



Horizon 2020 Policy Support Facility



EUROPEAN COMMISSION
DG FOR RESEARCH & INNOVATION

Overview of the policy on research and innovation in Montenegro

Specific Support to Montenegro related to the development of legislative framework and ecosystem model for supporting start-ups in Montenegro

21 June 2018

European Commission - Brussels



Content

- Short overview of the policy on research and innovation;
 - Legal framework
 - Institutional framework
- Overview of our business environment and the support to start-ups, business angels and incubators
- Preparation of PSF request



Legal framework of science, research and innovation in Montenegro

Harmonised with:

- Stabilization and Association Agreement (SAA)
- Acquis Communautaire
- Europe 2020 Strategy



SCOREBOARD



25. Science and research	12. Food safety, veterinary and phytosanitary policy	29. Customs union
26. Education and culture	13. Fisheries	31. Foreign, security and defence policy
30. External relations	14. Transport policy	32. Financial control
1. Free movement of goods	15. Energy	33. Financial and budgetary provisions
2. Free movement of workers	16. Taxation	17. Economic and monetary policy
3. Right of establishment and freedom to provide services	18. Statistics	27. Environment
4. Free movement of capital	19. Social policy and employment	8. Competition policy
5. Public procurement	20. Enterprise and industrial policy	
6. Company law	21. Trans-European network	
7. Intellectual property law	22. Regional policy and coordination of structural instruments	
9. Financial services	23. Judiciary and fundamental rights	
10. Information society and media	24. Justice, freedom and security	
11. Agriculture and rural development	28. Consumer and health protection	

- Provisionally closed chapter
- Opened chapter
- OBM report being drafted
- MNE Negotiating position being finalized
- Work on opening benchmarks



Legal framework R&I in Montenegro

The national legal framework is governed by:

- **The Constitution of Montenegro** (*Official Gazette of Montenegro, no. 01/07*);
- **Law on Scientific Research Activities** (*Official Gazette, no. 80/10 and 57/14*);
- **Law on Innovation Activity** (*Official Gazette of Montenegro, no. 42/16*);
- **Law on Higher Education** (*Official Gazette of Montenegro, no. 44/14*);
- **Company Law (40/11)** – currently a new law is under development (adoption by the end of year)
- **Law on Ratification of the Statutes of the International Centre for Genetic Engineering and Biotechnology, with Protocols and Amendments (ICGEB)** (*Official Gazette of Montenegro – International Treaties, no. 9/12*); and
- **Law on Ratification of the Agreement on the Western Balkans Research and Innovation Centre – WISE** (*Official Gazette of Montenegro – International Treaties, no. 4/16*).
- **Law on Patents (2015)**
- **Law on Copyrights and Related Rights (2011)**

** Documents developed by
the Ministry of Science*



International legal framework R&I in Montenegro

The international legal framework is governed by:

- **Memorandum on Accession to Eureka Programme** (signed in 2012);
- **Declaration on Adopting the Regional R&D Strategy for Innovation** (signed in 2013);
- **International Agreement between EU and Montenegro on participation of Montenegro in “Horizon 2020”** – (signed in 2014);
- **Framework Programme for Cooperation of Montenegro with the International Atomic Energy Agency – IAEA** (signed in 2014);
- **Memorandum of Accession to COST Programme** (signed in 2015);
- **MoU for the CMS Detector at CERN** (signed in 2017).



Strategic framework for science and innovation

List of documents developed by the Ministry of Science

- **Strategy of Innovation Activity (2016–2020) with the Action Plan (2016);**
- **Strategy of Scientific-Research Activity (2017–2021) with the Action Plan (2017);**
- **National Roadmap for the European Research Area (ERA) (2016);**
- **Montenegrin Research Infrastructures Roadmap (2014–2020) (2015);**
- **Feasibility Study for the Establishment of Centres of Excellence in Montenegro (2011);**
- **Feasibility Study for the Establishment of a Science and Technology Park (2011);**
- **Strategic Plan for Development of the Science and Tech. Park in Montenegro (2012);**
- **Study of Sci.Research Equipment and Formation of a Joint Research Area 2013–2017;**
- **Analytical Study of Montenegrin Diaspora (2014);**

