

# Joint Action Strategy for the Danube MacroRegion on Research Infrastructures



Project Acronym	ResInfra@DR
Project full title	Facilitating macro-regional scope and link up to socio-economic actors of Research Infrastructure in the Danube Region
Funding Scheme	Interreg Danube DTP
Project start date	01/01/2017
Project duration	30 months
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	Applied Research and Communications Fund, Ministry of Education (Bulgaria);
	Ministry of Education and Sports (Croatia);
	Institute of Philosophy, Czech Academy of Sciences (Czech Republic);
	Centre for Economic and Regional Studies, Hungarian Academy of Sciences (Hungary);
	Executive Agency for Higher Education, Research, Development and Innovation Funding (Romania);
	Slovak Centre of Scientific and Technical Information (Slovakia);
	Ministry for Scientific and Technological Development, Higher Education and Information Society of Republic of Srpska (Bosnia and Herzegovina);
	Ministry of Education, Science and Technological Development (Serbia);
	Central European Initiative Executive Secretaria (Italy);
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ResInfra@DR is co-funded by European Union funds (ERDF, IPA) and the Government of Hungary.

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ACKNOWLEDGEMENTS: We thank all participants and experts who contributed to this publication attending the following 7 events (in chronological order): Kyiv, Ukraina, April 10, 2019; Chişinău, Moldova, April 11, 2019; Podgorica, Montenegro, April 17, 2019; Sarajevo, Bosnia and Herzegovina, May 14, 2019; Bratislava, Slovakia, May 22-23, 2019; Vienna, Austria, June 12-13, 2019 Synergy event; Belgrade, Serbia, June 19, 2019.

The feedback and other contributions provided by participants of the ResInfra@DR meetings are gratefully acknowledged.

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DESIGN: Krassimir Apostolov YEAR OF PUBLICATION: 2019

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#### **EXECUTIVE SUMMARY**

With this document, ResInfra@DR collected 17 distinct actions that form a joint action strategy for the Danube macro-region for research infrastructures (RIs). Its value is to present distinct actions that can be used by differentiated groups of research infrastructure stakeholders.

Stakeholders include RI host organisations such as universities or distinct research organisations, active RI users inside and outside of host organisations, RI operative managers and RI policy stakeholders on macro-regional, national and regional levels. Furthermore it addresses the wider coordination of actors, such as the PA7 Working Group 5 on Research Infrastructures, where it will be also presented. Core content of the joint action plan considers background developments, which include funding and operational challenges.

Over the period March–June 2019, stakeholders from all EUSDR countries covered were involved in consultations during events taking place in the Ukraine, Moldova, Montenegro, Bosnia and Herzegovina (Federation), Serbia, and at two larger events in Slovakia and Austria. In total, more than 150 people contributed to this consultation and prioritisation action.

#### 1 INTRODUCTION

This document contains two distinct parts. Part one introduces a text describing some of the background processes and policy challenges in research infrastructures in the Danube macro-region. Part two introduces a collection of joint action points which were identified during the first two years of ResInfra@DR, with a particular focus on pilot actions 1 and 2 as developed by the project.

This joint-action strategyn is also a deliveryble of ResInfra@DR, which was developed on the basis of a draft strategy and the results of a public consultation. It considers further input to a draft strategy and was fully developed starting from 11 proposed topics and contains now 17 detailed descriptions of actions.

The consultation also considered the relevance, feasibility and importance to the Danube macro-region, and the priority for the working group on research infrastructure, which exists within EUSDR PA7.

#### 2 BACKGROUND DESCRIPTION OF THE JOINT-ACTION STRATEGY

# A Joint Action Plan for Research Infrastructure Development in the Danube Macroregion

Over the last decade, the topic of research infrastructures has become increasingly important on policy agendas. This includes the strategic value of national research bases for full integration in the international research landscape; the growing linkup between distributed RI resources; and the increasing number of relevant topics on national roadmaps, particularly recent ESFRI roadmaps. Also in the EU, the member states current funding rounds for structural funds have addressed RI investment, at the same time increasing attention to the durability of investments and financial sustainability

continues to evolve. Core attributes of research infrastructures include: being mostly mission driven; centring in most cases on basic research; meeting certain criteria of excellence; featuring open access and the provision of services beyond one's organisation; specific rules and limits for economic activities; professional management and human resource development. Considering the macroregional context, many current research infrastructures do not (or do not fully) organise their operations along these core requirements.

