

# MONTENEGRO: EU SUPPORT FOR INNOVATION STRATEGIES AND POLICY



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## Abstract

The EU provided support to Montenegro's innovation policy as part of the efforts to strengthen competitiveness and assist in its ability to meet the conditions for EU membership. This case describes the efforts made to generate participation of stakeholders in the development of the Smart Sustainability Strategy (S3), and outlines the challenges facing Montenegro for the future implementation of the strategy. It highlights the importance of dialogue not only with the DG responsible for enlargement (DG NEAR), but especially with those responsible for internal EU policy, line DGs and EU institutions for Member States. These latter institutions have greater specialist policy knowledge which is particularly influential in supporting policy development for enlargement candidates. This case study outlines the remaining challenges for Montenegro in implementing the S3. It provides recommendations in relation to financing implementation of the S3, and the importance of greater consultation in selecting indicators to monitor progress and success.

The case study is drawn from research conducted for the Evaluation of the European Union's Cooperation with Montenegro 2012-2019, published in 2021, which can be found [here](#).

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## Background

Montenegro's R&D policy targets have long been expressed in terms of share of GDP, although these were fraught with statistical difficulties in getting a reliable measurement. In fact, these estimates have raised some perplexity and remained broadly difficult to interpret for most of the period considered here, because of problems in fully capturing underlying investment by means of available statistical surveys<sup>1</sup>. Resulting figures have generally fluctuated around some 0.4%-0.5% of GDP, which remained well below the Government's own objective of reaching a target of R&D investment of some 1.4% of GDP by 2016. This objective was then more realistically redefined to some 0.6% of GDP by 2020, which remains less than one third of the correspondent EU reference value<sup>2</sup>. Some perplexity is due to the fact that available statistical series, however, apparently fail to account for the massive increases in the country's public expenditure on R&D that first almost doubled from 2012 to 2013 and then was further increased by 30% the following year, which therefore points to even greater uncertainties in assessing parallel private sector investment<sup>3</sup>. This is generally believed not to exceed some 30-40% of the total but based on GDP estimates themselves. To more specifically focus on the role of the private sector in funding R&D, the 2020 0.6% GDP

target was articulated into public and private contributions of 50% each.

Montenegro's approach to developing its innovation policy has become increasingly articulated and attentive to promoting private sector involvement over time. Policy development was long under the responsibility of the former Ministry of Science, whose original main constituency was represented by universities and other higher education institutions. Unsurprisingly, the Ministry first tried to favour as much as possible scientific exchanges with the EU through the entire set of related measures. It supported initiatives to participate into EU research programs, co-financed scientific professional training abroad, doctoral and master studies and the publishing of scientific papers in reference international scientific journals. Then, to stimulate business fallouts of academic research, it started developing a program of technological and science parks that could work as business incubators. A World Bank-financed center of excellence in bioinformatics (BIO-ICT) began operations in July 2014 at the University of Montenegro in Podgorica. If one considers that biotechnology is the field where Montenegro excels when it comes to scientific publications in high-impact scientific journals, it appears that scientific excellence was used as the main criterion to identify priority investment areas. The establishment of another World Bank-supported<sup>4</sup> science and technology park with laboratories

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<sup>1</sup> MONSTAT surveys on investment in R&D have long been deemed not sufficiently comprehensive as they did not include the investment of all the institutions that have R&D expenses in Montenegro. For instance, the increase in investment within the budget of the MoS, which grew from EUR 1.6 million in 2011 to a level of almost EUR 7 million in 2016 (an increase of 300%) does not appear to have been captured by the survey. See Government of Montenegro, *Strategy of Innovation Activity (2016–2020) with the Action Plan*, p. 19

<sup>2</sup> To put things into perspective in the Western Balkans all together resources available for R&D did not exceed the budget for research of the second leading university in the US. See World Bank *WISE Strategy*, 2016

<sup>3</sup> The exact number of companies engaged in R&D has long been unknown. Companies are recorded when they report R&D expenditures in the Statistical Annex of the final accounts, which are submitted to the Tax Administration. This system does not recognize companies that list the salaries of employees who work in R&D as a major expenditure in R&D activities, because it does not exist as a special account in the accounting standard. *Ditto*, p. 17

<sup>4</sup> In all this period, in fact, Montenegro was receiving assistance under the World Bank USD 15 million HERIC (Higher Education Research for Innovation and Competitiveness) loan. Together with the BIO-ICT and the Tehnopolis centers, this funded a number of university-led projects and launched, among others, a study mapping Montenegro's scientific diaspora with a view at stimulating the return of scientists from abroad, as well as a national excellence scholarship program for awarding post-doctoral studies and PhDs abroad.



of biochemistry and industrial design (Technopolis) was envisaged in Nikšić and its construction work started in July 2015. The center was completed the following year and a first set of 14 entrepreneur tenants selected for business incubation. In 2017 activities also started to establish another Science and Technological Park within the campus of the University of Montenegro.