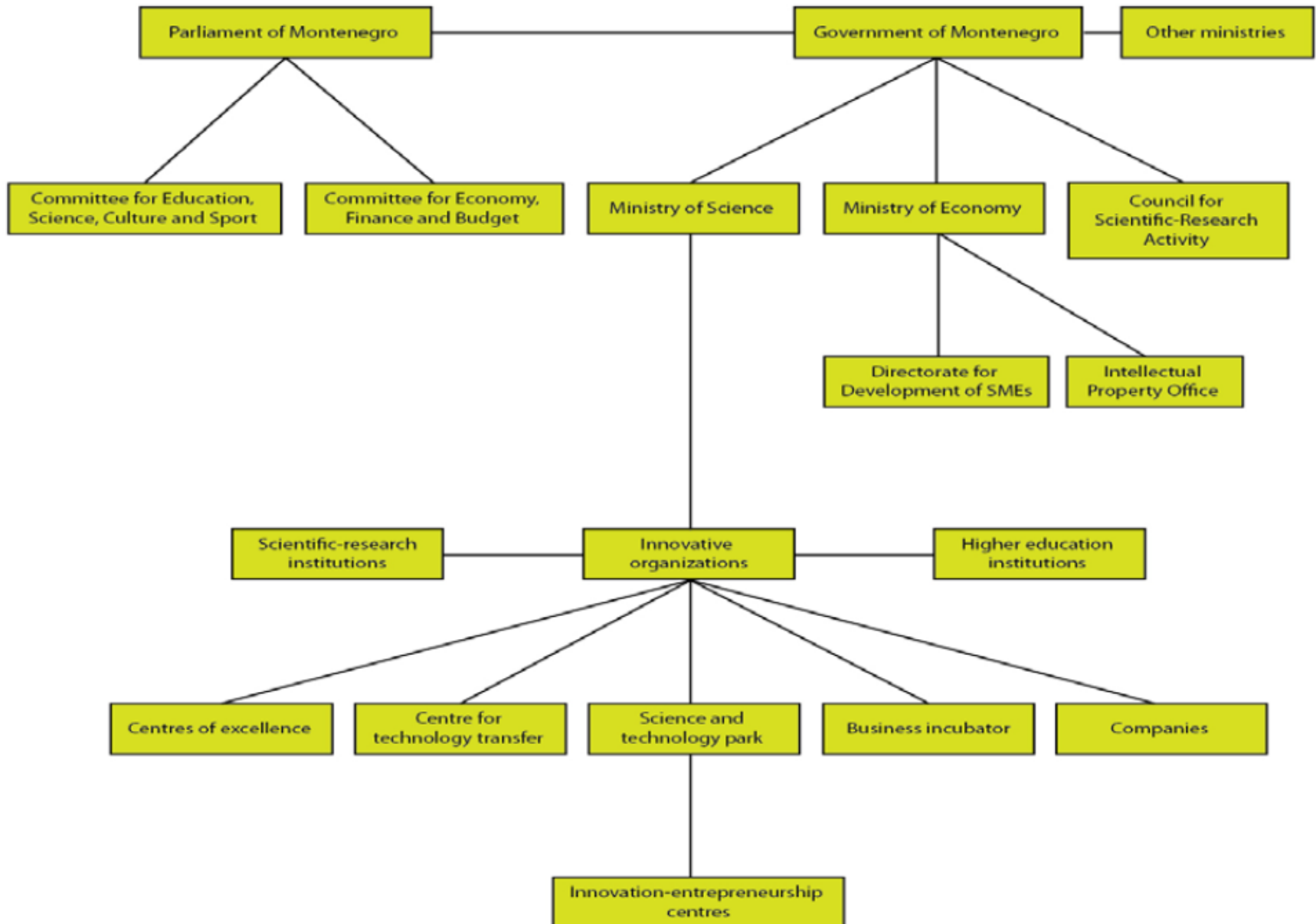
- **Smart Specialisation Strategy (S3) – in preparation phase, should be adopted by the end of 2018.**