Focusing on existing research capacities, universities are also trying to promote more organised operations and integration of their laboratories, which are now in the hands of active researchers, especially in order to meet new funding requirements. At the same time, newly built research infrastructures and existing smaller laboratories look for increased cooperation both internally and beyond organisational boundaries, which requires new modes and operation principles.

Expectations of better arrangements and a change of governance first includes the positive role of research infrastructures in enhancing international scientific cooperation and a specific influx of researchers to attractive research environments, which can trigger future collaborations. Second, research organisations are under pressure to enhance interaction within the regional economy, relevant industry sectors or existing small – and medium enterprises (SMEs). Taking on applied research questions with the aim of generating income and meeting regional economic demands has certain limitations. Specific funding rules (and state aid regulations), along with the existing capacity for result uptake in the economy, limit the room for entities to manoeuvre regarding this source of income.

Looking at the last funding rounds, and especially at European structural and investment funds (ESIF), which brought many research infrastructures to existence, it can be noted that long-term sustainability is receiving more and more attention. A balanced approach by policymakers and funding bodies must consider: (a) the meaningful distribution of available funding for research infrastructure (RI) establishment and upgrades, and (b) long-term sustainability and the provision of operational costs throughout the lifetime of a research infrastructure.

This joint action plan addresses the above challenges, with a focus on the Danube macro-region. It provides a broad list of specific activities that should trigger increased exchanges of mutual learning, including focused networking; suitable policy options; experiences with existing policy steering tools and information gathering; practical know-how on the management and governance of research infrastructures; and other relevant practical actions. Sharing personal experiences on involvement in processes across the region would provide a core opportunity that the current established network of experts and active organisations could use to improve their own practice.

The project ResInfra@DR has tested a number of proposed actions and added other intervention fields identified during ongoing work which deserve equal attention and importance.

The following 17 core action points, grouped into five distinct areas of action chosen through consultation, comprise the approved key components of the "Joint Action Strategy for the Danube Macro-region for Research Infrastructures".

#### 3 OVERVIEW OF ACTION POINTS

The following overview of actions comprises all identified actions and guides users through the relevance, feasibility and importance of each point to the Danube macro-region (DR), the main priority of the EUSDR Priority Area 7 (PA7) Working group on Research Infrastructure. It also examines the timing the timing of 17 possible actions:

Group	Short title of intervention	Relevance	Feasibility	Impor- tance for the DR	PA7 WG on RI priority	Start of action in
Information provision & exchange	Information provision: International trends and developments	••••	••••	•••○○	••000	1 yr.
	Information provision: Regional, national and macro-regional developments	••••	••••	•••00	••••	1 yr.
	Increasing exchange on national level	••••	••••	••••	••••	Start now
Investment planning for RIs	Tools for regional and na- tional investment plan- ning in Rls	••••	•••00	••••	••••	1 yr.
	RI Landscape analysis	•••••	•••••	•••••	•••••	1 yr.
	Approaches to involve- ment in mid-/large-sized international RIs	••••	•••00	•••00	••000	2 yrs.
	Resources for assessment: Reviewer and evaluator da- tabase	•••00	•••00	••••	••••	Start now
Capacity building & mutual	Training for stakeholders as policymakers and funding agencies relevant to RIs	••••	••••	••••	••••	1 yr.
learning	Training for RI staff	•••••	•••••	•••••	•••••	1 yr.
	Peer exchange and learn- ing about RI practice	••••	••••	••••	••••	1 yr.
	Building an RI user com- munity	••••	••••	••••	••••	2 yrs.

Group	Short title of intervention	Relevance	Feasibility	Impor- tance for the DR	PA7 WG on RI priority	Start of action in
Open access to RIs & laboratories	Developing an RI information service system	••••	••••	••••	••••	2 yrs.
laboratories	Basic principles of open access, practical solutions and operation models for RIs	••••	••••	••••	••••	2 yrs.
	Support actions for small laboratories to improve access to smaller facilities and become real RIs	••••	•••00	•••00	••000	3 yrs.
	Research universities and integration tasks for RIs, operation models of RIs	••••	••••	••••	••000	2 yrs.
Practical & horizontal actions	Measures for increasing the practical cooperation of RIs in the DR	••••	•••00	••••	••••	2 yrs.
	Support for better RI coordination in the DR through lobbying and community information	••••	••••	••••	••••	1 yr.

