POLICY ANSWERS

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Report on the Promotion of Research Infrastructures

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1 Introduction

This Policy Report provides an overview of policy and practice in Open Access (OA) to Research Infrastructure (RI) with reference to established European best practice and current status and ongoing actions in the Western Balkans (WB)[1].

OA to RI is part of the wider Open Science Agenda, led by the European Commission (EC) that includes OA to research publications and data[2]. Its importance is reflected in the 2025 European Strategy on Research and Technology Infrastructures[3] which identifies OA as a key driver to maximise scientific progress and innovation by providing researchers with opportunities to use cutting-edge facilities across borders and to achieve the "fifth freedom" in the EU. The significance of maintaining the OA RIs Agenda can be seen in its longevity and update: the EU published its first Open Access Charter for Access to RIs in 2016[4] and an update in 2024 (European Charter for Access to Research Infrastructures – principles and guidelines for access and related services[5]).

The policy framework for OA RIs in the WB is centred on the Protocol on Open Access to Research Infrastructure[6], agreed upon by the region as part of a Common Regional Market framework[7]. This framework, supported by initiatives like the Regional Cooperation Council's (RCC) 2020 Support Programme[8], provides principles to enable wider access for researchers to existing infrastructure by focusing on policy development, staff training and regional cooperation. The perceived benefits include fostering an attractive research and innovation ecosystem, promoting regional

[1] The Western Balkans comprise Albania, Bosnia and Herzegovina, Kosovo*, Montenegro, North Macedonia and Serbia.
*This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo Declaration of Independence

[2] See for example: European Commission: Directorate-General for Research and Innovation. (2016). Background note on open access to scientific publications and open research data. Publications Office of the European Union https://research-and-innovation.ec.europa.eu/document/download/4bd9ef8e-0101-457d-9fc5-1096c4e8f6f0_en?filename=ec_rtd_background-note-open-access.pdf. Accessed 26 September 2025.

[3] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. (2025). A European Strategy on Research and Technology Infrastructures. COM(2025) 497 final/2. https://research-and-innovation.ec.europa.eu/document/download/009f0f91-74d3-4b94-9d79-55668cfd5a78_en?filename=com_2025_497_1_en_act.pdf. Accessed 22 September 2025.

[4] European Commission, Directorate-General for Research and Innovation. (2015). European Charter for Access to Research Infrastructures – Principles and guidelines for access and related services, Publications Office of the European Union. https://data.europa.eu/doi/10.2777/524573. Accessed 22 September 2025.

[5] European Commission, Directorate-General for Research and Innovation. (2024). European Charter for Access to Research Infrastructures – Principles and guidelines for access and related services, Publications Office of the European Union. https://data.europa.eu/doi/10.2777/8299402. Accessed 22 September 2025.

[6] Regional Cooperation Council. (2020). Protocol on Open Access to Research Infrastructure in the Western Balkans. https://www.rcc.int/download/docs/Protocol%20on%20Open%20Access%20to%20Research%20Infrastructure%20in%20the%20Western%20Balkans%20.pdf/d63c38341c5d306db1be4fd605fafe31.pdf. Accessed 22 September 2025.

[7] Regional Cooperation Council. Common Regional Market. https://www.rcc.int/pages/143/common-regional-market. Accessed 22 September 2025.

[8] Regional Cooperation Council. (2020). Open Access Research Infrastructure in the Western Balkans Support Programme. https://www.rcc.int/working_groups/60/open-access-research-infrastructure-in-the-western-balkans-support-programme. Accessed 22 September 2025.

cooperation, supporting economic growth through innovation and acting as a vital stepping-stone for aligning with EU standards and the EU's Digital Single Market.

The present report builds on activities directly undertaken by the POLICY ANSWERS project to highlight the importance of RIs and to raise awareness among policy makers of their potential to address challenges such as geopolitical tensions, brain drain and to boost economic growth. To advance this vision, POLICY ANSWERS organised a number of meetings and conferences, introduced the RI Ambassadors initiative to promote both existing and emerging facilities in the region, and showcased the benefits of participation by WB researchers, organisations and companies engaged in leading European RIs, such as the European Strategy Forum Research Infrastructures (ESFRI)[9] and European Research Infrastructure Consortium (ERIC)[10].

The report at hand also considers complementary activities undertaken by other partners and stakeholders, including the RCC and the EIT's (European Institute of Innovation and Technology) InfraBooster action[11]. These are considered against established best practice, published by the EC and individual research performing organisations (RPOs).

Finally, the report highlights a potential contribution to the European FP10 "moonshot" project[12] related to regenerative therapies and advanced healthcare innovations initiated by the WB — coinciding with the European Organization for Nuclear Research's (CERN)[13] efforts to accelerate medical applications[14] — designed to address Europe's current geostrategic and geoeconomic challenges and underscoring the lesson that Europe, as a whole, matters.

The report is laid out as follows:

Chapter 1 examines best practice in encouraging and securing OA to RIs. It studies the past and current EC policy and strategy framework and the range and scope of "RIs": this term may be applied to from very large unique international facilities to specialised laboratory equipment and digital data repositories operated by a group or department. It offers an overview of how the EC has sought to offer good practice frameworks and how some EU Member States (MS) have embedded OA RIs into their national principles. It looks at how individual facilities and RPOs have adopted internal policies to promote and regulate Open Access by a variety of different users, including internal researchers and staff, external researchers from other RPOs and external commercial organisations and for a range of different purposes from fundamental research to commercially oriented product and service development.

Chapter 2 outlines the current status as well as recent and ongoing activities in the WB to support OA RIs. This includes the 2020 initiative by the RCC to support development and adoption of OA RI policies at RPOs, economy-level RI Roadmaps and some early mapping and inventory activities in Serbia and Albania, support for developing OA services by InfraBooster, the work of the WB RI Ambassadors and the POLICY ANSWERS's mobility scheme. Using Chapter 1 as a base line it carries

[9] ESFRI: European Strategic Forum Research Infrastructures. https://www.esfri.eu. Accessed 27 September 2025.
[10] ERIC: European Research Infrastructure Consortium. https://research-and-innovation.ec.europa.eu/strategy/strategy-research-and-innovation/our-digital-future/european-research-infrastructures/eric_en. Accessed 27 September 2025.
[11] European Institute of Innovation and Technology (EIT). InfraBooster. Western Balkans Support. https://www.eit.europa.eu/community-activities/western-balkans-support. Accessed 22 October 2025.
[12] European Commission, Directorate-General for Research and Innovation. (2025). Horizon Europe 2028 - 2034: twice bigger, simpler, faster and more impactful. https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/horizon-europe-2028-2034-twice-bigger-simpler-faster-and-more-impactful-2025-07-16_en. Accessed 27 September 2025.
[13] CERN: European Organization for Nuclear Research. https://home.cern. Accessed 18 September 2025.
[14] Vretenar, M. (2020). CERN takes next step for hadron therapy. https://cerncourier.com/a/cern-takes-next-step-for-hadron-therapy/. Accessed 26 September 2025.

out a gap analysis and makes recommendations to policy makers at regional, economy-level and institutional levels.

Chapter 3 showcases exemplary cases of emerging and developing research and technology-oriented infrastructures in the WB and examines how they act as catalysts for scientific excellence, innovation and regional transformation. The case studies span diverse fields — from smart agriculture (ANTARES – BioSense Institute, Novi Sad[15]), life sciences (BIO4 Campus, Belgrade[16]), digital backbones (RASH – Academic Network of Albania[17]) and green and digital urban innovation (Tech4Green Campus, Sarajevo[18]) to pan-European integration in the social sciences (ESS ERIC – European Social Survey[19]) and industrial innovation in green technologies (ElevenEs, Subotica[20]). The chapter illustrates how these initiatives demonstrate the potential of RIs to attract investment, build talent and align the region with European research and innovation (R&I) priorities set out in the 2025 European Strategy on Research and Technology Infrastructures. It underscores how different models of development — ranging from grassroots initiatives to large-scale flagship projects — can deliver scientific, societal and economic benefits and confirms the region's capacity not only to benefit from but also to contribute to Europe's evolving RI landscape.

Chapter 4 turns from analysis to action. It examines the need for, and benefits of, large pan-European RIs in the Western Balkans, with a focus on the concrete case of the proposed South East European International Institute for Sustainable Technologies (SEEIIST)[21]. Conceived in the WB, SEEIIST has managed to mobilise a powerful European consortium of 23 leading research centres, clinics and companies. SEEIIST demonstrates that the region can not only align with European priorities but also initiate a flagship project of true pan-European relevance. With technology ready, and a broad base of scientific and industrial partners in place, the project offers Europe a unique opportunity: to deliver cutting-edge cancer therapy, advance frontier accelerator technologies, and strengthen European industry, all while uniting a historically fragile region through science diplomacy. The chapter argues that it is now time to act. SEEIIST should be recognised as a moonshot project under FP10 — fully aligned with the priority to "Deliver to improve patient's health"[22]. The science and technology are ready; what is still needed is the political will and European commitment to move from design to construction.

[15] BioSense Institute. (2025). https://biosens.rs/en. Accessed 18 September 2025.
[16] BIO4 Campus. (2025). https://bio4.rs. Accessed 18 September 2025.
[17] RASH: Albanian academic network. https://www.rash.al/en/. Accessed 18 September 2025.
[18] POLICY ANSWERS. Policy Dialogue on Aligning Priorities in the Western Balkans – Conference. Sarajevo. 13 September 2023. https://wbc-rti.info/object/news/24526/attach/Panel1_4-Jasmin_Ademovic_-_Presentaton-Tech4Green.pdf. Accessed 18 September 2025.
[19] ESS ERIC. European Social Survey European Research Infrastructure Consortium. https://www.europeansocialsurvey.org/about-ess. Accessed 18 September 2025.
[20] ElevenEs: European leading manufacturer of the lithium iron phosphate blade prismatic battery cells. https://elevenes.com. Accessed 18 September 2025.
[21] SEEIIST: South East European International Institute for Sustainable Technologies. https://seeiist.eu. Accessed 18 September 2025.
[22] Ibid.

