Appendix I



SciLifeLab Research Infrastructure Platforms and Facilities

Terms and Conditions for Funding

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Introduction

SciLifeLab (Science for Life Laboratory) is a national center for life science research in the field of molecular biosciences. The mission includes offering researchers from all across Sweden access to advanced technical analyses of samples, support for data analysis and specialist expertise in molecular biosciences. SciLifeLab is regulated by a special governmental ordinance (förordningen (2013:118) om Nationellt centrum för livsvetenskaplig forskning) and university directives (regleringsbrev) to KTH and UU. In addition, there are a number of agreements and steering documents that describe the agreements among the host universities on how to manage SciLifeLab (see www.scilifelab.se).

SciLifeLab operates the national infrastructure with funding from the National SciLifeLab budget. Facilities are organized into technology platforms, which are further divided into facilities. Facilities and platforms have been approved by the SciLifeLab Board based on international evaluations and national discussions carried out every four years. The infrastructure is available to all Swedish researchers. The national research infrastructure is organized, financed, managed and developed with a long-term view to promote high quality interdisciplinary research in Sweden within and between academic institutions, industry and healthcare.

This governance and policy document aims to clarify the conditions and expectations linked to the appointment of facilities and platforms as part of the national SciLifeLab infrastructure, the criteria for services provided, funding issues, organizational structure, and other operational principles.

General

Each facility is hosted by and integrated with one or several departments within one or several universities. The facilities are part of the department operations and must follow applicable rules of procedure, delegation of authority and guidance of its host-university and department.

National SciLifeLab funding that the Board approves is provided to the specific host department(s) and host universities of the facility. The Head of the host department will agree in writing to the terms and conditions of the SciLifeLab funding, including the financial, HR, legal and reporting requirements.

SciLifeLab follows the directives of the host universities, for example that all employees and students must be treated with respect and be given the opportunity to work and study on equal terms regardless of sex, transgender identity or expression, ethnicity, religion or other belief, disability, sexual orientation, age or social background. Equal opportunities are a quality issue for the organization and a justice issue for the individual as regulated in the Higher Education Act (SFS 1992:1434), Discrimination Act (SFS 2008:567).

This *Terms and Conditions for Funding* document applies by default to all SciLifeLab facilities and platforms. Exceptions may be described as an appendix or as a completely separate version of this document.

Criteria for Funding of SciLifeLab Facilities

Nominations as national SciLifeLab facilities and funding decisions are made by the SciLifeLab Board, based on recommendations from the Director and the Management Group. The decisions will be based on international evaluations, internal discussions in the Management Group, as well as discussions with host university representatives and the National SciLifeLab Committee (NSC). Below are the most important criteria for the assessments. A SciLifeLab facility should ideally:

- Facilitate world-leading research in molecular life sciences.
- Enable research that otherwise would not be possible in Sweden.
- Provide high-quality services to academic researchers, industry, healthcare and other organizations in Sweden.
- Serve multiple research groups in high-quality research projects across the nation.
- **Function in** a high-quality research environment supporting continuous development of the facility services
- Provide internationally competitive services.

- Have a **long-term plan** for instrumentation renewal, technology development, data management and sharing, scientific domains and user communities being served, as well as for a sustainable and versatile funding base.
- Provide complementary and synergistic opportunities within and across SciLifeLab platforms.
- Participate in **national coordination** of similar facilities at other universities in Sweden (when applicable)
- Promote **translational implementation** of research findings into healthcare, industry and society (when applicable)

Evaluation and Decisions on Facility Funding

SciLifeLab platforms and facilities are evaluated by international panels every four years (2016, 2020, 2024 and so on) complemented by strategic discussions with representatives from the host universities and the National SciLifeLab Committee (NSC). Based on the outcome of the evaluations and discussions, the SciLifeLab Board decides on the organization of platforms and funding of the facilities for the next two + two years. A midterm check-up of facilities will be performed halfway through the four-year funding period to ensure that conditions, expectations and suggestions given to facilities have been acted upon. Based on this important check-up, the SciLifeLab Management Group and the Board will decide upon the continued funding for another 2-year period. This may involve adjusting the funding or undertaking other changes to facilities or platforms.

Phasing out of Facility Funding

If the SciLifeLab Board decides to phase out funding of a facility, funding is decreased to 80% level compared to the previous funding year for an 18-months phase-out period after the decision. The facility should provide service corresponding to the funding level during the entire phase out period and deliveries should be reported for the first year of the period. Once the SciLifeLab funding ends (after the 18-months period), the SciLifeLab brand/name cannot be used in association with the facility. Facilities may also be merged with other facilities or reorganized across platforms. In exceptional circumstances, such as gross negligence of good infrastructure practice or proven scientific misconduct, funding may be withdrawn immediately based upon a board decision (see below).

