

SYNERGIES FOR INNOVATION: LESSONS LEARNT FROM THE S2E NATIONAL EVENTS

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In this issue

- Smart Specialisation Strategies (S3) play a key role in fostering an efficient and inclusive Research and Innovation (R&I) ecosystem by creating the right framework for focused investments based on selected high value added priorities and a shared vision of territorial development.
- Building synergies can contribute to two complementary objectives: helping to close the innovation divide across European territories and increasing the efficiency and effectiveness of public policy intervention.
- Synergies between ESIF and other funding programmes (e.g. COSME, Horizon 2020) could maximise the specific value added of S3 investments such as the capacity to support effectively research capacity building and the exploitation of research results for raising the overall social/economic impact of European R&I.
- Quality of R&I "governance" (e.g. long-term planning, monitoring and evaluation, stakeholders' involvement) appears as the key factor for achieving a successful implementation of R&I investments under the current S3.

1. Rationale

Within Europe, considerable territorial disparity in terms of research and innovation (R&I) performance appears along several dimensions such as EU15-EU13, Northern-Southern countries and within many Member States (MSs).

The two biggest European funds - Horizon 2020 and the European Structural and Investment Funds (ESIF) - aim at supporting the development of European competitiveness, growth and knowledge generation.

On the one hand, Horizon 2020 provides funding on the basis of three criteria: (1) excellence, (2) impact and (3) quality and efficiency of the implementation - regardless of any geographical consideration. On the other hand, ESIF aim to allocate funds e.g. to build up and/or enhance innovation capacity in European regions and Member States.

By creating synergies between different innovation-related funding programmes (ESIF, H2020 and other European instruments and national initiatives) policy intervention can become more efficient and effective in supporting the entire research and innovation (R&I) ecosystem.

The European Commission Stairway to Excellence (S2E) initiative is centred on the provision of assistance to EU Member States and Regions with the aim of closing the innovation gap and promoting R&I excellence across Europe.

2. Activities

Following a mandate from the European Parliament and operating in collaboration with the Directorate-General for Regional and Urban Policy, the S2E initiative undertook both *capacity mapping* and *capacity building* activities in the EU13 Member States.

- *Capacity mapping* refers to the provision of key economic indicators and analyses to consistently inform policy makers about performance of the different R&I stakeholders active in each territory (universities and research organization, government, private sectors) and thus, reducing information barriers which could hamper effective collaboration over time.
- *Capacity building* activities centred on the organization of S2E national events in each EU13 Member State during the period 2015/2016. These events provided a unique platform for a better understanding of the European and national R&I ecosystem, for exchanging experience as well as raising awareness of the actions needed to enable cooperation and synergies among R&I actors. These events brought together national/regional authorities in charge of S3 and/or European funding programmes, renowned experts as well as representatives from universities, research centres and business. As a result of each national event, a *Joint Statement* was published by S2E and national authorities to summarise the main actions needed to overcome existing barriers and create synergies for enhancing the efficiency of national R&I ecosystem.

3. Results of S2E National Events

The S2E National Events provided an opportunity for establishing informed communication between stakeholders in participating Member States. This was recognised as a novelty in itself – especially in some MS where prior consultation of stakeholders consistently signalled the need of proper interaction between policy makers and research actors.

The main issues and recommendations proposed during these events can be summarised under three dimensions:

- quality of R&I governance,
- capacity building
- from innovation to commercialisation.

3.1. Quality of R&I Governance

The main issue highlighted in almost all the events was the need for improving coordination and communication tools between different stakeholders dealing with ESIF and S3 strategies, including ministries, national and regional public organisations, universities and business.

This issue is conducive to related bottlenecks in the R&I governance such as the lack of both information circulation between stakeholders (silo effect) and collaborative management.

Frequency of Topics Raised		
High	Medium	Low
<ul style="list-style-type: none"> - Coordination, communication and trust building between stakeholders - Administrative burden and complicated procedures - Business involvement in the innovation ecosystem 	<ul style="list-style-type: none"> - Timely information circulation (<i>silo effect</i>) - Strategic approach, long-term strategic planning and prioritisation - Unstable political and administrative structure, fragmented research system and frequent changes in the policy instruments 	<ul style="list-style-type: none"> - Heterogeneous EU regulations adoption into national provisions - Different responsiveness of Managing Authorities to new economic challenges - Heterogeneous interest by Managing Authorities towards other EU innovation initiatives (i.e. macro regional EU programmes, cooperation initiatives, cluster policies)

It is notable that such lack of coordination negatively affects the capacity of R&I actors to reap the maximum available benefits under both ESIF and H2020 activities.

Although the nature of these two programmes is quite different and each one requires different types of preparation from potential beneficiaries, research representatives from both the public and private sectors signalled difficulties to access the necessary information on time (with an effect on success rate in Horizon 2020

calls) as well as complicated administrative procedures (for ESIF). A reason for that appears to be the lack of long-term strategic planning due to unstable political structures and frequent changes in the policy instruments and related staff in some Member States.