All in all, this was broadly in line with the Government's initial focus on strengthening upstream R&D systems as the largest drivers of innovation in the economy. This strongly top-down approach was slowly redressed and reversed in later years when the Government first started issuing calls for proposals to co-finance scientific research activities such as co-financing for authors of patents and innovative solutions and calls on applied and developmental research and the development of innovation and then eventually moved towards more frankly bottom-up oriented matching grants and business R&I co-financing schemes. In 2018, the voucher scheme for innovation was extended to all SMEs, although not necessarily in a truly business-friendly manner yet. In fact, the application process reportedly remained relatively complex, and few companies applied. In 2018 the Ministry of Science budget was further increased by another 60% and national programs grew in funding and number, most of them now based on the principle of business co-financing. A program for supporting innovative start-ups was also adopted in June 2018. A Centre of Excellence for Research and Innovation was established at the University of Montenegro in May 2018, explicitly aimed at fostering cooperation between academia and the private sector. Early steps were also taken to establish an office for technology transfer there, but no staff were hired. Efforts are also made in so-called soft complementary measures (training, mentoring, intellectual property, etc.), financed to a large extent by means

of EU funds. However, these programs often appear fragmented and have hardly attracted strong interest from companies and SMEs. It is worth noting that differently from all other Countries in the Western Balkans, until 2018 no Montenegrin SME had had access to Horizon 2020 funding, and this was heavily concentrated into providing support to universities only.

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## Strategic Programming and Governance

In 2012 the main strategic documents in the field of R&D were still strongly scientific and education-oriented and were represented by the 2011 Strategy for the Development and Financing of Higher Education, and by the 2010 Law on Scientific Research Activity. These were complemented by a Feasibility Study for the Establishment of a Science and Technology Park (2011) and by the Strategic Plan for Development of the Science and Technology Park in Montenegro<sup>5</sup> (2012) as *ad hoc* documents whose broad rationale seemed mainly related to spreading public R&I investment more evenly across the Country and avoid it remaining concentrated in Podgorica. A first official attempt to move towards a more comprehensive approach to innovation was represented in October 2013 by Montenegro's co-signing of the Western Balkans Regional R&D Strategy for Innovation - a joint World Bank-DG ELARG regional initiative. The Strategy, drafted by the World Bank upon EU financing, was to launch the Western Balkans Innovation Strategy Exercise Facility (WISE) as a tool to promote policy stability and continuity of reform in the Western Balkans' research and innovation field and help improve the quality of public expenditures on research and innovation. Therefore, WISE was proposed to play an advocacy role for the implementation of the policy

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<sup>5</sup> The 'Strategic Plan for the Establishment of STP in Montenegro' (2012) originally conceived the park as a networked structure with a seat in Podgorica and three decentralized units – innovation and entrepreneurship centres located in Nikšić, Bar and Pljevlja. In 2014, work started in Nikšić on setting up 'Technopolis', the first centre for innovation and entrepreneurship. While the main unit in Podgorica was created under a different institutional framework within the University of Montenegro, the other two were never followed up as such. At Bar the local business Incubator began operating in 2010 and 20 companies were listed as tenants in July 2018 but was never upgraded to a park.

reform agenda for the R&I sector and was to manage the implementation of four proposed regional programs in collaboration with national partners. In addition, the WISE Facility would provide a platform for the coordination, monitoring, and evaluation of donors' support to research and innovation in the region, including serving as a "technical secretariat" for the discussions under the R&I pillar of the SEE 2020. WISE actually became a Centre based in Split with a mandate more directly related to two regional programs.

In 2015 the Council for Scientific-Research Activity established with the task of monitoring strategies and laws in the field of R&D, as well as of playing an advisory role to Government on these matters, released its National Roadmap for Research Infrastructure - giving a good overview of the current infrastructures and potential as a preparatory step

for the adoption of the national roadmap for the European Research Area in April 2016. In 2016 Montenegro with World Bank support eventually adopted its first Strategy on Innovative Activity (2016-2020) setting, as mentioned before, more realistic targets for an increase in national and private R&D expenditure by 2020 and first identifying as an explicit priority the need to increase private sector contribution to R&D expenditure. The Strategy, however, was still drafted by a working group selected by the Council itself and mainly composed of university professors and civil servants, just one of which came from the Ministry of Economy, as the only apparent instance of inter-ministerial cooperation in the process. This caused some notable limitations in its proposed approach to innovation as highlighted in the box C.1 below. The strategy was preceded by the Law on Innovation Activities that was adopted in June that year.

#### BOX C.1: The 2018 Joint Research Centre Assessment of Montenegro's Innovation Governance and Strategies

In 2018 comparative research carried out at the JRC<sup>6</sup> summarized Montenegro's R&D governance and strategies as follows: *"governance in the area of R&I has been gradually established in the Western Balkans through international cooperation and largely through EU-funded programs and projects or as part of the enlargement policy. However, R&I policy governance mechanisms were at very different stages of formation in the region. In Montenegro it was found in the process of being formed and very much still centred around the single Ministry of Science. "This is largely a reflection of very limited investments in R&D and a weak business R&D sector. The overall model of governance is rooted in the idea of the linear innovation model which puts the focus on R&D as the main source of innovation. ...There are no comparable governance mechanisms or bodies, networks or organizational arrangements that are focused on non-R&D sources of innovation. Organizations like productivity centres, quality control and quality enhancement centres, industrial extension services, sector technology support services are almost non-existent and not yet the targets of policy. Overwhelming emphasis is put on upstream R&D organizations. The need for downstream organizations to increase innovation and productivity is largely neglected".* The study continued by highlighting that *"overall, R&I systems ... are predominantly public-sector oriented with activities concentrated in public centres and institutes, higher education institutions, line ministries and governmental agencies".*

