ERA-Instruments
An ERA-Net initiative for promoting infrastructure funding in the life sciences

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Workshop on Facility Management in the Life Sciences

Task leader
DFG

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Authors

Johannes Janssen, Christian Renner, Thomas Gübitz, (DFG)
Cas Maessen (NWO)

Johannes.Janssen@dfg.de
Christian.Renner@dfg.de
Thomas.Guebitz@dfg.de
k.maessen@nwo.nl

1 Executive summary

Facility management is gaining importance in the life sciences. However, various aspects of facility management in the life sciences are still in need of improvement. The contribution of facility managers to research efforts needs to be more explicitly appreciated by scientists and research councils. Research facilities need to be evaluated using a different matrix than pure research proposals. The need for longer term sustainability of facilities needs to be recognised. Facility management should be further professionalised. The facility management is a key success factor for a research facility. Organisations experienced in facility management and training managers, such as ESRF, are willing to share their experience.

2 Introduction

During the discussions held in the course of various activities of ERA-Instruments, facility management had been identified as crucial for successfully running instrumentation platforms and providing access to instrumentation. Hence it was decided to address this issue on the one hand by exchanging knowledge and experience with other organisations and consortia (who have addressed this issue), and on the other hand by bringing together facility managers in the life sciences for discussing what pressing issues they face and how challenges can be tackled.

3 About the activity

3.1 Objective

The main aim of the workshop was to identify relevant issues which can and should be addressed by research and funding bodies and to establish contact and exchange between all participants.
The major input to the discussion was expected to be provided by RI managers.
The questions to be discussed with RI managers were marked out along the following lines:

- What are the critical issues and specific problems in managing mid-size RIs in the life sciences?
    - Career pathways?
    - How to become a (professional) facility manager?
    - Standards for managing facilities? What is required?
    - How to set up a core facility? How to become visible?
    - Open access? Free access?
    - Accounting? Legal structure of the facility?
- What possibilities exist for supporting/training/networking of RI managers?
    - European programmes in FP-6/FP-7?
    - National schemes?
    - Local support? Support groups (“self-help”)?
- What actions/programmes/services could funding organisations provide?

3.2 Approach

A one-day workshop was held on the 14th April 2011 at the Harnack Haus in Berlin, Germany. Talks by representatives from ERF (European association of Research Facilities), ESRF (European Synchrotron Radiation Facility) and RAMIRI (Realising And Managing International Research Infrastrucutures), that is organisations which already have addressed issues of the management of large facilities, were invited. In addition a dozen facility managers in the life sciences were invited to state their experiences, suggestions and other issues. The collected statements provided the basis of a round table discussion. The meeting

was also attended by ten representatives of the ERA-Instruments partner organisations. Unfortunately the invited speaker of the European Commission had to cancel his attendance. (The intended presentation is included in the Appendix).

3.3 Results

Presentations by:
(All presentations can be found in the Appendix)

ERF (W. Sandner)
ERF provides free access upon reviewing of proposals. ERF members have between 15-50% free access. This model is illustrated by "Laselab", a distributed facility (at 24 sites) with single-point access. There should be "good practice" for charging industry use. There should be increased EU funding to solve many problems.

ESRF (S. Perez)
At ESRF 50% of budget is for personnel, 25% for running costs, and about 20% for innovation. There is in-house technical expertise for building and developing instruments.

RAMIRI-2 (N. Vincent-Wynter)
RAMIRI started off with an initial focus on (establishing and managing) single-sited facilities and has conducted three conferences in 2009 with about 100 participants. RAMIRI-2 develops a learning program. In 2011 RAMIRI-2 will conduct two learning cycles.

Results of the round-table discussion:

Scale and management level
Centralising instrumentation and facilities is an appropriate approach in some areas of the life sciences (LS) but in many areas distributed research infrastructures (RI) are more appropriate.

There is a general difficulty in terms of variation of scale of RI. Facilities range from local core facilities over regional and national to large European facilities. These require different management schemes. However, it is clear that from a certain size of a facility a full time manager is required.

