon 2020-funded project actions in Germany can benefit from support for additional work packages of the Horizon 2020-funded project.

The consortium applies for relevant infrastructure investment and training support through individual applications under ESIF. Their applications thus form a consistent package of activities to be supported by the ERDF and ESF Operational Programmes that complete and enhance the activities undertaken under the Horizon 2020 project.

However, there is no double funding, since activities supported by the Operational Programmes are additional ones. Furthermore, for this part, the coordinator has invested its own additional funds to complete the ESIF expenditure. The result is a fully-fledged Horizon 2020 project, enhanced by additional substantial support by ESIF.

Theoretical example: Bringing together funding from Horizon 2020 and ESIF in a public procurement of innovation action

A transnational consortium composed of several public authorities that have similar public procurement needs (e.g. need for innovative solutions for environment, health, e-government, e-learning or transport) receive a Horizon 2020 grant (financing rate of 100% for Coordination and Support Actions) to identify the state-of-the-art technologies, conduct jointly industrial dialogues, develop the call specifications, in particular, the performance-based requirements, and other relevant legal and practical preparatory activities for the actual procurement, including prevention of errors as regards the EU public procurement rules. The ERDF support will then be used for the procurement of the innovative solutions by each participating authority.

This public procurement of innovation (PPI)-type of Horizon 2020 action offers a win-win situation as it helps to develop faster concrete solutions to societal challenges and improve public services and infrastructures, enable cost-savings in the medium to long term, e.g. through higher energy savings than standard solutions, while helping innovators to bring their solutions faster to the market.

Find more information in the 'Guide on PPI': *http://s3platform.jrc.ec.europa.eu/documents/10157/0/PPI-Platform_Guide_new-final_download.pdf.*

4.2 Funding actions that build research and innovation capacities of actors aimed at participating in the Framework Programme/ Horizon 2020 or in other internationally competitive research and innovation programmes (sequential – upstream)

The 'upstream actions' prepare national and regional research and innovation actors to participate in Horizon 2020 or in other competitive programmes. They contribute to the goal where the drive for excellence of Horizon 2020 is combined with the capacity-building elements of ESIF, in order to allow excellence to emerge and grow in regions, thus enabling them to climb the 'stairway to excellence'.

International Iberian Nanotechnology Laboratory INL (Portugal) is developing a world-leading and international Nanoscience and Nanotechnology community with the support from ESIF

The International Iberian Nanotechnology Laboratory (INL) located in the North Region of Portugal is the first intergovernmental research organisation in Europe in the field of nanoscience and nanotechnology. The INL is the result of a joint decision of the Governments of Portugal and Spain in 2005, whereby the two Governments committed to strong cooperation in the area of ambitious science and technology joint ventures.

For the construction phase of the initiative, funding of €30 million was received from ERDF in the programming period 2007–2013. The INL project was also co-financed at the time by the INTERRREG Cross-border Cooperation Programme between Spain and Portugal. The overall objective of the INTERREG project was to build a centre of excellence in applied nanotechnology research, having a major impact on the region's competitiveness as well as on promotion of qualified employment and new companies. The aim was also to create a model for science-industry cooperation in the region. The project included elements of constructing competitive scientific infrastructures, with the ultimate objective of attracting prominent nanotechnology researchers to the centre.

The installation of the INL facilities in the City of Braga in the North Region of Portugal has enhanced the local innovation ecosystem by fostering company spin-offs and integrating the INL in global knowledge networks. The research and innovation actors in the region have benefited from technological infrastructures that are of international quality. These infrastructures have increased the competitiveness of companies, universities and technological centres in the region and resulted in successful Framework Programme projects.

Find more information:
http://inl.int/

Research Infrastructure projects ELI (the Czech Republic, Hungary and Romania) and ESS (Sweden and Denmark) of the ESFRI Roadmap are supported by both the Framework Programmes and ESIF

The Extreme Light Infrastructure (ELI) project is a new Research Infrastructure of pan-European interest and part of the European ESFRI Roadmap. It is a laser facility that aims to host some of the most intense lasers world-wide, develop new interdisciplinary research opportunities with light from these lasers and secondary radiation derived from them, and make them available to an international scientific user community. The facility is currently based on three sites and is being implemented in Dolní Břežany near Prague (the Czech Republic), Szeged (Hungary) and Măgurele (Romania), with an investment exceeding €850 million. ERDF contributed more than €375 million to the construction from the 2007–2013 Operational Programmes and additional funding will be allocated from the Operational Programmes of the current programming period. FP7 contributed to the preparatory phase. Currently, the establishment of ELI as an ERIC (European Research Infrastructure Consortium) is prepared and negotiated with the help of funds from Horizon 2020. The ERIC status will help secure ELI's operation through annual contributions from member countries' own budgets.

Find more information:
http://www.eli-laser.eu.

The European Spallation Source (ESS) is a multi-disciplinary Research Infrastructure based on the world's next-generation neutron source. This new facility that is co-hosted by the cities of Lund (Sweden) and Copenhagen (Denmark) will be around 30 times brighter than today's leading facilities, enabling new opportunities for researchers in the fields of life sciences, energy, environmental technology, cultural heritage and fundamental physics. The ESS construction cost is estimated to be about €1.843 billion, and nearly half of the cost will come from the host countries Sweden and Denmark. In the current programming period, approximately €20 million will be allocated to ESS by the national ERDF programme of Sweden. Fifty percent of the cost will come from partner countries, and for Estonia and the Czech Republic, the new provision in the Cohesion Policy regulation allowing regions to spend part of their ERDF allocations (up to 15%) in other regions (even abroad) is of interest. In addition, there will be an annual operation cost of about €140 million[5]. The full construction of ESS is expected to be completed by 2025.

Find more information:
https://europeanspallationsource.se/.

Building up the R&I capacity of a research centre MULTITEL (Belgium) with ESIF support resulting in multiple participations in the Framework Programmes

MULTITEL is a Belgian research centre in the area of scientific technologies composed of a multidisciplinary team of engineers and technicians, complemented by a commercial structure. Its ambition is to develop innovative projects in collaboration with local and international organizations. MULTITEL's scientific skills include voice technologies,

[5] ESIF may not be used for the running cost or maintenance of infrastructures

data fusion, optic fibre applications, image processing, railway certification and computer network management. Besides its R&I activities, MULTITEL offers services in photonics, railway certification and in computer networks for companies. The research centre owes its birth to the 'Faculté polytechnique de Mons' (FPMs). In the mid-1990s, the FPMs/MULTITEL received significant support from the Structural Funds (ERDF/ESF) that contributed to building up the R&I capacity of the centre, and becoming a major actor at the European level with participation in a high number of projects under several Framework Programmes and other European programmes.

