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Towards Smart Specialisation in non-EU countries

Summing up outcomes of S3 Design Learning Workshop

(18-19 February, 2016, Chisinau, Moldova)

The context

The smart specialisation (S3) approach for research and innovation strategies has been mostly applied at the EU countries and regions where it has been a requirement for regions implementing operational programmes with the European Structural & Investment Funds. So far this model has been successfully applied in designing more effective R&I strategies and according to the majority of stakeholders it brought significant improvements.

EU seeks to share the benefits of the EU with neighbouring countries and the countries that are aspiring EU membership in order to strengthening stability, security and well-being in Europe. The new EU neighbourhood policy recognizes that the modernisation of the economy, fostering research and innovation are crucial for the creation of sustainable jobs and boosting skills and promoting economic, social and territorial cohesion in the neighbourhood¹. Therefore modernisation and diversification of economies should be encouraged by facilitating increased participation of neighbourhood countries in EU initiatives and applying successful models such as smart specialisation.

The EU's enlargement policy provides increased economic opportunities and at the same has a powerful transformative effect on the countries aspiring the membership. For this reason it's encouraged to use the good practice models such as the smart specialisation, which can enhance further investment in research and innovation and create the conditions for positive economic development, creation of jobs and growth².

The number of associated countries to Horizon 2020 is growing which opens a wide range of opportunities and access to knowledge and R&I networks for the non-EU partners as they can participate under the same conditions as partners from the member states³.

Aiming to support the EU enlargement process the Joint Research Centre has been carrying Enlargement and Integration Action (E&IA) which offers specialised workshops, conferences and

¹ Joint Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Review of the European Neighbourhood Policy. JOIN(2015) 50 final
http://eeas.europa.eu/enp/documents/2015/151118_joint-communication_review-of-the-enp_en.pdf

² Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. EU Enlargement Strategy. COM(2015) 611 final
http://ec.europa.eu/enlargement/pdf/key_documents/2015/20151110_strategy_paper_en.pdf

³ http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/3cp/h2020-hi-list-ac_en.pdf

advanced training courses for countries on the road towards EU membership, new member states and Horizon 2020 associated countries. It has been suggested to base JRC E&IA on the smart specialisation with closer cooperation between the departments of the Commission. In its policy towards E&I countries JRC puts additional emphasis on education & training activities related to S3 process of the E&I countries' institutions including intensive training, working sessions, awareness-raising workshops, peer reviews and other activities facilitating the participation of non-EU partners into the EU smart specialisation community.

The smart specialisation is a strategic approach towards economic development leading to more effective R&I strategies and inclusive, sustainable growth, therefore EU neighbourhood and enlargement policies are putting more attention to the smart specialisation.

S3 Design Learning Workshop

Following the advancements in the EU neighbourhood and enlargement policies the S3 Platform based in Joint Research Centre of European Commission seeks to support these processes by bringing access to the S3 methodology and knowledge networks to the EU neighbours. In the framework of the Danube-INCO.NET project the S3 Platform together with the Academy of Sciences of Moldova has organised the first workshop on smart specialisation strategy design targeted to the EU enlargement and neighbouring countries. The workshop took place on February 18-19, 2016 in Chisinau, Moldova.

In two days S3 Design Learning Workshop brought together about 80 participants from Moldova and other non-EU countries such as Ukraine, Turkey, Serbia, Montenegro, Bosnia and S3 experts from EU countries Slovenia, Slovakia, Romania, Hungary, Lithuania, Finland, Spain, Germany as well as representatives from the Commission services – DG NEAR, DG JRC , EU Delegation in Moldova and the EU agencies and programmes such as European Training Foundation and the Eastern Partnership Territorial Cooperation Programmes.

The objective of the Workshop was to enable countries outside the EU to benefit from S3 methodology focusing knowledge-based investments on a limited number of priority areas identified following an entrepreneurial discovery process.

