



## **Republic of Serbia**

### **PROGRESS REPORT**

**on recent developments regarding**

**research and innovation cooperation in/with Western Balkans**

***(Period: July 2017 – June 2018)<sup>1</sup>***

#### **1 Policy actions and legislative initiatives (legal and strategic framework)**

##### **MESTD activities:**

Financing the National Program of Basic Research and Program of Technological Development was extended based on the Governmental conclusion 05 no: 021-162/2018 dated 11.01.2018., therefor financing of 773 project in Basic Research, Technological Development and Interdisciplinary research continued.

December 2017 - MESTD issued a public call for scholarships for up to 200 PhD students who are involved in scientific research projects in the current research cycle.

March 2018 - MESTD published a public call for talented young researchers - students of doctoral academic studies for participation in scientific research projects.

March 2018 - MESTD published a call to support the inclusion of researchers - returnees from abroad on projects that are being implemented in the current research cycle.

##### **Center for the Promotion of Science:**

At the session held on May 31, 2018, with the decision of the Steering Committee of the Center for the Promotion of Science, Dr. Marko Krstić, assistant professor at the Faculty of Electrical Engineering at the University of Belgrade, was appointed as acting director of the Center for a period of six months with the prior approval of the Minister of Education, Science and Technological Development.

The Government of the Republic of Serbia adopted the Science Promotion Program for the period from 2017 to the end of 2019, the highest legal act which the Center for the Promotion of Science can submit. The main objectives of the Program are:

- Researchers' capacity building for the scientific culture awareness,
- Stimulation and development of communication between Scientific and Research organizations and the state and local administration through exchange of values and best practices,
- Development of a various science promotion programs based on scientific culture and scientific literacy among all citizens of the Republic of Serbia,

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<sup>1</sup> The last Steering Platform was held in Belgrade on September 27-28, 2017. All related information is also available online here: <https://wbc-rti.info/object/event/16372> (including links to the conclusions and minutes).



- Making programs for the promotion of science more accessible to citizens through centres' capacity building.

*Is there a national strategy on research and innovation policy in place? Has it been implemented? How is it being implemented? Is its implementation and impact monitored and what are the findings?*

Yes, there is a National strategy on research policy. Our Government adopted Strategy on Scientific and Technological Development of the Republic of Serbia for the period 2016 – 2020 “Research for Innovation” in 2016. Strategy defines six specific objectives and measures that will create conditions for their realization. In addition, the Strategy articulates a number of measurable Key Performance Indicators (KPIs) that will inform the progress and direction of the implementation and establish a narrative that puts science, technology, and innovation at the centre of Serbia's economic development. The presented KPIs are directly linked to the relevant monitoring and evaluation framework which will in turn delineate the impact of this strategy along the coming years.

Establishing “excellence” and “relevance” are two main guiding principles of Serbia's Research for Development Strategy. The Strategy makes a clear commitment to reform the country's public research institutions and the associated governance and funding frameworks. It makes a clear commitment to instituting the needed reforms to achieve the stated vision and mission. Although the commitment and the direction are made clear, the details of the promised reforms are understandably a challenging risk on the design and the implementation levels and are given in the Action plan which is in the final phase of adoption. However, even without adopted Action plan, we are taking measures towards this objective. Namely, this objective became one of the priority goals of our Government and the Group of Ministers are in charge of it.

*Do you have a country-wide and/or regional Smart Specialisation Strategy/Strategies? Are there sector specific scientific priorities?*

Republic of Serbia, as EU candidate country, has started preparation process of Smart Specialization Strategy – RIS3 on national level. The Ministry of Education, Science and Technological Development is coordinating this process, together with Public Policy Secretariat of the Government of Serbia and other relevant institutions, and is responsible for its preparation. RIS3 Interministerial Working Group, established by Government decision on 29. November 2016, consists of representatives of the following institutions: Ministry of Education, Science and Technological Development; Ministry of Economy; Public Policy Secretariat of the Government of Serbia; Ministry of Agriculture, Forestry and Water Management; Ministry of Labour and Employment; Ministry of Trade and Telecommunication; Ministry of Finance; Chamber of Commerce and Industry of Serbia; Serbian Academy of Science and Arts; and Provincial Secretariat for Economy and Tourism of AP Vojvodina. The RIS3 Interministerial Working Group has established the operational and analytical teams to perform the process on an effective way, and it is in charge of collecting statistical data, data processing as well as preparation and coordination of activities related to the entrepreneurial discovery process (EDP). The Joint Research Centre of European Commission (JRC) is supporting this process in Serbia right from the beginning, putting in place its own expertise as well as the expertise of the external experts. In that respect Serbia is JRC targeted country in the 2-year period, 2017-2018.