Strategic framework for science and innovation

Other relevant documents

- **Directions of Development of Montenegro (2015–2018);**
- **Economic Reform Programme (ERP) (2017–2019);**
- **Strategy of Regional Development of Montenegro (2014–2020);**
- **National Strategy of Sustainable Development of Montenegro by 2030 (NSSD);**
- **Strategy of Development of Higher Education (2016–2020);**
- **Strategy for SME development 2018-2022 – under preparation**
- **Strategy for Life Long Entrepreneurial Learning 2015-2019**
- **Strategy for Development of Women Entrepreneurship 2015-2020**
- **Strategy of Development of Information Society in Montenegro by 2020;**
- **Industrial Policy of Montenegro by 2020;**
- **Programme of Accession of Montenegro to the EU 2014-2018 (PPCG), Chapter 25 – Science and Research;**





Ministry of Science - state administration body which develops and implements the policy of **research, development and innovation through national and international programmes of public interest**. It also negotiates and implements bilateral agreements on S&T cooperation, concludes memoranda, protocols and programmes of cooperation with ministries and foreign organisations.

Ministry of Economy is the state administration body that proposes and implements the **development strategy of Montenegro**, creates conditions for sustainable and balanced growth and **development of Montenegrin economy and its competitiveness**, implements a **policy aimed at supporting economic development, entrepreneurship and SMEs**, and is responsible for new production and business technologies.

The Council for Scientific-Research Activity is appointed by the Government and is tasked with **monitoring the implementation of strategies and laws in the field of research and development, providing expert suggestions in terms of improving research and innovation activities and having an advisory role**.

Ministry of Finance

Council for Competitiveness (recently formed)



Innovative organisations that carry out innovation activity are:

- **Universities (one public and 3 private)**
- **Other research institutions,**
- **centers of excellence,**
- **higher education institutions,**
- **science and technology parks,**
- **centers for innovation and entrepreneurship,**
- **business incubators and**
- **companies or parts of companies**

*** Definitions are formulated in the Innovation Law and the Strategy for Innovation**



Developing innovation ecosystem in Montenegro

Period 2011-2017

- **focus on development of R&D capacities**
 - **set of financial instruments developed and implemented**
(National projects for R&D&I, young researchers, mobility, National excellence scholarship program)
 - Infrastructure / more than 15 laboratories upgraded with R&D equipment
- **international cooperation**
 - H2020, EUREKA, COST, NATO SPS, Bilateral cooperation...
- **linking science and business (HERIC project)**
 - First Center of Excellence 3,4 M €
 - 8 collaborative research grants 2,6 M €
 - TEHNOPOLIS established 2,0 M €