Find more information:
http://www.multitel.be/

Bio Base Europe – open innovation and education centre for the bio-based economy (Belgium & the Netherlands) – was established with the support from ESIF

The Flanders region in Belgium and the Netherlands have joined forces to build state-of-the-art research and training facilities to speed up the economic growth, innovation capacity and sustainable development of our society. The joint efforts resulted in a 'Bio Base Europe' initiative that was inaugurated in 2011. Bio Base Europe is an open innovation and education centre for the bio-based economy. It consists of a Pilot Plant located in the Port of Ghent (Belgium) that develops and scales up bio-based products and processes, and of a Training Centre located in Terneuzen (the Netherlands) that is accessible for companies and research institutions throughout the world. The development of Bio Base Europe was co-funded by ESIF (INTERREG IV 2007–2013).

This example of synergies was prepared on the basis of information available in the guidance document 'Combining BBI (H2020) and European Structural and Investment Funds (ESIF) to deploy the European bioeconomy'

http://www.bbi-europe.eu/sites/default/files/documents/Guidelines_BBI_H2020.pdf

and *http://www.bbeu-cd.org.*

Towards Regional Specialisation for Smart Growth Spirit (TR3S) (Spain) strengthens regional innovation systems, maximises knowledge flows and spreads innovation throughout regional economies in Europe

The TR3S project is an inter-regional cooperation initiative for regional and local authorities and actors funded by ESIF (INTERREG IVC). It is coordinated by TECNALIA, the private Research, Development and Innovation group in Spain. The project directly addresses smart specialisation, and at its core is the strengthening of regional innovation systems, maximising knowledge flows and spreading the benefits of innovation throughout the entire regional economy. The project is built upon regional strengths and it seeks to fill the gaps in the effectiveness of regional development policies through mutual learning and exchange of experiences.

The ten TR3S partners from nine countries (Spain, Hungary, the United Kingdom, Estonia, Italy, Romania, Poland, Finland and Germany)

illustrate the diverse innovation geography in the EU leading to fertile inter-regional cooperation. The project therefore aims to understand different innovation ecosystems and supports the move of regional innovation potential towards creating efficient and smart policy processes and policies for regional development that allow regions to create adequate conditions for growth and long-term investment in R&I. In doing so, the project reinforces the capacities of the actors to participate in Horizon 2020 and promotes synergies between them, making the whole value chain work in an effective manner and thus contributing to economic modernisation and competitiveness. Partnerships across the regions are facilitated and a collaborative and coordinated 'policy intelligence knot' beyond institutional boundaries is created for innovative actions.

Find more information:
http://www.tr3s-project.eu

The ESIF investments laid the foundation for the Centre for Nanohealth at the Swansea University (the United Kingdom)

The Centre for Nanohealth at the Swansea University in the United Kingdom started in 2009 with the support from ERDF. The centre aims to establish the region of the West Wales and the Valleys as a world leading interdisciplinary centre offering a Research and Development, Demonstration and Deployment, and Skills innovation system for NanoHealth. It aims to promote Welsh SMEs to work on the development of new healthcare technologies from initial concept to the point where they can be deployed commercially.

The AMETHYST project, funded by FP7, has been developed through the Centre for Nanohealth. Bringing together eight organisations from six countries this project is developing novel approaches to wound treatments which offer cost and safety benefits over current techniques. The Centre for Nanohealth is also supported by other sources of funding including nationally funded projects. Therefore, while focusing on synergies, there are wider leveraging effects of funding, including, in this case, activities that can be classed as downstream.

This synergy example was first published by the 'Stairway to Excellence' (S2E) project in connection with the Smart Specialisation Platform established by the European Commission.

Find more information:
http://s3platform.jrc.ec.europa.eu/stairway-to-excellence
http://www.swansea.ac.uk/nanohealth/

PICTIC–CEA R&D platform (France) provides knowledge for Horizon 2020 projects and implements pilot lines

The CEA (Alternative Energies and Atomic Energy Commission) is a key technology R&I actor in France hosting a PICTIC–CEA R&D platform that has its origins in a nationally and regionally funded 'CEA PRINTRONICS project'. The initiative was granted funding of €8 million for establishment of a PICTIC–CEA platform to which ERDF contributed €1.3 million.

The PICTIC–CEA platform gathers materials and equipment, develops printing technologies

and addresses the new generation of electronic components (circuits and sensors) on large flexible surfaces. It also develops new smart objects on conformable plastic, paper or textile substrates at a reduced cost as well as shapes the industrial value chain for companies. The platform is used by several major French companies. The knowhow of the platform has resulted in four successful Horizon 2020 projects that build on the PICTIC knowledge. Two pilot lines are under implementation.

Find more information:
http://www-liten.cea.fr/fr/plateformes_technologiques/pictic.htm.

Trans2care –Trans-regional Network for Innovation and Technology Transfer to Improve Health Care (Italy & Slovenia) – prepares researchers through focused training to compete in Horizon 2020

Trans2care is a joint project of academic, research, healthcare and technology transfer institutions from Italy and Slovenia, with the University of Trieste as a leading partner supported by the INTERREG IVA Programme. The network works in close cooperation with industry and end-users, in order to address unmet medical needs. INTERREG IVA for Italy and Slovenia had set out a strategic goal for the period 2007–2013 to develop long-lasting solutions for a few major issues in the programme territory, including research and innovation. In this spirit, during the implementation of the Trans2Care project, the actors understood the potential of the project to evolve towards a local 'prototype' for Horizon 2020.

Within Trans2Care, a training programme was built that focused on Technology Readiness Levels – a concept which is widely used in the Calls of Horizon 2020. In 2014, the project actors adopted a 'tool on the Technology Readiness Levels scale'. This tool assesses if research results could have immediate use and thus root technology transfer abilities in the research network. In scientific laboratories, many ideas are conceived and tested as good but often not further exploited. The project actors therefore wanted to familiarise the researchers with the Technology Readiness Levels scale in order to improve exploitation of research results. The tool on the Technology Readiness Levels scale has now become popular in the cross-border biomedical research community, and is expected to pave the way to more stable collaboration with industry and hospitals, as well as to greater success in the calls of Horizon 2020.