After the S3 concept and the main steps of RIS3 design were explained by the S3 Platform the experts from the EU countries and regions which have already developed their Smart Specialisation Strategies for Research and Innovation (RIS3) (Hungary, Lithuania, Romania, Slovenia, Slovakia, Catalonia-Spain, Tampere-Finland, Wielkopolska-Poland) - shared their experience on different steps of the S3 process: how to build a proper evidence for S3, what is entrepreneurial discovery process in S3, how to set up S3 governance, how decisions on S3 priorities were made, what bottlenecks they met in the process and what is the role of S3 in transforming economies and improving R&I policies.

The two days of presentations and discussions generated a number of messages summarised below.

Cooperation and communication at the core of S3

Romania stressed the S3 design as a continuous process of discovery. S3 analysis has to contain entrepreneurial discovery element and involvement of all actors providing them open access to data&analysis and creating social networks for dialogue about the shared vision for the future.

For Lithuania the biggest value of the exercise was bringing all actors together: academia, research, policy makers and business to discuss the future R&I strategy. Well institutionalised governance structure helped to achieve consensus and to identify concrete technologies within the selected priority areas.

Through S3 Slovenia initiated stronger cooperation of researchers with business sector asking researchers to identify not only prospective technologies but also the product groups what could be delivered within these technologies. In this way S3 helped to bridge different planets of research and business.

Building the knowledge triangle, namely supporting the interfaces of education-research-industry and supporting the collaboration of the companies and higher education institutions is one of the main S3 directions in Hungary.

From Slovakia's perspective – consideration of entrepreneurial environment and its dynamics, involvement of all stakeholders, including entrepreneurial players and public bodies are conditions for success in RIS3 design.

For West Romania region S3 helped to move from institutional differences, divergent visions, never ending negotiations and hanging problems towards integrated vision, concrete projects, enhanced competitiveness and cohesion.

RIS3 is a strategy for competitiveness

As from Slovakia's perspective RIS3 has to be more than research and development strategy, it is a strategy focusing on improving competitiveness through enhancement of relevant economic sectors.

In Wielkopolska S3 helped to wake up sleeping giants – big traditional industries. The process focused on traditional sectors with critical mass and new, fast growing sectors. The strategic vision was based on modernising the main sectors by adding scientific knowledge and inter-sectorial innovation.

RIS3 in Catalonia (Spain) promotes economic opportunities in emerging sectors based on technological capabilities and synergies between related sectors.

For Hungary efficient knowledge transfer creates a necessary link between research and competitiveness where S3 approach helps to overcome obstacles to knowledge transfer.

For West Romania S3 is a way towards transformation of regional economy towards increased productivity, labour efficiency and a high level of innovation which is helping to attract skills, ideas and capital.

Representative of Danubius Academic Consortium expressed the need of a comprehensive, integrative approach of the entire innovation process (integral innovation) including the education of inventors and of building a synergetic body, including inventors, investors and companies, to bridge the gaps along the conversion process of bright concepts, growing into smart solutions and successful products.

Joining global value chains with S3 approach

In Tampere the designing RIS3 matched with a need to go from local clusters to globally platformed innovation. Focus on new emerging ecosystems and global co-creation. Exceptional capabilities for collaborative innovation can provide competitive edge for regional innovation ecosystem. How to utilise smart technologies and smart capabilities for creating smart products and services is at the core of Tampere's RIS3. Participation in European networks of regions, cities, project-based participation in EU programmes such as Interreg, FP7/ Horizon 2020 helped to develop/join strategic partnerships such as Vanguard Initiative and to create shared platforms such as Demola.

With S3 Hungary seeks for effective participation with high-value added activities in the international division of labour for that the participation in high-value added RDI activities and programmes is a prerequisite.

Outcome of the expert groups

Following the presentations the experts and practitioners tackled four questions raised in the small-scale working groups and each of the groups provided a list of recommendations:

Group 1. Activating stakeholder involvement: how to involve business in RIS3 development

- Have all the interested parties involved
- Identify an initiator, a leader with legitimacy and recognition.
- Provide stimulus, arguments to participate for the private sector. Business should know that their proposals are taken into account.
- Consistency, credibility and transparency are the key aspect for maintaining stakeholders in the process.
- Share good practices and involve international peers.

Group 2. How to create/join networks with other countries and regions?

