Policy Brief

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Promotion of Research Infrastructures in the Western Balkans

POLICY ANSWERS

This Policy Brief provides an overview of policy and practice in Open Access (OA) to Research Infrastructure (RI) with reference to established European best practices, their current status and ongoing initiatives in the Western Balkans (WB).

The WB comprise Albania, Bosnia and Herzegovina, Kosovo*, Montenegro, North Macedonia and Serbia.

The Policy Brief builds on activities directly undertaken by POLICY ANSWERS to highlight the importance of RIs and their potential to address regional challenges such as brain drain, limited competitiveness and economic growth. Through targeted events and the RI Ambassadors initiative, POLICY ANSWERS has promoted existing and emerging facilities in the region and showcased the benefits of WB participation in leading European RI mechanisms such as the European Strategy Forum on Research Infrastructures (ESFRI) and in ERIC (European Research Infrastructure Consortium).

RIs are strategic investments that drive innovation, attract talent and provide solutions to societal challenges such as health, climate change and digitalisation. In the WB, underdevelopment limits competitiveness and contributes to brain drain. Supporting new and strengthening existing RIs, while expanding OA, can foster an attractive research and innovation ecosystem, promote regional cooperation and stimulate economic growth.

The EU and other developed economies push towards a more open approach to research, technological development and innovation. In this context, OA to RIs is a key driver to maximise scientific progress and innovation.

The EU policy framework for OA RI is centred on the Protocol on Open Access to Research Infrastructure[1], which provides principles to enable wider access for researchers to existing infrastructure by focusing on policy development, staff training and regional cooperation.

The ERIC Regulation is currently the only element of the EU acquis under Chapter 25 (Science and Research) in the EU Accession Negotiations. WB economies are therefore strongly encouraged to implement the ERIC Regulation into their national legislation at an early stage, as a key condition for allowing researchers from the region to fully participate in ERICs and to maximise the benefits of integration into the European research infrastructure landscape.

* 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.

[1] 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 28 November 2025.

Key considerations for adopting OA to RIs in the WB include:

- RIs range from large scale and complex research facilities to small laboratories with specialised equipment or libraries.
- Any laboratory within a university or research organisation represents an RI and can be offered for OA to users.
- OA is an integral part in modern day research environments and has numerous benefits for the hosting RI, for Research Performing Organisations (RPOs), for policymakers and other stakeholders.
- Each university or RPO should ideally have an inventory of their RIs and principles of OA clearly described.
- RIs can be used by numerous groups of users, both from within and outside the hosting organisation.
- Depending on the mission and strategic decision, it is possible to prioritise some users.
- Obligations of both the users and an RI hosting facility should be clearly described in a contract or a similar document.
- Access fees for RIs can vary but are easy to set once the costs of an RI are known.
- Beyond national inventories, RI mapping should be aligned with the EU and ESFRI context, ensuring visibility, interoperability and strategic positioning of WB RIs within the European research infrastructure landscape.
- Finally, implementation of the ERIC Regulation at national level is essential to enable long-term sustainability, structured access policies and full integration of WB RIs into European RI governance and funding mechanisms.

Building on these considerations, this Policy Brief focuses on activities directly undertaken by the POLICY ANSWERS project to further emphasise the policy dimension, highlight the importance of RIs and to raise awareness among policymakers that RIs are not only scientific facilities but also strategic investments with profound economic and societal benefits.

Through targeted events and the RI Ambassadors initiative, POLICY ANSWERS has promoted existing and emerging facilities in the region and showcased the benefits of WB participation in leading European Union mechanisms.

The Brief also considers complementary activities undertaken by other partners and stakeholders, including the Regional Cooperation Council (RCC) and the European Institute of Innovation and Technology (EIT) InfraBooster action. These are considered against established best practice, published by the EC and individual RPOs.

Finally, this Policy Brief highlights the potential for a pan-European project initiated by the WB, with the potential to address Europe's current geostrategic and geoeconomic challenges, demonstrating how regional cooperation can strengthen Europe's collective scientific capacity and societal resilience, underscoring the lesson that Europe, as a whole, matters.

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Recommendations for increasing OA to RIs in the WB

Improving OA to RIs in the WB should be a priority to increase the impact of RIs investment for economic, societal and OA-related benefits.

The following recommendations for policymakers and senior managers at RPOs are based on discussions with public research organisations in the region and presentations and articles from the POLICY ANSWERS RI Ambassadors.

In general, a stronger policy approach to OA RIs should take place at pan-regional-level where RIs are established or planned, at economy-level to support implementation of respective roadmaps, and at individual organisational level to ensure most efficient investment and use of equipment at faculties.
More recommendations are tailored for different target groups.