<sup>6</sup> Matusiak M., Kleibrink A. (ed.), Supporting an Innovation Agenda for the Western Balkans: Tools and Methodologies, Publications Office of the European Union, Luxembourg, 2018, ISBN 978-92-79-81870-7, doi:10.2760/48162, JRC111430 [https://publications.jrc.ec.europa.eu/repository/bitstream/JRC111430/2018-04-24\\_western-balkans-report\\_online.pdf](https://publications.jrc.ec.europa.eu/repository/bitstream/JRC111430/2018-04-24_western-balkans-report_online.pdf)



This created the need to expand their governance along two paths. First, there was a need to create fully-fledged governance for R&I policy by reaching out and interacting with the business sector. Second, a need also appeared to include business actors in the process of policymaking by making innovation an inter-ministerial task. Indeed, coordination and communication problems between science and economy-related ministries and implementing agencies appeared as a major impediment to effective and strategic innovation and development policies<sup>7</sup>.

Finally, it was noted that any effective innovation policy would require strict coordination with employment policy and industrial relations. This was because cooperative institutions for coordinating wage-setting as a way to enhance competitiveness linked to productivity were largely missing. So the labour market provided very limited natural incentives to invest in innovation<sup>8</sup>. *“First, wage-setting ... takes place mainly at the company level and not in a more centralized way at the industry level. This together with high unemployment leads to high flexibility in employing and laying off labour which in turn reduces incentives for investments in training. Second, the labour market ... is characterized by confrontational relations between employees and employers; it is much less based on cooperation”.*

The perceived risk was that Governments in the Western Balkans including Montenegro would simply resort to mimicking the economic priorities and instruments of advanced countries without a strong rationale. This would alienate the policies from the economic reality on the ground, resulting in an increasing gap between wrongly-defined agendas and their implementation. Misconceptions about the scope for a regional approach compounded this risk. Digitisation, for instance, was often cited as offering high-potential for the economies in the region and Montenegro was no exception in this respect. However, all available evidence suggested that ICT as a priority domain for innovation should entail very different niches and approaches among candidate countries.

Of the areas with some comparative advantages, only food was recognized by government and stakeholder groups alike as one of the most prominent priority domains for future R&I investment. The other domains perceived as most relevant in policy documents in the region still resembled those fashionable in the EU, namely: energy, healthcare, environment and biosciences/biotechnology. Moreover, measures such as the establishment of a Science and Technology Park in Montenegro illustrate *“the need for complementing large R&D investments with an appropriate social and ‘soft’ infrastructure. Investments in physical infrastructure must be accompanied by technological upgrading, skills-development and new management techniques within broader strategic objectives to have a significant effect.”*

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<sup>7</sup> OECD, *Competitiveness in South East Europe: A Policy Outlook, Competitiveness and Private Sector Development*, Organization for Economic Co-operation and Development Publishing, Paris, 2016.

<sup>8</sup> Grabisch, H. et al., *Improving Competitiveness in the Balkan Region: Opportunities and Limits*, Vienna Institute for International Economic Studies, Vienna, 2016.

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## Analytical Capacity Changes in Key Relevant Institutions

There was overwhelming consensus among interviewees and plenty of documentary evidence that programming capacity in the field of innovation policy had substantially increased in the country and this can be considered one of the most notable successes of enhanced policy dialogue with the EU. This dialogue had gone beyond the technicalities of the accession process (Chapter 25 on science and research was actually closed immediately after having been opened) and mere traditional forms of IPA financial support. It had even gone beyond the strategic recommendations of both the EU Country Reports and the Economic Reform Programme (ERP) policy guidance and entered - in the words of one interviewee - the more technical realm of the “tactical and operational aspects” of concrete structural reform implementation. This was an area of support that thus far some local counterparts had considered more typically provided by the World Bank rather than by the EU.

After Montenegro adopted its 2017-2021 strategy and action plan for scientific research activities<sup>9</sup> in December 2017, 2018 became a watershed year in Montenegro’s approach to innovation policy. This was thanks to the provisions of two-pronged advanced EU support: for defining an innovation policy more specifically targeted at local needs and shortcomings, and more convincingly involving the business sector in identifying and investing in possible areas of competitive advantage.