New job
opportunities

Promotion of science
in society

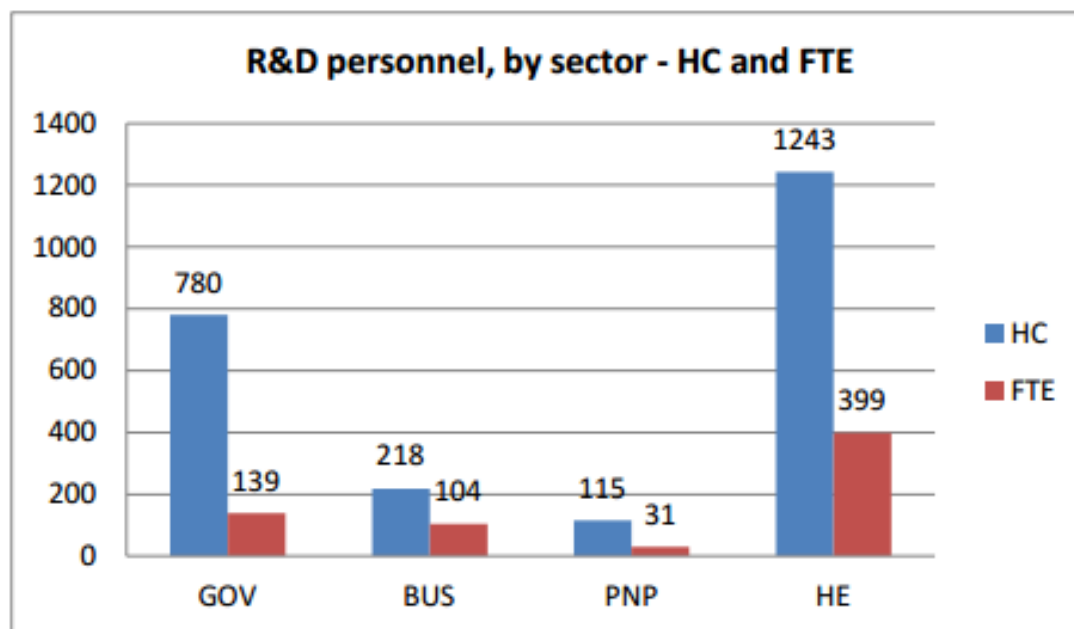


Developing innovation ecosystem in Montenegro

- **Innovative - entrepreneurial center "Tehnopolis" in Nikšić**
 - **Started in Sep 2016**
 - adaptation of old Army building in city center
 - ~ 23 innovative companies and start-ups
 - Industrial design and bio-chemical lab, ICT data center, congress center, meeting rooms, etc..
 - Total investment ~ 2 M €



Figures R&D – HR (2015)



2356 R&D staff

1766 researchers, 386 technicians and equivalent staff and 204 other support staff

Full-time-equivalent of 673 people on R&D jobs in 2015.

Figures

<i>GERD 2011-2015 - Montenegro</i>	2011	2012	2013	2014	2015
GERD	0.31	n.a	0.37	0.36	0.38

Mapping economic, innovation and scientific potential in Montenegro - Final report, 15 March 2018

Table 10 R&D expenditures in Montenegro

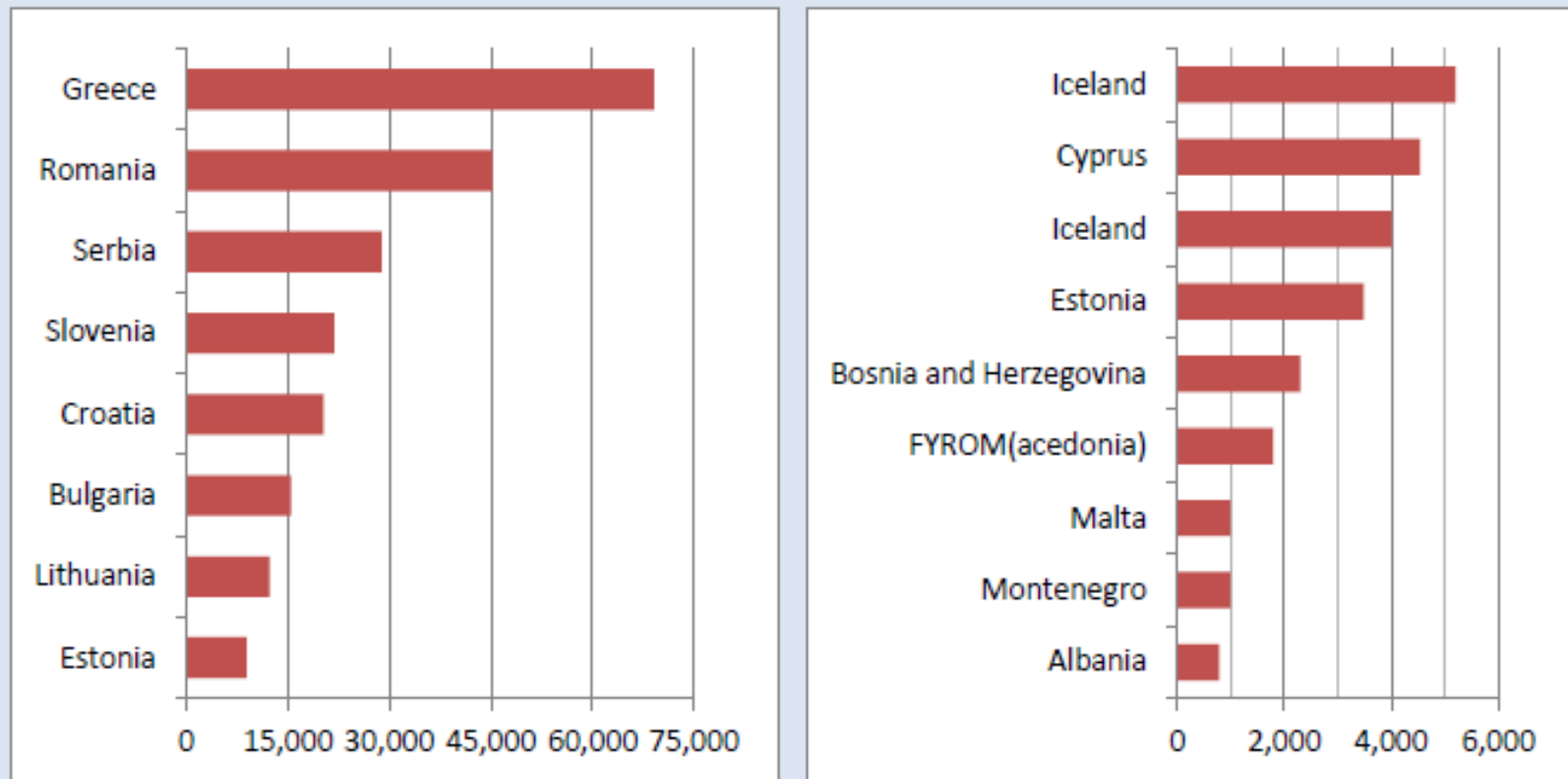
Montenegro		2011	2012	2013	2014	2015
Government sector	% of total R&D	24.7	n/a	16.0	21.3	19.2
Higher education sector	% of total R&D	44.3	n/a	32.0	37.4	46.7
Private non-profit sector	% of total R&D	2.4	n/a	2.7	2.8	3.5
Business enterprise sector	% of total R&D	28.7	n/a	49.3	38.5	30.4
Business enterprise sector	% of GDP	0.09	n/a	0.18	0.14	0.11
EU28		2011	2012	2013	2014	2015
Government sector	% of total R&D	12.7	12.4	12.4	11.8	11.8
Higher education sector	% of total R&D	23.4	23.4	23.3	23.2	22.7
Private non-profit sector	% of total R&D	1.0	1.0	1.0	1.0	1.0
Business enterprise sector	% of total R&D	62.9	63.2	63.4	64.0	64.5
Business enterprise sector	% of GDP	1.24	1.27	1.28	1.30	1.31