The documents Roadmap for Developing Research and Innovation Strategy for Smart Specialization has been developed. Document titled "Mapping of economic, innovative and scientific potential in Serbia" has been developed and presented to the stakeholders in Belgrade on



December 13, 2017. By this presentation, EDP process has started. First Innovation camp in Serbia was organized on December 14-15, 2017 in cooperation with JRC. The topic of this case study event was ICT software engineering challenges, as the software engineering is one of the priority areas recognized in the above mentioned document. In 2018 two meetings related to the EDP process has been organized together with JRC. The first one in February in Belgrade, and the second one (with very detailed instructions how the EDP process should be organized) in April in Ljubljana, Slovenia. At the moment qualitative process is ongoing, after which the priority domains (based on quantitative and qualitative analyses) will be selected.

*To what extent is business-academia cooperation and exchange taking place? Please name good practice examples.*

### **MESTD Activities**

Financing the National Program of Basic Research and Program of Technological Development on behalf of the Ministry of Education, Science and Technological Development is extended by the Governmental Decision till the end of the year 2018, therefore financing of 773 projects in Basic Research, Technological Development and Interdisciplinary Research is continued - these projects include cooperation between research institutions and business sector as participants of research under the signed contracts.

National Program of Innovations - In September 2017, new Public call was launched for participation in innovative and infrastructure projects which are implemented by development and innovation centers-companies, as well as scientific and technological parks and technology business incubators, under which 42 project proposals were selected for financing. Public call for individuals-innovators was published as well and 24 individuals-innovators were selected for funding.

The Best Technology Innovation Competition is continued to be organized annually. In February 2017, new call for the Best Technological Innovation Competition was published. This activity has the objective to promote entrepreneurship in the domain of high technologies and give assistance to potential and existing entrepreneurs, who are willing and able to transfer their own ideas and inventions into the market and to commercialize potential for innovation. The target group of the Competition includes researchers, students, innovators, teams and companies, who will contribute to transform the economic life of the Western Balkan region to a knowledge-based economy. In December 2017 was final Competition for the best technological innovation - 6 best teams were granted. Since 2005, the project Best Technology Innovation Competition in Serbia has achieved following results: more than 80 new enterprises established in the Republic of Serbia. Moreover, the Competition results in the raise of public awareness of the importance of the research sector and its role in the national business environment.

## **2 Development of international cooperation and actions on integration into ERA**

*(e.g. new bilateral/regional/multilateral/international agreements, memberships, support structures, important projects, programmes, etc.)*

### **MESTD Activities:**

#### **HORIZON 2020**



Serbia continues to participate in EU research and innovation programmes. Ministry of Education, Science and Technological Development (MESTD), as a national institution responsible for implementation of the programme Horizon 2020, continues to perform activities defined by the Agreements. In order to promote Horizon 2020, MESTD, as a national institution responsible for the implementation of the programme, organized and held a series of Info days and training sessions at Universities, Faculties, Institutes in the Republic of Serbia. In addition to that, all National Contact Points held numerous bilateral consultations with representatives of scientific and of economy sectors.

Nominated experts and delegates/NCP of the Republic of Serbia attend the meetings of the Strategic and Executive bodies of Directorate General for Science and Research held periodically.

According to the statistical data of January 2018 (e-Corda), 161 projects were approved for funding, in which 232 institutions from the Republic of Serbia participated. The budget for the approved projects amounts to €60.6 million.

As part of the European Neighbourhood Policy, and to allow the benefits of its **Copernicus** Earth Observation and Monitoring programme to extend to EU candidates, on Thursday 7 June 2018. the European Commission has signed a Cooperation Arrangement with the Ministry of Education, Science and Technological Development of the Republic of Serbia. The Cooperation Arrangement has been signed by Philippe Brunet, Director for Space Policy, Copernicus and Defence, on behalf of the European Commission and by Vladimir Popovic, State Secretary at the Ministry of Education, Science and Technological Development on behalf of the Republic of Serbia.

