Finnish Research Infrastructure Survey and Roadmap Project

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Research Infrastructures

Existing RI s

Plan/needs Roadmaps

Decision

EU27 MS & AS Survey "RI landscape"

National Survey and state of art

National strategy and Roadmap

ERA policy ESFRI Roadmap

EU27 MS & AS EC & EIB Implementation participation RI location

National budget plan for investments
Background for National RI Survey and Roadmap

Based on The Science and Technology Policy Council of Finland recommendation, the Finnish Ministry of Education launched a survey carried out in Finland in spring 2008 on national-level research infrastructures and initiatives for new national infrastructures and major upgrades of existing infrastructures. The resulting charting and plan concerning the national research infrastructures, the so-called Roadmap, will be updated at regular intervals.

The survey was in two parts, with the first part focusing on charting existing national research infrastructures and current commitments in international research infrastructures (inter-governmental agreements, memberships in international research).

The second part of the survey charts proposals for the major upgrades of national research infrastructures, new research infrastructures and participation in new international initiatives.
The definition of research infrastructure

Research infrastructures (RI) are resources of research methods, equipment, materials and services facilitating research and development in various stages of innovation, supporting organized research, and maintaining and developing research capacity.

The optimum structure of a research infrastructure naturally depends on the field of research and the user community, and their needs.
Different types of RIs

A single-sited RI is appropriate in fields that require major investments in expensive research equipment (e.g. synchrotron light sources, research reactors), special laboratories (e.g. cleanrooms) or research materials (e.g. hazardous chemicals). Single-sited infrastructure may include satellite units or it may also permit remote use.

A distributed RI is suited to fields in which the available resources are geographically dispersed (e.g. meteorological observation networks, biobanks etc.). A distributed infrastructure may also produce shared, centralized services.

Virtual RI are, for example, databases, archives etc. that can be used by researchers from their own workstations.
### Working plan

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<tr>
<th>STAGE</th>
<th>JANUARY</th>
<th>FEBRUARY</th>
<th>MARCH</th>
<th>APRIL</th>
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1. Planning the work in the Steering Committee
2. Seminar for Finnish contacts of the first ESFRI projects
3. Preparation of the Online Survey
4. The Online Questionnaire is open
5. Analysing the Survey Results
6. Working period of expert panels, site visits
7. Hearings
8. Working for the report
9. Working for the final report
10. Publishing the results
Process details STEP by STEP

0. National seminar on RI’s and information February 2008 (& web site)

1. Proposals submitted through an open Internet Survey

2. Opinion of an independent Expert Group (4 experts, 2 in secretariat)

3. National Steering Group selected out the RI that does not meet the criteria of a national level RI (16 experts & members, 2 in secretariat)

4. 3 International Expert Panels (22 members, 3 in secretariat)

5. National information & discussion meeting in 15.10.2008 in Helsinki

6. Agreed report by the National Steering Group to Ministry of Education 12/08
Distribution of the RI type in proposals for existing national RI (N=156)
Distribution of the main scientific and technological domains in proposals for existing national RI (N=156)
Distribution of the RI types in proposals for Finnish partnership in international RIs (N=24)
Distribution of the main scientific and technological domains in proposals for Finnish partnership in international RI (N=24)

- Social sciences and humanities: 21%
- Environmental sciences, ecology: 42%
- Life sciences and medicine: 21%
- Physical sciences and engineering: 58%
- Energy: 21%
- E-sciences and IT-technology: 4%
- Other: 4%

share of RIs serving the particular domain
<table>
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<tr>
<th>Panels (Acronym)</th>
<th>Number of proposals in the panels</th>
<th>Number of submitted RIs</th>
<th>Number of panel members</th>
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<td>Existing RIs</td>
<td>RI Roadmap</td>
<td>Existing RIs</td>
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<tr>
<td>Life Sciences and Medicine &amp; Environmental Sciences (LME)</td>
<td>21 +1 *)</td>
<td>24</td>
<td>76</td>
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<td>Physical Sciences, e-Science and Engineering (PSE)</td>
<td>10+8 *)</td>
<td>18</td>
<td>58</td>
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<tr>
<td>Social Sciences and Humanities (SSH)</td>
<td>14</td>
<td>9</td>
<td>38</td>
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<tr>
<td>Joint evaluations</td>
<td>7</td>
<td>7</td>
<td>11</td>
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<td><strong>Total</strong>)</td>
<td>*<em>52 + 9</em>)</td>
<td><strong>58</strong></td>
<td><strong>183</strong></td>
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Panel work (July-September 2008) (1/3)

STEPS:
The working methods for Panels in the process were prepared in summer 2008. Every proposal was evaluated following the general guidelines (Terms of Reference, ToR), introduced by the Steering Group.