Source: Eurostat

Figures - publications

Mapping economic, innovation and scientific potential in Montenegro - Final report, 15 March 2018

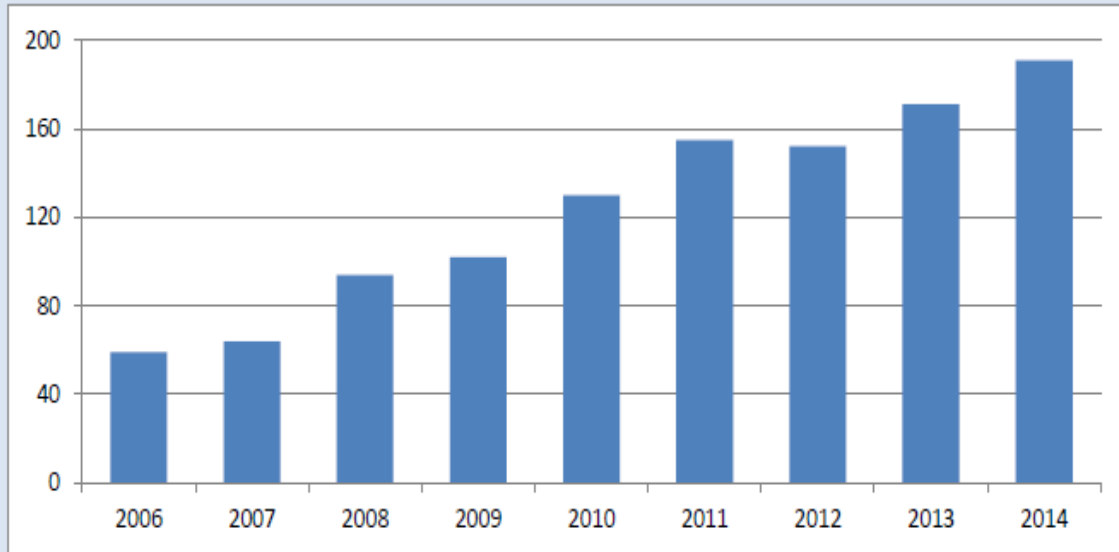
Figure 8 Number of scientific publications (2008-2014)