Find more information:
http://www.trans2care.eu/default.aspx.

4.3 Funding actions that capitalise on already implemented Framework Programme/Horizon 2020 research and innovation actions aimed at market uptake (sequential – downstream)

The 'downstream actions' provide the means to exploit and diffuse into the market R&I results stemming from projects funded by the Framework Programme/Horizon 2020 or national/regional programmes, with particular attention on creating innovation-friendly market conditions and business environment, including for SMEs and in line with the priorities identified for the territories in the relevant smart specialisation strategies.

FP7 TIGER and TIGER DEMO projects paved the way to transport corridors – a regional demonstration site established in the City of Genoa (Italy) and supported by ESIF

TIGER (Transit via innovative gateway concepts solving European intermodal rail needs) is a finalised FP7 project that supported the development of competitive European rail transport and co-modal freight logistics chains. TIGER DEMO, the follow-up project, aimed at taking the pilots developed by the TIGER project forward into a full-scale demonstration for subsequent market uptake and commercial exploitation The results of these pilots, after validation, are replicable in other EU ports and are ready for market exploitation.

TIGER DEMO's objective was the demonstration of innovative technological and management solutions capable of optimising the container traffic flows to and from the major European ports. The project defined new production processes, technological alternatives and new business models supported by management tools in order to improve performances and competitiveness of the rail connections between seaports and their near and distant hinterlands. During the full-scale demonstration, TIGER DEMO devised co-modal solutions for maritime traffic flows in several geographical sites in Europe. One of these sites is Genoa, where the construction of the 'Genoa Fast Corridor' aiming to reduce congestion in the Genoa harbour, has been partially funded with ESIF by the Liguria region.

Find more information:
http://www.transport-research.info/web/projects/project_details.cfm?id=41356

From the FP7 Research Potential project BioSUPPORT to establishment of a Technology Centre & Transfer Office with ESIF support at the University of Plovdiv (Bulgaria)

The University of Plovdiv in Bulgaria has always held position among the leading universities of the country, with scientific focus on Systems Biology and Food Biotechnology. In late 2009, the University of Plovdiv was awarded with a grant of €2 million under the FP7 Research Potential scheme. The aim of the BioSUPPORT project was to reinforce research infrastructures and human potential in the university's two strongest disciplines and consolidate the science base in these fields. These aims were achieved and the University was turned to one of the best research entities in Bulgaria.

In general, due to the characteristics of the economic landscape, Bulgarian companies are hesitant to invest in science which is not alleviated by the fact that there are not many big biotech companies in the country. In the final stages of the BioSupport project, one of the strategies was to create an association between the University of Plovdiv and several SMEs and apply to establish a Technology Centre and related Technology Transfer Office through means of ESIF. In 2012, the creation of the two entities started with the ESIF support.

Find more information:
https://uni-plovdiv.bg/

4.4 Combining funding from the Framework Programme/Horizon 2020 and ESIF (and/or from other sources) for coordinated parallel actions that complement each other

Funding parallel actions/roadmaps that complement each other means that multiple sources of funds, for example, European, national, and private, are used to achieve one strategic goal. This can take many forms as it is showcased below.

Central European Institute of Technology CEITEC in the South Moravia region (the Czech Republic) aims to establish itself as a prestigious European centre of science with support from FP7, Horizon 2020 and ESIF

The Central European Institute of Technology CEITEC is a centre of scientific excellence in the fields of life sciences and advanced materials and technologies whose aim is to establish itself as a recognized European centre of science. It is located in the City of Brno in the South Moravia region and is one of the key research centres in the Czech Republic. The institute has received a major support of around €190 million from ERDF in the period 2011–2015 of which €51 million was dedicated to the construction of buildings, €103 million to equipment (core facilities and other laboratories), and €42 million to start-up grants supporting the first phase of equipment operation.

In 2012, the CEITEC Institute was awarded a nearly €4 million grant under the FP7 Research Potential programme for the project 'Synergies of Life and Material Sciences to Create a New Future SYLICA'. The project aims at developing research topics of a strong interdisciplinary character, creating added value for Europe, using core R&I facilities as a tool for creating a long-term partnership, and integrating CEITEC fully in the European Research Area through strategic partnerships. The FP7 SYLICA grant complements ESIF received by CEITEC. SYLICA does not finance any buildings or equipment but supports human resources, especially internationalisation through incoming researchers and scientific mobility. This is an ideal combination of European funding where ESIF is used for construction of buildings and state-of-the-art infrastructure and FP7 for building up scientific knowledge capacity of the institution.

Building up both the infrastructural and human capacity of the centre is yielding results in terms of R&I success for CEITEC. In the last calls of FP7, CEITEC was successful in securing one European Research Council (ERC) grant and one ERA Chair grant. In the first calls of Horizon 2020, one ERC grant was awarded to CEITEC. The centre is also participating in the INSTRUCT initiative which is an 'Integrated Structural Biology Infrastructure for Europe' and part of the ESFRI Roadmap. The construction of a new centre for integrated structural biology, which is planned within INSTRUCT, will significantly strengthen the position of CEITEC in the European context.

The South Moravia region has also successfully attained three Marie Skłodowska-Curie Co-Fund actions. This 'SoMopro' programme (http://www.jcmm.cz/en/somopro.html) has allowed attracting 52 established scientists to Brno, most of them directly to CEITEC.

Find more information:
http://www.ceitec.eu/

EIT's Climate-KIC and its Regional Centre (Poland) is working with public and private entities in the Lower Silesia region on the transition towards a low-carbon economy

As part of the European Institute of Innovation & Technology's (EIT) activities to foster greater impact, increase outreach of the EIT's Knowledge and Innovation Communities (KICs), and fully use the innovation potential in Member States, Climate-KIC has established Regional Centres in six regions across Europe including one in the Lower Silesia region in Poland. Most Lower Silesia partners in this KIC, and in particular the WROCŁAW RESEARCH CENTRE EIT+, the University of Environmental and Life Sciences and the Wrocław University, have received since 2007 from ERDF over €210 million for projects. This enabled the Lower Silesia region to join the Climate-KIC.

The Climate-KIC's Regional Centre in Lower Silesia is working with 14 public and private entities in the region on the transition towards a low-carbon economy. It collaborates with businesses, academia and the public sector to develop new innovation schemes, professional education programmes and entrepreneurship. Almost 100 Polish 'agents of change' have been trained as part of the on-going 'Pioneers into Practice' programme. The strategy focuses on enhancing the good practices and policies of business, academia and public institutions. This is being done to strengthen and reshape the Polish economy and to reach the targets of the European Union set for the use of renewable energy.