2 Guidelines and best practices for the effective use of national and international Research Infrastructures

2.1 Introduction to Research Infrastructures and Open Access

2.1.1 Definitions and scope

ESFRI defines Research Infrastructures (RIs) as "facilities, resources and services used by the science community to conduct research and foster innovation"[23]. RIs range from very large and complex research facilities for carrying out cutting edge fundamental research, such as CERN and the Extremely Large Telescope (ELT), to small laboratories with specialised Research and Development (R&D) equipment that can be used for routine testing, e.g., tensile testing machines and microscopes. Common terms to describe such facilities include "single-sited", "distributed" (an organised network of resources), "mobile" or "virtual".

As noted by the 2025 European Strategy on Research and Technology Infrastructures[24], research and technology infrastructures have been developed to serve different needs and hence different primary user communities. The EC's definition of RIs and their guidelines on issues such as OA Policy are largely directed towards large and highly specialised facilities[25]. However, widening access to less unique RIs is becoming more common as RPOs are encouraged to pool resources and avoid duplication of equipment purchase — a practice that also encourages mobility of researchers between groups, disciplines, organisations and countries. It is also seen as a way to support enterprise R&D, particularly in smaller companies who do not have access to such facilities within their own organisation or the financial resources to purchase their own infrastructure.

2.1.2 RI OA as part of the "Open" Agenda

The EU, as well as other developed economies, has been moving for many years–towards a more "open" approach to Research, Development and Innovation (RDI). This can be seen through a number of well-established initiatives, including "Open Innovation" (OI) where academia and industry work together to boost innovation. Triple helix mechanisms to boost OI, with a particular emphasis on Small and Medium-sized Enterprises (SMEs), are now well established across Europe. It is also inherent in the "Open Access to research publications and data"[26] initiative that seeks to make all publications available to an audience as wide as possible to help disseminate knowledge and learning. This now forms a corner stone of the Horizon Europe programme. From OI and Open

[23] This definition is based on Article 2 (6) of the Regulation (EU) No 1291/2013 of 11 December 2013: Establishing Horizon 2020 - the Framework Programme for Research and Innovation (2014 – 2020) https://eur-lex.europa.eu/eli/reg/2013/1291/oj/eng. Accessed 5 October 2025.
[24] See footnote 3.
[25] See footnote 5.
[26] See for example European Commission: Directorate-General for Research and Innovation. (2016). Background note on open access to scientific publications and open research data. Publications Office of the European Union https://research-and-innovation.ec.europa.eu/document/download/4bd9ef8e-0101-457d-9fc5-1096c4e8f6f0_en?filename=ec_rtd_background-note-open-access.pdf. Accessed 26 September 2025.

Access (OA) to publication and data, the EC has further broadened the OA to "Open Science" (OS) to cover how research is performed as well as how knowledge is shared[27].

Most recently, the 2025 European Strategy on Research and Technology Infrastructures identifies OA as a key driver to maximise scientific progress and innovation by providing researchers with opportunities to use cutting-edge facilities across borders and to achieve the "fifth freedom" in the EU. The importance of integrating existing and potential candidates as well as Associated Countries in the European Research Area (ERA) is also recognised by the EC as a key element of the resilience of RIs.

2.1.3 Benefits of OA to RIs

RIs can provide the basis for attracting and retaining good researchers as well as providing contract research services to enterprises and other external organisations. While highly specialised RIs such as CERN and Extreme Light Infrastructure (ELI)[28] can form the basis for global collaborative research programmes, smaller laboratories, facilities and expertise can form the basis for strengthening innovation at local, national and regional levels, with associated benefit to the economy. Smaller RIs can also form the nucleus for a Centre of Excellence (CoE) to promote collaboration between science, technology and industry and to provide a platform for education of young scientists and engineers.

The benefits of OA to RIs for an individual RPO are numerous. To name just a few, opening up infrastructures of different type and size can lead to stronger scientific results (a key goal for all research-focused organisations), stronger effects in other domains (e.g., innovation when the research leads to new commercially viable discoveries and results) and more collaborative research by involved various research groups. It can also potentially bring additional financial benefits in cases where access to the RIs can be offered for a fee and the revenue used to maintain and repair the equipment.

2.1.4 Benefits of OA to policy makers

Policy makers also receive benefits from an OA approach. In many scientific fields, specific instruments are so costly or not used frequently enough for every laboratory to justify purchasing them: sharing of equipment and a reduction in duplication of equipment is attractive to Ministries as a more efficient approach to the allocation of funds. In addition, interactions between research groups and companies can encourage long term collaboration including those that are interdisciplinary in nature. This desire to avoid duplication and encourage sharing can be at the heart of a move by policy makers towards OA.

A strategic approach to OA RIs by policy makers can be seen in the 2017 Lithuanian "R&D Valleys" initiative established using Structural Funds and comprising five integrated centres (valleys) linked by an "Open R&D network" comprising 14 Lithuanian universities, 13 public research institutes and eight science and technology parks. All these institutions have concentrated their high-level R&D intellectual potential, infrastructure and resources in order to provide scientifically based solutions for business and society ("Open R&D Lithuania[29]"). While the original project-based funding ended in 2020, the OA network and approach continues to flourish.

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[27] See for example European Research Executive Agency. Open Science. https://rea.ec.europa.eu/open-science_en. Accessed 26 September 2025.
[28] ELI: Extreme Light Infrastructure. https://www.eli-laser.eu/. Accessed 26 September 2025.
[29] ecoRIS3 Interreg Europe. (2017). Open R&D network has been launched in Lithuania. https://projects2014-2020.interregeurope.eu/ecoris3/news/news-article/2218/open-r-d-network-has-been-launched-in-lithuania/#:~:text=03/01/2017,and%20get%20highest%20quality%20services. Accessed 26 September 2025.

2.1.5 RIs: scale and value

One of the key definitional issues of importance is the scale (or geographic scope of relevance) of the RIs. The EC definitions have been generally set as part of discussions on "large-scale" infrastructure of pan-European relevance (within the framework of ESFRI[30]). The scale of RIs can be defined partly in terms of the financial investment required but also in terms of the strategic objectives of the RIs' management, e.g., a business plan may define an objective to encourage use of the RIs by researchers from neighbouring economies or to become a "regional research facility" linked to a European large-scale research facility. This regional aspect may become increasingly important for the WB.

Good Practice example

As outlined in its 2023-2027 Roadmap[31], Croatia categorises RIs primarily as large, medium and small equipment based on their purchase value:

- Large equipment: Purchase value over EUR 400,000;
- Medium equipment: Purchase value between EUR 55,000 and EUR 400,000;
- Small equipment: Purchase value up to EUR 55,000.

However, Croatia also defines RIs by type:

- e-Infrastructures: Digital infrastructures crucial for research and education;
- Data repositories: The DABAR (Digital academic archives and repositories) platform hosts institutional repositories for publications and research data;
- Cloud computing: The Croatian Scientific and Educational Cloud (HR-ZOO) is a national scientific and educational cloud being built to provide cloud and data centre services for higher education and research institutions;
- High-Performance Computing (HPC): Services and clusters are available to support demanding computational needs;
- Network infrastructure: Services are provided to connect researchers to international networks and data services.

2.1.6 Creating an inventory of RIs

In order to assess the RIs available, many countries or individual RPOs have initiated an "inventory exercise" (sometimes also called an "equipment audit" of "capital equipment") and then established an online database. Examples of this approach can be found at national level in Ireland where the "Large Items of Research Equipment" (LIRE) database[32] contains research equipment items with a value of EUR 100,000 or more, and at organisational level at Kaunas Technical University (KTU) in Lithuania where all equipment worth more than EUR 5,000 is available in an online catalogue[33].

[30] See footnote 9.
[31] Ministry of Science and Education of the Republic of Croatia. (2023). Research Infrastructure Development Roadmap of the Republic of Croatia 2023-2027. https://mzom.gov.hr/UserDocsImages/dokumenti/Znanost/ZnanstvenaInfrastruktura/ZnanstvenaOprema/znan-oprema-29-12-2023/Research-Infrastructure-Development-Roadmap-of-the-Republic-of-Croatia-2023-2027.pdf. Accessed 26 September 2025.
[32] The LIRE is currently being updated and will ultimately be accessible via the Higher Education Authority's website. https://hea.ie/funding-governance-performance/governance/research-infrastructure-guidelines-for-access/. Accessed 26 September 2025.
[33] Kaunas University of Technology, Lithuania. National innovation and entrepreneurship centre. https://apcis.ktu.edu/en/site/katalogas. Accessed 26 September 2025.

Other countries that have used auditing to improve transparency and visibility of RIs include Slovenia (SICRIS)[34].

2.1.7 Good practice principles and guidelines

Making access to Research Infrastructure more widely available via OA is seen as a way to increase their efficiency and bring wider benefits. For this reason, a number of European and country level guidelines have been developed to encourage the practice. These have evolved through use and now distil best practice.

The EU published its first Open Access Charter for Access to RIs in 2015[35] and an update in 2024[36]. Some EU MS like Ireland have also developed their own national level guidelines for access by researchers to RI[37]. Others, like Poland and Lithuania have encoded OA into national regulations[38]. Individual organisations are then encouraged or compelled to develop their own policies as well as protocols, principles and regulations that lay out who can use the RI and under what conditions[39,40,41].