This was first achieved through support from the [EU Horizon 2020 Policy Support Facility \(PSF\)](#) where the country received concrete high-level expert advice from innovation entrepreneurs and busi-

ness angels on how to establish an Entrepreneurial Innovation Ecosystem by means of a dedicated report delivered in 2019<sup>10</sup> (see box ... below). Then inspired by the example of a JRC pilot project aimed to transpose the structural fund-driven smart specialization methodology into Moldova, Ukraine and Serbia, Montenegro on its own initiative decided to involve the JRC in the preparation of its own Smart Specialization Strategy with the support of the Commission, and established to this aim an inter-ministerial working group, including business, academia and NGOs. The related S3 preparatory guidelines (2018-2024) were adopted in December 2018 and following intensive collective programming effort, the Smart Specialization Strategy (S3) was finalized as early as June 2019, thereby making Montenegro the first country in the Western Balkans to produce such a document. The Montenegrin strategy, whose relatively quick preparation could not always involve extensive dialogue with the line DGs concerned, was then endorsed by a conditionally positive assessment by all the relevant EC services in December 2019. At the same point in time the S3 strategy was also officially adopted in the first meeting of the Council on Innovation and Smart Specialization whose establishment the PSF had advocated thereby creating a notable synergy between the two initiatives, which can be appreciated also under other respects.

The PSF study made nineteen recommendations articulated into three main areas and timed as short to medium term priorities, namely: 1) the overcoming of legislative barriers including a more innovation-friendly bankruptcy law and, most importantly, key legal reforms to facilitate businesses receiving online payments; 2) funding and related mechanisms including the need to explore the feasibility of a regional seed venture capital facility supported by the IFIs or the EIB/EIF and last but not least 3) governance and connectivity issues to foster coop-

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<sup>9</sup> The Strategy of Scientific Research Activity for the period 2017-2021 (Ministry of Science, 2018) confirms that the scientific research community is producing low levels of academic and scientific contributions. From on average of eight domestic patents a year, the strategy targets a 50 % increase by 2021

<sup>10</sup> <https://rio.jrc.ec.europa.eu/policy-support-facility/specific-support-montenegro-towards-entrepreneurial-innovation-ecosystems>



eration, dialogue and exchanges between different layers of Government and between Government and the business community. This included the establishment of the dedicated alternative cross-ministerial Council for Innovation and Entrepreneurship Activities mentioned above and of a law on Public

Private Partnerships whose preparation is currently in the making. These recommendations were overall very well received and endorsed in the Government analysis of the situation and were to a large extent incorporated into the *“Programme of measures promoting innovative start-ups in Montene-*

## The Policy Support Facility Study

The Policy Support Facility (PSF) study, among others, had started its analysis from noting that the country completely lacked success stories to leverage on, showing how innovative projects and start-ups can offer new growth opportunities. The only international success story - BeeAnd.me - was a business that started in Montenegro, but then had to move to Austria to succeed. Actually, most of the Montenegrin start-ups created in recent years have left the country and typically moved business operations to Austria, Bulgaria and Germany in search of better market access conditions, or even as a precondition set out by investors to sign investment agreements. Among other factors, this was due to the fact that Montenegro lacked integration with global markets and financial services which hampered business access to global payment systems such as PayPal, Apple Pay, etc. As a consequence, there appeared to be a profound lack of investors and successful entrepreneurs to start a business in Montenegro and achieve major success by staying in the country. The study also remarked on a shortage of entrepreneurial talent and business growth management skills which was attributed, at least in part, to a lack of effective, modern entrepreneurship education programs.

Although entrepreneurship is taught as a subject from primary school through to secondary school, teachers are far from being practitioners. At that moment, there was no entrepreneurship center at any public or private university and it was thought that creating them could help build a space for students and practitioners to interact. As a further indicator of that need, it can be noted that so far Montenegro has been one of the very few countries unable to appoint a Country representative to the EU Horizon 2020 ESIL project for the creation of an EU network of local business angels. All in all, brain drain remained by far the main threat to the Montenegro innovation ecosystem.

Finally, the PSF study noted that innovation in Montenegro remained governed in silos with very few programmes and mechanisms fostering collaboration and integration. At the end of 2017, a TAIEX mission to provide short-term advice on the *‘Establishment of a Science and Technology Park held in Nikšić’* while reviewing the state of the triple-helix<sup>11</sup> ecosystem

<sup>11</sup> The triple helix model of innovation refers to a set of interactions between academia, industry and government, to foster economic and social development, as described in concepts such as the knowledge economy and society. The framework was first theorized in the nineties by Henry Etzkowitz and Loet Leydesdorff in their publication *“The Triple Helix, University-Industry-Government Relations: A Laboratory for Knowledge-Based Economic Development”*.



in the Country, had already concluded that the most significant and commonly mentioned challenge was “the lack of communication, understanding and collaboration among and within helixes”<sup>12</sup>. One attempt by Montenegro to reduce organizational silos concerned the creation of inter-ministerial councils. The composition of the Competitiveness Council, in particular, on paper would duly reflect the triple-helix and include members from several different ministries<sup>13</sup>. However, the PSF Study noted with some disappointment that strengthening the entrepreneurial innovation ecosystem had yet to become part of its work program<sup>14</sup>. This was because innovation was seen as an important matter to only a few of its thirty members.

It was unclear whether the lack of interest related to a cultural bias, the Study also highlighted, according to which actors in the Montenegrin ecosystem often seemed to approve the *status quo* and appeared compliant with existing boundary conditions. Some interviewees commented that a body at too high a political level like the Council, often had difficulties making radical decisions with a clear strategic direction, as it became entangled in mediating between different positions and interest groups; therefore they advocated for leaner and more operationally-oriented structures with a stronger technical component.