Governance

The default organisation of the SciLifeLab infrastructure is outlined in the figure below (special terms and conditions may apply for some platforms).



Facility Director and Head of Facility. Each facility is managed by a Facility Director (FD) and a Head of Facility (HF). Facilities may have operations at several departments and can have more than one FD and/or HF.

The FD is responsible for the scientific leadership and the strategic development of the facility, and is usually responsible for management of the facility personnel. The FD should always be accessible for communication with the Platform Director and the SciLifeLab Management Group (MG). The FD is appointed by the SciLifeLab Director on a two + two year basis in conjunction with the funding decision. For facilities with several sources of funding, the FD should be jointly appointed by the SciLifeLab Director and other significant external funding bodies. The FD reports to the SciLifeLab Infrastructure Director.

The HF is appointed by and reports to the FD, and is responsible for the everyday operations at the facility, including project management and allocation of facility resources. The HF is directly responsible for ensuring good communication with the users, and is also responsible for communication with the SciLifeLab administration and Operations Office. The FD and the HF can be the same person. Replacement of FD must always be approved by the SciLifeLab Director, and replacement of HF must always be reported to the Infrastructure Coordinator at the SciLifeLab Operations Office.

The FD and HF are responsible for the high-quality and reproducible data production and high level of scientific know-how within the service area. The FD and HD need to agree on who is responsible for:

- Coordination of project applications
- Communication with potential and existing users
- Project prioritization models
- Operational plans
- Training and competence development of staff
- Build-up of economy structure according to instructions from Operations Office (OO)
- Budget
- User fee models for academic users and for full cost models
- Annual report preparation
- Outreach
- User workshops and courses
- Communication
- Technology development
- Data management and user guidance together with Data Center on open access, FAIR and GDPR requirements
- Maintenance of the SciLifeLab facility webpage, including list of services

Platform Director and Vice Platform Director. Based on research area and services provided, SciLifeLab facilities are organised into platforms that are managed by a Platform Director (PD) and when applicable, a Vice Platform Director (vPD). The responsibilities of the PDs (and vPDs) include to lead the work in the Platform Management Group (see below), and to assemble feedback reports and material on platform level requested for evaluations by the International Advisory Board (IAB). The PD should be able to represent the entire platform at SciLifeLab meetings, in communication with the MG and the Board, as well as in external communication and outreach. The Facility Directors within a platform (see below), nominate PD and vPD candidates among themselves to the MG, which in turn selects candidates to be approved by the SciLifeLab Board. The PD position(s) for a platform may also be publicly announced by Board decision. The PD is responsible for communication with the Platform Advisory Board (see below) on strategic and operational issues on a regular basis. The PD is appointed by the SciLifeLab Board. SciLifeLab board on a two + two year basis. Replacement of PD must be approved by the SciLifeLab Board. SciLifeLab Director may nominate a temporary PD or vPD until the next board meeting.

Platform Management Group. The PD (and vPD), FDs and/or HFs, and additional staff according to the choice of PD, constitute the management of the platform. The Platform Management Group should meet on a regular basis and has the overall responsibility for the strategic and scientific development of the platform.

Platform/Facility Advisory Board. Each platform should appoint a Platform Advisory Board to advise on long-term scientific development and strategic issues on the platform level. The Platform Advisory Board should include 3–5 national and/or international experts with competences relevant for the platform research fields, and

should be selected to cover the range of technologies provided by the platform. When appropriate, advisory boards can be appointed on the facility level instead (Facility Advisory Board). Additional authority can be given to the Advisory Board after approval by the SciLifeLab Director.

Project Prioritization. In order to ensure unbiased user access to facility services on equal terms regardless of the user's affiliation, facilities should develop, document and apply appropriate and transparent models for project prioritization. Facilities can appoint a Project Prioritization Committee (PPC) responsible for the prioritizing of project proposals. The PPC can also be the advisory group. Project prioritization should primarily be based on scientific impact and technical feasibility. The PPC should ensure that services are provided on equal terms to academic users. In addition, all facilities should be prepared to allocate up to 15% of the services to healthcare, industry, governmental agencies and international users. In facilities dedicated to diagnostic development and health care services, these percentages can be higher. Facilities are also encouraged to make sure that project prioritization considers favourably young principal investigators, SciLifeLab fellows, NMMP fellows, recipients of ERC grants and other major national or international young investigator grants. Data handling and data management plan should also be considered, ideally in collaboration with the SciLifeLab Data Centre and the Bioinformatics platform (see below).