2.1.8 Summary and conclusions

In summary, national and organisational level OA policies and protocols addressing RIs can enable better efficiency and use of the existing RIs, streamline investments into the future RIs, to ensure optimisation of access to RIs by industry and the wider research community, public sector and civil society, as well as cross-border cooperation. OA policies and protocols to RI can also be a good entry point for a wider discussion and development of long-term management plans for RIs.

2.2 Open Access principles and policy development – the main issues

The 2024 European Charter for Access to Research Infrastructures[42] sets out non-regulatory principles and guidelines to be used as a reference when defining access policies for RIs and related services. The European Strategy on Research and Technology Infrastructures indicates that this is likely to be extended to include a Charter of Access for industrial users to research and technology infrastructures designed to simplify and harmonise diverging access and contractual conditions. It will also provide guidance on applicable State Aid rules for public research organisations that grant access to infrastructure.

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[34] Slovenian current research information system. https://cris.cobiss.net/ecris/si/en. Accessed 26 September 2025.
[35] See footnote 4.
[36] See footnote 5.
[37] National guidelines for access by researchers to research infrastructure hosted by higher education institutions or other research bodies in Ireland. https://hea.ie/assets/uploads/2017/09/NATIONAL-PRINCIPLES-FOR-ACCESS-TO-RESEARCH-INFRASTRUCTURE.pdf. Accessed 22 September 2025.
[38] For Lithuanian example see: https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.375571/asr. Accessed 22 September 2025.
[39] For Kaunas University of Technology, Lithuania see https://apcis.ktu.edu/help/operating_rules.pdf. Accessed 22 September 2025.
[40] For Vilnius University of Technology, Lithuania see https://www.vu.lt/site_files/MID/APC/VU_open_access_ENG.pdf. Accessed 22 September 2025.
[41] For the Terms and Conditions of use of the Research Infrastructure of the National Synchrotron Radiation Centre Solaris, Poland see https://synchrotron.uj.edu.pl/documents/1457771/138966987/terms-and-conditions.pdf/9abd9044-042c-47b5-a87f-8fcaa42b0a12. Accessed 22 September 2025.
[42] See footnote 5.

However, many individual RPOs have now adopted policies to open their smaller research facilities to a wider set of users. OA RI policies for smaller facilities need to reflect the size and complexity of the infrastructure as well as the target user groups.

The three main issues to be addressed upfront are listed below. For a much more comprehensive coverage of these and other issues and examples of how different organisations have dealt with them the reader is referred to the 2020 Regional Cooperation Council (RCC) document[43] developed as part of the RCC Open Access Research Infrastructure in the Western Balkans Support Programme (2020)[44].

Main issues to be addressed:

1. the definition of OA for the institution concerned;
2. the principles under which it will be made available;
3. the two "axes of access" indicting the degree to which the RI will be oriented towards research or services and internal and external users.

Once these issues have been resolved then the RI owning or hosting organisation can move towards developing an OA policy, normally adopted as an internal regulation.

2.3 Creating an Open Access policy

A typical OA policy addresses four key topics:

1. Users – typically divided into "internal and external";
2. Use of the infrastructure – the process for offering and managing access to the facilities;
3. Contractual and legal aspects – laying out the roles and responsibilities of the organisation and the user(s), addressing issues such as responsibility in case of equipment damage, ownership of results and any associated Intellectual Property Rights (IPR) as well as public acknowledgment of use;
4. Costs and pricing including recognition of the need for Full Economic Costing and any differences in pricing for different user groups.

Again, for a much more comprehensive coverage of the issues and examples of how different organisations have dealt with them, the reader is referred to the 2020 RCC document developed as part of the RCC Open Access Research Infrastructure in the Western Balkans Support Programme (2020).

Summary and key points to consider

In summary, there are a number of key considerations when preparing OA principles and policy for access to RIs. These include:

- RIs range from large scale multi-functional and multi-dimensional facilities to a single instrument for a specific research.
- Any laboratory and equipment within a university or research organisation is a RI and can be offered for OA to users.
- OA has numerous benefits and is an integral part in modern day research environment.
- Each university or RPO should have an up-to-date inventory of their RI and principles of OA clearly described.

[43] See footnote 6.
[44] See footnote 8.

- RIs can be used by numerous groups of users, both from within and outside the organisation that hosts or owns a specific RI.
- Depending on the mission and strategic decision, it is possible to prioritise some users, i.e., SMEs or those companies which have signed a strategic cooperation agreement.
- Obligations of both the users and a RI (as well as its hosting organisation) should be clearly described in a contract (or a similar document). Apart from the typical contractual clauses, some of the key points include ownership of IPR, confidentiality regulations and acknowledgements.
- Access fees for RIs can vary (from free use to a fee) but are easy to set once the costs of a RI are known.

3 Recommendations for increasing Open Access to Research Infrastructures in the Western Balkans

3.1 Introduction

The preceding chapter has outlined best practices for the effective use of national and international RIs including mapping, auditing and establishment of clear OA RI policies. This chapter offers a gap analysis between best practice and the current situation in the WB including ongoing initiatives. It makes recommendations for sustaining emerging good practice and closing the gap.

3.2 Open Access: status, challenges and ongoing initiatives

3.2.1 Regional roadmaps

Regional roadmaps for RIs have been developed for each WB economy, coordinated by the RCC. These roadmaps set strategic priorities, identify existing facilities and highlight areas for future investment and collaboration, with openness as a core principle[45].

3.2.2 OA RI policy

Development and adoption of OA RIs Policies in the WB was strongly supported by the RCC who supported a programme of technical assistance in its 2020 Western Balkans Support Programme for Open Access Research Infrastructure. This initiative resulted in the development of 21 OA RI policies, implemented at different levels including University level (e.g., University of Montenegro and Isa Beletini University, Mitrovica, Kosovo) as well as faculty and unit levels (e.g., at Aleksander Moisiu University in Albania: DIMTV Lab, ICT Lab, LLL Centre; University of Kragujevac, Serbia, Faculty of Engineering, Centre for Bioengineering).

There are no indications that further policy development and adoption has taken place since this RCC initiative.

Status of use

Of the 21 units which developed OA RI policy in 2020, only two responded to a request by the authors in 2025 to provide an update regarding their use. One indicated that active use was “rare” while the other indicated that the policy has been used “occasionally”.

Perceived challenges to increased use of OA RI policies

A number of challenges have been identified to increased active use of OA RI policies. These are:

- Low level of awareness among researchers, users and even other RI operators about the existence, resources and operations of open RIs;
- Limited “openness”;
- Absence or only slow adoption of clear policies and supporting procedures (policy regulation remains ”on paper”);
- Legal and administrative aspects;
- A prevailing culture of ”non-sharing”;

[45] Roadmaps for Research Infrastructures in Each Western Balkans Economy. https://westernbalkans-infohub.eu/documents/roadmaps-on-the-research-infrastructures-of-western-balkans-economies. Accessed 19 September 2025.

- Insufficient and unsustainable funding for the RIs which makes it hard to offer them for wider use with any long-term certainty;
- Competition from the private sector offering similar services.

Perceived benefits

Despite the challenges, RPOs have identified benefits. OA is seen to:

- Increase the use of RI resources;
- Enable institutions to collaborate more effectively on joint projects with other OA RIs;
- Strengthen an institution's capacity to attract new projects;
- Meet the requirements of some donors who increasingly prioritise "openness, transparency and alignment with international standards".

3.2.3 Support to RI mapping and establishment of registries

The National Agency for Scientific Research and Innovation (NASRI) in Albania launched a call in 2025 for "Mapping of Research Infrastructure and Establishment of National Register in Albania"[46] in the frame of the POLICY ANSWERS capacity building activities. The call focuses on evaluating and documenting the physical and digital resources available for research within higher education institutions (HEIs) and affiliated research organisations. The initiative aims at involving national experts conducting interviews with stakeholders, analysing strategic and policy documents and developing a methodology for a comprehensive national register of RIs. This effort includes a detailed assessment of institutional facilities, capacity building activities and preparation of recommendations on how to optimise OA and efficient use of these resources.

The rationale behind this mapping exercise is to address gaps in information about existing facilities, promote transparency and strategic planning and support national priorities for scientific advancement. Mapping is critical not only for identifying underused or unrecognised infrastructure, but also for guiding future investments, facilitating collaboration and enhancing the visibility of Albanian research capacity at a European level. Improved access to accurate and up-to-date information about RIs enables better resource sharing and informs policy decisions, which in turn helps foster innovation and international cooperation. Implementation is foreseen for 2025/26.

3.2.4 RIs and the Western Balkans Mobility Scheme

The Western Balkans Mobility Scheme (WBMS)[47] was a regional initiative launched in March 2024 by the POLICY ANSWERS project, designed to promote mobility-driven research and innovation across the WB, with a specific focus on the active use and accessibility of RIs by young researchers.

The scheme funded short-term mobility projects for early-career researchers affiliated with RPOs or HEIs within the WB. Their projects had to involve the physical presence of researchers at a host RI in a different WB economy, for periods ranging from two weeks to two months, with overall project durations between two weeks and six months. All thematic fields were eligible, with special attention to research addressing Green and Digital Transitions or regional Smart Specialisation priorities.

[46] POLICY ANSWERS. (2025). Mapping of Research Infrastructure and Establishment of National Register in Albania. https://westernbalkans-infohub.eu/calls/call-for-consultant-mapping-of-research-infrastructure-and-establishment-of-national-register-in-albania. Accessed 22 October 2025.
[47] Western Balkans Mobility Scheme: A POLICY ANSWERS Pilot Programme – Call for Applications. (2024). https://westernbalkans-infohub.eu/calls/western-balkans-mobility-scheme/. Accessed 22 October 2025.