Source: Compiled by author using Web of Science data from 2015 UNESCO Science Report

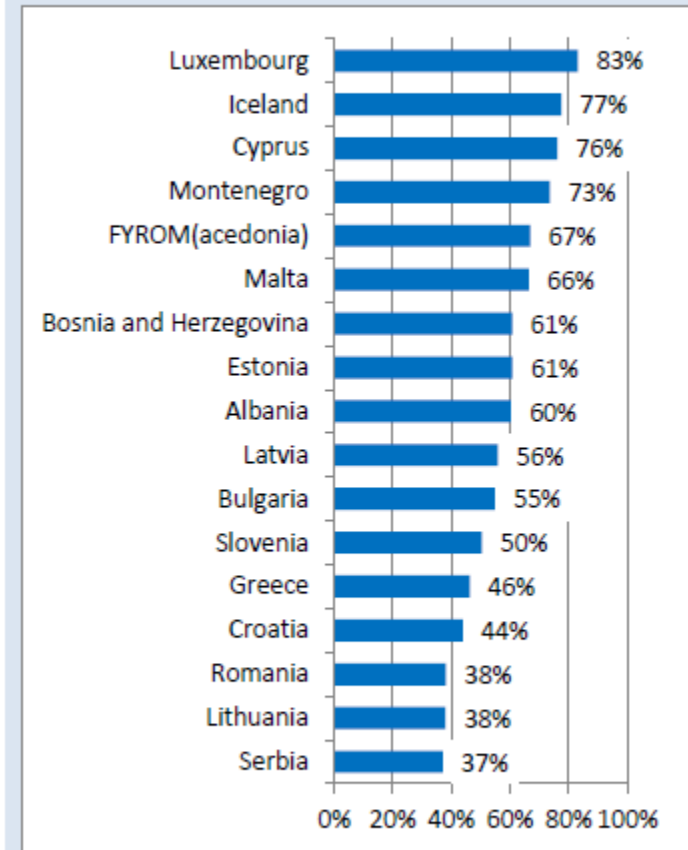
Publications

Figure 10 Montenegro: scientific publications (2006-2014)



Source: Compiled by author using Web of Science data from 2015 UNESCO Science Report

Figure 14 Percentage of papers with international co-authors (2008-2014)



Source: Compiled by author using Web of Science (data from 2015 UNESCO Science Report)

Author: Hugo Hollanders

Innovation statistics

- Not yet established – pilot survey in 2018 (Monstat)
- Innovation Scoreboard inclusion planned for 2019
- Alternative: *World Economic Forum* Global competitiveness index: 91 out of 137 countries (score: 3,2 on scale 1-7)