- It is important to have sustainable partnerships and long term involvement in the transnational partnership.
- Sharing objectives and aligning agendas are crucial.
- A partnership is an investment, it has to bring return, value creation to all participating parties.
- Involve business partners in networks, don't separate business networking from policy networking.
- Identify risks ex-ante, be aware of risks and be ready to solve problems.
- Networks differ from partnerships as they do not have deadlines.

Group 3. What is the right balance in priority setting: not too narrow and not too broad?

- In priority setting all parties have to be involved. Motivate their participation, try to close communication gaps.
- Ensure the continuity of the process.
- Ambitions have to be well grounded. Consider the critical mass of the sector in the economy.
- Create connections between the fields, balance should be found between sleeping giants - traditional industries and innovative SMEs.
- The smaller funds, the more specialised one should be.

Group 4. How to overcome the gap between research and business?

- Support and motivate the industry stakeholders to participate.
- Identify / support the creation of innovative industry.
- Establish trust between industry and research, organise joint events
- Identify financial motivation for the steps forward. Measures stimulating collaboration or creating conditionality for joint participation shall be applied.
- Create / develop knowledge transfer networks
- Identify common interests, open up strategies for business.
- Market priorities should not be dictated by research direction or scientific breakthrough. Funding research has to be aligned with priorities that bring economic value.

Expert advice for non-EU partners

Further in the panel discussion the experts provided recommendations for the for the non-EU countries whether is it worth to undertake S3 process and how to develop it:

- The smaller the country the more relevant is S3. Do RIS3 for yourself not for a paper - S3 helps to build stronger economic development policy. Consider it when preparing documents for IPA (Instrument for Pre-Accession Assistance) funds.
- For small countries it is important not to disperse with too many or too broad priorities. It is important to involve the right institutions and departments responsible for policy development and to keep close contacts in S3 process.
- Stability of governance and capacity building, dedicating sufficient human resources are crucial for developing sustainable R&I policy
- RIS3 is a living document, therefore do not afraid to make mistakes, risk taking is a part of entrepreneurial discovery process.
- RIS3 has to be grounded with funding although it might be small at the beginning, small investments can attract larger consortia. Investment in R&I projects do not bring fast return.
- Compact size of a country or region could be an advantage. Small regions and countries are more flexible to mobilise stakeholders to take risky investments.
- Dialogue about the future can support democratic decisions and positive developments. It is important to have a shared vision for the future.
- Knowledge, research results have to bring economic value, creation of new products, services, businesses.
- Provide support to business ecosystems. Create favourable conditions for FDI, it accelerates economic development. The stable political environment is a pre-condition for the economic development.
- Build partnerships in early stage and create trust among stakeholders.

Towards S3 in non-EU countries

The EU has instruments to facilitate transfer of good practices to the non-EU neighbours and two examples of such instruments were presented in the Workshop.

European Training Foundation (ETF) helps transition and developing countries to harness the potential of their human capital through the reform of education, training and labour market systems in the context of the EU's external relations policy. Under the EU's Instrument for Pre-Accession, the European Neighbourhood Instrument and Development Cooperation ETF is providing expertise and technical advice in the field of education, training and labour in non-EU countries.

The Eastern Partnership Territorial Cooperation EaPTC Programmes are bridging neighbours across borders of six Eastern partnership countries and helping them to address challenges together. These programmes similarly like in the EU territorial cooperation are strengthening cross-border contacts between local authorities, communities and civil society organisations for the development of joint solutions to common problems.

The question how EaPTC could assist in cooperation on S3 issues was addressed. S3 and EaPCT share the same principles as both are considering competitiveness of regions, networking and partnership, joint response to common challenges and building viable "eco-systems" to change social-economic structures. Considering the needs for better, more effective R&I policies for promoting sustainable

growth and jobs, it has been suggested that the strategic objectives of EaPTC programme have to include research and innovation applying the good practise of S3 approach and strengthening cooperation with the partner countries on bridging the gap between research and innovation and connecting them to EU's R&I infrastructures.

On the second day of the Workshop the experts from four non-EU countries shared their experience on R&I policies and expressed their expectations towards S3.

