JOINT STATEMENT OF THE NATIONAL EVENT OF BULGARIA

Synergies between European Structural and Investment Funds (ESIF) & Research and Innovation Funding

Organised by

European Commission, Joint Research Centre (Stairway to Excellence Initiative), DG REGIO, the Ministry of Economy and the Ministry of Education and Science of Bulgaria.

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The development of efficient research and innovation strategies for smart specialisation (RIS3) requires Member States (MS) and their regions to identify a limited number of research areas and related industrial activities with high innovation potential. In this context, *the Stairway to Excellence* (S2E)[1] project aims at facilitating synergies between different European Research and Innovation (R&I) frameworks and funding programmes, such as European Structural and Investment Funds (ESIF), Horizon 2020, COSME, ERASMUS+ and Creative Europe, aiming at minimizing the innovation gap and thus promote economic growth and job creation.

The S2E national event - jointly organised by the European Commission, Directorate General Joint Research Centre (DG JRC), Directorate-General for Regional and Urban Policy (DG REGIO), the Ministry of Economy and Ministry of Education and Science of the Republic of Bulgaria took place in Sofia on July 14th 2016 as part of the effort by the S2E Initiative, to assist capacity building in the EU13 Member States[2]. The Bulgarian National Event brought together different stakeholders and provided a platform for a better understanding of the Bulgarian innovation ecosystem while raising awareness of the actions needed to enable synergies and drawing lessons for future actions. 90 participants joined the event from several academic/research institutions, public and private sectors, as well as Horizon 2020 National Contact Points (NCPs) and Managing Authorities (MAs). As an indication of the commitment to this topic by the Bulgarian Authorities, the event was opened by Ms Daniela Vezieva, Deputy Minister of Economy, and Mr Krassimir Kiriakov, Deputy Minister of Education and Science. Moreover, a number of international experts from other European countries presented their experience on the challenges of RIS3 implementation and examples of synergies. All these inputs offered insightful elements for discussion in the different panels and participatory sessions throughout the event. General comments and recommendations are summarised below[3].

[1] http://s3platform.jrc.ec.europa.eu/stairway-to-excellence

[2] "EU13" refers to those 13 Member States which have joined the European Union since 2004.

[3] The comments and recommendations summarised below do not represent neither the Ministry of Economy nor the Ministry of Education and Science of Bulgaria, and neither the European Commission's official position but are the outcomes of the panel discussions.

Main issues and possible actions to address them

Macroeconomic and research performance[4]: R&D expenditure based on GDP in Bulgaria (0.65%) is lower than the EU13 (1.05%) and EU15 averages (2.09%). R&D expenditure is primarily concentrated in the Business Enterprise sector followed by the Government sector. For the 2007-2013 period, the annual FP7 financial contribution per capita received by Bulgaria (12.9€) was lower than the EU13 average (17.8€) and very far from the EU15 average (95.2€). For the same period, the Structural Funds allocated to RTDI projects were 774.5 M€, corresponding to 106.32 €/inhabitant[4].

1. Stakeholder involvement

a. Lack of collaboration culture between public and private institutions

Lack of communication between public and private organisations was highlighted as one of the major problems facing the Bulgarian innovation ecosystem.

On the one hand, according to stakeholders from the research organisations, companies are not innovative enough and lack the direct approach towards universities and research institutions for collaboration. On the other hand, business participants mentioned that there is a lack of trust in Bulgarian universities and research organisations. Bulgarian companies would be more efficient working with international research organisations as they are more collaborative and open establish a continuous collaboration. As an example, CleanTech Bulgaria, during the event, showed how a company could get involved in EIT Climate Knowledge and Innovation Community (Climate KIC[5]), one of the leading European initiatives to establish collaborations between universities, research organisations and companies to develop world-class solutions to societal challenges.

Key Issue 1: Need to reinforce research organisations and business collaborations

Potential Action(s):
Bulgarian authorities:

- Launch specific programmes to boost research organisations and business collaborations
- Reinforce intermediary organisations' role and activities to support research-business collaborations
- Develop programmes to enhance potentials of the country to increase in RTD activities and international partnerships

Suggestions raised by participants and experts during the event were as follows:

- Reinforce a direct link, having companies gaining information on the research groups and fields to explore more directly collaboration possibilities

[4] http://s3platform.jrc.ec.europa.eu/documents/20182/117536/S2E_BG_national_profile.pdf/f1155ae7-1421-41dc-9a34-0805372f42e6
[5] http://www.climate-kic.org/

- Establish specific funding programmes and give key roles to intermediary organisations supporting collaboration projects between research organisations and business.
- An online communication platform to support the implementation of the national smart specialisation strategy (eg entrepreneurial discovery) is intended to put in place by the Ministry of Economy. The platform will inform the stakeholders on the smart specialization priorities and allow them to take part via open public discussions in the governance of the process of the smart specialization itself. Other additional information concerning the Bulgarian programs and existing matchmaking "business-science" platform created by the Ministry of Education and Science will be also included

b. A clearer role for clusters in Bulgarian research and innovation ecosystem

As stated in the country report published by the Joint Research Centre Seville[6], there are 190 clusters in Bulgaria. This is an indication of a fragmented and inefficient use of resources. According to participants, 10 clusters are currently playing a key role in the Bulgarian research and innovation system, having a good level of definition and strategic focus. The national smart specialisation strategy takes into account the potential importance of some clusters in its implementation.