The Copernicus programme, the world's most ambitious and successful Earth observation programme, delivers benefits in a wide range of applications, e.g. land, marine and atmosphere monitoring as well as support in the forecasting, management and mitigation of natural disasters. Its full, free and open data policy has proven its merits by allowing the development of a thriving user base in Europe and beyond.

The Cooperation Arrangement establishes the Serbian BioSense Institute – Research and Development Institute for Information Technologies in Biosystems (hereinafter referred to as “BioSense Institute”) as the focal point in Serbia for the Copernicus programme in terms of data access and use of Sentinel data.

### **Bilateral cooperation**

Realization of planned activities is continued for approved projects within bilateral cooperation with Austria, Belarus, China, Croatia, Germany, Italy, France, Portugal, Montenegro, Hungary, Slovakia and Slovenia.

Newly approved bilateral cycles:

Slovenia - period 2018 - 2019, Joint commission approved 53 bilateral projects for funding, started from 1. June 2018.

France - period 2018 - 2019, Joint commission approved 19 project proposals, started from 1. January 2018.

In the scope of Memorandum of Understanding between the Ministry of Education, Science and Technological Development of Republic of Serbia and the Ministry of Science and Technology of the **People's Republic of China** on joint financing of research and development projects which was



signed on 18<sup>th</sup> June 2016, 6 R&D projects approved on the 4th Joint committee meeting session held on January 16<sup>th</sup>, 2018. in Being.

Second Joint **Serbian-Indian** committee meeting was held on 02<sup>th</sup> – 3rd October 2017 in Belgrade, for implementation of bilateral Science and Technology Agreement of 2004. In view of promising opportunities for scientific & technological partnership, Programme of Cooperation (POC) was adopted. To begin with, both sides proposed to organize in 2018 workshops in areas: ICT and biotechnology in Serbia and India respectively.

Currently there are 3 Public calls for bilateral cooperation open, with Croatia (deadline 20. June 2018), Slovakia (deadline 16. July 2018.) and Italy (deadline 12. July 2018).

### ***ERA.Net RUS Plus***

MESTD participated in the S&T *ERA.Net RUS Plus call* which was published on 2<sup>nd</sup> May 2017. (with deadline 4<sup>th</sup> July 2017.) In this call, the partners aim to further enhance EU-Russia S&T cooperation on an equitable and mutually beneficial basis. Five projects with participation of Serbian researchers were main listed and approved for financing in 2018-2019.

### **Activities of Center for the promotion of Science**

The Center for the Promotion of Science is a full member of the largest European network of science centers and museums – ECSITE. It is also member of the EUSEA – European Science Engagement Association.

Since May 2018, CPN is involved in recently funded H2020 project entitled RRING – Responsible Research and Innovation Networking Globally – as an initial partner. The aim of this 3-years long project is global mapping of different practices of the Responsible Research and Innovation process and its alignment to the Sustainable Development Goals (SDG), as proposed by the United Nations.

## **3 Important events, meetings, training activities, studies etc.**

### **MESTD Activities**

Within the framework of the contract “Communication activities for international cooperation”, the European Commission with MESTD organized Horizon 2020 Info Day on 07 - 08 December 2017 in Belgrade. The aim of this event was to provide information on Horizon 2020 (The EU Framework Programme for Research and Innovation) to the researchers and the science community in Serbia and to inform about participation and funding opportunities in this programme. There were 144 participants attended the event.

Within the project Access4SMSs (Capacity-building for national contact points (NCPs) for SMEs and Access to risk finance under Horizon 2020) - training on InnoFin Equity Instruments was held in March 2018 in Lisbon at which all representatives of project consortium presented their national activities related to the promotion and introduction of final beneficiaries with initiatives, instruments and possibilities offered through EU funds and programs for the financing of high-tech innovation with risk outcomes, and insufficient financial resources with focus how to attracting investments and access to venture capital, business angels, technology transfer. The number of participants was 40.