The use of RIs was central to the scheme. The definition used was rather broad and also included virtual infrastructures[48] but the objective was clear: mobility projects must use specialised equipment or facilities at a host RI, thereby facilitating access to often underused regional resources.

The scheme encouraged utilisation of RIs that operate under OA policies, aiming at fostering brain circulation and retention, especially by removing barriers to access for early-career researchers. This reflects broader regional policy developments such as the establishment of OA networks and protocols endorsed by the WB economies. The scheme leveraged earlier OA initiatives, benefiting from standardised procedures and guidelines for access as well as supporting further dissemination and exploitation of research results. The scheme aimed at promoting OA principles in RIs as essential for improving regional cooperation, maximising resource use and stimulating innovation and knowledge transfer.

3.2.5 InfraBooster

The InfraBooster is a support programme developed by the EIT[49] aimed at enhancing the operational effectiveness and openness of RIs in the WB. The initiative provides training, knowledge-sharing and practical guidance for RI managers and staff, helping them understand business models, stakeholder engagement and service development without barriers to access.

InfraBooster's activities foster capacity building and regional cooperation, equipping participants to promote innovation and facilitate broader access for local and international researchers, industry and other stakeholders.

3.2.6 POLICY ANSWERS RI Ambassadors

The RI Ambassadors are five individuals selected to promote R&I policies in the WB through the EU-funded POLICY ANSWERS project. The following RI Ambassadors were appointed within the five thematic domains of

1) Agri-Food: Vesna Bengin (BioSense Institute, Serbia);

2) Health & Biotechnology: Smiljana Krivokca (Government of Serbia);

3) Digital: Arjan Xhelaj (Academic Network of Albania/RASH);

4) Green & Digital and Financial & Governance: Almir Badnjevic (Agency for Identification Documents, Registers and Data Exchange of Bosnia and Herzegovina/IDDEEA);

5) Social Science: Nenad Celarevic (Helvetas, Serbia).

The RI Ambassadors facilitate policy dialogue, bridge gaps between R&I stakeholders and advocate for the integration of the WB into the ERA. Their role involves sharing best practices, supporting policy coordination and improving the policy environment for R&I in the region to foster stability and prosperity.

3.3 Recommendations

Improving OA to RIs in the WB should be a priority to increase the impact of investment into RIs for both economic and societal benefit and to bring the wider benefits that are linked to an OA

[48] Ibid. *"… a set of facilities, resources and services that are used by the research communities to conduct research and foster innovation in their respective fields. It includes: major scientific equipment (or sets of instruments), knowledge-based resources such as collections, archives and scientific data, e-infrastructures, such as data and computing systems and communication networks and any other tools that are essential to achieve excellence in research and innovation."*

[49] See footnote 11.

approach. The following recommendations are made to policy makers and senior managers at RPOs. They have been developed based on feedback from and discussions with some public research organisations in the region and presentations and articles from the POLICY ANSWERS RI Ambassadors.

3.3.1 Overall recommendation

A stronger policy approach to OA RIs should take place at pan-regional-level where RIs are established or planned, at WB economy-level to support implementation of respective roadmaps and at individual organisational level to ensure most efficient investment and use of equipment and faculties.

3.3.2 Specific recommendations for policy makers

3.3.2.1 Pan-European and WB regional initiatives

Pan-European and WB regional initiatives should plan to develop and adopt OA principles and practices based on the 2024 EU Charter (or introduce further refinements).

3.3.2.2 WB economy-level initiatives

At WB economy-level, policy makers should:

1. Follow the practice example of Ireland and establish economy-level OA principles. Economy-level principles should
    - define OA RIs as a priority at the level of each WB economy;
    - outline the benefits of OA RIs to different user groups;
    - be structured to encourage RPOs to develop and adopt suitable OA policies that encourage a prevailing culture of openness and "sharing".
2. Consider making the adoption of an OA RI policy a legal requirement for accredited HEIs and RPOs. Where having an OA RI policy is a legal requirement, then legislation should include clear guidelines and rules for "opting out" (e.g., when a RPO does not have a RI that meets a certain threshold value), as well as triggers for needing to comply (e.g., acquiring a RI of a certain value), plus the time scale needed to adopt a policy.
3. Introduce incentives for researchers and institutions to use and contribute to OA RI. These could include recognition in promotion criteria, grant eligibility or performance evaluations.
4. Consider including OA RI Key Performance Indicators (KPIs) into RPOs' reporting. KPIs might include:
    - total number of OA users;
    - type of OA users;
    - number of new and repeat users;
    - type of services;
    - cost/value of providing access.
5. Take steps to raise awareness of the benefits of OA to different stakeholder groups, including the private sector, and monitor the effects, observing the following points:
    - Benefits should be tailored to different target groups and include research visibility, more effective collaboration and stronger impact for RPOs as well as increased competitiveness and innovation for the private sector.
    - Efforts should be made to monitor the effect of promotion in different stakeholder groups in order to assess raised awareness.
    - Promotional efforts should be repeated, e.g., annually, and linked to take up of services, e.g., via reported RPO KPIs (see above).

3.3.2.3 RPOs

RPOs in the WB are recommended to:

1. Carry out and regularly update an inventory of their RI.
   ⇒ It may be necessary to set a minimum threshold value for qualifying as an inventory item "RI". The source of the funding used to acquire the infrastructure should be noted in case a grant has prescribed a certain sort of use that would preclude "open" use, e.g., limited to teaching or to non-commercial R&D purposes.
2. Promote and embrace a culture of openness and "sharing" of RI.
   ⇒ Inventories of OA RIs should be made available and researchers should be encouraged to seek use of existing equipment rather than to duplicate facilities. This may be encouraged by linking funding to consumables, up-keep and repair to demonstrated shared use.
3. Educate their staff and researchers on the benefits of OA RI and "sharing".
   ⇒ This includes stimulating the ability to collaborate more effectively on joint projects with other Open Access RIs, strengthening institutional capacity to attract new projects and meet the requirements of donors, who increasingly prioritise openness, transparency, and alignment with international standards. And it includes pointing out the difference between OA RI and OA publications and the associated infrastructure for both.
4. Ensure capacity building for staff and researchers involved in planning and procuring RIs to guarantee that any purchasing decision is accompanied by a comprehensive analysis.
   ⇒ The analysis should cover the human and financial resources need to install, operate and maintain the equipment; the suitability of the physical environment for the equipment; the size of the expected user base and the significance of the use for economic and societal benefits, and the alignment of purchasing decisions with wider considerations, e.g., policy directions for the WB economy and the region.
5. Consult the 2020 RCC Open Access Policy Guidelines and template[50] and develop, adopt, distribute and publish an OA policy that is as "open" as possible.
   ⇒ This can take place at different organisational unit levels, e.g., institutional, faculty or centre, to suit their individual needs, potential and infrastructure. When planning for policy adoption the institution should include sufficient time for the process, involve all relevant stakeholders, and ensure that the final policy is both realistic and aligned with the institution's available resources and strategic directions. The policy should pay particular attention to the use of RIs by students (especially at Master and Bachelor programme level) to avoid conflict with commercial users. Any restrictions linked to the need for ongoing funding to maintain RIs should be considered and a plan put in place to deal with them.
6. Publish their OA RIs "service" offerings.
   ⇒ The offering should make it easier for potential users to understand what can be used, and when, from the OA RI facility. The RPO should designate a person with the responsibility to respond to questions regarding OA.
7. Ensure that they have practical procedures and technical support in place to allow the policy to be implemented by their constituent units.
   ⇒ Piloting the policy with different target groups, e.g., internal sharing, external sharing with another RPO and a commercial organisation may be a good way to test

[50] Regional Cooperation Council. (2020). Principals and Guidelines for creating a Policy for Open Access to Research Infrastructures. https://www.rcc.int/files/user/docs/open_access/Principals%20and%20Guidelines%20to%20Open%20Access%20RIs.pdf. Accessed 18 September 2025.

if it is feasible for implementation or if it runs the risk of remaining a good practice "on paper".

8. Introduce a practical usage tracking system to monitor use and make it possible to make a reliable "costing".
   ⇒ Different tracking systems can be considered that range from monitoring the full use of power and of the utilities to equipment and the costs of staff needed, which can help to run it to a simpler costing for a defined service for different levels of users and for the uptake of those services. Tracking may be needed to prove that the RPO is not exceeding the threshold for State Aid commercial usage (20 % ancillary "use"), however 20 % can be defined and monitored in different ways, e.g., from simple time occupancy to non-commercial or commercial value.

3.4 Summary

The WB economies have made good progress with developing roadmaps for their own RIs. This has not yet been translated into a systematic mapping of equipment and online registry despite some early work done by Serbia and a planned initiative by Albania.

Despite a strong initiative led by the RCC in 2020, OA RI policy remains mainly "on paper" and some researchers in the region still lack understanding of the difference between OA RI and OA publication. The lack of real OA policy adoption may hinder mobility focused initiatives such as the POLICY ANSWER WBMS.

Much work remains to be done by policy makers at all levels to strengthen OA RIs and make them a practical reality. There are clear benefits from this happening for all stakeholder groups, but they have yet to be realised. Moreover, there is a clear role for the POLICY ANSWERS RI Ambassadors in leading thematic approaches to OA RIs which should also be further promoted and aligned with Smart Specialisation priorities.