Specific recommendations for policymakers

Pan-European and WB regional initiatives should plan to develop and adopt OA principles and practices based on the 2024 EU Charter[2]. Moreover, in each economy policymakers should:

- Establish economy level OA principles, defining OA RIs as a priority, outlining the benefits of OA RIs to different user groups and encouraging RPOs to adopt suitable OA policies.
- Consider making the adoption of an OA RI policy a legal requirement for accredited higher education institutions and RPOs.
- Introduce incentives for researchers and institutions to use and contribute to Open RI.
- Consider including OA RI Key Performance Indicators (KPIs) into RPOs' reporting (e.g. total number of OA users, type of OA users, number of new and repeat users, type of services, cost and value of providing access).
- Take steps to raise awareness of the benefits of OA tailored to different stakeholder groups, including the private sector, and monitor the effects in order to assess raised awareness. Promotional efforts should be repeated and linked to take up of services.
- Support participation in ERICs, including implementation of the ERIC Regulation at national level, and encourage engagement of WB economies in ESFRI-related initiatives and established ERICs (e.g. participation of WB6 in successive iterations of the European Social Survey).

[2] European Charter for Access to Research Infrastructures. https://op.europa.eu/en/publication-detail/-/publication/ec4692ae-ac6f-11ef-acb1-01aa75ed71a1/language-en. Accessed 28 November 2025

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Specific Recommendations for RPOs

Carry out and regularly update an inventory of their research infrastructures. This may include setting a minimum threshold value for qualifying as an inventory item "RI" and noting the source of the funding used to acquire the infrastructure.

Promote and embrace a culture of openness and sharing of RI, making inventories of OA RI available and encouraging researchers to seek use of existing equipment rather than duplicate facilities.

Educate their staff and researchers on the benefits of OA RI and sharing, including the ability to collaborate more effectively on joint projects with other OA RIs and to strengthen institutional capacity for attracting new projects and meeting the requirements of donors; the difference between OA RI and OA publications and the associated infrastructure for both.

Make provision for capacity building for staff and researchers involved in planning and procuring RIs, to ensure that any purchasing decision is accompanied by a comprehensive analysis that covers: the human and financial resources needed 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; alignment of the purchasing decisions with wider considerations.

Develop, adopt, distribute and publicise an OA policy that is as open as possible, at different organisational unit levels. The institution should allow 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, while considering any restrictions linked to the need for ongoing funding to maintain RIs and putting in place plans to deal with them.

Publicise their OA RI service offerings, making it easier for potential users to understand what can be had and when from the OA RI facility, and designating who must respond to questions regarding OA.

Ensure that they have practical procedures and technical support in place to allow the policy to be implemented by their constituent units. The policy should be piloted with different target groups to test if it is feasible for implementation.

Introduce a practical usage tracking system to monitor use and make it possible to make a reliable costing. Tracking systems can range from monitoring the full use of energy consumption and utilities to the equipment and the costs of staff needed to run it, to a more simple costing for a defined service for different levels of user and the uptake of those services. Tracking may be needed to prove that the RPO is not exceeding the threshold for State Aid commercial usage.

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Exemplary Cases: Emerging and Developing Research Infrastructures

This Policy Brief showcases examples that illustrate the transformative potential of RIs across domains – from health and environment to digital innovation and social sciences – selected through POLICY ANSWERS workshops and the input of POLICY ANSWERS RI Ambassadors.

ANTARES – BioSense Institute (Novi Sad, Serbia)

Figure 1: BioSense Institute. ©BioSense

Through the ANTARES project, the BioSense Institute in Novi Sad was transformed into a European Centre of Excellence for Advanced Technologies in Sustainable Agriculture and Food Security. A new research facility was built and provided with cutting-edge scientific equipment. BioSense is a regional leader in digital agriculture, leveraging big data, Internet of Things (IoT) and AI technologies. ANTARES is an innovation ecosystem that attracts top international talent, fostering entrepreneurship and strengthened collaboration between academia, business and government.
It remains the only successful Teaming for Excellence project in the WB and has 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.
The success of the ANTARES project can encourage policymakers to allocate dedicated budgetary supplements and to raise awareness of the societal and economic returns by investments in RIs.

BIO4 Campus – Bioeconomy Hub (Belgrade, Serbia)

Figure 2: How the BIO4 Campus in Serbia might look. ©BIO4

Conceived as a national hub for biomedicine, bioinformatics, biotechnology and biodiversity, BIO4 Campus is designed to integrate cutting-edge research, education and innovation. Its aim is to create an ideal ecosystem for innovation, attract top international talent, strengthen collaboration between academia and industry and position Serbia as a leader in life sciences research.
The initiative reflects the implementation of Serbia's Smart Specialisation Strategy, ensuring alignment with economy-level priorities.
The campus will feature eight core facilities and more than 300 research laboratories, equipped with state-of-the-art technologies: it will be one of the largest life science RIs in Southeast Europe, enhancing the region's capacity in biotechnologies and biomedical research.
It is a strong example of how strategic foresight in RI planning can drive economic growth and strengthen national competitiveness.

