Greece: Towards a National Roadmap for Research Infrastructures

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National Strategy for Research Infrastructures: A Challenge for Greece

- Creation of a coherent, collaboration framework among the academic / research and industry stakeholders → **Research Infrastructures** as catalysts for the achievement of synergies between research and the development structures of the country

- Multi-annual plan for investment on Research Infrastructures, mapping national priorities (also part of *ex ante conditionality in the programming period 2014-2020 “1.2 The existence of a multi-annual plan for budgeting and prioritization of investments”* regarding the allocation of Structural Funds for RIs)

- Strong links with innovation and alignment with Smart Specialisation Strategies

- Emergence of National and European Added Value

- Identification of priorities for Regional Research Infrastructures and Regional Partner Facilities

- Optimal networking / sustainability / critical mass
Objectives of the National Roadmap for Research Infrastructures

- Support the decision-making process for the upgrade of research infrastructures (or new ones, if necessary) within the framework of a National Strategy for Research and Innovation, 2014-2020

- Provide an evidence-based support for EC negotiations regarding ESFRI participation

- Roadmap: A policy instrument for Research Infrastructures in the country
Greek participation in ESFRI roadmap

<table>
<thead>
<tr>
<th>Scientific Area (ESFRI)</th>
<th>Greek participation in ESFRI roadmap</th>
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<tbody>
<tr>
<td>Biological &amp; Medical Sciences</td>
<td>BBMRI, EATRIS, ELIXIR, Infrafrontier, EMBRC, EURO-Biolmaging, ERINHA, ISBE</td>
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<tr>
<td>Energy</td>
<td>HiPER, ECCSEL, EU-SOLARIS, WindSCANNER</td>
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<tr>
<td>Physical Sciences &amp; Engineering</td>
<td>ELI, KM3NeT</td>
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<tr>
<td>Material, Analytical Facilities</td>
<td>European XFEL</td>
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<tr>
<td>Environmental Sciences</td>
<td>COPAL, EMSO, EPOS, EURO-ARGO, LIFEWATCH</td>
</tr>
<tr>
<td>Social Sciences &amp; Humanities</td>
<td>CESSDA, SHARE, CLARIN, DARIAH</td>
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<tr>
<td>e-infrastructures</td>
<td>PRACE</td>
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* In **bold**: Structural Funds (2007-2013) approved for the preparation of Greek participation in ESFRI
Research Infrastructures in line with the national and regional priorities & Research & Innovation Smart Specialisation Strategies

Agro-bio-food

Environment - Energy

Health - Pharmaceuticals

Cultural Heritage

Sustainable tourism

ICT

Strengthening the role of research within the Greek Knowledge Triangle
- Solid & competitive participation in ERA

Research Infrastructures

Human Potential

Key Enabling Technologies / FET

Monitoring and reviewing mechanisms
1\textsuperscript{st} Phase – Expression of interest

- Submission of 138 proposals in 7 thematic areas
  - A “bottom-up” process
  - Strengthening national networks and critical mass per scientific area
  - Encouragement of strong governance schemes / emphasis on sustainability

- Only 69 proposals support only one thematic priority (\textit{significant level of interdisciplinarity})

- Significant connection to the European landscape of Research Infrastructures (I3 networks, ESFRI, ...)

Main steps for the formulation of the National Roadmap for Research Infrastructures

- **1st Phase:** Expression of Interest - submission of abstracts
- **2nd Phase:** Submission of full / detailed proposals

**Evaluation Procedure based on 2 threads**

- **Evaluation of the scientific and technical merit and innovation potential**
  - Methodological support / Criteria setting / evaluation thresholds
    – **GSRT / Advisory Board**
  - International peer review evaluation process
  - Site visits / targeted meetings per scientific area

- **Strategic prioritization of the proposed RIs**
  - Within the ongoing Strategy for Smart Specialisation for Research and Innovation being, developed by GSRT, taking into consideration national and regional RIS3
  - Meeting visionary, strategic priorities at the national and regional level, boosting national and regional economy and competitiveness with R&I
Number of proposals per main scientific area

- **13** Social Sciences and Humanities
- **31** Biological and Medical Sciences
- **31** Physical Sciences and Engineering
- **20** Material Sciences and Analytical Facilities
- **9** Energy
- **20** Environmental Sciences
- **14** e-infrastructures
Distribution of proposals per scientific area
GSRT actions

1. **Open call for bottom-up expression of interest**
   - 1st Phase – completed: 17.2.2013
   - 2nd Phase – deadline 12.7.2013 (based on expression of interest)
   - Guidelines: Available on 23.5.2013
   - 2 information days (February, April 2013) & several targeted meetings

2. **Advisory Board & formulation of support framework**
   - Representatives of the research, academic and business / industry areas
   - 3 meetings (up to May 2013) and extensive information exchange
   - Elaboration of methodology issues / criteria / evaluation method
   - 4 groups of criteria (grades: 1 – 5)
   - Experts identification for specific scientific areas / topics
   - Guidelines for submission of proposals / FAQs (available through the online submission platform)

3. **Targeted information towards Regions**
   - Structured dialogue / negotiations with Regional Authorities
   - Identification of strategic interests at the regional and national level
   - Linkage to the multi-annual planning of GSRT for innovation infrastructures
Two threads for proposal evaluation & prioritization

A. Phase
- Call for Expression of interest
  - Submission of short proposals
    - 138 proposals submitted
  - Submission of detailed proposals
    - Scientific and technical merit and innovation potential evaluation
      - Threshold (Grade ≥ 4)
        - YES: Strategic assessment
        - NO: Out of Roadmap process