4 Showcasing success: exemplary cases of emerging and developing Research Infrastructures

4.1 Introduction: Research Infrastructures as engines of transformation

Research infrastructures are not only scientific facilities; they are strategic investments with profound economic and societal benefits. By driving technological innovation, enabling breakthrough discoveries and fostering collaboration across borders, RIs act as engines of transformation for regions and societies alike. Their impact extends well beyond science — they attract global talent, stimulate industrial innovation, create high-skilled jobs and provide solutions to pressing societal challenges such as health, climate change and digitalisation.

In the WB, the underdevelopment of RIs and the limited access to state-of-the-art facilities continue to constrain competitiveness and to drive talent abroad. This weakens scientific capacity and limits the region's contribution to European priorities. To reverse this trend, greater recognition of the importance of RIs is essential — not only as enablers of scientific excellence, but also as powerful levers of economic growth, regional cohesion and social stability - and must therefore be promoted as strategic investment.

While the definition of RIs is broad (as established in Article 2(6) of Regulation (EU) No. 1291/2013[51], covering facilities, resources, services, e-infrastructures and distributed models), the following part of this report at hand focuses on larger-scale infrastructures where science-based solutions, enabled by advanced technologies and collaborative frameworks, generate transformative impact.

This chapter highlights successful and emerging RI initiatives in the WB that

- serve as role models for future development and cross-border collaboration,
- demonstrate how EU instruments can catalyse transformation,
- illustrate the benefits in participation in leading European RIs, RI Fora (e.g., ESFRI) and RI Consortia (e.g., ERIC),
- provide lessons for policy makers to scale up RI investment as part of EU enlargement and ERA deepening.

4.2 Case studies: emerging and exemplary Research Infrastructures

Each of the following initiatives illustrates the transformative potential of RIs in different contexts — from health and environment to digital innovation and social sciences. The cases presented here are not an exhaustive catalogue of all important initiatives in the region. Rather, they represent a selection based on discussions at two dedicated POLICY ANSWERS workshops on RIs[52,53] and on the input of the POLICY ANSWERS RI Ambassadors. This approach ensured that the examples reflect both regional diversity and expert judgement, while remaining concise and focused.

[51] ESFRI. Research Infrastructure (RI). https://www.esfri.eu/research-infrastructure-ri. Accessed 18 September 2025.
[52] POLICY ANSWERS. (2023). Workshop on Research Infrastructures, September 2023, Sarajevo. https://westernbalkans-infohub.eu/news/policy-answers-workshop-on-research-infrastructures-september-2023-sarajevo/. Accessed 18 September 2025.
[53] POLICY ANSWERS. (2025). POLICY ANSWERS boosts importance of technology-oriented infrastructures for economic transformation in the Western Balkans. https://westernbalkans-infohub.eu/news/policy-answers-boosts-importance-of-technology-oriented-infrastructures-for-economic-transformation-in-the-western-balkans/. Accessed 18 September 2025.

4.2.1 Case: ANTARES – BioSense Institute, Novi Sad, Serbia

Background

The impact of the Teaming for Excellence calls in the WB — part of the EU Framework Programme for Research and Innovation Horizon Europe — is well illustrated by the ANTARES project. Dedicated calls in Horizon Europe are designed to support the creation of Centres of Excellence (CoE) as role models to stimulate institutional building.

Figure 1: BioSense Institute. ©BioSense

Through ANTARES, the BioSense Institute[54] in Novi Sad was transformed into a European Centre of Excellence for Advanced Technologies in Sustainable Agriculture and Food Security. The project delivered substantial infrastructure investments, including the construction of a new research facility and the acquisition of cutting-edge scientific equipment.

ANTARES positioned BioSense as a regional leader in digital agriculture, leveraging big data, Internet of Things (IoT) and artificial intelligence (AI) technologies. Beyond the physical upgrades, the project catalysed the creation of an innovation ecosystem that attracts top international talents, fosters entrepreneurship and strengthened collaboration between academia, business and government. Importantly, it also triggered national recognition: the Serbian government's decision to support the Bio4 Campus initiative (see 4.2.2 below) was directly linked to BioSense Institute's success.

Policy insight

- ANTARES demonstrates how targeted EU investments can catalyse institutional transformation, boost employment, retain talent and foster cross-sector cooperation.
- It remains, however, the only successful Teaming for Excellence project in the WB, underscoring the urgent need for stronger economy-level and Instrument for Pre-accession Assistance (IPA)[55] co-financing mechanisms to enable broader regional participation in such instruments.
- BioSense has since become one of the notable recipients of EU funding in Horizon Europe in the WB, proving how strategic EU support can elevate regional excellence to European standards.

Stakeholder perspective: Vesna Bengin, Co-founder, BioSense Institute and POLICY ANSWERS RI Ambassador

Vesna Bengin emphasises that maximising the benefits of RI investments is shared responsibility between policy makers and researchers[56]. While 50 % of ANTARES' funding came from the EU,

[54] See footnote 15.
[55] European Commission: IPA. 2025. Overview – Instrument for Pre-accession Assistance. https://enlargement.ec.europa.eu/enlargement-policy/overview-instrument-pre-accession-assistance_en. Accessed 18 September 2025.
[56] See footnote 52.

researchers must however actively demonstrate how their work creates societal and economic value and impact, moving beyond narrow scientific fields or academic publications. She highlights the importance of focusing on science for demand or science for impact.

According to Bengin, success stories like ANTARES are the most effective way to encourage policy makers to allocate dedicated budgetary supplements, whether through economy-level or IPA funds and to raise awareness of the societal and economic returns by investments in RIs. The success of ANTARES and BioSense, in her view, directly contributes to the Serbian government's decision to back the Bio4 Campus initiative.

Bengin stresses that to maintain competitiveness, the region must address fragmentation in its research ecosystem and prioritise sustained development of RIs. She underlines that RIs can only deliver their full potential when coupled with investments in skilled people required to operate, maintain and innovate within them.

4.2.2 Case: BIO4 Campus – Bioeconomy Hub, Belgrade, Serbia

Background

BIO4 Campus[57] represents an ambitious planned RI, set to create an ideal ecosystem for innovation and attract top talent. Conceived as a national hub for biomedicine, bioinformatics, biotechnology and biodiversity, BIO4 Campus is designed to integrate cutting-edge research, education and innovation under one roof.

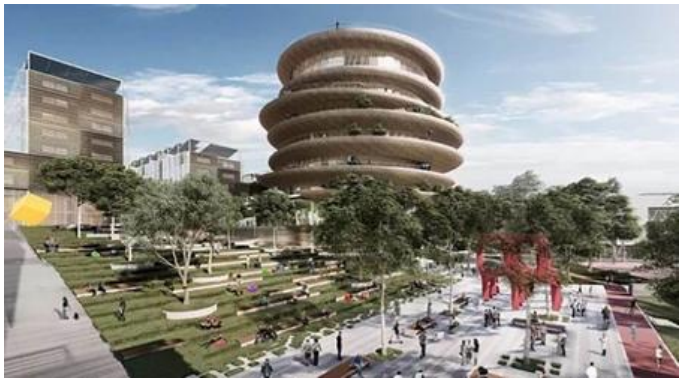

Figure 4: How the BIO4 Campus in Serbia might look ©BIO4

Spanning 20 hectares in Belgrade, the campus is meant to feature eight core facilities and more than 300 research laboratories, equipped with state-of-the-art technologies. The investment totals EUR 500 million, with EUR 100 million earmarked for advanced equipment. Once operational (planned for 2026), BIO4 Campus should act as an ecosystem for innovation, attracting international talent, strengthening collaboration between academia and industry and positioning Serbia as a leader in life sciences research. Importantly, the initiative reflects the implementation of Serbia's Smart Specialisation Strategy (4S)[58], ensuring alignment with economy-level priorities. Its top-down policy support underscores the recognition of life sciences as a strategic driver for Serbia's competitiveness.

Policy insight

- BIO4 Campus can demonstrate how large-scale and top-down investment can build an entire innovation ecosystem in life sciences.
- It can represent a flagship implementation of 4S, fully aligned with the corresponding Action Plan.

[57] See footnote 16.
[58] Smart Specialisation Strategy Serbia (4S). 2020-2027. https://pametnaspecijalizacija.mpn.gov.rs/wp-content/uploads/2021/06/Strategija-pametne-specijalizacije_EN_WEB.pdf. Accessed 18 September 2025.

- BIO4 Campus would be one of the largest life science RIs in Southeast Europe, enhancing the region's capacity in biotechnologies and biomedical research.
- By concentrating top-level facilities and researchers in a single location, it would aim at fostering multidisciplinary collaboration, accelerate knowledge transfer and attract international investment.
- The initiative can be strong example of how strategic foresight in RI planning can drive economic growth, strengthen national competitiveness and contribute to ERA objectives.

Stakeholder perspective – Teodora Ilic, Ministry responsible for Science, Serbia (2023 - presenting on behalf of POLICY ANSWERS RI Ambassador Smiljana Krivokuca)

In reflecting on the development of BIO4 Campus, Teodora Ilic highlights the importance of demonstrating measurable impact to secure and sustain political and financial support. Planned metrics include economic growth indicators, societal impact measures (e.g., health outcomes, job creation) and scientific excellence benchmarks. Communication strategies are being prepared to share these results with stakeholders and potential funders.

She also notes that the decision to invest in BIO4 Campus was strongly influenced by S4. Aligning the campus with the Smart Specialisation Strategy (S3) ensured political buy-in and can guarantee that the initiative would not just be a research project, but a driver of national development priorities.

4.2.3 Case: RASH - the Academic Network of Albania

Background

Figure 7: RASH
©2025 Albanian Academic Network

RASH[59], the Academic Network of Albania, is the country's National Research and Education Network (NREN) and a showcase of how pan-European e-Infrastructures can drive digital transformation in higher education and research. A decade ago, Albania had nearly no university networks and little political support. Thanks to the persistence of the founder and director of RASH and RI Ambassador Arjan Xhelaj, RASH now operates the academic network backbone and campus networks, fully integrated into the European research ecosystem through GÉANT[60], the collaboration of European National Research and Education Networks (NRENs) and 38 other NRENs.