Serbia is developing the new Strategy for Scientific and Technological Development of Serbia "Research for Innovation" which follows S3 approach. The need for capacity building and training of public officials involved in strategy development and implementation was expressed. Some potentials for collaboration in S3 for non-EU countries were indicated in such areas and instruments as: joint teams of experts, exchange of experience, (in)formal peer reviews, joint development / use of R&I infrastructures, defining priorities focused on cooperation, using R&I as driver for economic cooperation. It was noted that diversity in R&I performance has to be taken into account when developing R&I strategies and further mechanisms and tools for cooperation in R&I.

Ukraine presented the national framework of R&I policy and shared the future steps in R&I policy to 2017. The R&D system needs reform and this sustains Ukraine from more active looking into S3. Ukraine has priority directions of for research and development and these priorities open some collaboration opportunities in S3 with partners from EU and non-EU countries. Lack of financial support instruments is a bottleneck preventing to implement these priorities. Enlarging transnational cooperation in the framework of the Horizon 2020 and other EU instruments could help to achieve required access to knowledge and funding. Decentralisation of R&D bringing developing regional centres of excellence could open up more opportunities for collaboration in S3 in the future.

For **East Marmara region (Turkey)** Regional plan is the main strategic documents guiding public investments. Regional plan includes determination of prominent sectors, potential clusters and niche areas with potential considering global trends and sectorial potential. Turkey Marmara decided to include S3 approach in the regional plan and launched S3 process with setting up the governance structure deciding on priority sector. Following the example of East Marmara the process might be transferred to other 25 regions in Turkey.

Moldova has developed strategic framework for knowledge economy embracing Education Development Strategy – Education 2020; Research&Development Strategy – Knowledge Moldova 2020 and Innovation Strategy – Innovation for Competiveness 2020. Moldova has started the reform of science and innovation which includes establishing new institutions for R&I and giving the autonomous status for Academy of Sciences (the main R&D policy developing institution); foresees revision, creation and simplification of funding instruments for R&I. The reform aims to improve research performance, to increase research funding over 1% of GDP and ensure attractiveness and accessibility of reaches vacancies to young researchers.

There are five strategic directions of science and innovation for 2013-2020, approved by the Parliament which indicates thematic focus and interests.

Moldova has been an associated country to FP7 since 2011 and currently in Horizon 2020, also became associated country in COME since 2014. Engagement into transnational activities and networks demonstrate some positive achievements and prospects for Moldova however there are

still many bottlenecks especially with respect to inefficiency of governance model and developing cooperation in the knowledge triangle education-research-business.

Structural challenges for Moldova's R&I system were mentioned in the Workshop, which are also common to some other non-EU countries:

- inefficient innovation governance model;
- lack of human resources for R&I;
- low R&D investments, especially by private sector, with no clear prioritisation;
- weak links between R&D institutes, universities and business organisations;
- undeveloped evaluation and monitoring system of R&I.

Final remarks. The benefits of S3 approach as witnessed by the experts from the EU countries and regions go beyond *ex-ante* conditionality requirements. S3 is raising opportunities and expectations for non-EU partners. There is a common concern and interest of non-EU countries for sharing know how on R&I policy approaches as well as actual areas of cooperation. The non-EU countries can join the S3 Platform activities to benefit from the good practises and knowledge in developing and implementing S3 approaches. The JRC Enlargement and Integration Action and TAIEX can support more active participation of non-EU partners in S3 related activities.

The new EU neighbourhood and enlargement policies are advising to include smart specialisation in the R&I agenda of non-EU countries to accelerate the conditions for positive economic developments. At the same time the increased cooperation between relevant departments is needed for enabling the existing EU instruments to include support for implementing S3 approach outside the EU borders. The bottom-up interest from non-EU partners is important for considering S3 in the relevant documents and instruments.

As the outcome of the Workshop Moldova became the member of the S3 Platform: <http://s3platform.jrc.ec.europa.eu/regions/md/tags/md>

All presentations from the Workshop can be accessed here: <http://s3platform.jrc.ec.europa.eu/-/s3-design-learning-workshop>