Possible actions concerning the quality of governance

- *Better coordinate the current information channels, offices and platforms & exchange information between MAs, NCPs and other stakeholders*
- *Develop a long-term vision and exploit opportunities provided by the continuous Entrepreneurial Discovery Process (EDP)*
- *Establish an independent coordination body (one-stop shop) for communication with stakeholders*
- *Establish an independent evaluation/monitoring body*
- *Learn and adapt from good practices*
- *Improve the project management and employ more qualified administrative staff / train the existing staff*

Long-term strategic planning is crucial for reinforcing a shared vision of R&I policies, building up a consensus on the prioritisation while aligning activities and creating a more open, transparent and flexible working culture to maximise socio-economic impacts of these investments. This can facilitate strategic business involvement into the wider innovation ecosystems since a stable economic and political environment help business actors to plan investment decisions and long-term initiatives.

A crucial element for measuring successful business involvement into the R&I ecosystem is the degree of collaboration with academia for strategic R&I projects.

Building business awareness of both potential funding sources and opportunities for synergies is therefore an important dimension for a successful S3 implementation. Hence, the common request across many EU13 MSs to establish independent coordination bodies (one-stop shop) which can timely assist and provide advice in a tailored manner to different stakeholders (in particular to SMEs, and research institutions/universities) while helping authorities to shape strategies and public interventions.

3.2. Capacity Building

Capacity building activities for Member States and Regions refers to the use of ESIF resources to reinforce a territorial R&I ecosystem and thus favours a more attractive and competitive environment where local actors could successfully participate in international R&I initiatives such as H2020 calls and other research schemes.

The major concern expressed during the S2E events referred to the lack of sustainability in the use of research infrastructure and availability of human resources in S&T.

Frequency of Topics Raised		
High - Sustainability of research infrastructure and cost of maintenance - Lack of expertise and qualified staff to support participation in Horizon 2020 - Brain drain	Medium - Considering ESIF as an easy/guaranteed source for short-term research projects (substitution effect versus other R&I funds) - Salary differences between researchers in EU13 and EU15 MSs - Need to improve research collaboration with EU15 MSs	Low - Business access to public research infrastructure and improvement of public-private partnership - Need for an efficient legal framework for public procurement - Attraction of EU13 Member States to foreign researchers

Mapping the existing research infrastructures and facilities to avoid duplication and reinforce economies of scale appears to be a common need across many regions and Member States. Indeed, rather than potential financial constraints which impede the building of new facilities, the issue of economic sustainability of the existing infrastructure appears more relevant in many territories.

This efficiency argument seems to apply also to infrastructures built up with Structural Funds in the previous funding period which are now not always maintained on a regular basis. In some of the S2E national events it was mentioned that this could be related to intrinsic mistakes in the planning as well as to policy makers' relative preferences towards physical investments (rather than so-called intangible knowledge-based expenditure) in both the design and implementation of funding initiatives.

Moreover, one related problem is that past projections made in relation to some of these investments were too optimistic and they did not take into account the structural brain drain observed in these territories. This problem reflects salary, networking and career opportunities as well as the broader economic performance of these territories. As such, it relates to (broader) national and European R&I policies and thus it goes beyond the scope of specific infrastructural initiatives and ESIF investments (although the latter are an instrument which should contribute to counteract increasing economic divide between territories).

Wide salary difference for researchers across EU MSs creates a barrier to an effective functioning of the European Research Area and a barrier to the creation of international collaboration and consortia. However, also in this case the final outcome will depend on the interaction between European and national R&I policies and investment decisions. This will generate incentives for R&I actors to decide whether to engage (and to what extent) into different funding initiatives.

As indicated in the S2E "Facts & Figures" prepared ahead of each S2E national event and available on our website, the average Structural Fund allocated to R&I related activities is around 15 times higher than FP7 contribution in EU13. Indeed, a substitution effect may appear between competitive international funding programmes (such as Horizon 2020) and "territorial-specific" available R&I funding under ESIF where the latter represents for many beneficiaries a guaranteed source for short-term research projects.

In a wider sense, it should be recognised that the overall policy framework generates an incentive for R&I actors in these regions to enter (or not) into international collaborations and thus speeding up the integration of territorial R&I ecosystem into broader markets and research environments.

Possible actions concerning the capacity building

- *Map the existing research infrastructure and facilities*
- *Improve access to public infrastructure and equipment (also for business enterprises)*
- *Offer advisory support activities to potential users of research infrastructures*
- *Track brain-drain and develop motivational mechanisms for researchers*
- *Launch measures to mitigate the researchers' remuneration gap between EU13 and EU15*
- *Attractive career paths and incentives*

3.3. Innovation and Commercialisation

An effective economic exploitation of research results is a necessary step for transforming R&I investments into job creation and economic growth and welfare.

It is therefore essential to ensure a stable legal and economic environment for R&I actors as well as a continuous and sustainable financing. European funding

instruments (e.g. SME instruments, ESIF Financial Instruments) represent already major tools for venture capital and entrepreneurial support. Moreover, the prioritisation of investment areas and the effective implementation of RIS3 would help to provide a more predictable environment for investors and beneficiaries.