A particular area of work is influencing the way the Operational Programmes under ESIF are being used to stimulate low-carbon innovation. These programmes represent a major source of investment for low-carbon innovation in Central and Eastern Europe up to 2020. Climate-KIC has a ground-breaking agreement with the Lower Silesia region to coordinate the multi-million Euro investment programmes to support the transition towards a low-carbon economy. Both sides will be making substantial investments in the current programming period. The Lower Silesia region is proposing to spend more than €600 million of its ESIF to support regional low-carbon economy developments over the next seven years.

The Climate-KIC's Regional Centre in Lower Silesia recently organised with a great success a 'Climathon - climate change event' which is a global 24-hour hackathon-style occasion in Walbrzych. The Regional Centre is also now formally collaborating with Estonia to share approaches and develop joint programmes and activities to boost low-carbon innovation.

Find more information:
http://www.climate-kic.org/.

FP7 ERA-NET INCOMERA – network of funding agencies fostering innovation actions and promoting the use of ESIF

INCOMERA is an ERA-NET funded under FP7 and focused on innovation actions and use of the Structural Funds. This ERA-NET is a network of funding agencies coordinated by the Wallonia region (Belgium) that encourages transnational networking and coordination of national research programmes through joint calls with partners from different Member States and regions. It also maps existing research potential and carries out foresight activities. The network consists of 22 partners from 13 countries and 11 regions representing

governmental research, development and innovation funding bodies and addressing SMEs within each region's smart specialisation strategy.

The concept of INCOMERA is that each region is free to select its own innovation priorities and streamline public funds in technological fields in order to address SMEs/projects with Technology Readiness Level 4 and upwards. As an overall strategy, INCOMERA aims to detect and financially support those research results in the area of 'Nanotechnologies, Advanced Materials, Biotechnology and Advanced Manufacturing and Processing' (NMBP) that are likely, firstly, to provide solutions for innovative products, processes or services, and secondly, to analyse and assess the lessons from the measures supported in various Member States in order to exploit the research results and provide operational guidance for successive steps, paying particular attention to the use of ERDF, in the context of smart specialisation strategies. The network also develops synergy-friendly actions for supporting transnational/regional cooperation of SMEs with a view to enhancing commercialization/productivity plans of the actors and launching joint Calls for Proposals to fund innovative industrial research projects close to the market.

Find more information:
http://www.incomera.eu/

FP6 & FP7-supported ERA-NET MANUNET – network of funding agencies in the field of manufacturing – has funded more than 500 SMEs and mobilised regional and national funding

Manufacturing generates approximately 22% of the EU Gross National Product, while manufacturing-related activities represent an estimated 75% of the EU Gross Domestic Product and 70% of employment.

MANUNET was created in FP6 as an ERA-NET to extract greater value from the funds spent in national/regional programmes. Since 2006, MANUNET has worked towards a goal to promote and fund transnational research and development projects in the field of manufacturing, through annual Calls for Proposals. The network gathers regional and national agencies that use their own funding programmes to fund manufacturing research and development projects performed by companies (preferably SMEs), research centres and universities.

MANUNET is an ideal complementary programme that is halfway between the Framework Programmes and national/regional funding programmes. It is tailor-made initiative for SMEs as the network funds close to market and short-term projects with small consortia and with simple submission and evaluation processes that are supported by national/regional advisors. MANUNET has funded 190 projects and 530 SMEs. More than €200 million have been invested in these projects.

Find more information:
http://www.manunet.net.

Danube:Future initiative develops interdisciplinary research and education in the Danube River Basin with support from Horizon 2020 and ESIF

Danube:Future is a joint contribution of the Danube Rectors' Conference and the Alps-Adriatic Rectors' Conference, thus integrating the largest pool of institutionalised knowledge in the Danube River Basin. The project contributes to the EU Macro-regional Strategy for the Danube Region by developing interdisciplinary research and education in the Danube River Basin, in particular strengthening a long-term humanities' perspective. Danube:Future contributes to solutions for pressing environmental issues and works towards a sustainable future of the region.

Danube:Future funds its activities from multiple sources including Horizon 2020 and ESIF and aims to have a lasting effect on research and teaching in the humanities in the region, bringing young scholars to the forefront of international research and hence developing the strengths of higher education in the region in internationally competitive contexts. It is also of particular importance for those Danube River Basin regions which base the core of their smart specialisation strategy on sustainability of the economy and 'green jobs'. Danube:Future carries out trainings in cultural and natural heritage, institutional capacity building for green jobs, and strengthens regional and supra-national networks alike.

Find more information:
http://www.danubefuture.eu.

Building regional capacity for R&I through establishment of a University Consortium in the South Ostrobothnia region (Finland)

In late 1990s, the South Ostrobothnia region was facing challenges due to structural changes in national economy, low level of higher education and R&I as well as severe out-migration of population. The actors in South Ostrobothnia were aware of the factors connected with the region's poor R&I performance: the absence of their own university. As a consequence, a group of local and regional policy actors together with representatives from some key research organisations locating in the region came up with an idea of pooling resources by triple-helix co-operation for new professorships to fields that have links to the regional economy. Active professors were recruited to work in the region. A dedicated academic network entitled the 'University Consortium of Seinäjoki' came into being in 2004.

Today the University Consortium comprises five partner universities – Universities of Tampere, Helsinki, Vaasa and Tampere University of Technology and University of Arts – and is the base for 22 research groups led by professors. The University Consortium brings together a community of 90 experts; hosts about 15 researchers at the Researchers' Residence; educates 2500 adult students per year; has contributed to 340 Master degrees in the region; and has received annual funding of about €7 million. The EU funding has been one of the main sources to sustain the University Consortium and is provided by multiple sources (ERDF, ESF and FP). The municipalities, scientific foundations, national innovation financiers, the Finnish Academy of Science and approximately 150 enterprises also fund the University Consortium.

Find more information:
http://www.ucs.fi/index.php/english.