A distinctive feature of RASH is its bottom-up model: instead of outsourcing, the director Arjan Xhelaj recruited young students, mentoring them into skilled developers and engineers. This home-grown approach built both the infrastructure and a sustainable community of digital expertise.

RASH delivers a broad suite of national platforms, including:

- U-Albania (university portal), U-Library (digital library), U-Doc (document archiving), U-Finance (university finance & HR management), U-CRIS (research information system);
- Teachers for Albania: an online teacher application platform;

[59] See footnote 17.
[60] GÉANT. https://geant.org. Accessed 28 October 2025.

- Training Portal: professional training for researchers;
- V.UNI: the Virtual University platform;
- Pitagora: an online student secretary system;
- access to advanced GÉANT solutions[61].

Policy insight

- RASH proves that e-Infrastructures are as crucial as physical RIs, providing the backbone for scientific excellence and innovation.
- Its youth-driven model highlights how capacity-building and local expertise ensure long-term sustainability.
- With international support (Italy, EC, EOSC[62], NI4OS-Europe[63]), RASH demonstrates how national initiatives can integrate into European frameworks.

Stakeholder Perspective – Arjan Xhelaj, Founder and Director of RASH, and POLICY ANSWERS RI Ambassador

Arjan Xhelaj describes RASH as a story of resilience and empowerment: a national digital backbone built entirely by young Albanians. He stresses that digital infrastructures are not luxuries but essential tools for science, innovation and integration into the ERA. This approach not only created infrastructure but also nurtured a generation of highly skilled ICT professionals who are now driving Albania's digital transformation.

4.2.4 Case: Tech4Green Campus – High Performance Computing Centre, Sarajevo, Bosnia and Herzegovina

Figure 10: How the Tech4Green in Sarajevo might look
©Tech4Green

Background

Tech4Green[64], initiated by the City of Sarajevo, represents a pioneering step towards building a High-Performance Computing (HPC) centre to address pressing urban challenges such as air pollution, climate adaptation, waste management and renewable energy. Unlike most RIs, Tech4Green Campus is led by local authorities, embedded in Sarajevo's strategy to achieve Smart City status and lead Bosnia and Herzegovina's digitalisation process.

The city has allocated a location for a modern 2000 m² building, worth EUR 6-7 million, with construction now 95 % complete. The first phase is financed through government sources and public companies, while the second phase will seek EuroHPC[65] and Horizon Europe support. Tech4Green Campus will enable advanced modelling of air quality, traffic flows, energy systems and climate resilience, providing decision-support tools for policy makers, businesses and citizens.

[61] For example eduroam. https://eduroam.org. eduGAIN. https://edugain.org. eduMEET. https://edumeet.geant.org. Accessed 30 October 2025.
[62] EOSC: European Open Science Cloud. https://eosc.eu. Accessed 18 September 2025.
[63] NI4OS: National Initiatives for Open Science in Europe. https://ni4os.eu. Accessed 18 September 2025.
[64] See footnote 18.
[65] EuroHPC Joint Undertaking. https://www.eurohpc-ju.europa.eu/index_en. Accessed 28 October 2025.

It aims to bring together universities, institutes, companies, NGOs and digital hubs to co-create sustainable urban solutions.

Policy insight

- Tech4Green Campus shows how municipal leadership can drive mission-oriented RIs aligned with citizen needs.
- It integrates digital, green and inclusive priorities while contributing to EU Missions and the Green Agenda for the Western Balkans[66].
- Stable national and regional co-financing is essential for sustainability, with EuroHPC and Horizon Europe offering pathways to European integration.
- By addressing Sarajevo's severe air pollution, the Tech4Green Campus highlights the tangible societal and health impacts of urban RIs.

Stakeholder Perspective – Jasmin Ademovic, President of the City Council of Sarajevo (presenting on behalf of POLICY ANSWERS RI Ambassador Almir Badnjevic)

Jasmin Ademovic stresses that the Tech4Green Campus stems directly from the city's needs and citizens' priorities. He sees it as proof that smaller regions can host cutting-edge digital infrastructures with highly practical applications — from cleaner air to smarter energy use. He underlines that success will depend on coupling infrastructure with development of skills, ensuring trained staff and researchers can fully exploit its potential.

4.2.5 Case: ESS ERIC – European Social Survey ERIC

Background

Figure 13: ESS ERIC
©2025 ESS ERIC

The European Social Survey European Research Infrastructure Consortium (ESS ERIC)[67] is a well-established European RI that provides high-quality, comparative trend data on living conditions, social structures, public opinion and attitudes across European countries. By conducting repeated survey rounds every two years since 2002, ESS allows researchers and policy makers to track how societies change and to compare developments across borders.

For the WB, participation in the ESS ERIC illustrates how access to world-class RI strengthens local R&I systems through knowledge sharing, capacity-building, and "brain circulation". ESS offers free OA to data, enabling high-quality publications, integration into international networks and better teaching resources for HEIs. Beyond academia, it enriches national data systems and supports evidence-based policymaking.

Serbia and Montenegro are now full members, while Albania, Kosovo and North Macedonia participated in one survey round. Their integration was achieved through grassroot demand,

[66] Green Agenda for the Western Balkans. https://enlargement.ec.europa.eu/system/files/2020-10/green_agenda_for_the_western_balkans_en.pdf. Accessed 28 October 2025.
[67] See footnote 19.

international support and political engagement, with Helvetas[68] and the EC playing key roles in strengthening social science and sustaining the process.

Policy insight

- The ESS ERIC shows how pan-European social science infrastructures strengthen research capacity and international visibility in the WB.
- Benefits go beyond academia: comparative data builds trust between science and state, and lays the groundwork for evidence-based policymaking.
- Covering membership fees for access to European RIs is a strategic investment, unlocking access to world-class data, training and integration into ESFRI/ERIC networks.
- Partnerships combining grassroot scientific demand, international donors and policy engagement are critical to securing participation in global infrastructures.

Stakeholder perspective – Nenad Celarevic, Policy Expert in Social Sciences, RI Advocate and POLICY ANSWERS RI Ambassador

Nenad Celarevic, who played a pivotal role in integrating the WB into the ESS ERIC, describes the journey as a multi-level effort: grassroot demand from scientists, support from Helvetas (as part of the Swiss government programme), encouragement from the EC and the engagement of policy makers.

He highlighted four key benefits:

1. Strengthening social sciences through access to high-quality, open data and more visible publications.
2. Building trust between state institutions and social scientists with robust comparative evidence.
3. Enhancing education, as ESS ERIC data is widely used in teaching across universities in the region.
4. Laying the foundation for evidence-based policy, still developing but increasingly recognised as essential.

Celarevic emphasises that lasting political support requires greater trust in science. Engaging civil society organisations to highlight the societal value of research is key to ensure policy makers prioritise long-term investments in RIs.

Additional milestones: Two further milestones in placing WB economies on the map of world-class European RIs are Serbia's membership in CERN and Montenegro's memberships in EMBL[69] and EMBO[70].

[68] Helvetas. International development organization. Switzerland. https://www.helvetas.org/en/switzerland . Accessed 18 September 2025.
[69] EMBL: European Molecular Biology Laboratory. https://www.embl.org. Accessed 18 September 2025.
[70] EMBO: European Molecular Biology Organization. https://www.embo.org. Accessed 18 September 2025.

4.2.6 Case: ElevenEs – European Manufacturer of Lithium Iron Phosphate Battery Cells, Subotica, Serbia – Technology-oriented infrastructure

Background

ElevenEs[71], based in Subotica, Serbia, is the first European producer of lithium iron phosphate (LFP) prismatic battery cells outside China, contributing to the EU Green Deal and Europe's energy security. Founded just five years ago, it has grown from an R&D lab into a pilot facility producing 100 cells per day, with plans for an 8 GWh Gigafactory.

With applications in electric vehicles, machinery, and renewable energy storage, ElevenEs is becoming a key player in Europe's battery ecosystem. Recognised as a company of national interest, it is embedded in the EU-Serbia initiative to build a vertically integrated battery and e-mobility value chain. Backed by the Al Pack Group[72] and early-stage investor ENO Energy[73], the company is scaling sustainable battery technology with advantages over conventional chemistries: lower costs, improved safety, longer lifespans and use of abundantly available raw materials. Its Edge 574 Blade Cell enables ultra-fast charging (10–80 % in 12 minutes) and a lifecycle of over 500,000 km.

Policy insight

- ElevenEs shows how green-tech scale-ups from the WB can integrate into European strategic value chains.
- Pioneering LFP technology in Europe reduces dependence on Asian imports, strengthening energy security.
- Its growth from R&D to production highlights the role of industrial heritage and investment partnerships in scaling innovation.
- National recognition and EU-Serbia cooperation anchor the WB in the global battery and e-mobility sector.

Stakeholder perspective – Nevena Radomirovic, Quality Management Director, ElevenEs

Nevena Radomirovic highlightes ElevenEs as an example of how research-driven innovation can evolve into large-scale industrial impact. Its progress rests on combining strong R&D with industrial know-how, sustainability principles and alignment with European goals. She underlines that the company's trajectory shows how WB firms can drive innovation-led industrial transformation, linking research, investment and policy to foster sustainable growth.