*gro*” and the accompanying Action Plan which was adopted by the government on 27 December 2018. Discussions with interviewees highlighted how the main messages of the PSF document have genuinely entered the set of analytical concepts commonly used by policymakers and stakeholders alike to assess the state of innovation in the Country and that substantial reservations still exist just on the appropriateness of launching a regional seed venture capital facility whose suitability to local conditions is considered at times either premature or far from the business culture by some and for which little concrete preparatory steps have been mentioned or could be identified. All in all, however, awareness about the increasing importance of a bottom-up

approach to innovation, the need to involve the business community, and the complexity of the underlying governance is now much more widespread than was previously the case and can be found in many policy documents. This represents a notable reversal of the 2012 scenario largely attributable to EU policy dialogue including the TAIEX mission and the PSF recommendations and to some more limited extent to HERIC focus on launching co-financing grants in 2018. Actually, this meant that certain PSF recommendations were put into practice even before the PSF report was officially released. The revised Law on Innovation Activity, the Law on Incentives for Development of R&I were approved in July 2020 before the political elections. Others

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<sup>12</sup> For instance, TAIEX found there was little collaboration between the Ministry for Science and that of Education, and poor collaboration between academia and business and between incumbent businesses and start-ups. Furthermore, representatives of the business community claimed they were not consulted or even informed by Government when policy conditions were changed. Quoted in PSF Horizon 2020 -*Specific Support to Montenegro - Towards Entrepreneurial Innovation Ecosystems in Montenegro*. 2019.

<sup>13</sup> Specifically, there are three councils that should influence the entrepreneurial innovation ecosystem: the Competitiveness Council, the Council for Scientific Research Activity, and the Council for Higher Education. However, there are no members from other ministries either in the Council for Scientific Research Activity, governed by the Ministry of Science, or in the Council for Higher Education, governed by the Ministry of Education.

<sup>14</sup> The Competitiveness Council first included innovation in its agenda in the last quarter of 2020.



were delayed, including the legal establishment of a National Body entrusted with Implementing the S3 and Innovation strategy<sup>15</sup>.

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## Impact of the Smart Specialization Strategy

Among the main challenges explicitly faced by Smart Specialization Strategy process in Montenegro was to break as much as possible the vertical “silos” mentality, and to nurture a strong sense of strategy ownership in the public administration. The aim was to ensure that the strategy drafting would not be exclusively dependent on external experts’ inputs and consequently would not represent a barrier to subsequent strategy implementation. This required, first of all, the creation of a S3 co-ordination team, an inter-institutional body charged with the development, management and coordination of the S3 strategy itself (see figure C.1 below). The central co-ordination team in turn has worked directly with JRC and received from them targeted training, guidance and expert support.

**The Smart Specialization Strategy process had to break as much as possible the vertical “silos” mentality, and to nurture a strong sense of strategy ownership.**

The mapping exercise for the identification of possible S3 targeted sectors for intervention was carried out by triangulating statistical evidence on economic potential, innovation potential and scientific potential. The hard data was complemented with more qualitative information drawn from case studies, focus groups and interviews with stakeholders. Data collection required overcoming three key prac-

tical barriers and resulted in notable improvements in underlying programming performance:

1. the first barrier concerned fostering data availability. This was achieved by involving Statistical and Patent Offices already in the early stages of the process in the co-ordination teams. This created opportunities for discussion with international experts on the type of indicators needed and the appropriate level of their disaggregation. As a result of this, Montenegro had committed to improve the quality of its innovation statistics in its application for the PSF and has become the first Country in the region to comply with the EU Innovation Scoreboard information requirements and to implement a dedicated innovation survey in line with Eurostat standards and methodology;
2. overcoming the second barrier required building capacity for the analytical exercise. This was achieved by encouraging the creation of a local analytical team and employing an international expert to work together with them on a targeted approach. This ensured the continuity of the process and the establishment of a team of local experts familiar with the methodology and capable of both updating the results of the analysis and crucially explaining them to stakeholders.
3. Finally, the third barrier was overcome by raising interest and overcoming scepticism in the business community. This required heavy investment in the participation and transparency of the process, including providing industry- and stakeholder-specific interpretation of the results of statistical analyses and ‘hard data’. This was achieved by initiating discussions with stakeholders at the early stages of the mapping exercise and asking for their feedback. Stake-

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<sup>15</sup> The same governance mechanism was replicated also in Serbia where it is planned that the implementation of the strategy will be governed by the Smart Specialization Coordination Body that will consist of the representatives of the Ministry of Education, Science and Technological Development, the Public Policy Secretariat, Ministry of Economy, Serbian Chamber of Commerce and the external expert team. See Radovanovic, N. and Gerussi E. (2020), *“Challenges in Governance of Smart Specialisation in South East Europe”*, Smart Specialisation – JRC Policy Insights, JRC120642, May 2020.

holders were consulted twice during the analytical stage: when the first results became available and once the final version of the mapping report was ready. Montenegrin sources claim that over some 400 stakeholders were involved.