European Centre of Excellence for sustainable water technology Wetsus (the Netherlands) connects researchers from all over the EU to a leading-edge water technology programme

Wetsus – the European Centre of Excellence for sustainable water technology – facilitates breakthrough innovations for water treatment technology. Wetsus is located in the City of Leeuwarden in Fryslan. Wetsus was initiated in 2003 as a public-private partnership (50% public finance, 25% company finance and 25% university contributions). This regional initiative has grown into industry-driven research programme in which 50 European research chairs cooperate with 100 companies from all over the world. The 60 Post-Doctoral Students are all located at the Wetsus campus. The programme has so far generated 60 patents and 26 spin-offs. Activities of Wetsus are supported by ESIF, FP7, Horizon 2020, local, regional, national funding and contributions by companies.

Most of the participating universities and companies in Wetsus are from EU-15 countries. To widen participation in the initiative, Wetsus and the Riga Technical University (RTU) in Latvia jointly developed a Horizon 2020 Teaming proposal with the objective to develop a 'Centre of Excellence for Smart Technologies Engineering'. The proposal was positively evaluated by the Horizon 2020 evaluation procedure but not funded due to budgetary constraints. In June 2015, Wetsus and RTU signed a collaboration agreement to continue working on this initiative through the ESIF support from the Latvian Operational Programme. Part of the agreement is the training of researchers in the Wetsus Ph.D. programme. This investment in human capital should reinforce the effort of building the Centre of Excellence in Riga. Ph.D. graduates will learn to work in a truly multidisciplinary environment and link business and academia.

To continue sharing excellence, Wetsus foresees a cooperation agreement with around ten additional regions, in which ESIF will be used to train Ph.D. graduates abroad. Simultaneously, several regional, national and European funding sources will be combined to develop Centres of Excellence within these participating regions. The agreement also foresees an active role for the regional governments and businesses. This will enhance long-term cooperation, cross-sectorial cooperation, valorisation of research results and the generation of spin-off companies.

Find more information:
http://www.wetsus.nl/.

The Clean Sky Joint Technology Initiative is investing major efforts in stimulating cooperation and synergies with ESIF in aeronautics research across regions in Europe

The 'Clean Sky Joint Technology Initiative' (JTI) was established in 2008 and is managed by the Clean Sky Joint Undertaking. Clean Sky represents a unique Public-Private Partnership in the field of aeronautical research between the European Commission and industry. Its mission is to develop breakthrough technologies to increase significantly the environmental performances of airplanes and air transport, resulting in less noisy and more fuel efficient aircraft, hence making a key contribution to achieving the environmental objectives. Clean Sky 2 will enable a continuation to the progress achieved in the first Clean Sky Programme launched under FP7, which will end in 2017.

The Clean Sky Joint Undertaking (CSJU) encourages synergies between Clean Sky and ESIF by allowing complementary activities to be proposed by the applicants to CSJU calls and by amplification of the scope, addition of parallel activities or continuation of CSJU co-funded project/activities through ESIF in synergy with the Clean Sky 2 Programme and its technology roadmap. The CSJU Work Plan – the Clean Sky 2 Joint Technical Programme and the Clean Sky 2 Development Plan – are instrumental for identification of possible areas of synergies. The CSJU also encourages the use of ESIF to build and enhance local capabilities and skills in the fields related to the programme to enhance the level of European competitiveness of stakeholders in the area.

The CSJU has launched an action plan on synergies and is developing close interactions with interested Member States and regions in Europe to discuss strategies and possible cooperation through tailor-made approaches and incorporation of modalities depending on the level of Member States' or regions' interest and commitment. While keeping well separate the funding processes and rules of each competent authority, the purpose is to identify and apply mechanisms for ensuring complementarity and synergies with ESIF in the most relevant research and innovation projects from a Member State or region in view of maximising its impact through the framework of CSJU-funded projects. With the intention of identifying potential interested actors, the CSJU is currently developing a mapping of Member States and regions that have an interest in cooperation with the CSJU based on their smart specialisation strategies. The CSJU is running a pilot phase for years 2015-2016 with selected participating Member States/regions during which pilot projects will be launched and good practices identified for further Member States and regions. After the signature of a first Memorandum of Understanding with the Midi-Pyrénées region (France) in February 2015, the CSJU has established cooperative relations for the pilot phase with regions in Italy (Campania), in the Netherlands (Flevoland), in Spain (Andalucía and Cataluña) and in Sweden (Västra Götaland and Östergötland), and at national level with Romania, and several other regions/countries are planned to be engaged in the future.

Find more information:
http://www.cleansky.eu/content/page/synergies-structural-funds.

CERIC-ERIC – materials science facilities in Central Europe – joint resources offer an integrated service to researchers

In June 2014, the European Commission agreed on setting up of a unique distributed research infrastructure that will offer researchers an integrated service and access to materials science facilities in Central Europe. The initiative receives financial support from Horizon 2020. CERIC – the Central European Research Infrastructure Consortium – will join together multidisciplinary, analytical, synthesis and sample preparation facilities of Austria, the Czech Republic, Italy, Romania, Serbia and Slovenia (including observers from Croatia, Hungary and Poland). Under CERIC, the Romanian research infrastructure facilities will also be supported by ESIF.

The new European legal entity CERIC-ERIC will exploit the full scientific potential of Central Europe in the synchrotron light and other microscopic probes for analytical and modification techniques for a broad range of applications in the fields of life sciences, nanoscience and nanotechnology, cultural heritage, environment and materials sciences. CERIC will be instrumental in overcoming fragmentation and fully exploiting the members' capabilities to outreach and attract users as well as to connect with capabilities and resources at international level. CERIC-ERIC has its statutory seat in Trieste (Italy).

Find more information:
http://www.ceric-eric.eu

4.5 Providing funding from alternative sources for Framework Programme/ Horizon 2020 proposals – the Seal of Excellence initiative

The European Commission has launched the 'Seal of Excellence' initiative that addresses regions and Member States interested in increasing the impacts of their investments in research and innovation, by supporting the most dynamic and innovative SMEs. The 'Seal of Excellence' initiative aims at creating a link between the Horizon 2020 proposals meriting funding and the ESIF Managing Authorities in the regions and Member States interested in providing the proposals with the required support.

The 'Seal of Excellence' is a quality label, awarded to project proposals – submitted for funding under the Horizon 2020 SME Instrument calls – which succeeded in passing all of the stringent selection and award criteria, but could not be funded by the available Horizon 2020 Call budget. The Seal identifies, therefore, promising project proposals which merit funding from alternative sources (public or private) available at national, regional, European or international level. A holder of the 'Seal of Excellence' certificate can approach alternative funding sources and present the certificate as a label of a high-quality project proposal. The action concerns, for this initial pilot phase, only proposals applying to the SME Instrument. Later on it could be extended to cover more areas of Horizon 2020.