Key Issue 2: Clarifying role of clusters in R&I ecosystem

Potential Action(s):

Bulgarian authorities:

- Stock taking and use existing clusters efficiently
- Develop strategic vision on the clusters that can contribute to the RIS3 strategy of Bulgaria.

2. Upstream capacity building: How to create appropriate conditions for Research & Innovation?

a. Lack of research & innovation infrastructures integrated in the European Research Area

In 2010 a Bulgarian National Research Infrastructure Roadmap[7] was developed by the Bulgarian Ministry of Education, Youth and Science. The objective was to provide a vision on the effective and strategic development of science and innovation infrastructures. It also establishes links to international and European partners for future investment in national infrastructure facilities as a part of pan-European infrastructure networks.

[6] http://s3platform.jrc.ec.europa.eu/documents/20182/117536/S2E_Report_BG.pdf/dc1285cb-e7f6-42ef-9252-44f201b11bbe

[7] http://www.nrri-bg.com/sites/default/files/docs/National_Roadmap_EN.pdf

The roadmap defines the participation of Bulgaria in several European research infrastructures[8].

Nevertheless, participants highlighted that research infrastructures are not always well targeted and have limited access, and also need more mobility, teaming and complementary funding. The improvement of the communication on research quality of infrastructures should be boosted. The long-term vision of research infrastructure should be reinforced by the government, in terms of financial resources, the contribution to the territorial development policy and connection with the broader scientific and innovation system at national and EU level. Bulgarian organisations should take opportunity to improve their participation in Horizon 2020 measures particularly targeting low-R&I performing Member States. As an example, *Teaming actions*[6] support the creation or upgrading of Centres of Excellence whereas *twinning actions*[9] aim to improve the networking potential through knowledge transfer and exchange of good practices with other leading institutions at European level.

The European Strategy Forum on Research Infrastructures (ESFRI) could as well constitute an opportunity for Bulgaria to address the mentioned challenges to further reinforce the participation in actions supporting the implementation and operation of research infrastructures for 2020 and beyond listed in the ESFRI roadmap[10].

Suggestions raised by participants and experts during the event were as follows:

- Develop a common strategic vision and improve the quality of governance for more sustainable future research infrastructures.
- Design an infrastructure inventory map covering all type of national R&I infrastructures and equipment, to boost R&I infrastructures sharing and researchers' mobility.
- Improved use of the existing infrastructures, including more targeted focus, improved governance, access and use of facilities.

Key Issue 3: Integration of research and innovation infrastructure

Potential Action(s):

Bulgarian authorities:

- Improved strategic vision and quality of governance of research infrastructures
- Better targeted use of research and innovation funding for infrastructures
- Exploit the possibilities in H2020 to upgrade or create research infrastructures and integrate in EU networks

European Commission:

- Reinforce the integration and sharing of research infrastructures across the EU

[8] EURO-ARGO European infrastructure, a distributed infrastructure for sustainable development in the area of sea; INFRAMAT an infrastructure for design and characterisation of new materials with industrial, biomedical and environmental applications; BG-BBMRI and infrastructure for genome, proteome and metabolome researches; Energy Sources; BG-Supercomputing Centre a highly productive infrastructure for computer modelling, simulations and research in the area of industry, medicine, pharmacy energetics, transport, finances and environment; BG-CLARIN; Regional Centre for Astronomical Research and Education (RACIO).

[9] http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-sewp_en.pdf

[10] http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-infrastructures_en.pdf

b. Attraction and retention of talent

The participants' perception is that Bulgaria is too small to be attractive for international researchers and there are cultural and language barriers that have to be addressed. Foreign students are not sufficiently attracted to study STEM (Science, Technology, Engineering and Mathematics) in Bulgarian universities or research organisations, except for medical oriented ones. Measures to attract foreign researchers and students in Bulgarian academic system should be implemented.

The Marie Sklodowska-Curie actions under H2020 could be better used to attract European scientists to existing research infrastructures promoting all stages of researcher's career, encouraging transnational, cross-sectorial and interdisciplinary mobility. In addition, in the past Erasmus Program has enabled Bulgarian students to study at foreign universities, and thanks to institutional collaborations to attract EU students to Bulgarian universities. The new Erasmus+ programme could be explored to enhance the mobility and attraction of students.