Platform/Facility Steering Groups/Boards (when applicable). For platforms/facilities receiving funding from other bodies (e.g. the Swedish Research Council (VR)), the funder typically expects the appointment of a Steering Group/Board. Such Steering Groups/Boards can, if agreed with the SciLifeLab Board, assume responsibility for the steering of SciLifeLab-funding.

Additional Facility Funding

An expectation for a successful and sustainable SciLifeLab facility is that it continues to receive funding from its host university(ies), other participating universities or other funding agencies. The facilities and platforms should always contact the SciLifeLab Management Group well in advance before applying for external infrastructure funding, particularly from VR. This is mandatory if the SciLifeLab funding will be used as counter funding in the application, since the funding period for the VR grant may exceed the current funding commitment of SciLifeLab.

User Fees

SciLifeLab facilities should charge user fees according to pre-defined and documented cost models. Facilities are responsible for the preparation and implementation of cost models, including a full cost model in accordance to Ekonomistyrningsverket's guidelines "Sätt rätt pris" (www.esv.se/publicerat/publikationer/2014/satt-ratt-pris). Cost models should specify what is covered by the user fees and should be aligned with common practice at the facility host university.

Service and Users

The facilities should provide high quality services to users who are engaged in research projects of high scientific impact. The service should be such that the users can pursue projects without being an expert in the facility technology. Facilities should define criteria for prioritizing projects primarily based on scientific impact, technical feasibility and other facility-specific criteria. The service should be accessible on equal terms to all Swedish academic users including the MG, Board, NSC, and SciLifeLab committee members, Facility/ Platform Directors and SciLifeLab Faculty and Fellows. Service should also be accessible to researchers within the private sector, healthcare and governmental agencies. Part of the facility capacity may also be used for service to international users. The users carry the responsibility for any necessary legal or ethical considerations regarding analyses and material (e.g. ethical permits, Nagoya protocol, GDPR etc), and the facility should make sure the user has understood this responsibility.

Facilities are encouraged to actively identify opportunities to participate in large-scale research projects that address grand societal challenges within life science related areas. This includes active participation in the SciLifeLab Research Community Projects as well as interactions with SciLifeLab and NMMP fellows, ERC grant recipients and other promising young PIs.

Technology Development

Up to 20% of SciLifeLab funding provided to a facility can be used to develop, implement and adapt new or improved services, methods and technologies. These efforts should not entail resource building or *bona fide* research projects. Method and technology development may involve collaboration with national and international academia, industry, health care and governmental agencies, with young PIs to be considered favourably in research collaborations. SciLifeLab and host universities will in addition support technology development through Technology Development Project (TDP) grants.

Quality control

SciLifeLab facilities should implement quality control processes to ensure that services are delivered in accordance with the high quality standards SciLifeLab users have the right to expect. Adherence to good laboratory practices is expected, including documentation of standard operating procedures, use of electronic lab notebooks (ELN or equivalent systems), electronic sample and data workflow systems (LIMS or equivalent), project planning systems (ProjectPlace or similar), and electronic systems for communication with users (Data Centre's Order Portal, for example). Facilities should consult the SciLifeLab Data Centre for guidance on systems to use, and to communicate any needs regarding IT systems and data management tools.

Data Management and Sharing

SciLifeLab facilities should guide users with the analysis, storage, availability and accessibility of the data produced by the facility. Supported projects must be assigned a unique identifier and facilities should collect the appropriate project information to enable tracking and reporting. Facilities will be required to submit such data to a central database to facilitate cross platform services, at the time when SciLifeLab will provide the infrastructure platform for this.

In accordance with increasing demands from funders and scientific journals, we recommend that projects that include data management of any type set up a Data Management Plan (DMP). For example, Vetenskapsrådet has announced that from 2019, all supported projects will be required to have DMPs. We recommend that facilities ensure users set up a plan that estimates at least existing and requested resources to deal with data analysis and management, including computing, storage, archiving, security, and accessibility. Templates and guidelines for DMPs can be provided by the SciLifeLab Data Centre. In the near future, DMPs will be required for all SciLifeLab supported projects.

Facilities are required to inform supported projects about the obligations:

- a) to acknowledge SciLifeLab support in publications, using the unique identifier assigned at the start of the project, and
- b) to report back to SciLifeLab when data has been used in a publication and where the data has been deposited.