The 'Seal of Excellence' offers a unique opportunity for regions and Member States (and any other interested actor) to fully exploit the high-quality Horizon 2020 evaluation process: to identify easily and possibly support

high-impact proposals coming from promising innovative companies, with an ambition to grow and compete internationally. It is up to each Member State or region to establish supporting funding schemes for these types of proposals and enable the provision of alternative funding, in compliance with national and EU rules.

Find more information:
http://ec.europa.eu/research/regions/

VINNOVA (Sweden) builds on the Horizon 2020 SME Instrument to support its innovation champions

VINNOVA's task is to achieve sustainable growth by funding research and innovation in order to strengthen Sweden's competitiveness, with a particular focus on supporting innovation in SMEs. The agency finds it very important to encourage Swedish SMEs to apply for the EU funding. As the subscription rates for the SME Instrument have been unexpectedly high under Horizon 2020 and as many high quality proposals by Swedish SMEs could not be funded due to budgetary constraints, VINNOVA established the 'Runner up Programme'. The programme is funded by national resources.

When the results of each phase 1 of the Horizon 2020 SME Instrument are available, VINNOVA invites the companies that have scored 13 or above to submit an application under a Call for Proposals of the VINNOVA 'Runner up Programme'. The applicants receive a link to a simplified application form, requiring a summary of the project and a budget, supplemented with the original Horizon 2020 SME Instrument application and its Evaluation Summary Report as well as a statement that the applicant is not above the limits for the 'de minimis' rule for the State Aid. VINNOVA will not carry out a qualitative evaluation of the applications for the second time, but instead, accepts the outcome of the Horizon 2020 evaluation. After the proposal has been granted funding, the project will follow the same rules and reporting as all the other projects supported by VINNOVA.

VINNOVA regards this programme as an economical way to synergize with Horizon 2020. The agency has been able to fund good projects recognised at European level with a very low indirect cost, and has shown that it could be done very quickly. From the Swedish tax-payer viewpoint, the cost is minimal but the added value for Europe is maximised. VINNOVA has also an agreement with the Enterprise Europe Network (EEN – co-funded by the COSME programme) that the SMEs awarded funding from the 'Runner up Programme' will receive coaching from the 'Enhancing Innovation Management Capacity' team of the EEN. The goal is to provide the SMEs with similar support as is offered under the Horizon 2020 SME Instrument. A support office is also financed by VINNOVA and Tillväxtverket – the Swedish Agency for Economic and Regional Growth Finance. The office supports all SMEs that want to participate in an application to Horizon 2020.

Find more information on VINNOVA and Tillväxtverket:
http://www.vinnova.se/en/;
http://www.tillvaxtverket.se/.

Lombardy region (Italy) issues vouchers for SMEs that were positively evaluated (but not funded) under Phase 1 of the Horizon 2020 SME Instrument

The Lombardy region issues vouchers with the value of €25 000 for those SME applicants that were positively evaluated in Phase 1 of the SME Instrument under Horizon 2020 but not funded due to budgetary reasons. Such SMEs from the Lombardy region are encouraged to apply under a 'SME Voucher R&I Call' at regional level, by submitting the same Horizon 2020 SME Instrument proposal and related Evaluation Summary Report provided by the European Commission. The applicants will then automatically receive the voucher, without any further evaluation, under the condition that they commit themselves to work on the feasibility study and present the project in the Phase 2 Call of the Horizon 2020 SME Instrument. In the process of drafting the feasibility study, SMEs are also invited to use the services of the European Enterprise Network. The new Voucher R&I Call edition that was launched in October 2015 will be funded by ESIF.

Find more information:
http://www.regione.lombardia.it.

The Greek General Secretariat for Research and Technology has funded applicants that were positively evaluated (but not funded) by the FP7 Grant Schemes of the European Research Council (ERC)

In 2011, the General Secretariat for Research and Technology (GSRT) – the main governmental body responsible for Greek Research and Innovation policy activities – launched a national funding scheme called 'Financing research proposals positively evaluated under the FP7 ERC Grant Schemes'. This scheme was aimed at supporting ERC applicants that had applied with a Greek Host Institution for an ERC grant, reached the quality threshold during the second-stage evaluation but were not funded due to the FP7 budget limitation.

During the period 2011–2012, the GSRT published three calls for proposals and applied this novel initiative to two ERC funding instruments – advanced and starting grants – for proposals submitted under the ERC calls. The GSRT scheme was co-financed by ESIF (the European Social Fund-supported Operational Programme 'Education and Life-long Learning' for 2007–2013) with an overall public expenditure amounting to €12.4 million. In total, 14 projects were approved for establishing 'individual teams' led by a 'principal investigator' with an average budget of €891.000, a duration of 30 months and a financing rate up to 100% of eligible expenses.

The GSRT funding scheme was aimed at rewarding proposals with innovative character distinguished for their quality in the context of a European-wide competitive funding mechanism, such as FP7. Funding these types of proposals fitted into the overall research policy and the Structural Funds' context of the country.

Find more information:
http://www.gsrt.gr

The Spanish Ministry of Economics and Competitiveness provides alternative funding for high quality Phase 1 proposals of the Horizon 2020 SME Instrument

Spanish SMEs are very active applicants under the Horizon 2020 SME Instrument calls. In 2015, the Spanish Ministry of Economics and Competitiveness together with CDTI (the Spanish Innovation Agency) established a specific scheme, named 'Horizonte PYME', for providing alternative financial support from national funds under the 'de minimis' rule of the State Aid to high quality proposals that were submitted under the Horizon 2020 SME Instrument (Phase 1) calls but were not funded under available call budgets. The only eligibility criterion for a SME applicant for requesting alternative national funding was scoring at least 12 out of 15 points of the stringent evaluation of the Horizon 2020 SME Instrument.

This alternative funding scheme has received a very positive response in Spain with more than 200 proposals received. With the budget for the 2015 call (€8.6 million), the Ministry has funded around 130 proposals with an average grant size of €70 000. The experience of the Spanish Ministry in the provision of alternative funding is encouraging as the scheme could be replicable under ESIF provided that the applicants are not above the limits for the 'de minimis' rule of the State Aid.