Furthermore, Bulgaria has introduced a student loan system[11] introduced by the government and sponsored by three Bulgarian banks to cover the tuition fees and maintenance and living costs of European Union/European Economic Area and Switzerland students.

c. Lack of expertise to support participation in Horizon 2020 programme

The performance of Bulgaria in H2020 participation has been very low, which could be explained by the lack of expertise in the programme. There are not enough personnel with knowledge on the preparation and drafting of competitive EU proposals, accordingly young researchers usually carry out this task.

The need for additional support from National Contact Points to participate in H2020 was highlighted, not only with the organization of information days or general information on calls, but helping to build or integrate European consortia and better understand calls' specifications.

Suggestions raised by participants and experts during the event were as follows:

- A more concrete support on Horizon 2020 sub-programmes is requested by Stakeholders (ie. increasing the resources of NCP, training personnel or learning from other NCP).
- High level representatives in charge of implementation of policies should have a better understanding of Horizon 2020 and the possibilities

Key Issue 4: Building expertise for H2020 participation

Potential Action(s):

Bulgarian authorities:

- Develop better awareness of possibilities of synergies building between EU funding
- Creation or better support to EU grant offices in universities
- Additional support provided to beneficiaries in consortium building and key aspects for drafting proposals.
- Integration of Bulgarian partners in large EU networks/initiatives.

[11] http://www.studyinbulgaria.com/student-loans-in-europe/

of establishing synergies with ESIF.

- European offices or grant offices could be promoted in Bulgarian universities to support in the design and management phase of EU projects.
- Direct actions to improve the skills and expertise of researchers to draft European proposals would be needed.

3. Downstream initiatives: How to enhance the creation of economic value from the R&I system?

a. Lack of business innovation culture

A lack of innovation culture of Bulgarian companies was highlighted. Even if companies in the IT sector cannot be included, in general the absence of innovation culture among companies has been mentioned during the event. Companies are more focused on short term planning due to economic and financial constraints.

National programmes are not market oriented but only process oriented. It results in a lack of interest of Bulgarian companies in participating in national research programmes and unfortunately it contributes to the weak collaboration between public research organisations and private companies.

Suggestions raised by participants and experts during the event were as follows:

- A better awareness of the usefulness of medium and/or long term innovation strategies and venture culture in companies should be encouraged by public authorities.
- A clearer definition of the Intellectual Property rights (IPR) legislation at the national level could contribute to orient the programmes towards innovation and market. Priority should be given to funding of patents instead of infrastructure in this respect. Universities lack funding and skilled persons on IPR aspects.

Key Issue 5: Boost market oriented funding programmes

Potential Action(s):
Bulgarian authorities:

- Design programmes with more business-oriented definition that enable research institutions and business collaborations
- Improve IP rights legislation to make more attractive for business to develop new products and services.

b. Improvement of technology transfer and commercialisation support services

The Technology Transfer Offices (TTO) are integrated in universities and managed by civil servants with scarce knowledge on market needs. This organisation does not contribute enough to bridge with business sector. According to participants, the involvement of experts coming from industry would improve the effectiveness of Bulgarian TTO through.

In any case, it should be noted that ESIF funds have been used in the past to launch several initiatives to improve technology transfer services in Bulgaria. The Bulgarian Technology Transfer Network (BTTN) [12], a network of innovation centres, technology transfer offices and innovative companies or the "Virtual Technology Transfer Office"[13] are two examples.

Suggestions raised by participants and experts during the event were as follows:

- Encourage the creation of TTO mirror groups or committees involving both academic and business representatives.
- Commercialisation of research services, for example developing a strategy to offer contractual research services from universities and research organisations to the industry (e.g. the activities carried out by the Fraunhofer Institute[14] in Germany).

Key Issue 6: Technology Transfer offices and commercialisation

Potential Action(s):
Bulgarian authorities:

- Establish links between existing university TTO and industry
- Promote programmes for the use of contractual research services

4. The Way Forward

The state of play of the above key issues and actions mentioned in this Joint Statement will be followed up after a period of one year with:

- A survey targeting managing authorities in charge of the implementation of synergies and beneficiaries of national and EU funding to assess the progress with regard to the issues raised in this Joint Statement;
- A follow-up seminar with Managing authorities to monitor the progress on issues assessed in the Joint Statement in more depth and to develop further actions to be taken.

Furthermore, in order to widen the benefit of the discussion to a broader network involving all potential research and innovation stakeholders, the EC will disseminate relevant information to:

- Help Bulgarian stakeholders to build capacity and international networks.
- Establish an information system to inform on examples of synergies that take place Bulgaria.

[12] http://www.tto-bait.bg
[13] http://virttto.ott-iict.bas.bg/index.php?route=common/home
[14] https://www.fraunhofer.de/en.html