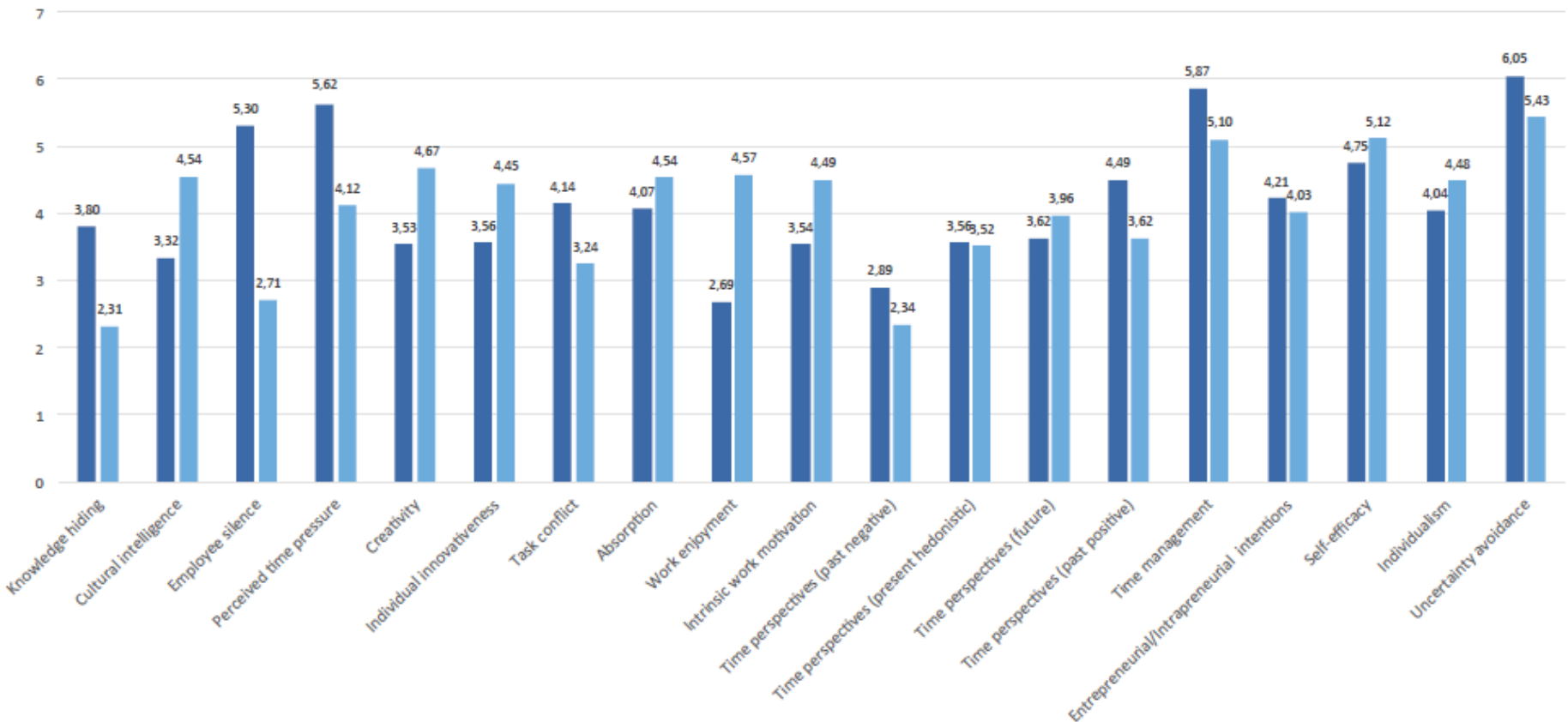
Table 13 Innovation activities: relative performance of Montenegro

Indicator	Montenegro	Europe & Central Asia	All Countries
Percent of firms that introduced a new product or service	14.3	23.4	36.8
Percent of firms whose new product/service is also new to the main market	22.7	68.2	65.1
Percent of firms that introduced a process innovation	11.7	20.6	34.0
Percent of firms that spend on R&D	9.5	8.1	16.6
Percent of firms using technology licensed from foreign companies (manufacturing firms only)	9.0	17.0	14.5

Source: Enterprise Surveys (<http://www.enterprisesurveys.org>), The World Bank.

Innovation analyses

- Micro determinants of innovation: EU Paccino project
- MNE – blue; Adriatic region – light blue





Towards 2020

- **to ensure more attractive environment for innovation**
 - Innovation and R&D Strategy, Smart Specialization Strategy
 - **new set of financial instruments**
(New calls for national R&D and innovation projects, collaborative grants, PhD candidates)
 - Program for employments of PhDs after graduation
 - legislation improvement
- **to continue supporting international cooperation and mobility**
 - Increase participation in H2020, COST, EUREKA, NATO SPS etc.
 - Increase mobility
- **to continue supporting science/industry cooperation**
 - Science & Technology Park in Podgorica - general design tender soon to open
 - new grants for collaboration



HERIC

HIGHER EDUCATION AND RESEARCH FOR INNOVATION AND
COMPETITIVENESS PROJECT

www.heric.me

Implemented by the Ministry of
Science and Ministry of Education
World bank Loan - 12 M EUR

Implementation period
(May 2012 – 31. December 2018)

General objective of the HERIC project

“strengthen the quality and relevance of higher education and research in Montenegro through reforming the higher education finance and quality assurance systems and by strengthening research and development capabilities”



TTOs issues..