It is important to ensure continuity of funding support in terms of both technology requirements and time horizon. European funding should aim at a coherent support of the different levels of technological development (the so-called Technology Readiness Levels) and entrepreneurial stages via an effective mix of public policy instruments. Moreover, *timing* is an important issue e.g. the need of a smooth transition from each programming period to the next one without gaps due to policy design and implementation. Strategic synergies (in terms of broader policy settings and specific advisory support to beneficiaries) could help tackling these two bottlenecks and thus foster business involvement into the innovation ecosystem.

Frequency of Topics Raised		
High		
<ul style="list-style-type: none"> - Lack of continuous support and incentives for commercialisation - SMEs-based business environment with limited capacity and resources - Lack of international collaboration and close-to-market research 	Medium	
	<ul style="list-style-type: none"> - Need for enlarging the scope of the Seal of Excellence initiative - Complicated state-aid rules - Low business and entrepreneurial culture 	Low
		<ul style="list-style-type: none"> - Limited roles of Technology Transfer Offices and support services for business - Rigid public procurement regulations - Lack of entrepreneurship in university curricula

As indicated in the S2E "Facts & Figures", business R&D expenditures (BERD) in EU13 is roughly 2.5 times smaller than in EU15. This is due to a difference in the structural composition of the economy with a business environment in the EU13 based more on SMEs with relatively lower economic and financial resources. In this context, an efficient public support could generate an important leverage on the economic success of these territories by fostering both participation in international collaborations and initiatives aimed at commercialisation via strategic collaboration between public research organizations, higher education institutions and business actors.

The existing participation-related sunk costs and the relatively lower success rate of EU13 R&I actors in competitive-based funding programmes (such as Horizon 2020) could generate a negative effect on EU13 propensity to future participation and dilapidate an important knowledge and entrepreneurial capital.

Correspondingly, some novel policy instruments aiming at supporting the participation in funding programmes, e.g.

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the European Commission's initiative *Seal of Excellence* (SoE) have been launched to support high-quality Horizon 2020 proposals via ESIF funding. The rationale behind the SoE has been generally welcomed by R&I actors. Although several points were raised with regard to the effective implementation process by Managing Authorities, there is an expectation by potential beneficiaries of a broader scope of this initiative beyond its application to the SME instrument only.

Possible actions concerning the commercialisation

- *Impact-based evaluation and long-term monitoring to create sustainable ecosystem*
- *More effective public funds and incentives for SMEs and researchers in collaboration with business*
- *Continuity in policy implementation and funding support*
- *Simplify the state-aid procedures and provide guidelines for business enterprises*
- *Redefine tax incentives for R&I activities*
- *Allow Public Research Organisations and Higher Education Institutions to assist business needs; including information exchange and expert support*
- *ESIF allocation to give priority to market-oriented researches activities*
- *Reinforce cluster policies to encourage cooperation between public and private stakeholders.*

Another issue related to the commercialisation of research results is directly related to the internal regulations of MSs. State-aid rules have been often mentioned as a bottleneck for a continuous business involvement in several European funding initiatives and collaboration networks with other public R&I organisations.

The simplification of state-aid procedures and the provision of clear guidelines for businesses are considered urgent needs to make private enterprises more involved in ESIF instruments. Moreover, the simplification of public procurement procedures and the establishment of transparent, fair and competitive evaluation systems are necessary to generate business opportunities and align public and private R&I activities.

4. Way Forward

The S2E initiative will continue providing support to Member States and Regions to support a more efficient and effective implementation of RIS3 by building synergies

between R&I funding instruments. In doing so, the S2E will continue providing both country-tailored and R&I thematic support. In line with the new mandate from the European Parliament - operational from 2017 onwards - the geographical scope will be extended also to the EU15. Finally, in line with the thematic orientation adopted in the context of the launching of the new Thematic Smart Specialization Platforms, the S2E will reinforce thematic support to enhance regional investments under S3 priorities and the opportunities offered by Horizon 2020 and other R&I funding programmes.

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Read more

1. Joint Statements: As an outcome of these events, Joint statements were issued by S2E and national authorities, and covered the main issues under the different topics brought at these events; available at <http://s3platform.jrc.ec.europa.eu/national-events>
2. Facts and Figures: draw the profile of a MS and its regions with statistical and financial information coming from FP7 and Structural Funds dedicated to RDI; available at <http://s3platform.jrc.ec.europa.eu/country-region-information>
3. S2E Country Reports: provide further analysis on the selected policy issues that would affect optimal use of key EU funding for RDI; available at <http://s3platform.jrc.ec.europa.eu/country-region-information>.
4. Synergy examples: are the cases presenting in which SF/ESIF and FP7/H2020 funds can be combined in order to amplify the RDI investments and their impact; available at <http://s3platform.jrc.ec.europa.eu/synergies-examples>

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