### 4 DESCRIPTION OF ACTIONS

#### 4.1 Action group: Information provision & exchange

Short title of action	Challenges addressed	Aims of the action	Activities	Outputs/results
Information provision: International trends and developments	Information on current developments to establish international networks with strategic fora such as ESFRI and others, as the Group of Senior Officials (GSO) on global Research Infrastructures are not well known and it is challenging to receive adequate insight	■ Provide access to background studies and reports to access "early" information on new developments	Systematic collection of relevant materials and provision of access (primarily addressing policymakers, decision makers in research organisations)	■ Accessible relevant documents and inventory of initiatives, currently active projects
Information provision: Regional, national and macro- regional developments	■ Information about regional, national and macro-regional initiatives, cooperation and access offers are not collected systematically or distributed to a full range of actors	The systematic collection and distribution of up-to-date information and targeted information provision i.e. including CERIC-ERIC calls, ERRIS offers, other calls etc.	■ A LinkedIn page (or a regular news- letter) can provide necessary informa- tion in a timely man- ner, or a dedicated hashtag can be pro- moted to enable ad- equate sharing of in- formation	■ Permanent update through electronic channels ■ Newsletter items ■ Readers of newsletter
Increasing exchange at a national level	■ Different actors do not exchange information about current national or international developments; stakeholder lists are not collected in countries to facilitate exchange	■ Brief on developments: current challenges and analysis; planned new initiatives or funding rounds; Horizon2020/Horizon Europe calls ■ Inform about international developments i.e. ESFRI; regionally active bodies such as CERIC ERIC and user access offers ■ Network with national stakeholders, including policymakers, agencies and active research organisations, as well as users of RI´s beyond academic circles ■ Meet with specified target groups	Set up stakeholder lists on RI topics  Prepare information for stakeholder groups i.e. on funding opportunities or EU processes, including using the Horizon 2020 National Contact Points NCP information  Organise meetings for exchange and better national coordination  Provide newsletters for outreach	■ National-level meetings (variable openness) ■ Networking opportunities ■ Newsletters or other accessible information channels

# 4.2 Action group: Investment planning for RIs

Short title of action	Challenges addressed	Aims of the action	Activities	Outputs/results
Tools for regional and national investment planning for RIs (overview of current practice)	Regional/nation- al planning approach- es, including roadmaps or specific policy steer- ing mechanisms, which could follow valuable international examples are not collected sys- tematically. Access is limited to collections of guidance documents or toolboxes, progress on reviews of current prac- tice limits	A commented overview of practical guidelines and toolboxes of direct relevance for policy steering, funding and specific monitoring or assessment approaches	■ Systematic collection of relevant materials and provision of access ■ Webinars to present available tools	Accessible overview and commented collection of toolboxes and examples
Approaches to involvement in mid- to large-sized international RIs	■ Policymakers are often concerned with decisions regarding participation in international infrastructures	Present solutions for the assessment of par- ticipation. (e.g. benefits, access, economic val- ue and return on invest- ment, intellectual prop- erty, user community size, cost)	■ On-hand presentation by peer policymakers of assessment frameworks or evaluation grids used; coordination with the user community	<ul><li>Workshops</li><li>Webinars</li><li>Sessions at macro-regional events addressing policymakers</li></ul>
Resources for assessment: Reviewer and evaluator database	■ For the systematic evaluation of RI support calls and all other assessments, a sufficient and regionally embedded reviewer list is currently missing. This creates a bottleneck for funding programmes or specific assessments. Programme evaluations do not count on experts from the macro-region	■ Develop and enrich the established RI reviewer database.  I ■ nform users about the existence of and opportunities provided by an RI reviewer database	■ Provide and enlarge quality-ensured reviewer database on RI assessments (primarily addressing policy stakeholders, policy delivery organisations as agencies and research organisations for their own steering) ■ Organise Web meetings to provide information	■ Permanently updated database of RI reviewers, starting e.g. with the ResInfra@DR reviewer database ■ Access by main users to the database (by keeping data protection regulations)