As the figure C.1 below demonstrates, the extraordinary level of stakeholder involvement was achieved also by means of sectoral focus groups in clusters with a potential for smart specialization. These were eventually identified in three vertical clusters and one horizontal, cross-cutting cluster:

- 1) sustainable agriculture and food value chain;
- 2) energy and sustainable environment;
- 3) sustainable and health tourism;
- 4) the development of information and communication technology (horizontal).

Another key component of the S3 approach to generate participation was the support provided to the 'entrepreneurial discovery process' (EDP). Smart specialization strategies are drafted under the key assumption that their implementation will require that at least 10% of key actors change their behaviour in a system. Therefore, a significant effort is devoted to identifying these key players in important related value chains, particularly the most important research centres and innovative companies with the aim of actively involving them in the S3 drafting and implementation process. The identification of these appropriate actors will later become the base for the so-called entrepreneurial discovery process or EDP. The EDP is the bottom-up detection of concrete business needs and related practical dialogue on how to address them with R&I activities. Therefore, it is of paramount importance for the S3 to succeed, that an effort is made to attract companies, especially SMEs, to take an active part in the process.

Another key component of the S3 approach to generate participation was the support provided to the 'entrepreneurial discovery process'.

## Sustainability Considerations

The successful transposal of the S3 methodology to a candidate Country like Montenegro highlighted the yet unsolved question of how to ensure underlying S3 financing over time. While the Smart Specialization Strategy in the EU has mainly been developed to steer the use of the structural funds, candidate countries cannot rely on this source of funding. The pre-accession IPA instrument does not yet envisage an obvious predefined procedure to automatically bridge the two programming exercises. Recourse to a dedicated IPA sector budget support could appear to some as a workable possibility, but this would require economies of scale in funding that are not necessarily there. So, the issue has arisen of how to finance S3 implementation. Importing solutions already adopted or proposed elsewhere in the region has appeared as an obvious possible way out. In Serbia, in particular, S3 has ultimately influenced the establishment of the Science Fund and led to a revision of the possibilities of using existing national funding options by means of an Innovation Fund<sup>16</sup>. This appears the most likely option also for Montenegro at the moment and the Country seems intentioned to establish one following the adoption of the relevant by-laws. This uncertainty on the best way ahead and possible S3 financing mechanisms can be found reflected also in the Montenegro's latest 2020-2022 ERP where it was clearly stated that *"when it comes to funding for 2021 and 2022, it will be much larger, as these*

<sup>16</sup> Radovanovic, N. and Gerussi E. (2020), "Challenges in Governance of Smart Specialisation in South East Europe", Smart Specialisation – JRC Policy Insights, JRC120642, May 2020.



*funds are yet to be programmed, given that a national implementing body for S3 and innovation is to be established in late 2020, as well as that legislative amendments will follow that are not fully*

*known and defined at this time, so it will only be realistic to plan a budget for these purposes after that.”*



Source: Matusiak M., Kleibrink A. (ed.), Supporting an Innovation Agenda for the Western Balkans: Tools and Methodologies, Publications Office of the European Union, Luxembourg, 2018



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## Internal and External Coherence

By contrast with Serbia, however, where the S3 strategy and the visibility and the overall importance and political weight of the related process were greatly fostered by their strong links to the parallel development of the country's industrial policy<sup>17</sup>, in Montenegro no such synergy was immediately apparent, and the two processes have appeared much more detached to some interviewees. The newly drafted 2019-2023 Montenegro Industrial Policy limits itself to endorse the concept of smart specialization as a way to modernize and support the most promising industrial sectors in terms of developing innovation, adopting new technologies, creating new products and services based on knowledge and confirms generically that it is fully aligned with the Smart Specialization Strategy S3 2019-2024<sup>18</sup>. It then quotes the results of the sectoral EDP among the consulted documents together with other sources, but without particularly emphasising their contents or providing any operational detail. This might be a mere editorial coincidence as the parallel timing of the two exercises might have hindered further cross-referencing, but might also represent a subtle indicator that the two policy-making processes have still remained, at least to some extent, and despite all S3 integration

and connectivity efforts, quite separate.

Inter-ministerial dialogue is a matter of particular concern to external observers, including the need to keep the National IPA Coordinator (NIPAC) in the loop. While generally positive about the S3 process per se, some interviewees still have reservations on the likelihood of maintaining the S3 momentum. They went beyond a theoretical framework for reference and would have liked to see a more convincing policy dialogue between the two ministries to reinforce S3 future credibility.