Within the Interreg Danube Transnational programme – CROWD, workshop on Current Status and Future perspective of Crowdfunding, was held in Serbia at Center of transfer technology, University of Belgrade;

MESTD with the Association of Banks of Serbia has organized a workshop for representatives of commercial banks, the Serbian Chamber of Commerce and other stakeholders to presented the content and importance of certain financial programs (mainly InnoFin financial instrument) that banks in Serbia are using or intend to access. The number of participants was 28.

MESTD participated in May 2018 at 62. Belgrade Fair of Techniques and Technical Achievements.

### **Activities of Center for the promotion of Science – CPN**

In October 2017, CPN has supported a free training for H2020 project proposal writing and management for 60 researchers, which was organized by UNDP (United Nations Development Programme) and under patronage of the Ministry of Education, Science and Technological Development. This training event was held at the Science Club Belgrade.

Department for Publishing and Media Production initiated during 2018 new series of seminars dedicated to the peer review process in the scientific papers. This program was delivered at the national universities across Serbia and at several faculties and research institutes.

Center for the Promotion of Science, as a work package leader, has organized the final conference of the large FP7 project SATORI in Brussels, September 18-19 2017. Entitled “Ethics assessment of R&I: Looking to the Future”, the Conference appeared to be truly intriguing and successful, gathering relevant stakeholders in the domains of ethics, research and innovation, including representatives of several EC directorate generals and executive agencies.

Since 2014, in cooperation with the Ministry of Education, Science and Technological Development, the Center is regularly organizing diverse events dedicated to the promotion of the European programs. Under the joint umbrella “Horizon on Thursday”, the biggest focus is given to the opportunities existing in Horizon 2020 framework, yet other funding schemes are also presented and elaborated like Erasmus+, IPA or Creative Europe. Since March 2018, a new series of this event was initiated in the Science Club Belgrade, major public facility of the Center, with a further plan to decentralize it by organizing similar events elsewhere in Belgrade and across Serbia.

In May 2018 two CPN representatives participated at several large events in Beijing and Hohhot, China, after invitation from the Beijing Exchange Center for Science and Technology (BECST). It is planned to sign cooperation agreement between two institutions and to plan further joint activities.

The Center is part of a novel major H2020 project dedicated to the development of new concepts of Science (STEM) Education – SySTEM 2020, led by the Science Gallery at the Trinity College Dublin, Ireland, with participation of twenty-five additional partners. The kick-off meeting was held in Dublin in May 2018.



The CPN, acting as a national contact point for the Scientix, biggest European online network of STEM teachers and education professionals, undertook more than twenty different activities in the reporting period, empowering teachers, principals and school representatives with tools, services and resources provided by it. Scientix portal and belonging network is directly funded by its call inside Horizon 2020 framework.

Center continued its efforts in putting gender balance in R&I in practice. Training workshops on gender equality, women in science and girls in STEM education took place on more than dozen occasions in the reporting period, within the scope of H2020 Hypatia project. Events were organized in collaboration with technical and IT faculties, primary and secondary schools, and innovative companies.

The Center is maintaining its Responsible Research and Innovation (RRI) agenda, leading national education program “Science Education for the Responsible Society” and through the implementation of several ongoing EU projects in the reporting period – Scientix (H2020), CREATIONS (H2020), Hypatia (H2020) and SATORI (FP7).

#### **INNOVATION FUND ACTIVITIES**

- **Direct Grant to the Innovation Fund – Creating a Comprehensive R&D Collaboration (IPA 2013)** - The Collaborative Grant Scheme Program (CGS) is designed to incentivize private-sector companies and public-sector R&D organizations to engage in joint scientific research and development projects with the goal of creating new commercially viable products and services, as well as innovative precompetitive technologies with significant future impact and market potential. Financing for this Program is provided by IPA funds in the amount of EUR 2.4 million and the Ministry of Education, Science and Technological Development in the amount of 1 million euros, while 1 million investment made by the consortia members.

Public call for proposals for this Program was opened from June 21<sup>st</sup> to September 23<sup>rd</sup> 2016. A total of 14 projects were approved for financing in this pilot public call, with the Innovation Fund providing support in the amount of EUR 3 million. Financing agreements between the Innovation Fund and the Lead Applicant of each consortium were signed in the period between February 1<sup>st</sup> and April 1<sup>st</sup>, 2017. Financial disbursement, as well as monitoring of spending and implementation progress are conducted on a quarterly basis.

