

Ex-Ante Evaluation of Research Infrastructures: Benefits, Methods and Approaches, Steps in Implementation, and other

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A Practical Guide on Ex-ante Evaluation for Research Infrastructures

Draft Version

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Who is it for?

RI managers

Funders

+ other interested actors

Policy-makers



Context – ResInfra@DR project

- ✓ **Facilitating a macro-regional scope and link-up to socio-economic actors of Research Infrastructure in the Danube region**
- ✓ **Co-funded** by European funds, ERDF and IPA – INTERREG Danube Transnational Programme
- ✓ **Mission:** to improve framework conditions for research infrastructure and innovation in the Danube region.

Name	Type	Country
Centre for Social Innovation	Lead Partner	Austria
University of Natural Resources and Life Sciences, Vienna	ERDF Partner	Austria
Applied Research and Communications Fund	ERDF Partner	Bulgaria
Ministry of Education and Science	ERDF Partner	Bulgaria
Ministry of Science and Technological Development	ERDF Partner	Bulgaria
Institute of Physics and Applied Mathematics	ERDF Partner	Bulgaria
Centre for Scientific Research and Technological Innovation	ERDF Partner	Bulgaria
Centre for Economic Research and Innovation of the Bulgarian Academy of Sciences	ERDF Partner	Bulgaria
UEFISCDI - Executive Secretariat for the Development of the Research and Innovation System	ERDF Partner	Bulgaria
Slovak Centre for Applied Research and Innovation	ERDF Partner	Slovakia
Ministry of Science and Technology of the Republic of Srpska	ERDF Partner	Bosnia & Herzegovina
Ministry of Education, Science and Technological Development	ERDF Partner	Serbia
Central European Initiative Executive Secretariat	Associated partner	Italy
Ministry of Research and Innovation	Associated partner	Romania
Academy of Sciences of Moldova	Associated partner	Moldova



How it all started?

WP 3	4 Dialogue Workshops	Country notes	3 Guides for evaluating and monitoring RIs
WP 4	3 Training sessions (Sofia, Banja Luka, Bucharest)	Registry of reviewers of RIs	
WP 5	PA1. Peer learning process between RIs from 9 countries	PA2a. Support to RIs or to parent organisations of RIs	PA2b. Support to public entities managing and financing RIs

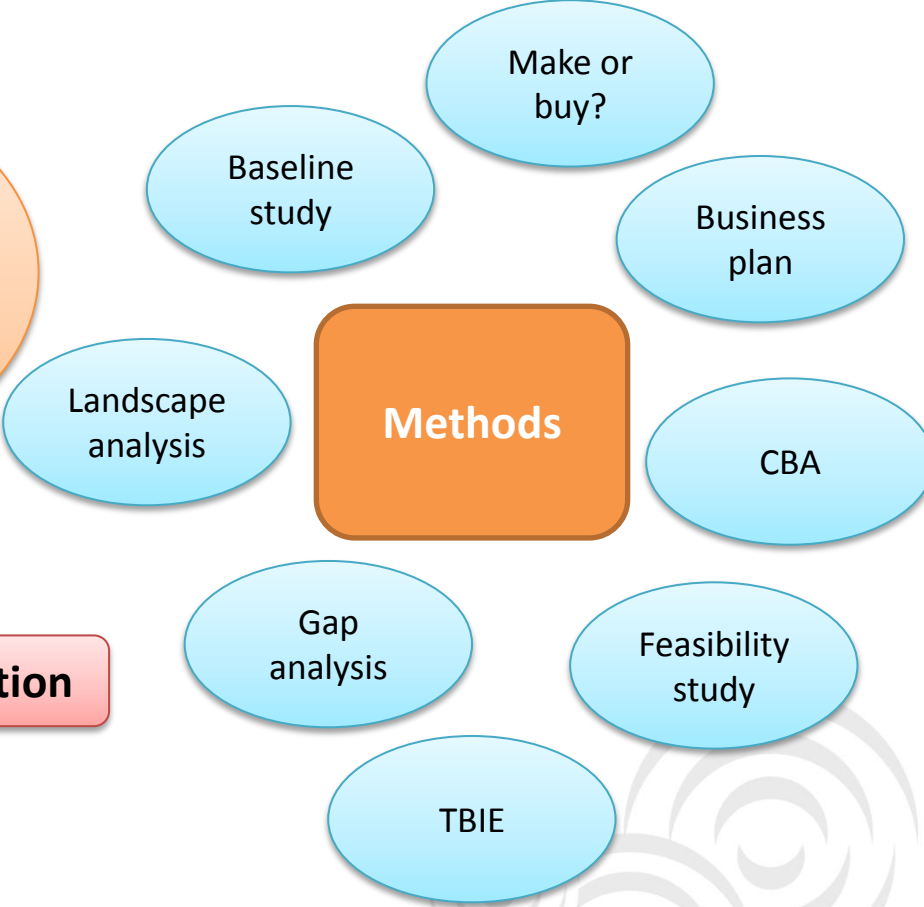
How it all started?