As the real challenge in Spain is the high number of SMEs applying under the Horizon 2020 SME Instrument calls, efforts have also been devoted to explore feasible alternative financial support to positively evaluated but not funded Phase 2 proposals of the SME Instrument, together with other national innovation agencies from Italy and Ireland. In this context, it has been proposed to set up a pilot programme under the network of Horizon 2020 SME and Access to Finance National Contact Points. The idea is to allocate a small budget of this network to explore the attractiveness and the feasibility of a voucher-based 'Seal of Excellence'-type of action for SMEs applying (but not funded) to the Phase 2 calls of the SME Instrument. The pilot programme is planned to test different scenarios in these three countries with the ultimate joint goal of showcasing what can be done to valorise the Seal of Excellence complying with the State Aid rules but aiming to support the growth of very interesting SMEs.

Find more information:
https://www.cdti.es/

5. Examples of initiatives with high potential for synergies

In the following section, some examples of initiatives that have high potential for synergies with ESIF are provided, to raise the awareness of the actors at all levels on the possibilities they have towards developing synergies.

Bio-Based Industries Joint Undertaking opens up avenues for synergies between Horizon 2020 and ESIF

The Bio-Based Industries Joint Undertaking (BBI JU) is a new €3.7 billion Public-Private Partnership between the EU (Horizon 2020) and the Bio-based Industries Consortium (BIC). The BBI JU is driven by the Vision and Strategic Innovation and Research Agenda developed by the industry, mobilising €975 million of EU funds and €2.7 billion of private investments – an effort with a great potential for leveraging additional private and public funds including ESIF. The aim is to develop new bio-refining technologies to sustainably transform renewable natural resources into bio-based products, materials and fuels through new value chains. This nascent sector is expected to grow rapidly and create new markets and jobs in Europe.

In order to develop and implement a strategic approach for creating synergies between European and regional support programmes, the European Commission and its industry partner, the Bio-based Industries Consortium, work closely with the Bio-based Industries Joint Undertaking, in particular through the BBI JU Governing Board, the BBI JU Executive Office and the BBI JU States Representatives Group. The European Commission also cooperates with the Horizon 2020 Programme Committee on these issues. The goal is to identify areas of cooperation and to develop specific measures with regard to dissemination, communication and deployment activities. These efforts will be continued and will grow in importance during the lifetime of the BBI JU.

The BBI JU is launching calls, and in these calls, participation of regional stakeholders could play an important complementary role and is thus encouraged, thereby opening avenues for synergies between Horizon 2020 and ESIF. Various synergy-types could be considered here. For example, the consortium partners in a 'Research& Innovation Action (RIA)' are expected to cover important parts of the whole value chain, from feedstock to market. Depending on the smart specialisation focus of a region, regional actors could support consortium partners from their region to access a BBI JU project, and provide the right knowledge infrastructure and bio-based innovation ecosystem for implementation under BBI JU projects. A region may equally attract investments from other partners in order to establish a favourable bio-based ecosystem. This could be done, for example, by subsidizing the growing of new crops for the bio-economy, or by setting up and supporting regional research infrastructures with the ERDF funding to facilitate the exploitation of bio-mass as a feedstock. Adequately trained human resources for carrying out excellent research and development within the BBI JU could be fostered by support from ESF (European Social Fund).

Furthermore, uptake of results from the BBI JU-funded R&I projects can be supported by productive investment, which contributes to creating and safeguarding sustainable jobs, via direct aid to investment in SMEs. The BBI JU also funds value chain-driven demonstration projects from feedstock to market. Such BBI JU demonstration projects could complement or build on ESIF-funded projects. ESIF could also complement BBI JU 'Flagship projects' by investing in the development of endogenous potential through financing equipment and infrastructure and services to enterprises, in order to have sufficient regional storage and transport facilities for bio-based feedstock, and create optimal conditions to attract large-scale industrial investments in 'first of a kind' production facilities in their region. Such actions would support employment and acceleration of the bio-based economy.

ESIF could also support large-scale investments, by fostering and underpinning new financial instruments from the European Investment Bank (EIB), to overcome one of the key bottlenecks towards boosting Europe's bio-based innovation and economy: the availability of finance and risk capital for very large-scale investments with higher risks and lower bankability. Furthermore, the BBI JU 'Coordination & Support Actions' could complement ESIF investments in regional innovation ecosystems by setting up and funding European networks of regions with bio-based smart specialisation strategies, to identify and share regional good practices. ESIF could fund the replication of such identified regional good practices in other regions. ESIF could also support cross-regional knowledge sharing by using the new opportunity to use part of the ESIF funding (up to 15%) outside of the region and accelerate development of the bio-based economy within and across regions throughout Europe.

Find more information on possible synergies between the BBI JU calls and ESIF in a document prepared by the Bio-based Industries Consortium: 'Combining BBI (H2020) and European Structural and Investment Funds (ESIF) to deploy the European bioeconomy – Guiding principles':
http://www.bbi-europe.eu/sites/default/files/documents/Guidelines_BBI_H2020.pdf.

Joint Baltic Sea research and development programme BONUS addresses the challenges facing the Baltic Sea

BONUS is a joint Baltic Sea research and development programme with a total budget of €100 million. The budget is supported by €50 million granted under FP7. The programme was started by the BONUS Member States (Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland and Sweden) and the European Commission. It was officially founded in September 2010 by a co-decision of the European Parliament and the European Council as an initiative under the Article 185 of the Treaty on the Functioning of the European Union and full implementation commenced in October 2012.

BONUS is a cross-cutting and interdisciplinary programme that integrates the research programmes of the Baltic Sea states with focuses on the marine sector and the environmental challenges facing the Baltic Sea. These include overcoming large blooms of toxic cyanobacteria and ensuring sustainable development of the Baltic Sea. BONUS supports ecosystem-based management of the sea and is closely aligned with many of the objectives and horizontal actions of the EU Strategy for the Baltic Sea Region, in particular its objective to 'Save the Sea'. BONUS is also closely linked to the Baltic Sea Action Plan of HELCOM (Baltic Marine Environment Protection Commission), the EU Marine Strategy Framework Directive and other European, regional and national coastal and marine environmental policies and plans. In a similar way to FPs, BONUS issues calls for proposals and supports a variety of collaborative research and innovation projects of high excellence and relevance aimed at producing knowledge, scientific evidence and innovative solutions for policy-makers and other actors in the Baltic Sea region.

The BONUS programme also seeks to engage end-users and the society at large in the knowledge-based governance of the fragile Baltic Sea. BONUS has already established synergies with the INTERREG Baltic Sea Region programme and there may be wider opportunities for establishing greater synergies with ESIF to ensure the coordination of activities in the Baltic Sea region from both a marine bioeconomy as well as research and innovation perspective.