RASH – the Academic Network of Albania

Figure 3: RASH, ©2025 Albanian Academic Network

RASH, the Academic Network of Albania, is the country's national research and education network, showcasing how pan-European e-Infrastructures can drive digital transformation in higher education and research.
RASH delivers a broad suite of national platforms, proving that e-Infrastructures are as crucial as physical research infrastructures. It thus provides the backbone for scientific excellence and innovation.
With international support, RASH demonstrates how national initiatives can integrate into European frameworks.
A distinctive feature of RASH is its bottom-up model: this home-grown approach built both the infrastructure and a sustainable community of digital expertise, and, most importantly, nurtured a generation of highly skilled ICT professionals who are now driving Albania's digital transformation.

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Tech4Green Campus – High Performance Computing Centre (Sarajevo, Bosnia and Herzegovina)

Tech4Green is a pioneering step towards building a High-Performance Computing Centre to address pressing urban challenges such as air pollution, traffic flows, climate adaptation, waste management and renewable energy.
The project stems directly from the city's needs and citizens' priorities; in particular, by addressing Sarajevo's severe air pollution, it highlights the positive societal and health impacts that RIs can have in an urban environment.

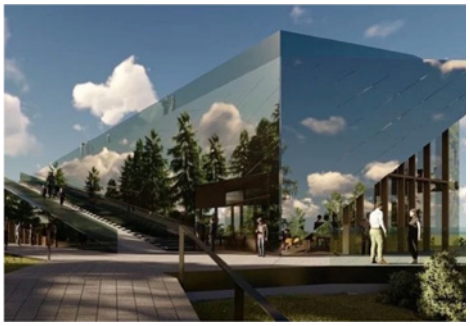

Figure 4: How the Tech4Green in Sarajevo might look, ©Tech4Green.

Tech4Green is led by local authorities, demonstrating that smaller regions can host cutting-edge digital infrastructures with highly practical applications.
It aims to bring together universities, institutes, companies, NGOs and digital hubs to co-create sustainable urban solutions and provide decision-support tools for policymakers, businesses and citizens. It integrates digital, green and inclusive priorities while contributing to EU Missions and the Green Agenda for the WB.

ESS ERIC – European Social Survey

The European Social Survey (ESS ERIC) is a well-established European Research Infrastructure that provides high-quality, comparative trend data on living conditions, social structures, public opinion and attitudes across European countries.
ESS offers free, open access to data, enabling high-quality publications, integration into international networks and better teaching resources for higher education institutions. Beyond academia, it enriches national data systems and supports evidence-based policymaking.
For the WB, participation in ESS ERIC offers major benefits, such as strengthening social sciences through access to high-quality, open data and more visible publications, building trust between economy level institutions and social scientists, enhancing education and laying the foundation for evidence-based policy. Serbia and Montenegro are now full members, while Albania, Kosovo and North Macedonia participated in one of the survey rounds conducted by ESS.

Figure 5: ESS ERIC, ©2025 ESS ERIC

Development of the Pan-European Research Infrastructure SEEIIST

The South East European International Institute for Sustainable Technologies (SEEIIST) is envisioned as the first large-scale, state-of-the-art research infrastructure in the WB in over 70 years. Launched in 2017 by Montenegro, it will be the fifth ion-beam cancer therapy centre in Europe and the fifteenth worldwide. It will deliver life-saving cancer therapy, advance frontier research, strengthen European industry and unite a historically fragile region through science diplomacy. In more detail, it will:

Figure 6: How the SEEIIST Ion Therapy Research Infrastructure in South East Europe might look, ©SEEIIST

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- provide cutting-edge ion-beam cancer treatment for patients across South East Europe;
- be a unique single-site European cancer research infrastructure with an Open Access model;
- attract talent from across Europe and beyond, engaging physicists, oncologists, radiologists, biophysicists, engineers and IT experts in collaborative frontier research;
- serve as a hub for regional cooperation, prevent brain drain, foster talent and strengthen European health-tech industries.

SEEIIST is a European flagship opportunity, combining science diplomacy, frontier technologies and a transformative health mission to ensure Europe's leadership in ion-beam therapy. It will be a milestone from several points of view:

- scientific excellence: it will foster frontier research in cancer therapy and ion-beam applications;
- pan-European relevance: it will be an opportunity to develop next-generation ion therapy facilities, expanding access to ion therapy for a much larger number of patients;
- socio-economic impact: it will boost regional cohesion, innovation ecosystems and industry;
- sustainability: it will be a clinical research model fully aligned with EU missions and enlargement priorities;
- industrial empowerment: it will strengthen Europe's health-tech and accelerator industries.

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

Image credits:

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Figure 5: ESS ERIC, ©2025 ESS ERIC. https://www.europeansocialsurvey.org/about-ess
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Strengthening Research and Innovation in the Western Balkans: The POLICY ANSWERS project

POLICY ANSWERS is a strategic initiative funded by the European Commission through the Horizon Europe project "R&I POLICY making, implementation ANd Support in the WEsteRn BalkanS". The project focuses on enhancing research and innovation (R&I) policymaking and governance systems in the Western Balkans, while also addressing aspects of education, culture, youth, and sports. By providing essential support to the region's development, POLICY ANSWERS plays a crucial role in strengthening the Western Balkans' potential for successful participation in regional and multilateral research and innovation activities.

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