The Panels used uniform evaluation forms to help the members to focus on the most important criteria in their evaluation. All members of Panels were asked to give a primary opinion on each proposal in written format.

The Federation of Finnish Learned Societies (TSV) established a site as a working platform for all three expert Panels

The discussions in the meeting were confidential.
Panels exchanged their views concerning the proposals send for joint evaluation. The LME and SSH Panel chairs as well as the LME and PSE Panel chairs had meeting together with each other before the their own meetings with Panel members.

1) **Meetings** Panels had a meetings in Helsinki 3 to 11 September 2008 (3 days/panel).

2) **Hearings** The Panels invited the coordinators of 61 proposals to hearings. The aim of the hearings was to get clarifications of arguments in the applications, and to answer open questions from the proposal templates.
3) Panel meetings
After the hearings, the nominated Rapporteurs gave a presentation of each proposal based on the results of the preliminary evaluation and started the Panel discussion. The panel discussed all the proposals, decided on the Roadmap proposals, and identified the national level research infrastructures in closed sessions.

Conflicts of interests were declared at the beginning of the Panel meetings.

4) The Panelists approved the Panel report through written procedures using the protected web site for the Panel work.
Panel work: Existing Finnish RIs

In order to be considered as a proposal for the list of national level research infrastructures it must in all cases demonstrably meet the following minimum criteria:

• The infrastructure is of scientific significance and its work produces added value at the national or international level

• The infrastructure is continuously utilized by a significant number of domestic or foreign researchers

• Free access in principle to the utilization of the infrastructure. This may, however, be subject to the approval of a research plan and reasonable compensation for costs of use and received guidance and services
Panel work: Finnish RI Roadmap proposals

A national-level infrastructure proposed for the roadmap shall for the most part meet the following criteria:

• Preliminary plan for the upkeep, services, administrative structures and finances of the infrastructure and responsible personnel

• The scientific significance and added value of the research infrastructure at the national and international levels

• A separate budget and working plan in the case of a major upgrade of infrastructure
Next step

Inclusion of a project on the Roadmap does not guarantee funding. It should be stressed that the Roadmap does not contain every conceivable project in which Finnish scientists might wish to be involved, the Roadmap rather concentrates on those projects of the highest strategic importance.

There are more research infrastructure proposals than it is possible to fund.

For this reason, there is a need for prioritization which projects on the roadmap might move into construction phase, long-term commitment or joining to international projects.
Future plans

A strategy should be developed for RI cooperation among the diverse agencies that work in the broad field of sciences and technology. RI projects need a mechanism for bringing in new partners (and new branches) under a joint or common management system. For example, some of the new RI initiatives may benefit from collaboration with existing RI or one of the new proposals. A trend towards integration, instead of fragmentation of initiatives working around the same themes, should be encouraged within the scientific community.

Finland as many other countries is still in a learning phase regarding the best practice in selecting the RI proposals with the highest potential for the national or for the ESFRI Roadmap, especially evaluation of multidisciplinary proposals.
**Future plans**

The concept of a research *infrastructure* initiative needs to be defined in a way that differ clearly from networking activities between research organizations. Some of the networks may be seeking the RI label to foster high-quality cooperation, although in some cases domestic and international networks may be a more appropriate approach for the participants. Some of the networks may later develop to become a distributed RI.

The advice from the Panels is to find mechanisms to increase and improve interaction between science communities to propose joint proposals to the Roadmap.

The update of the Roadmap after 2/3 years. In next exercise the lessons learned from the first process should be considered.
Thank you for your attention