Find more information:
http://www.bonusportal.org

Joint marine and maritime research and innovation initiative BLUEMED for jobs and growth in the Mediterranean Sea

BLUEMED is an initiative that was jointly developed and agreed by the participating Member States (Cyprus, Croatia, France, Greece, Italy, Malta, Portugal, Slovenia and Spain) and facilitated with the support of the European Commission. The initiative was launched in December 2014 and it targets research and innovation activities in the marine and maritime domains. BLUEMED addresses the relevant challenges of the Mediterranean area in view of its economic, environmental and societal sustainability, i.e. creating new jobs, promoting social cohesion, improving the environmental status and the wellbeing of the citizens.

BLUEMED focuses on producing knowledge of the socio-economic and ecological systems in the Mediterranean Sea but also on providing a new generation of innovative solutions for the development of new markets and instruments for policy-makers. The initiative

calls for a coordination effort of marine and maritime research and innovation activities and for creation of synergies between regional, national and EU investments, with a view of avoiding duplication and reducing fragmentation. A 'Vision' and a 'Strategic Research & Innovation Agenda' of the initiative have been recently adopted by the Member States which will pave the way for a long-term 'blue strategic implementation plan'. The ultimate aim of the initiative is to integrate the policy, industry and research communities and the society at large towards a sustainable and prosperous future of the Mediterranean Sea.

Find more information:
https://www.researchitaly.it/uploads/12471/BLUEMED_Vision.pdf?v=dc3e784

European Innovation Partnership for Agricultural productivity and Sustainability (EIP-AGRI) contributes to integrating different funding streams towards the same goal

The European Innovation Partnership for Agricultural productivity and Sustainability (EIP-AGRI) was launched by the European Commission in 2012. It aims to support a competitive and sustainable agriculture and forestry sector that 'achieves more from less'. It contributes to ensuring a steady supply of food, feed and biomaterials and sustainable management of the essential natural resources on which farming and forestry depend, working in harmony with the environment.

The innovation model under the EIP-AGRI goes beyond speeding up the transfer from laboratory to practice. The EIP-AGRI adheres to 'interactive innovation model' which brings together specific actors (farmers, advisors, researchers, businesses, etc.) to work together in multi-actor projects to find a solution for a specific issue or to develop a concrete innovation opportunity. In these 'Operational Groups', new insights and ideas will be generated and existing tacit knowledge will be built into focused solutions that are quicker put into practice. Such an approach will stimulate innovation from all sides and will also help to target the research agenda. The EIP-AGRI contributes to integrating different funding streams towards the above-mentioned goals. A range of available funding sources can help get agricultural innovation projects started, such as the European Agricultural Fund for Rural Development or Horizon 2020.

Find more information:
http://ec.europa.eu/eip/agriculture/.

6. Making synergies happen: working with different stakeholders

National and regional authorities have a key role to play in the transition towards greater synergies. Regions are in the best position to identify new opportunities for developing synergies in line with the relevant national or regional smart specialisation strategies for research and innovation.

Strengthening the cooperation between the two policy frameworks will involve some genuinely hard work as it requires both a new mode of conduct and time for building new and closer relationships between the actors. It will require that all actors think more strategically in their parallel efforts from now on. Establishing an effective communication between the strategy and policy making, implementation, monitoring as well as advisory and information bodies for the two programmes at all levels (local, regional, national and European) will be a key element for achieving greater synergies.

The success of developing synergies will also depend on the quality of involvement by different actors in the process. Research stakeholders (public or private) have to be better informed about the investment plans and implementation rules and conditions under ESIF. Horizon 2020 National Contact Points have to develop better interfaces in order to reach out to competent national and regional ESIF authorities, and in particular, to inform them about Horizon 2020 beneficiaries in their territory, forthcoming calls and trans-national funding opportunities and networks that could be relevant for their smart specialisation priorities. Finally, the European Commission will support these interactions through systematic interventions towards the appropriate stakeholder communities involved.

Development of synergies requires a long-term commitment by all actors. If the process is nurtured by enthusiasm and deepened cooperation, synergies will increase and investment in research and innovation will have an ever higher positive impact on jobs, growth and competitiveness in Europe.

7. Useful sources for further guidance

Find more information on synergies:
http://ec.europa.eu/research/regions/

In order to provide support for developing synergies, the European Commission has produced guidance to the relevant authorities through a Staff Working Document (SWD (2014)205 final) and annexes which contains explanations on the basic rules and principles for obtaining synergies and combining the different funds, and which contains recommendations to the relevant actors as well as to the European Commission on how to facilitate synergies. The online version of the guidance document 'Establishing Synergies between European Structural and Investment Funds, Horizon 2020 and other research, innovation and competitiveness-related Union programmes':
http://ec.europa.eu/regional_policy/sources/docgener/guides/synergy/synergies_en.pdf

The guidance document is also available at the Horizon 2020 Participant Portal under the tab 'Other Funding Opportunities':
http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/other/index.html

The pilot project 'Stairway to Excellence' supports EU-13 regions and countries in developing and exploiting the synergies between ESIF, Horizon 2020 and other EU funding programmes. The project assists the actors in closing the innovation divide, in order to promote excellence in all regions and EU countries and stimulates the early and effective implementation of national and regional smart specialisation strategies.

Find more information:
http://s3platform.jrc.ec.europa.eu/stairway-to-excellence.

The InfoRegio webpage of the European Commission on research and innovation: *http://ec.europa.eu/regional_policy/en/policy/themes/research-innovation/.*

If you know additional good examples of synergies between ESIF, Horizon 2020 and other current or past EU funding instruments, please send information on the examples by e-mail to:
RTD-SYNERGIES-STUDY@ec.europa.eu.

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Synergies between Horizon 2020 and the European Structural and Investment Funds (ESIF) aim at maximising the quantity and quality of R&I investments. In doing so, synergies seek to bring together research and business communities as well as relevant national and regional policy designers and implementing bodies, thus ensuring a higher impact of the funds for a knowledge-based economic transformation. Developing synergies will ultimately lead to a positive effect on jobs, growth and competitiveness across Europe's diverse regions and will also give a greater push to open innovation in the European Union.

This publication describes the rationale for developing links between the different funding sources and explains how they can be combined. It showcases examples of synergies that have emerged at strategic, programming and project implementation levels and also highlights initiatives with a high potential for synergies.

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