Structure/ Sections

What's in it for me?

Introductory aspects



financing

steps in implementation

Who?

“What’s in it for me?”

Policy-makers

- how policy should be designed + actions => greater results;
- Types of actions => multiplying effects of the RI;
- Synergies and complementarities with other projects;

RI managers

- Basis for convincing decision-makers and funders;
- Better design for excellent results;
- Info on potential risks and measures;
- Reinforce RDM and increase sustainability;

Funders

- Identify ways for obtaining greater value for money;
- Ensure accountability and transparency;

“What’s in it for me?” (part 2)

RI staff members

- Clearer overview of what is to come;
- Better planning of their careers;
- Potential more commitment to the organisation;

Other actors

- Local firms and entrepreneurs;
- Firms interested in coming to the region;
- Local authorities.

Suggestions

Some glimpses of content

Why do ex-ante evaluation?

What does it do?

Ex-ante evaluation	Interim evaluation	Ex-post evaluation
RI design stage	Implementation of RI	After a programme has ended
<ul style="list-style-type: none"> - identifies and documents the needs that have to be addressed; - documents the results that need to be obtained; - establishes the feasibility of the planned activities; - can shape the design of the RI; - can contribute to the selection of the next steps; - assesses the likelihood of the success scenario; 	<ul style="list-style-type: none"> - document progress and implementation of the different interventions; - shapes RI operation/ programme implementation; - offers evidence on early effects; 	<ul style="list-style-type: none"> - focus on results and the contribution of the RI to the produced changes; - contributes to policy review by assessing the effective use of public funds;

Steps in implementation



Scoping

1. Scoping	Define the evaluand; Time horizon, geographical relevance	desk research; interviews with RI managers, technicians involved; review of the RI proposal, strategies, other relevant documents etc.
2. Intervention logic	needs/ context, financial resources, strategic objectives, impacts expected, underlying assumptions, stakeholders involved etc.	needs assessment, stakeholders analysis, landscape analysis desk research, interviews
3. Evaluation design	Methodology and instruments - Evaluation questions, indicators, choose methods, build instruments, plan a baseline study	
4. Collect data	Baseline study & apply the created instruments	
5. Integrate results & Reporting	Synthesis of collected data & formulate recommendations	

Who conducts the evaluation?

- Internal vs. External Experts
- National vs. International Experts

	National Experts	International Experts
Pros	<ul style="list-style-type: none"> - better knowledge about and understanding of the RI ecosystem and political context; - easier access to the RI and its personnel (in terms of language, better knowledge of the institutional and legal framework); - better understanding of the legal and institutional framework in which the RI will/ is activate/ing; - reduced costs (fees, not required to travel great distances); - increased availability – as they are not required to travel great distances; 	<ul style="list-style-type: none"> - if the new RI has/will have international relevance, it might be desirable to also have international experts in the evaluation team (for increased credibility at international level and multicultural reasons); - perceived objectivity (as the chances of having a conflict of interest are lower); - potential increased level of expertise + more diverse experience;
Cons	<ul style="list-style-type: none"> - increased risk of subjectivity – due to potential conflicts of interest; - reduced willingness to criticize (due to potential negative consequences – professional and social); - potential less diverse expertise. 	<ul style="list-style-type: none"> - higher costs (potential higher fees, accommodation and transportation costs); - language barriers; - reduced availability for meetings and on-site visits (involves coming back and forth from one country to the other); - reduced knowledge and understanding of the <u>legal and institutional framework</u> of the RI's country; - reduced knowledge and understanding of the <u>political context and nuances behind the RI;</u>