B. Phase
- 1st Thread
- 2nd Thread
- Priority list
1st Thread
Main groups of criteria

1. Scientific, technological potential & maturity of the RI
2. Effective networking & synergies within the knowledge triangle
3. Access policy, governance and sustainability
4. Innovation potential and socio-economic benefits
1. Scientific, technological potential & maturity of the RI

- The significance of the Research Infrastructure for specific research fields addressed, including:
  - Scientific objectives, main concept of the RI
  - Current state-of-the-art
  - Expected benefits for the Greek research system as location for conducting cutting edge research at an international level
  - International reputation and visibility, involving the partners and principal investigators
  - Impact of combating the brain-drain of highly skilled human resources (research & technical staff)
- Degree of interdisciplinarity
  - The effect of RI on strengthening interdisciplinary research in Greece
- Perspectives for scientific & technological breakthroughs in the field of operation of RI
- Maturity of the RI project
  - Proven ability to continuously follow state-of-the-art, experienced human resources & operational readiness
2. Effective networking & synergies within the knowledge triangle

- Competence complementarity of the partners and added value of the national RI network at the regional, national and international level

- Degree of networking and creation of critical mass

- Extent and types of the user community

- Potential for increasing existing or for creating new research groups in the field of operation of RI

- Education and training for students, researchers, technicians and engineers

- Synergies and networking capacity in relation to other Research and Innovation initiatives at the national and international level (with emphasis on ERA integration effects, e.g. ESFRI participation)
3. Access policy, governance and sustainability

- Access policy for researchers
  - Transparent policy, incl. transnational access activities, conditions for provision of access, addressing remote access needs in relation to availability of e-infrastructures and data management issues
- Access policy for industry (addressing IP rights – if applicable – fees and confidentiality issues)
- The management structure & governance of the proposed research infrastructure
- Technical feasibility, incl. human resource issues & cost-effectiveness of the proposed infrastructure, based on:
  - Level of requested funding and envisaged sources of funds
  - Multi-annual financial plan (est. costs) with funding sources information, as per:
    - Cost of investment
    - Operational Cost
    - Cost for decommissioning
- SWOT analysis
- Long-term sustainability plan of the investment
4. Innovation potential and socio-economic benefits

- Contribution to increase the potential for innovation and technology transfer through the construction and operation of the RI, based on expected results and spill-over effects of the RI

- Addressing major societal challenges and other socio-economic benefits, such as:
  - Development of new technologies
  - Effects on training
  - Creation of jobs
  - Return of investment
  - Territorial development (reduction of regional disparities and further regional upgrading)
  - Territorial cooperation (new opportunities for inclusion of the RIs in cross-border, transnational and interregional clusters and networks)

- The integration of the RI in scientific, business and social environment in Greece and expected socio-economic benefits at the regional and national level
2nd thread
Main points of strategic importance for proposal prioritization

- Expected economic and social benefits for Greece as location for conducting cutting edge research at a national, regional and international level, considering also the importance of cross-border cooperation

- The relevance of the RI to the national strategic priorities for Research & Innovation

- Its expected impact on the national and regional development and competitiveness

- Expected impact of the RIs on additional socio-economic issues (e.g. employment, environment, related commercial / business activities) towards the national & regional economy
### 2nd phase for proposal submission

#### Time table / Submission & evaluation process

- Online submission platform → Updated information based on expression of interest (1st Phase): *Application based on Parts A & B*
- Evaluation expected end October 2013
- Draft Roadmap: end 2013
- Presentation of the Roadmap: ICRI2014 – Athens, April 2014

#### Support documents / actions

- **Integrated Infrastructure Initiative (I3) model** → model for the description of proposed Networking, Services and Joint Research Activities
- **Guidelines** for submission of proposals
- **FAQs** *(incl. relevant link to EuroRIs-Net+ Knowledge Repository)*
- **Helpdesk** (GSRT)
Planned implementation and monitoring of the National Roadmap for Research Infrastructures (2014 – 2020)

**Research Infrastructure proposal for the roadmap**
- Research infrastructures of national relevance
- Significant renewal of national infrastructures
- Association with international infrastructures (ESFRI roadmap, Regional Partner Facilities)

**Roadmap process (3 year intervals)**
**Stages:**
- Preliminary selection based on national / regional priorities
- Submission of detailed proposals
- Evaluation of proposals by independent expert panels, site visits & deliberations with proposers towards establishing synergies
- Panel reports (statements on projects’ evaluation, recommendations, summary)

**Preparation of Joint Proposals / Synergies / Governance**
- Scientific and innovation communities
- Universities
- Research Institutes
- Regional partners

**GSRT**
- Procedures
- Instructions for proposing parties & governance schemes
- Helpdesk for proposers / electronic submission platform
- Planning of evaluation process
- Management and updates of information material

**GSRT / Steering Committee**
- Coordination of evaluation process
- Establishment of roadmap conditionalities & priorities
- Preparation and publication of the roadmap & updates according to RIS3 overall plan
- Consensus building: Consultation with stakeholder groups, central state and regional authorities, other private and public decision makers

**Monitoring of the roadmap / Infrastructure Management Team / GSRT**
- Periodic evaluation / annual reporting for roadmap infrastructures
- Mid-term and final impact assessment of roadmap infrastructures at regional, national and EU / International levels

**Implementing the roadmap**
- Finalizing legal environment (MoUs, governance, access policies & IPR, ...)
- Inclusion agreements and international participation
- Further negotiations with concerned parties and funding authorities
- Establish procurement mechanisms / state aid regulations
- Specific plans including calls / funding plans & sustainability issues (upgrades & operational costs)
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