In December 2017, one of the projects officially finished implementation and that is the first CGS project successfully completed in the scope of this Program. The indicator values on the result level are moving towards targets set during the programming period. Adoption of technology transfer practices by innovation support organizations (ISO) and/or R&D organisation is almost fulfilled with the current indicator value of 4 out of 5 organisations envisaged, and this indicator depends on the level of progress of individual projects and character of research and development activities conducted. Additionally, three out of 5 envisaged technology transfers from R&D institutions to commercial sector have been fully completed. Regarding development of the new products and services, out of 5 envisaged during programming process, all have been fulfilled. These include individual projects in the areas of IT, health, agriculture and food processing. Having in mind that total number of projects is 14, it is expected that final indicator values shall surpass target values.

- **Implementation of the Serbia Research, Innovation and Technology Transfer Project – SRITTP (IPA 2013)** through establishment of the Technology Transfer Facility (TTF) as a



specialized unit operating within the Innovation Fund and implementation of the pilot Technology Transfer Program. The mandate of the TTF is fulfilled through its pilot TTF Program – a support program designed for the R&D community in Serbia. The TTF helps local TTOs and other R&D organizations to identify research with commercial potential and focus on the transactional aspect of technology transfer.

In August 2017, TTF has published new simplified application procedure and increased the limit for the grants to EUR 50,000 (instead of EUR 10,000).

The TTF pipeline currently contains a total of 24 applications of which 13 have been awarded (EUR 252,050), 3 are under evaluation, 3 were withdrawn and 5 were rejected. Amongst the awarded applications, the TTF facilitated signing two commercialization deals (the Faculty of Technical Sciences, Čačak and the Innovation Center of Faculty of Mechanical Engineering, Belgrade).

In December 2017, the TTF launched **Innovation vouchers scheme** as an additional service line for SMEs who want to use services of the public R&D organizations. By the end of the Public call (April, 21<sup>st</sup> 2018) 116 innovation vouchers were approved, with total amount of EUR 600,000.

- **Direct Grant to the Innovation Fund - New products and services developed through research commercialization in the SMEs (IPA 2014)** – The Innovation Fund prepared and submitted the application for project „New products and services developed through research commercialization in the SMEs “to the Ministry of Finance, for further funding of enterprise innovation through Mini and Matching Grants Programs. Total funding is 4,5 million euros (2,5 million from IPA and 2 million euros from the budget of the Ministry of Education, Science and Technological Development). The Direct Grant Agreement with the Ministry of Finance has been signed on May 31, 2018.

- **Competiveness and Jobs Project (World Bank)** - The Innovation Fund has officially renewed its two hallmark programs for the support to innovative entrepreneurs – the Mini Grants Program and Matching Grants Program, intended for private micro and small companies engaged in the development of technological innovations with a clear market need and potential for commercialization. Total funds in the amount of EUR 2,7 million for implementation of the Mini and Matching Grants were secured from the budget of the Ministry of Education, Science and Technological Development (MESTD) for 2017, through the Competiveness and Jobs Project. The public call for these two programs was closed on September 1<sup>st</sup> 2017 and registered a record number of innovative project applications submitted by enterprises: 237 applications in total of which 137 for the Mini Grants Program and 100 for the Matching Grants Program. On December 8<sup>th</sup>, 2017 the Innovation Fund awarded 25 innovative projects to Serbian enterprises through grants in the amount of EUR 2.45 million. For the Mini Grants Program, grants were approved for 20 innovative projects in the amount of EUR 1.45 million, while for the Matching Grants Program, EUR 1 million was approved for 5 projects. The innovative projects that received funding cover various industries, mainly in the field of software and application development, information-communication technologies, as well as mechanics and mechanical engineering, new materials, and nano-technology. The majority of those supported are operating in Belgrade, Niš, Novi Sad, and Kraljevo.

In 2018, the Innovation Fund launched a new Public call for proposals for the Mini and Matching Grants Programs on April 2<sup>nd</sup> and it was opened until June 1<sup>st</sup> 2018. This year, the Innovation Fund





received 218 applications in total of which 143 for the Mini Grants and 75 for the Matching Grants Program. Currently, the Innovation Fund team is conducting the eligibility review of submitted applications.