	Internal	External
Pros	<ul style="list-style-type: none"> - better knowledge about and understanding of the RI and its context (including political aspects); - access to the RI and its personnel - reduced costs - increased availability - for participating in meetings and activities when required - capacity to collect information – when the <u>RI is less willing to give important information to external experts</u>; - utilisation of evaluation results – due to a better knowledge of the RIs specificities, internal evaluators might be able to produce findings that are more likely to be implemented; 	<ul style="list-style-type: none"> - more adequate specialist skills and expertise; - perceived objectivity and open mindedness (with <u>“no obvious stake in the program”/ RI</u>) – this aspect weights even more in the case of public funding (accountability purposes); - capacity to collect information (sometimes, <u>people find it easier to open up in front of a stranger</u>, with whom they do not work within the RI); - increased willingness to criticize – external evaluators might find it easier to raise uncomfortable issues when necessary; - utilisation of evaluation results – in this case, it can be also ensured by external evaluators through a participatory approach (working closely with stakeholders);
Cons	<ul style="list-style-type: none"> - increased risk of subjectivity and reduced willingness to criticise (<u>due to potential negative professional and social consequences</u>) – however, external evaluators can face in certain cases the same or increased pressure in this regard, or face a reduced willingness to criticize due to a highly participatory approach; - lack of expertise in the field of evaluation; 	<ul style="list-style-type: none"> - higher costs (fees, potential transport and accommodation costs); - a potential decreased availability for participating in meetings and activities (but this is not always the case; their availability might be the same); - reduced understanding of RI’s specificities compared to that of an internal evaluator;

Methods & Approaches

- List of options
- Mix & match
- Structure for presenting each method/ approach:
 - What does it do?
 - When to use it?
 - What circumstances are required before considering to use it?
 - What are its specificities?
 - Steps in implementation
 - And other

Lifecycle of RIs + Stages of the Evaluation Process

Context/ Needs	Design of an RI proposal			Design (final version) & build RI	Operation phase	Decommissioning	
Initial needs assessment	RI design – log frame	Planning of M&E	Baseline study	Implementation (Intermediary evaluation can be done during the operation phase)		Final ex-post impact evaluation	Learned lessons are used in designing future programmes/ RIs
Initial assessment of context and needs	Ex-ante evaluation/ Planning			Monitoring & Evaluation			



**TIME
DELINES**

Monitoring the Socio-
of Investment in
structures



TENCIES IN RESEARCH,
REGION)

Further References (1)

- ESFRI Roadmaps 2016 & 2018 + Guiding documentation
- Griniece, R., Reid, A., and Angelis, J. (Technopolis Group), Evaluating and Monitoring the Socio-Economic Impact of Investment in Research Infrastructures (2015)
- Rochow, R., Peró, M., Pook, K., Tchonkova, D., Marinova, D., Gheorghiu, R. and Niță, V. FenRiAM full guide – Proposal for a Foresight-enriched Research Infrastructure Impact Assessment Methodology (2011)
- European Commission: EVALSED Sourcebook: Methods and Techniques (2013)
- EvalInno, RTDI Program Evaluation Guidelines (2011)
- ELI ex-ante evaluation
- Academy of Finland, Evaluation criteria for research infrastructures

Further References (2)

- Guide to Cost-benefit analysis of investment projects - Economic appraisal tool for Cohesion Policy 2014-2020 (2014), European Commission, Directorate-General for Regional and Urban policy
- Research Infrastructures Foresight and Impact (RIFI), FP7 project No 228293, 2009
- Impacts of Large-Scale Research Facilities – A Socio-Economic Analysis, Research Policy Institute, (2004)Lund University
- Evaluation of Research Infrastructures in Open innovation and research systems (EvaRIO), FP7 project No 262281, 2013
- Additional information available in OECD, "The Impacts of Large Research Infrastructures on Economic Innovation and on Society: Case Studies at CERN"(2014),OECD
- Cost/Benefit Analysis in the Research, Development and Innovation sector (2016), Center of Industrial Studies, University of Milano. Additional information available at: https://www.csilmilano.com/docs/WP2016_01.pdf

What's next??