4.3 Conclusions: Lessons and way forward

The cases presented in this chapter demonstrate that RIs in the WB are not abstract concepts but concrete drivers of transformation. From digital backbones like RASH to smart agriculture innovation at BioSense, from life sciences hubs such as BIO4 Campus to green technology pioneers like ElevenEs, from pan-European integration through ESS ERIC to mission-driven sustainability

[71] See footnote 20.
[72] Al Pack Group. https://www.alpackgroup.com/. Accessed 18 September 2025.
[73] ENO Energy. German wind-turbine manufacturer. https://www.eno-energy.com. Accessed 18 September.

infrastructures like Tech4Green, each initiative shows that the region can generate excellence, attract investment and contribute to European priorities.

Several common lessons emerge:

- Strategic alignment with EU priorities (Green Deal, Digital Agenda, ERA, EU enlargement) increases political support, economic growth and financial sustainability.
- Diverse models of success exist — from bottom-up grassroot initiatives (RASH) to top-down flagship investments (BIO4 Campus) - and both have proven transformative when coupled with stakeholder engagement.
- Partnerships between local actors, European institutions and international donors are essential to overcome resource limitations and build trust in long-term investments.
- Human capital development is central: training the next generation of scientists, engineers and innovators ensures sustainability, reduces brain drain and turns the region into a magnet for talent.
- Mission-driven innovation (BioSense in agriculture, Tech4Green in sustainability, ElevenEs in green tech) demonstrates how RIs can provide not only scientific capacity, but also practical solutions to urgent societal, economic and environmental challenges.

Too often, capital budgets in the region still focus narrowly on “hard infrastructures” such as highways or traffic roads. While these are important, the case studies clearly demonstrate that technological infrastructures and RI deliver equally powerful — and often longer-lasting — benefits, with faster return on investment.

Importantly, the 2025 European Strategy on Research and Technology Infrastructures provides a framework to position the WB within the evolving EU agenda. The lessons from the WB’ cases directly echo the strategy’s five pillars:

1. Strengthening capacities and investments: Examples like BIO4 Campus and Tech4Green Campus show how economy-level and regional investments can be mobilised to create ecosystems aligned with EU needs.
2. Simpler, better access: ESS ERIC and RASH highlight how opening infrastructures and data to wider communities accelerates scientific excellence and innovation.
3. Talent attraction and skills development: BioSense and ElevenEs illustrate how RIs can cultivate next-generation researchers and innovators, reducing brain drain and attracting global talent.
4. Improved governance and coordination: SEEIIST and HITRIplus demonstrate the value of long-term, cross-border commitments supported by the EU (see Chapter 5 for more information).
5. International dimension and resilience: All cases show how regional initiatives in the WB can contribute to European sovereignty in critical technologies and to integration into the ERA.

Together, these examples underline that investing in RIs is not a luxury but a necessity for the WB. They offer a pathway to strengthen competitiveness, drive economic growth, deepen integration into the ERA and foster regional stability through shared goals and resources. Building on these success stories, policy makers should scale up RI investments, secure stable funding mechanisms and align with the 2025 European Strategy on Research and Technology Infrastructures to position the WB as fully integrated and indispensable partners in Europe’s R&I ecosystem.

5 Guideline for the development of the pan-European Research Infrastructure SEEIIST

5.1 Context and rationale

The WB represent a region with valuable human capital and scientific talent, yet this potential remains largely underutilised. Limited resources and institutional capacity constrain the development of modern, large-scale RIs. At the same time, the region is increasingly aligning with EU priorities — digitalisation, the Green Transition, health and innovation and many more, creating a unique opportunity for strategic investment.

Without state-of-the-art RIs, the WB risk continued brain drain, economic stagnation and marginalisation from Europe's competitiveness agenda. Pan-European infrastructures, strategically supported by the EC, can transform the WB into an active contributor to Europe's strategic autonomy, technological sovereignty and inclusive growth.

5.2 SEEIIST – A potential flagship for EU enlargement

The South East European International Institute for Sustainable Technologies (SEEIIST)[74] was launched in March 2017 by Montenegro[75,76] as a visionary regional project, inspired by CERN's model of science diplomacy. SEEIIST is envisioned as the first large-scale, state-of-the-art RI in the WB in over 70 years, representing both a scientific and political milestone.

SEEIIST foresees a EUR 250 million accelerator-based RI for cancer therapy and biomedical research with ion beams[77]. Once realised, it will become the fifth ion-beam cancer therapy centre in Europe and the fifteenth worldwide[78], with a unique three-fold dimension:

- Clinical: provide cutting-edge ion-beam cancer treatment for patients across South-East Europe.
- Scientific: dedicate 50 % of beam time to multidisciplinary research in radiobiology, medical physics, imaging, materials science and space applications, establishing SEEIIST as a unique single-site European cancer RI with an OA model. This will attract talent from across Europe and beyond, engaging physicists, oncologists, radiologists, biophysicists, engineers and IT experts in collaborative frontier research.

[74] See footnote 21.
[75] Science|Business. Viewpoint: Peace and prosperity should be end goals of scientific collaboration. (2019). https://sciencebusiness.net/viewpoint/viewpoint-peace-and-prosperity-should-be-end-goals-scientific-collaboration. Accessed 18 September 2025.
[76] Science|Business. Montenegro's research minister wants to heal war wounds with science. (2019). https://sciencebusiness.net/news/montenegros-research-minister-wants-heal-war-wounds-science . Accessed 18 September 2025.
[77] CERN Yellow Report. An Accelerator-based Research Infrastructure for Cancer Therapy and Biomedical Sciences with Ion Beams. (2024). DOI: https://doi.org/10.23731/CYRM-2024-004. Accessed 18 September 2025.
[78] PTCOG: Particle Therapy Co-Operative Group. https://www.ptcog.site. Accessed 18 September 2025.

- Societal: serve as a hub for regional cooperation, prevent brain drain, foster talent and strengthen European health-tech industries.

Figure 16: How the SEEIIST Ion Therapy Research Infrastructure in South East Europe might look ©SEEIIST

In line with ESFRI guidance[79], SEEIIST demonstrates:

- Scientific excellence: frontier research in cancer therapy and ion-beam applications.
- Pan-European relevance: an opportunity to develop next-generation ion therapy facilities, expanding access to ion therapy for a much larger number of patients by leveraging collaboration to advance accelerator technologies and novel treatment techniques such as FLASH therapy[80] through international collaboration.
- Socio-economic impact: boosting regional cohesion, innovation ecosystems and industry, while treating patients with the most advanced cancer therapies.
- Sustainability: a dual clinical-research model fully aligned with EU missions and enlargement priorities.
- Industrial empowerment: strengthening Europe's health-tech and accelerator industries by creating new markets in accelerator and medical technologies.

By combining clinical treatment with frontier research, SEEIIST represents a dual-purpose infrastructure that delivers both immediate societal benefits and long-term scientific and technological competitiveness. Its pan-European relevance, cross-border governance model and alignment with EU enlargement and health priorities make SEEIIST a strong candidate for inclusion

[79] See footnote 9.
[80] FLASH Therapy. Wikipedia. https://en.wikipedia.org/wiki/FLASH_Radiotherapy. Accessed 27 September 2025.

in the next ESFRI Roadmap – and as a potential "moonshot" project under the upcoming Framework Programme FP10[81], advancing Europe's leadership in health and R&I.

5.3 SEEIIST and the next leap in hadron therapy

Europe's leadership in hadron therapy began three decades ago with pioneering efforts at GSI Helmholtz Centre for Heavy Ion Research (GSI)[82] and CERN, leading to four ion-beam cancer therapy clinics: Heidelberg Ion Beam Therapy Centre (HIT) in Heidelberg, Germany[83], Centro Nazionale di Adroterapia Oncologica (CNAO) in Pavia, Italy[84], Marburg Ion Beam Therapy Centre (MIT) in Marburg, Germany[85], and MedAustron Ion Therapy and Research Centre (MedAustron) in Wiener Neustadt, Austria[86]. Since beginning operations in 2009, HIT alone has treated more than 10,000 patients, proving the life-saving power of ion-beam therapy (survival probability after 5 years of treatment reaches 90 % with carbon ions, compared to about 60 % with protons or 10-20 % with conventional X-rays).

This success triggered industrial investment in proton therapy, with 23 compact cyclotron facilities now operating across Europe, treating approximately 4,000 patients annually[87]. Yet, despite the clear clinical advantages of heavier ions — notably carbon, but also helium and oxygen currently under investigation — only the four European facilities deliver such treatments. By contrast, Asia operates nine ion-therapy centres (mostly in Japan) and several more under construction, highlighting the urgent need for Europe to accelerate.

To meet this challenge, CERN launched the Next Ion Medical Machine Study (NIMMS)[88] following its 2017 Council decision to enhance knowledge transfer to medicine. NIMMS leverages CERN's accelerator expertise — including superconducting technologies developed for the Large Hadron Collider (LHC) at CERN — to design a new generation of compact, cost-efficient ion accelerators. The simultaneous launch of SEEIIST positioned it as the natural reference user for this innovation. Since then, a pan-European consortium of 23 research centres, ion-clinics and SMEs from 14 countries[89]— including CERN, GSI, HIT, CNAO, MIT, MedAustron, Instituti Nacionale di Fisica Nucleare (INFN)[90], Paul Scherrer Institute (PSI)[91] and Ion Beam Applications S.A. (IBA)[92] — has worked with SEEIIST to design a next-generation multi-ion synchrotron featuring breakthrough innovations such as FLASH therapy[93] and superconducting gantries.