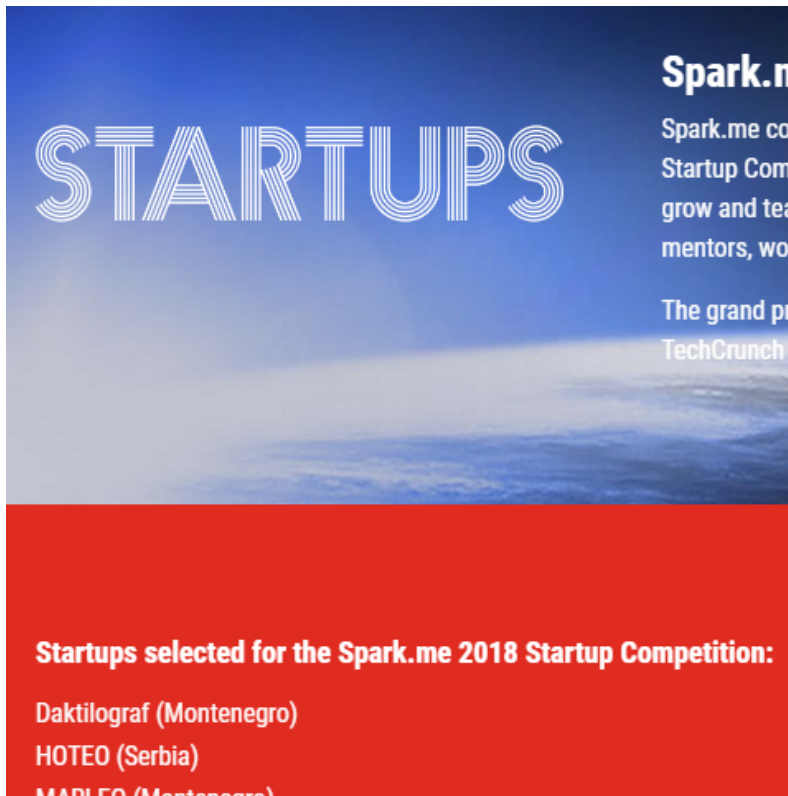
- Universities are still developing their innovation ecosystem.
- Institutional IP regulations still missing
- TTO established at the University of Montenegro, but still no employees

Research teams have results with potential close to market, but need support from university management when it comes to commercialization actions (including the creation of start-ups).



Grassroot initiatives

- **A growing start-up community**
 - Conferences (Spark.Me)
 - Hackatons, start-up weekends
 - Co-working spaces
 - Student involvement
- **Dialogue with start-ups initiated**
 - TAIX workshop 2017
 - Dialogue with start-ups 2018
 - Creation of partnership for collaboration on PSF project and national programme for start-up support ecosystem – 4-helix
- **Joining of EU initiatives**
 - ESIL project (EU-H2020) – creation of local business angels (from 2018, Philippe Gluntz)
 - EIT summer / winter schools, business competitions...



TAIEX: Workshop on establishment of Innovation ecosystem - 2017





Preparation of PSF request - I

Preparation of PSF request: August – September 2017

Drawing recommendation from existing policy documents:

- National ERA Roadmap (MoS document - adopted in 2016)
- Commercialisation Report (Ministry's working doc from May 2017, external expert: Peter Lindholm)

Context: recently adopted Strategy for Scientific-research activity (Dec 2017), Innovation Strategy and Law on Innovation (2016), Strategy for development of science-technology Park in Montenegro (Dec 2012), First innovation impulse centre opened (Sept 2016), Growing start-up community in the country seeking funding abroad



Preparation of PSF request - II

Areas of intervention opened to consultation to the Council of Scientific-Research activity and Ministry's staff (with ranking):

1. Implementation and improvement of legislation related to the establishment and growth of start-up companies
2. Financial support to research projects with commercialisation potential
3. National policy on HR in research and innovation
4. Improvement of entrepreneurial education (in cooperation with universities)
5. Intellectual property management
6. Creation of „open access“ policy



Preparation of PSF request - III

Letter of Intent sent to DGRI in September, approval received in Dec 2017:
Development of legislative framework and ecosystem model for supporting start-ups in Montenegro.

The expected outcomes of this activity would be:

- Recommendations for legislation changes in all the domains relevant to start-up work (state aid, labour, tax, banking, university internal legislation)
- Concept design of the organisational setting for start-up support ecosystem
- Proposal of the funding programme in the mandate of the Ministry of Science for initial phases of start-up development.

Government of Montenegro Annual Plan for 2018 (IV quarter):
Programme of support to start-ups in Montenegro

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