- **Enterprise Innovation Fund (ENIF)** - The Government of Serbia signed an Agreement to join the Enterprise Innovation Fund as a Limited Partner in June 2017 with total investment of EUR 1.32M. Serbian Government joined ENIF in the subsequent closing, bringing the total fund size to more than EUR 41M available for investments in early stage technology companies in the Western Balkans. ENIF is an equity fund aimed to support SME in in early stage who wants to grow their businesses internationally. The ENIF's strategy is to invest in excellent local teams that have the skill set, ambition and potential to grow their companies regionally or globally. ENIF is managed by South Central Ventures and has been active in the region since September 2015. Existing investors in ENIF include institutional investors such as European Commission, European Investment Fund (EIF), European Bank for Reconstruction & Development (EBRD), and also Western Balkans economies, and several individual private investors. Its portfolio to date includes 14 tech companies in seed to early growth stage, among them seven from Serbia (EUR 3,43 million).

The Enterprise Innovation Fund (ENIF) forms one pillar of the umbrella structure – the Western Balkan Enterprise Development and Innovation Facility (WB EDIF) which provides a range of complementary financial instruments and support services to SMEs in the Western Balkans.

#### **ACTIVITIES OF THE SCIENCE TECHNOLOGY PARK BELGRADE**

Science Technology Park Belgrade is the first science and technology park in Serbia and it was founded in June 2015 in the partnership of the Government of the Republic of Serbia (Ministry of Education, Science and Technology Development), City of Belgrade and University of Belgrade, with the aim to create the environment for innovation development and commercialization by providing infrastructure and business support services in high-tech area to start-ups, SMEs and R&D departments of large companies. The establishment and development of the STP Belgrade was supported by the Swiss Government's State Secretariat for Economic Affairs (SECO).

In only three years of its existence, STP Belgrade has managed to gather under his roof more than 60 high-tech companies and teams which employ more than 500 young engineers. The income of this companies in 2017 was 16.4 million of EUR, 8 million from export and contribution to the state was 2.4 million.

The STP Belgrade model is based on international best practice examples, adapted to local conditions and as such was recognised from the Government of RS as a model that can be replicated in other university/faculty centres in Serbia. In September 2017, the Serbian Prime Minister, Ana Brnabić ceremonially opened the Start-up Niš on Faculty of Electronics, which was established with every step of the way support of STP Belgrade according to the methodology of the Business-Technological Incubator of Technical Faculties (which was the scaling up model for establishment of STP Belgrade).

At the end of the 2017, STP Belgrade joined the process of preparation of the Strategy for Smart Specialization of the Republic of Serbia, especially in the part of Entrepreneurial Discovery Process.



In the same period, STP Belgrade started the realization of the two year Adriatic-Ionian Programme for the Establishment of the Open Innovation System of the Adriatic-Ionian Region, which is led by the AREA Science park from Trieste and on whom STP Belgrade is one of the partners.

#### **4 Outlook and perspectives**

*(e.g. upcoming relevant meetings, policy actions etc.)*

##### **INNOVATION FUND ACTIVITIES**

- Evaluation of the applications for the Mini Grants Program and Matching Grants Programs within the Competitiveness and Jobs project
- Further development and promotion of TTF service lines
- Public call for proposals announcement for the Collaborative Grant Scheme Program
- In coordination with the MESD the Innovation Fund is involved in competitiveness sector programming phase for IPA 2018

##### **ACTIVITIES OF THE SCIENCE TECHNOLOGY PARK BELGRADE**

STP Belgrade will continue supporting the expansion of innovation, growth of high-tech companies, establishment of start-ups, together with helping the Government of RS in establishing new science and technology parks in Serbia, by working actively on mapping the needs for science technology parks in other university centres in Serbia and helping transferring the good model of STP Belgrade adjusted to local conditions and needs. STP Belgrade will also provide assistance in the further process of developing RIS3 in Serbia and will continue to participate in international projects in order to help the development of high-tech sector in Serbia.

#### **5 Other relevant information related to Research and Innovation cooperation in/with Western Balkan economies)**