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[81] See footnote 12.
[82] GSI Helmholtz Centre for Heavy Ion research. https://gsi.de. Accessed 27 September 2025.
[83] HIT: Heidelberg Ion Beam Therapy Centre. https://www.klinikum.uni-heidelberg.de/interdisziplinaere-zentren/heidelberger-ionenstrahl-therapiezentrum-hit. Accessed 27 September 2025.
[84] CNAO: Centro Nazionale di Adroterapia Oncologica. https://fondazionecnao.it/en/. Accessed 27 September 2025.
[85] MIT: Marburg Ion Beam Therapy Centre. https://www.mit-marburg.de. Accessed 27 September 2025.
[86] MedAustron: Ion Therapy and Research Centre. https://www.medaustron.at. Accessed 27 September 2025.
[87] See footnote 14.
[88] NIMMS: Next Ion Medical Machine Study. (2019). https://kt.cern/kt-fund/projects/nimms-next-ion-medical-machine-study. Accessed 27 September 2025.
[89] HITRIplus Consortium as a whole. https://www.hitriplus.eu/consortium/. Accessed 25 September 2025.
[90] INFN: Instituti Nacionale di Fisica Nucleare. https://www.infn.it/en/. Accessed 27 September 2025.
[91] PSI: Paul Scherrer Institute. https://www.psi.ch/de. Accessed 27 September 2025.
[92] IBA: Ion Beam Applications S.A. https://www.iba-industrial.com. Accessed 27 September 2025.
[93] See footnote 80.

SEEIIST is thus not just a regional initiative but a European flagship opportunity: combining science diplomacy, frontier technologies and a transformative health mission to ensure Europe leads the global development of ion-beam therapy.

5.4 Roadmap for implementation

SEEIIST has successfully advanced through the design study phase, supported by:

- an EUR 1.5 million EC grant (2019)[94] to initiate the design study;
- the EUR 5 million Horizon 2020 HITRIplus project[95] (2021–2026);
- in-kind contributions from CERN, GSI and other partners (approximately EUR 6 million);
- endorsement as one of six flagship EU–WB projects under the Innovation Agenda (2020)[96];
- inclusion in the EU Economic and Investment Plan (EIP, 2020)[97].

This joint effort has created a technical mature, high-readiness project ready to enter the preparatory and construction phase. EUR 250 million investment is expected to mobilise around 400 companies (based on CNAO's experience).

However, without renewed political commitment and financial momentum, more than seven years of European investment and scientific mobilisation risk being lost. At the same time, Asia is expanding rapidly and Europe risks losing its chance to regain its global lead in ion-beam therapy.

Strategic alignment with EU priorities

SEEIIST directly advances:

- Horizon Europe Missions (Cancer & Health): provides state-of-the-art ion-beam cancer therapy and research, filling the notable gap given cancer research being entirely absent from the European RI landscape.
- EU enlargement & Growth Plan for the WB[98]: a unifying flagship for the region, fostering stability, cohesion and competitiveness, aligned with the goal of deepening regional economic integration. With EUR 6 billion available under the Growth Plan for the Western Balkans, SEEIIST (EUR 250 million) represents a highly impactful use of funds, capable of unlocking growth, creating jobs, opportunities for businesses, opening the labour market

[94] The South East European International Institute for Sustainable Technologies (SEEIIST). Horizon 2020 Research and Innovation programme under Service Facility in Support of the Strategic Development of International Cooperation in Research and Innovation No 30-CE-0838742/00-87. https://seeiist.eu/. Accessed 27 September 2025.
[95] Heavy Ion Therapy Research Integration. Horizon 2020 research and innovation programme under grant agreement No 101008548. https://www.hitriplus.eu. Accessed 27 September 2025.
[96] European Commission. Agenda on Innovation, Research, Education, Culture, Youth and Sports. https://research-and-innovation.ec.europa.eu/strategy/strategy-research-and-innovation/europe-world/international-cooperation/regional-dialogues-and-international-organisations/western-balkans_en?utm_source=chatgpt.com. Accessed 27 September 2025.
[97] European Commission. Enlargement and Eastern Neighbourhood. An Economic and Investment Plan for the Western Balkans. https://enlargement.ec.europa.eu/economic-and-investment-plan-western-balkans_en. Accessed 27 September 2025.
[98] European Commission. Enlargement and Eastern Neighbourhood. Growth Plan for the Western Balkans. https://enlargement.ec.europa.eu/enlargement-policy/growth-plan-western-balkans_en. Accessed 27 September 2025.

for researchers, stimulating the growth of high-tech industries and attracting European investors.
- European Industrial Strategy: empowering health-tech and accelerator industries by translating advanced physics into clinical and industrial applications.
- ESFRI Roadmap principles: meets the criteria of scientific excellence, pan-European relevance, socio-economic impact and sustainable operation.

5.5 Guideline for action

To prevent SEEIIST from stalling, the EC should:

1. Establish a targeted EU intervention mechanism for pan-European infrastructures that are technically ready but politically stalled, with bridging finance, strategic co-financing and political facilitation.
2. Embed SEEIIST in FP10 as a "moonshot" project under the projected priority "Deliver to improve patient's health"[99]. Competitive funds announced for FP10 should sustain the European research and industry community around SEEIIST and accelerate development of new infrastructures in Europe.
3. Secure inclusion under the Growth Plan for the Western Balkans, directing part of the EUR 6 billion package to SEEIIST, as a high-impact, ready-to-implement EUR 250 million flagship project for EU enlargement.
4. Mobilise blended financing tools (EU funds, WBIF[100], European Investment Bank (EIB)[101], Public-Private Partnerships (PPPs)) to secure construction and de-risk private and industrial investment.
5. Guarantee regional ownership while embedding SEEIIST in the broader EU research ecosystem via joint EU-WB governance.
6. Introduce a monitoring framework to ensure transparency, strong governance, socio-economic returns and alignment with EU missions.

5.6 Conclusion

SEEIIST is far more than a RI — it is a European flagship opportunity that:

- Delivers life-saving cancer therapy,
- Advances frontier research,
- Strengthens European industry and
- Unites a historically fragile region through science diplomacy.

The next step requires clear guidance and support from the EC to move SEEIIST into construction. By doing so, the EU will demonstrate its ability to turn vision into reality, empower the Western Balkans, and consolidate Europe's global leadership in health, science and technology for decades to come.

[99] See footnote 12.
[100] WBIF: Western Balkans Investment Framework. https://www.wbif.eu. Accessed 27 September 2025.
[101] EIB: European Investment Bank. https://www.eib.org/en/index. Accessed 27 September 2025.

6 List of abbreviations used in this document

4S	Serbia's Smart Specialisation Strategy
CERN	European Organization for Nuclear Research
CNAO	Centro Nazionale di Adroterapia Oncologica
CoE	Centre of Excellence
DABAR	Digital academic archives and repositories
EC	European Commission
EIB	European Investment Bank
EIT	European Institute of Innovation and Technology
ELI	Extreme Light Infrastructure
ELT	Extremely Large Telescope
EMBL	European Molecular Biology Laboratory
EMBO	European Molecular Biology Organization
EPSRC	Engineering and Physical Sciences Research Council
ERA	European Research Area
ERDF	European Regional Development Fund
ERIC	European Research Infrastructure Consortium
ESFRI	European Strategy Forum for Research Infrastructure
ESS	European Social Survey
EU	European Union
EuroHPC	European High Performance Computing
GSI	GSI Helmholtz Centre for Heavy Ion Research
HEI/HEIs	Higher education institution/Higher Education Institutions
HIT	Heavy Ion Therapy Centre
HPC	High Performance Computing
ICT	Information and Communication Technology
IBA	Ion Beam Applications S.A.
INFN	Instituti Nacionale di Fisica Nucleare
IPR	Intellectual Property Rights
KPIs	Key Performance Indicators
KTU	Kaunas Technical University
LHC	Large Hadron Collider
LIRE	Large Items of Research Equipment
MedAustron	MedAustron Ion Therapy and Research Centre
MIT	Marburg Ion Beam Therapy Centre
MRI	Magnetic Resonance Imaging
MS	Member State
NGO	Non-Governmental Organisation

NMR	Nuclear Magnetic Resonance
OA	Open Access
OI	Open Innovation
OS	Open Science
PSI	Paul Scherrer Institute
RCC	Regional Cooperation Council
RI/RIs	Research Infrastructure/Research Infrastructures
R&D	Research and Development
R&I	Research and Innovation
RDI	Research, Development and Innovation
RPOs	Research performing organisations
SEEIIST	South East European International Institute for Sustainable Technologies
SMEs	Small and Medium-sized Enterprises
S3	Smart Specialisation Strategy
TRAC	Transparent Approach to Costing
TTO	Technology Transfer Office
WB	Western Balkans
WBIF	Western Balkans Investment Framework

POLICY ANSWERS

ABOUT POLICY ANSWERS

POLICY ANSWERS (R&I POLICY making, implementation ANd Support in the WEsteRn BalkanS) supports policy coordination in the Western Balkans and with the EC and the EU. 14 partner organisations, representing network nodes in the region and EU expert organisations, support policy dialogue through formal meetings (such as ministerial and steering platform and ad-hoc policy meetings), monitoring and agenda setting, capacity building and implementation of the EU's Western Balkan Agenda, as well as the alignment of thematic priorities. The project implements regional pilot activities and offers an information hub based on the westernbalkans-infohub.eu online information platform. The partners provide analytical evidence via monitoring and mapping activities of the stakeholder ecosystem, of the implementation of the Western Balkans Agenda and of the Western Balkans' integration into the European Research Area as well as via strategic foresight. POLICY ANSWERS also allows for tailored and targeted capacity building activities in the Western Balkans as well as regional alignment of priorities in relation to the digital transformation, the green agenda and towards healthy societies. Pilot activities provide learning opportunities on policy and programme level and reach out to final beneficiaries related to improved academia-industry cooperation, researcher mobility, inclusion of youth in policy processes, promotion of research infrastructures and increased innovation skills in all areas.

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