The IPA-funded *Business Environment Project* worked by taking the S3 as a given and made proposals to the Ministry of Economy on how to bridge the S3 process with the cluster development approach sponsored by the Ministry itself. So, these reservations might be not fully warranted. Policy dialogue with the Ministries of Employment and Education was about to start when the research interviews were carried out, although some preparatory activities had taken place before the Covid epidemic<sup>19</sup>. The S3 process still seems to be far from triggering a more general debate on the pre-conditions for innovation in the labour market and the education system. The country, for instance, has heavily invested in a mechatronics educational center, but how robotics fits with the industrial and innovation strategies is not immediately evident to the external observer. The impression remains these initiatives have not been fully coordinated in advance, but somehow conceived in isolation and then justified after the fact. Little evidence could be found either that incentives to innovation policy-related considerations have ever entered industrial relations and negotiations with the trade unions. However, it is also fair to say that such a level of pol-

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<sup>17</sup> See again Radovanovic, N. and Gerussi E. (2020), "Challenges in Governance of Smart Specialisation in South East Europe", Smart Specialisation – JRC Policy Insights, JRC120642, May 2020

<sup>18</sup> "In all defined priorities, especially in the segments of improving the innovation infrastructure in accordance with the needs of enterprises, developing innovation through cooperation of scientific research institutions and enterprises, stimulating investment in the manufacturing industry, certification of management systems food quality and safety, improvement of energy infrastructure, energy efficiency and use of renewable energy sources, then in the field of industrial pollution and industrial emissions, remediation and environmentally sound management of industrial waste, preservation and self-sustainable use, protection and improvement of the environment, ICT infrastructure and public services offer, digital transformation, etc."



icy integration and inter-ministerial collaboration in the field of innovation would be hard to find in many a Member State.

The issue of coordinating innovation policies and programming also involved IPA programming itself. At national level there remained a discrepancy between the IPA funds that can be allocated by means of annual programmes and those managed by means of multiannual operational programmes more closely mirroring the structural funds programming tools for EU Member States. There were divergences of opinion on the best means for IPA to support the S3. One option was a EUR 900,000 dedicated S3 grant scheme, which could reportedly be proposed for IPA financing as a part of the 2020 IPA programming exercise without any particular problem (aside from the anticipated inconvenience of having it in place with substantial delay). Other interviewees believed instead that incorporation of the S3 component could take place at a lower strategic level and be eventually feasible when drafting project calls.

Coherence or lack thereof with the regional IPA-funded innovation initiatives also remains questionable to some. During the research interviews, no reference was ever made to any impact of EU regional initiatives (including the Western Balkans Research and Innovation Centre, WISE), on local developments in innovation. When asked about the reasons why, respondents mentioned the hindering factors already highlighted by the JRC: the different development stages of innovation policies and the different specific R&I needs between the countries in the region. While the S3 process was run nationally, synergies were envisaged only through a possible future regional EUR 200 million SEEIIST (South East European International Institute

for Sustainable Technology) project that will develop a state-of-the-art “Facility for Tumour Therapy and Biomedical Research with Protons and Heavier Ions”<sup>20</sup>. This has, however, not been included in any IPA financing yet and remains an early-stage project idea. It is expected that the establishment of this facility will offer a number of opportunities for technology transfer, as the procurement and construction of certain technological components will likely be assigned to industry in the region. Moreover, the project is expected to give rise to spin-offs and trigger complementary technologies, like boosting the use of green infrastructures. On top of that, the facility should also spur the creation of a powerful digital network and big data handling and cyber security. In Montenegro the SEEIIST project in the long run will therefore include all the three main strategic directions for future S3 development, and namely: health, sustainability and digitalization. This early-stage initiative for the moment remains fraught with substantial uncertainty.

External coherence with international financial institutions (IFIs) and other donors can be assessed as having substantially improved over time and become more active. At the time of HERIC, insufficient donor coordination with the EU in the field of national qualifications was highlighted by the World Bank as a factor negatively affecting project implementation and requiring better coordination with the EU in Brussels. At the time of this case study, the World Bank is reportedly considering possible forms of support to the establishment of an innovation fund in Montenegro to complement and build upon the S3 programming effort. Conversely, IFI cooperation in developing venture capital facilities to support innovation and entrepreneurship development is, however, less evident to interviewees, although many agree this will be one of the likely EU-IFI cooperation priorities in the next few years.

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<sup>20</sup> Tumour treatment with heavy particles like protons or carbon ions is the most modern and powerful method of treating many types of cancer, given that the radiation is deposited solely in the tumor region, thus protecting the normal cells. Heavier ions are unique even for the treatment of radio-resistant tumors. The latter method still requires extensive research.

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## Conclusions and Recommendations

Programming of innovation policy is a good example of the results that can be achieved when the EU complements traditional forms of policy dialogue and IPA assistance with a more direct involvement of the candidate countries in specific sectoral dialogue. In this case, the guidance provided through sectoral dialogue was implemented through dedicated technical agencies such as the Joint Research Centre (JRC), and enhanced policy support mechanisms managed by relevant line DGs (e.g., the DG Research Horizon 2020 policy support facility).

Programming of innovation policy is a good example of the results that can be achieved when the EU complements traditional forms of policy dialogue and IPA assistance with a more direct involvement of the candidate countries in specific sectoral dialogue.