# 4.3 Action group: Capacity building and mutual learning

Short title of action	Challenges addressed	Aims of the action	Activities	Outputs/results
Training for stake- holders, (policymak- ers and agencies)	■ Specific knowledge for policymakers con- cerned with rapid pol- icy developments can scarcely be found in training sessions or workshops	Provide training according to the needs of policymakers and policy-delivery agencies	Train stakeholders for better steering, as well as planning, monitoring and commissioning of studies i. e. to assess economic impact	■ Training for Poli- cy maker and poli- cy delivery organisa- tion staff
Training for RI staff	■ RI management tasks are challenging, includ- ing e.g. user access pro- vision needs, specific hard and soft skills and providing adequate support structures	Train research in- frastructure staff to improve operations, access and cooper- ation	Provide training events, workshops or online webinars on current RI management practice i.e. access models, user interaction, governance issues	■ Meetings (virtual, real)
Peer exchange actions (for RIs)	■ RIs need to follow international trends to ensure appropriate development, yet the format for peer assessment or institutional peer review is barely known and rarely used. This includes policymaking, agency funding operations and research organisations hosting RIs	Provide peer exchange, mutual learning and reviews addressing:  (a) policymaking and delivery;  (b) research infrastructures and their hosts/umbrella organisations	■ Exploit reviewer database ■ Organise Web meetings to provide information ■ Provide seminars and workshops focussing on topics specific to RI issues	■ Peer support actions in pairs or other settings ■ Meetings – web meetings, seminars and workshops
RI user community building	There are many offers to establish new RIs or facilitate access to laboratory facilities. In order to attract excellent users, the visibility of capacities is often not adequate; in addition, information often does not reach future users. Currently there is no specific exchange on how to provide outreach and information about broader tools to the RI-user community	■ Exchange on best practices regarding how to map and attract potential users in specific research fields, as well as consideration of systematic approaches ■ Provide tools to inform about opportunities for potential users of an Rl ■ Exchange information on practices regarding user community management, considering the specific and widely varying DR situation	■ Thematic exchange on RI user community building actions via showcasing current practices and using systematic methodologies and approaches ■ Interregional exchange on user community building actions, options and experiences in specific research fields	Thematic exchange sessions for RI staff and RI managers (virtual and real meetings)

# 4.4 Action group: Open access to RIs and laboratories

Short title of action	Challenges addressed	Aims of the action	Activities	Outputs/results
Developing an RI equipment and service information system	■ Currently, existing RI capacities are not visible and access is hindered, due to an inability to find the right contact persons. Additionally, a reference point for funders on existing capacities and equipment is rarely existent and investing twice in similar equipment occurs, despite under-usage of similar systems	<ul> <li>Showcase active RI service systems such as ERRIS</li> <li>Explore opportunities to map a specific research field and associated RI services</li> <li>Exchange information on possible booking systems that include a broader range of equipment (also across the DR)</li> </ul>	■ Present service systems on current examples i.e. ERR-IS (Romania) which operates as booking system for access ■ Test a systematic approach for service arrangements regarding a specific field of research in a pilot project	■ Information sessions (virtual/real) for RI stakeholders to gather information about the ERRIS approach ■ Thematic pilot actions for service catalogues using existing RI information systems
Open access basic principles, practical solutions and operation models for RIs	<ul> <li>Open access is a precondition when public funding is involved, but includes a fee-based operation and must respect state aid rules for economic use</li> <li>Openness to all types of users is requested more and more, this requires new approaches that are often unknown (how to organise, what can be charged)</li> <li>Cost models for open access to Rls</li> <li>IPR rules and other conditions</li> <li>Special conditions for funding by the European Commission and structural funds, as well as from national funding schemes (state aid rule=20% commercial use)</li> </ul>	■ Provide better understanding and streamlining of RI offers and services ■ Propose and showcase open access models and what they mean for the operation of an RI ■ Fulfil meaningful funding conditions and corresponding documentation	Exchange on open access models for RIs, including the pricing of use of services  Collect current practice examples to see open access provisions and options  Steer and manage access (beam time allocation i.e. by use of a review mechanism, services for users, access for educational/teaching purposes, etc.)  Share models for IPR management  Monitor and document open access (specific indicator framework)	<ul> <li>Exchange meetings</li> <li>Online presentations and webinars</li> <li>Sharing current practice with interested actors in workshops or newsletters</li> <li>Sharing relevant material for the monitoring of operations, pricing, and steering of access</li> <li>Monitor indicators and provide materials</li> </ul>
Support to small laboratories to improve access to facilities	■ A number of smaller facilities maintain valuable research resources, equipment, laboratories or databases. In many cases, access for users outside of research entities remains limited.	■ Capitalizing on current access approaches i.e. through open calls, and the use of small research facilities, can be facilitated. The needs of users need to be reflected on a caseby-case basis.	Rls can be provided with essential information for their management challenges and options. These could be: (a) cooperation and management model agreements or examples adapted to one's own needs. (b) Pilot support cases can focus on specific thematic "silos"	■ Information about user access cases for small research facilities or specific thematic solutions