Development of best practice
Many core facilities are emerging, but doing so without strategic planning and coordination.
The importance of RI in the LS is not sufficiently recognised in some countries/funding systems.

There is a lack of awareness by funders, universities, and reviewers, that infrastructures need to be evaluated differently from research projects. This holds in particular in terms of planning horizon (that is there is a need for longer term planning and investment). Management positions should be part of grant applications.

Organisations such as EMBL and ESRF provide best practice examples. Awareness about these best practice examples need to be further raised and related information disseminated.
Service should be based on cost/contribution by users in order to assure that the service is appreciated and used appropriately.

When facilities are growing, usually personnel for management are introduced (too) late. A flexible solution to this problem of variable/changing scale could be to buy time of managers

according to demand. These managers could be employed centrally by the university and could be involved in managing different projects.

Despite the need for improvements in facility management and access to facilities, research at the RI is important for maintaining and further developing its scientific and technological expertise and competitiveness, and should not be neglected in exchange for service.

Training and education of facility managers

Mid-size RI management is in need of professionalization.
Even at ESFRI level operating cost management needs further improvement. Networking and information exchange may be providing a way to address this.

Most facility managers have become managers by “happy accident”, that is they have not received training prior to fulfilling the role as facility mangers. Instead of such retrospective training, prospective training may be required. Becoming a facility manger implies that serving the scientific community becomes a major task while the own research is no longer the only aim. There seems to be a lack of reward for these management activities at the institutes.
Annual (“non-scientific”) meetings of facility mangers for training and networking, and introducing certificates of professional training for example based on a rotational training scheme may address the problem. BBMRI is already introducing a Master in Biobanking. These measures could also be supported and carried out by scientific associations. However, currently a general problem may be lack of awareness about existing programmes/possibilities. The importance and need for professional facility management could be emphasised by research funders by giving more weight to management in evaluating applications for instrumentation.

Career paths of facility personnel

The difficult situation of (non-research) professionals running instrumentation should be acknowledged. Scientists running instrumentation should receive the same salaries as research scientists. Their contract does not necessarily have to be permanent but should be of longer term (5-8 years), which will allow facilities to train personnel and to benefit from this expertise. When personnel are leaving the facilities, sufficient time for transferring expertise is necessary. In the UK (BBSRC) funding for research technicians is based on research “income”. This and regular reviews keep up quality.

Sustainability of facilities

How can the efficiency of an RI be demonstrated? RI input is not always acknowledged by users, as users have the interest to promote their reputation and not the reputation of the facility.

RI are in need of longer sustainability. Small RI usually lack longer-term continuity like large RI. RI are more than research(ers), and need to be evaluated in a matrix taking bioinformatics, administration, access structure etc into account.

In ESFRI projects defining a business plan is standard. Such business plans should reflect the cost of total ownership. Introducing such business plans to facilities in the life science could contribute to professionalization.

Standards of good practice need to be enforced. Funders could play a larger role in this.
Establishing quality labels (ISO) for RI including the management and organisation could help to enforce standards.
From a technical point of view benchmarking facilities can be easily achieved, but labour etc are difficult to be benchmarked. There are examples of applying benchmarking in the US for

example NG sequencing). In France, CNRS and INSERM introduced the IBIZA label to national facilities in some life sciences areas (for example proteomics).

The Dutch funding organisation NWO now includes running costs for five years in large instrumentation/facility grants with the university having to commit, too. In the selection criteria special emphasis is given to the quality of the management.

Access to large facilities via “open access” (no cost to user) can be regulated by liberally handling first time access to services but evaluating users after usage (for example as NWO is regulating access to ESRF).

Combining public funding with industrial funding may be difficult (in some countries) because of legal constrains.
Provision of (publicly sponsored) service is often not favoured by governmental funders because such service may interfere with the private sector service market.

4 Conclusion

Research and funding organisations can and should contribute to increasing the appreciation of RI management and managers. They can also help establishing labels of standards of good practice. RI management needs to be further professionalised. Specific meetings and networking of RI managers could address these issues. Expertise gained at large facilities can be shared.