Exposure to these dialogue mechanisms will likely further increase when the Commission's Western Balkans Agenda proposal is adopted (in all likelihood by mid-2021). The Commission has not always been in a position to propose such advanced forms of dialogue in all policy areas as it was in the field of R&I. Where this is possible, countries like Montenegro would be in a position to greatly benefit from direct exposure to policy discussions at the

EU level and this should be recommended as a best practice to follow. The annual ERP exercise allows the Commission to discuss economic structural reforms directly with the countries, including through missions on the ground meeting with stakeholders / authorities and innovation will all be the more relevant under the Economic Investment Plan as a crosscutting element – so there is/will be plenty policy discussion on that. Nevertheless, based on their experience so far, many interviewees believed that such enhanced exposure would help structural reforms gain traction and allow a better understanding of the issues at stake<sup>21</sup>.

No technical assistance project or twinning can ensure that degree of high-level exposure, but conversely, IPA projects could build on the results of such exposure and greatly increase their effectiveness as was the case for the *Business Environment Project* itself that largely built on JRC work. A more general reflection would therefore probably be needed on how to more effectively integrate accession-related policy support and dialogue into mainstream sectoral policy dialogue at the EU level, as plenty of opportunities appear to be there<sup>22</sup>. So relevant Government institutions should be increasingly given the possibility of opting in to take part into the EU sectoral initiatives they are interested in, as this is currently not the rule, to facilitate what in the case of the JRC and the smart specialization strategy happened in part out of a series of lucky coincidences as Montenegro had not been originally included among the non-EU Countries where S3 would be attempted, but came to know

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<sup>21</sup> For instance, some assume that, if it ever had been possible, better exposure to the initiatives of the European Cluster Collaboration Platform (ECCP see <https://clustercollaboration.eu>) could have further helped Montenegro understand how cluster policy is being run in the EU and how this could fit with local developments and strategies, including the S3. Unfortunately, this is not always possible or easily feasible. For instance, in the case of the ECCP, internationalization initiatives are now managed mainly on a call basis and not as an institutionalized mechanism where Government and stakeholders can be invited to attend. This is not necessarily a friendly access modality for a Candidate Country. It would also seem that ECCP regional initiatives such as the regional forum in Sofia or the organization of cluster matchmaking events in Thessaloniki in September 2017 and in Croatia in November 2018 have only limitedly reached out to Montenegro to encourage cluster policies and engage with the specific challenges of cluster development there.

<sup>19</sup> For instance, the ETF did a pilot study of two S3 areas (energy and health tourism), to document the foreseeable impact of economic prioritisation on skills supply and demand and the capacity of education and training systems to adjust to newer skills required in the context of smart specialization. The research was carried out throughout 2019 and completed before the Covid-19 outbreak.



about it and asked to be allowed to take part on its own. This evaluation can confirm that the interest is there, and this would be extremely welcome in a number of areas.

**IPA projects could build on the results of exposure to high level dialogue.**

The limitations that “management by means of objective indicators” have in steering EU support and future IPA programming are well highlighted in this case study. The Commission itself considers R&D GDP figures unreliable and unrepresentative as they did not seem to capture well known increases in public expenditure in R&D and has asked the Montenegrin statistical agency MONSTAT to further refine and improve them. Most interviewees knowledgeable with the subject have warned against relying on balance-sheet based R&D indicators, as these can be deeply misleading and distorted by the buoyant grey economy. Alternative proposals of more reliable indicators have variously included, just to mention some of them, the number of PhDs who start a business, the number of innovative start-ups, the number of hi-tech employees, the number of collaboration projects between business and academia, the development of new products and services.

**DG NEAR could benefit in the future from more open discussions with local counterparts knowledgeable with the real policy significance of specific indicators in the given country context and make the key indicators selection process more participative and based on stakeholders’ consensus.**

Irrespective of the merits and limitations of these alternative indicators, this case study well illustrates the point that, also due to limitations in MONSTAT staffing, DG NEAR could benefit in the future from more open discussions with local counterparts knowledgeable with the real policy significance of specific indicators in the given country context and make the key indicators selection process more participative and based on stakeholders’ consensus. The risk is that the indicators that are selected because they appear good and appropriate “on paper” or because they are officially published by Eurostat. Nevertheless, they may lack a real legitimacy among local stakeholders and therefore end up sabotaging any genuine incentive towards their achievement. The example of the OECD SME Policy Index indicator on SME innovation policy well illustrates the risk that more qualitative indicators to assess progress in a given policy area also in comparative regional terms can be biased by the criteria used for their construction and cannot entirely replace fully-fledged qualitative analysis. If one had to judge based on that indicator, for instance, all the progress in innovation programming achieved through the S3 process, this would be entirely missed. If IPA funding had been based on progress in this indicator, the country would not have received much deserved support to the S3 process. Limitations can more subtly be also in relation to content. No innovation indicator whatsoever would have allowed to fully appreciate the crucial detail that the country could not develop internet-based start-ups because online payment services such as Pay Pal are not allowed, unless the criterion had already been known in advance and used for its construction.

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<sup>22</sup> Just to make one possible theoretical example, offering Montenegro the possibility of participating as observers to the recently established EU Industrial Forum ([https://ec.europa.eu/growth/industry/policy/dialogue-expert-advice\\_en](https://ec.europa.eu/growth/industry/policy/dialogue-expert-advice_en)), particularly if high level discussions on post-covid industrial policy reforms are held there, could represent such an opportunity.