SAVE THE DATE:
27-28 Nov. 2018

Final Consultation Meeting

**managers, policy makers,
evaluators**

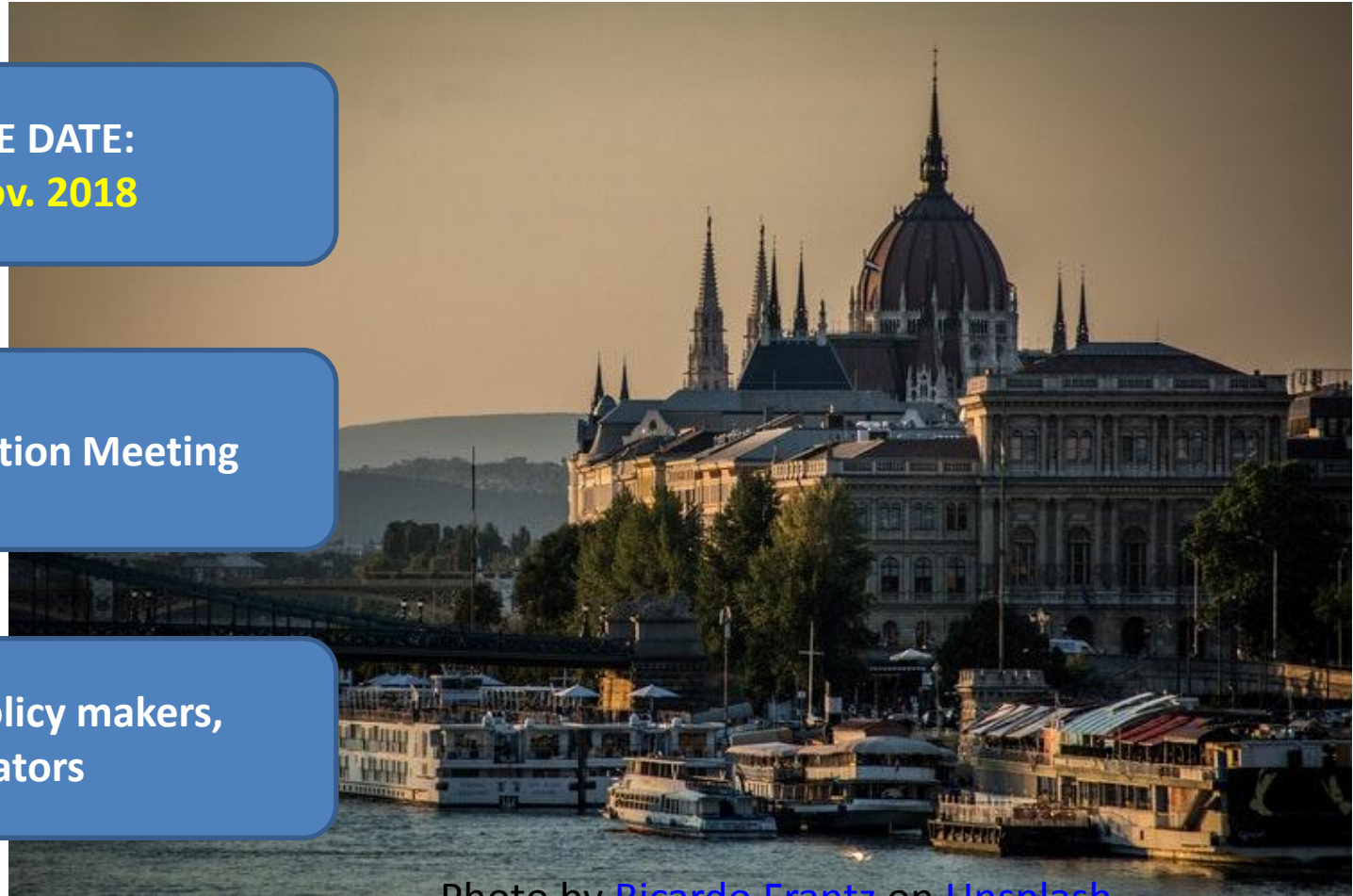
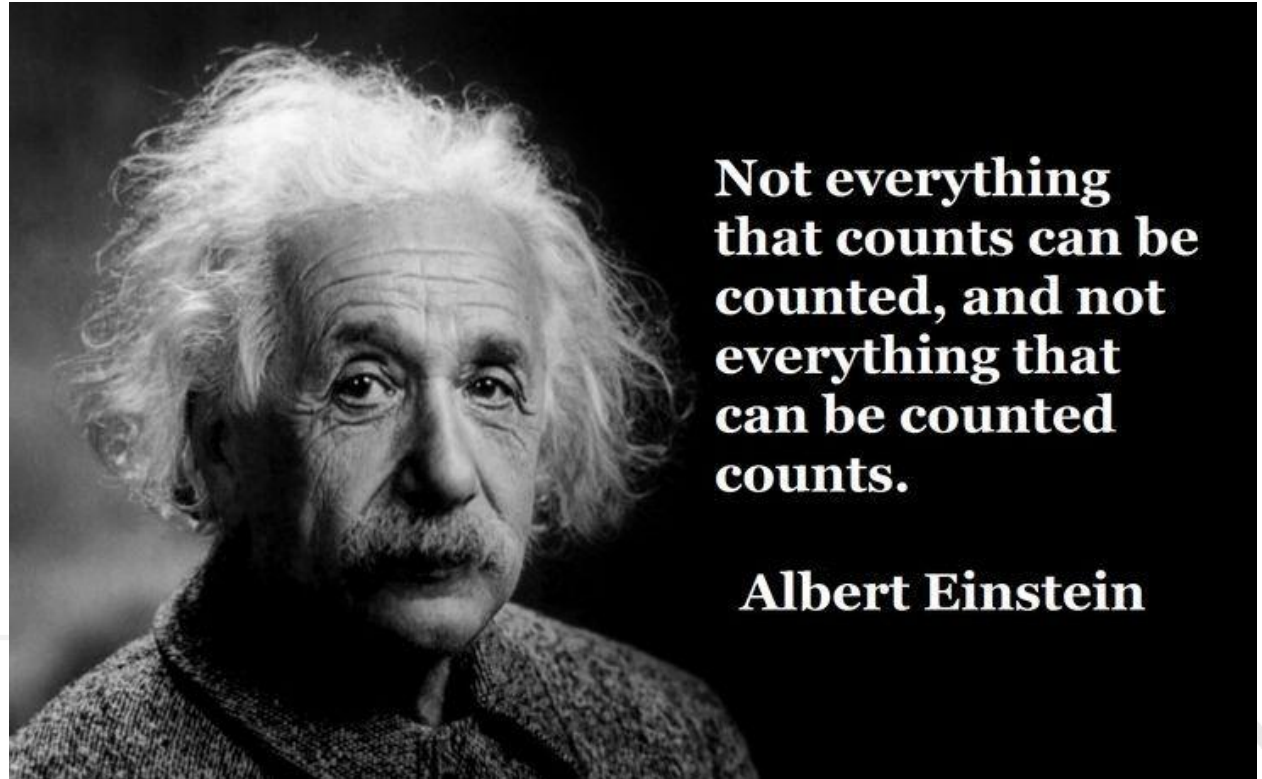


Photo by [Ricardo Frantz](#) on [Unsplash](#)

Structure

- Types of actors and how can they benefit from an ex-ante evaluation of RIs
- Introductory aspects
- Organizing and managing an ex-ante evaluation
 - Financing
 - Steps in managing & organizing
 - Who initiates it and should conduct it?
- Methods & approaches
 - Qualitative vs. Quantitative methods
 - Baseline study
 - “Make or buy?” analysis
 - Business plan
 - CBA
 - Feasibility study
 - Landscape analysis
 - Gap analysis
 - CIE & TBIE

Reflect & React



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<http://www.interreg-danube.eu/approved-projects/resinfra-dr>

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