Short title of action	Challenges addressed	Aims of the action	Activities	Outputs/results
Research universities and integration tasks for RIs	■ Universities increasingly try to pool their research base by forming joint or "core laboratories", often in the hands of the rectorate. At the same time, faculties have acquired knowledge of procurement and other procedures to purchase equipment.  ■ The challenge of integrating university-wide facilities includes issues such as human resources and ownership by faculties, and is a pressing development	■ Provide interplay of research groups and their research infrastructures with faculties. The rectorate must activate the full potential of existing laboratories and research infrastructures. ■ Actions include: - Identify steering and governance models integrating existing resources - Provide operations models which can be adapted to best utilise existing RIs and address future upgrading phases	Share experiences of similar tasks in webinars or at thematic meetings  Use synergies with the Danube Rectors conference and other stakeholders to bring the topic to the agenda  Inform about internationally recognized and tested models as "core facilities" in the microbiology or medical and genomics	■ Thematic online meetings ■ Sharing successful cases or existing assessments (i.e. with news or including DR stakeholders' specific thematic newsletters, etc.)

## 4.5 Action group: Horizontal activities

Short title of action	Challenges addressed	Aims of the action	Activities	Outputs/results
Measures for increasing practical cooperation of RIs in the Danube Region	<ul> <li>Many Rls work in isolation and do not exploit international opportunities in the DR</li> <li>A number of smaller laboratories do not consider the added value of services which are organised together with other Rl's or laboratories including distributed facilities</li> </ul>	■ Create an exchange on existing collaboration models within the region  -■ Establish practical exchanges on strategic planning for internationalisation  ■ Explore how to integrate and open up smaller distributed RIs in the DR, as well as in specific thematic fields	■ Share new RI and laboratory networks and reflecting on added value in online talks or at relevant events ■ Inform about internationalisation options with thematically similar organisations within/outside of the region	■ Thematic meetings reflecting the topic and providing insights for participation options ■ Online talks or sessions to demonstrate concepts
Support for better RI coordination in the DR through lobbying and community information	■ The PA7 WG will support future activities, but financial means need to be acquired for such tasks. ResInfra@DR has been developing a clear action strategy with this document that requests small resources for further implementation. Being to some degree a neglected topic in the DR, stronger lobbying for RI investment in the region is necessary.	<ul> <li>Use existing resources to maintain topic interest in the region on RI, including the PA7 WG</li> <li>Maintain a list of interested people in the region to address thematic information</li> <li>Lobby for regional cooperation and support actions</li> </ul>	■ Present the joint action plan at PA7 WG meetings or organise such meetings. ■ Prepare a regular newsletter (with the community, the H2020 NCPs, the Danube rectors conference, the JRC, ESFRI)	■ Briefings at topic-related events about feasible actions (and an action plan) ■ Release of a thematic newsletter to maintain contact with RI-related staff ■ Lobbying initiatives i.e. for funding of coordination initiatives



With this document, ResInfra@DR collected 17 distinct actions that form a joint action strategy for the Danube macro-region for research infrastructures (RIs). Its value is to present distinct actions that can be used by differentiated groups of research infrastructure stakeholders.