

Collecting information for the Pre-study

(SW, PR 210218)

Lund University has a long tradition in using Research Infrastructures (RI) and programs are being set-up, both in Lund and nationally, to further develop the use of RIs within academia and in industry. However, the field of research and technology which *supports and develops the facilities themselves, their instruments, sample environments and methods* has a weaker position.

We believe that Lund University must form a node for collaboration, actions and support among infrastructure developers to work towards the RIs.

Areas that need to be addressed are, among others:

- How can LU contribute more efficiently to the development of Swedish RIs?
- How can the in-kind processes to non-LU RIs be developed?
- How can competence be developed and retained over the long lead times of RI construction?
- How can research groups at LU enhance their collaboration and visibility?
- How can this be achieved in the Swedish funding system?

This study will during 2022 address these ideas by collecting information, elaborate a proposal and present this within LU.

This document provides questions to be used in interviews to gather information to a study on contributions to Research Infrastructures (RI).

We are looking at contributions to the design, maintenance and development of RIs, not the use or actual experiments. (Design studies, prototypes, hardware, software, development of methods, development of processes and systems, ...)

Many different models for contributions exist:

- In-kind. The funding of the project is by a national funding agency and a contract stipulates that the contribution will count as part of the national fee to the RI.
- Cash-model. The funding is from the RI to a research group in cash, using its operation grants received through national contracts.
- Other models, for example where the project is not accounted to the national contributions but seen as a research project similar to the use of the experimental facilities at the RI.

1 Group in Lund

1.1 Basic information

0. Role of interviewee? People may voice their own opinions rather than their department's/division's/group's. This is fine, but we must assess whether what we here is anchored in the formal leadership.

1. Research area
2. Faculty
3. Department
4. Division
5. Research group
6. Number of people
7. Head of group

8. Research field

1.2 Contribution to a RI

1. Have you contributed to a RI
2. Would you like to contribute more/start contributing/support LU contributions
3. Is the contribution itself your main research area, is it supporting your main research or is the contribution advanced, but standard knowledge?
4. Which RI
5. What have you contributed
6. Type of contribution
7. When
8. Volume/hours
9. How was it financed
10. Who took the initiative/started
11. What are the benefits/incentives from your vs. the RI perspectives?

1.3 The process

Every aspect of the process from how the idea and first contacts were made, the selection mechanism, how this was co-ordinated with the funding to how the project was carried through and finally evaluated and accepted.

1. Describe the process
2. Timing
3. Contracts
4. Co-funding
5. The collaboration with the RI
6. Involvement (PhD, Post docs,...)
7. Other partners
8. Finalising the project
9. How would you ideally see the process?
10. Are there certain bottlenecks in the process that could/should be removed?

1.4 Problems / improvement

What are the lessons learnt from the project. This could also deal with projects that were never started due to any reason. (No contact established, not competence enough, some component missing, financing...) Discuss also how the experience from the project is being brought forward to the next project. Focus on how the process can be improved and what is needed to continue developing new projects.

1. Identify problems
 - a. In the process
 - b. Technically
 - c. Different goals/culture?
 - d. Networking?
2. Opportunities
 - a. Funding?
 - b. Contact networks?
 - c. Advancement/evaluation research?

3. Support needed
 - a. Financially?
 - b. Administratively?
4. Financing between in-kind projects

2 LU: Division, department, faculty, LU central

In addition to the questions above discuss how the strategy to compose, gain and perform projects is formulated. What is the approach the leadership above the research groups? What goals are formulated to gain more “contracts” for contributions or in-kind. How are the research groups supported in their activities. Is there an interest. How does one look on building and retaining competence within the organization. What measures do one envisage to be effective.

1. = Same as for a Group at LU + what would they describe as success stories?
2. Policy
3. Relevance
4. View and ideas (Does LU/Sweden need an organization/research institute?)

2.1 Phase 2 questions

These are questions when we have a proposal/results ready from the first study. (can be elaborated later when we know more specifically what we propose.)

1. Feed back on ideas, proposals
2. Limitations
3. Possibilities
4. Feasibility
5. Possibilities to implement at LU

3 Other organisation with experience/policy

- STFC, Helmholtz, INFN, ENEA, PSI, ...
- Swedish universities, Freja
- Århus uni, Oslo uni, Hamburg uni, EPFL, Oxford uni

These are organisations outside LU that provide in-kind or other projects to RIs. What are their experiences and policies to do so. How do they support the research groups. Here we should get the good examples and ideas that worked at other places. We should also get their strategies, long term views and how they prepare their organisations.

1. How are you contributing to RIs
2. Which RIs are you contributing to
3. How many are involved in the process? (number, %)
4. What support organization do you have
5. How large part of your activity is contributions to RIs
6. What is your policy – incentives?
7. Describe a typical process
8. Funding of contributions
9. Bridge activities among researchers between contributions

10. How much is the contribution the main research area and how much a support of the main research area
11. Relation to research funding agencies
12. Relation to national in-kind
13. Experiences of in-kind processes
14. Problems, success, improvements

4 Research infrastructure

- MAX IV, ESS, DESY, CERN, XFEL, FAIR, ...

These are facilities that would “get” the contribution/in-kind project. What are their needs of contributions from outside. How do they look on these, also comparing to in-house development. Do they have an in-kind process and what are their experiences and strategy. How are the projects financed, through which channels? How do the RIs collaborate if they have similar needs?

1. Needs
2. Contributions, collaborations
3. In-kind
4. Financial ideas
5. Collaboration
6. Internal/external co-operation
7. Experience (what works/success stories)
8. Multi-party collaboration/contributions – same needs at many RI
9. Would a larger Swedish partner like a research institute be of benefit in the contacts and processes?

5 Funding bodies

- VR, VINNOVA, KAW, Departement, ...

What are the views of the Swedish funding bodies on contributions and in-kind? What role are they willing to take? What is their view of responsibilities for long term project times and to retain competence? Balance in performing research, supporting research, supporting industry.

1. Policy by the funding body.
2. What role does the funding body want to take. (in relation to universities, companies, RIs)
3. Relevance for the funding body, Academia, companies, Sweden, the RIs of contributions and in-kind?
4. View and ideas, strategies for future development.
5. Mechanisms. What mechanisms do they see in the future? Funding, contact to RIs, contact to companies, collaborations, support short-term and long-term.