SciLifeLab supported projects should adhere to the principles of open science, including open access to both publications and data to the greatest extent possible, given ethical, legal and intellectual property considerations. The facilities must ensure that sensitive and confidential information (e.g. from health care-related projects) is handled in accordance with current laws, regulations and host university practices, including GDPR directives.

The SciLifeLab Data Centre will provide support to the facilities to address requirements and recommendations in this section.

Courses and Training

The facilities should provide courses and training related to technologies, analyses and application of the technologies and data generated by the facility. Courses and training should be offered to national academic user communities. Preferably, courses and training should also be offered to users within healthcare, governmental agencies, industry as well as international user according to rules and regulations for "uppdragsutbildning". Costs for courses and training are usually covered by facility budgets or through participant fees (if applicable).

Communication and Branding

The facility should actively communicate to potential users regarding opportunities for existing and new services at the facility, both through own initiatives and by participating in events organized centrally at the SciLIfeLab level. New possibilities and important research results produced using service provided by the facility should actively be communicated to the research community and to the society.

SciLifeLab facilities should keep their web-site up to date and be active towards SciLifeLab communications office in terms of how communication and web traffic can be improved. With SciLIfeLab web site being continuously developed, the facilities should participate in making the web site as attractive as possible and well branded.

All SciLifeLab facilities and platforms should be primarily branded under the SciLifeLab name. The VR- and KAW-funded network names can be used as secondary, but not alone. VR networks that only partially overlap with SciLifeLab facilities and platforms are suggested to negotiate branding with the SciLifeLab management (contact infrastructure coordinator).

All members of the SciLifeLab community should follow the SciLifeLab's communication handbook guidelines (www.scilifelab.se/staff/documents-and-templates). In order for SciLifeLab's brand to be clear, strong and recognizable, it is important that it is handled consistently and purposefully. The handbook is available as a tool for this and differentiates SciLifeLab from other organizations.

National and International Networking/Strategic Collaborations

SciLifeLab platforms and facilities should, whenever applicable, have a national role in developing and maintaining infrastructure networks in their specific service area. The platforms and facilities will be in contact with local core facilities across the country.

SciLifeLab platforms and facilities should participate in international networks, including relevant EU networks and infrastructures (e.g. European Strategy Forum on Research Infrastructures (ESFRI), European Molecular Biology Laboratory (EMBL), and European Bioinformatics Institute (EMBL-EBI) and other global partners to sustain a cutting-edge, internationally competitive development.

Reporting

SciLifeLab facilities must report to the MG annually and upon request. The yearly report normally includes project deliveries, number of users and their national distribution, quality and efficacy metrics for data production, publications, financial report and budget for the coming year. The financial report should contain complete financial information for the facility including national funds, funds for drug discovery and development, Strategic Research Area (SFO)-funding, VR, KAW and additional funding and user fees. This information should be extracted from the host university's financial systems every third month by the responsible economist at the department and/or university and delivered to KTH in a predefined format. Reported deliverables will be used in the annual reports to the Ministry of Education and Research, as well as in other web-based or printed material that describes SciLifeLab activities.

For the major evaluation of the infrastructure every fourth year, more detailed evaluation material and future plans will be requested. This will include general descriptions of facility/platform (e.g. instruments, staff, service etc.), SWOT analysis, benchmarking and operational plans (incl. four-year budget).

Facilities with phased-out funding from SciLifeLab or under reorganization should report during their first year of phasing out.

Agreements

Facility Agreements. All SciLifeLab facilities are organized under a department (or sometimes several departments) at a Swedish university. To clarify funding conditions and the responsibilities of the department and SciLifeLab respectively, SciLifeLab will provide an agreement to be signed by the Head of Department, the FD, HF, the SciLifeLab Director, and the SciLifeLab Head of Operations. The agreements only needs to be signed with departments receiving direct national funding from SciLifeLab. The departments should ensure that the personal research funding of the scientists operating the facilities is kept separate from the national infrastructure funding. Thus, facility funding cannot be used to support the research funding of the PD, FD and HD or other staff members. Conversely, research funding of the of the PD, FD and HD should not be applied to back up salaries if the facility is subject to phase-down or loses other infrastructure funding.

User Agreements. SciLifeLab facilities should prepare and employ User Agreements. The agreements should specify the conditions, responsibilities for each party, estimated fees, and timelines. In User Agreements, facilities must include writing to collect consent to process personal data in accordance with GDPR, and optionally consent to share limited project information with other SciLifeLab facilities for the purpose of planning project specific services. User agreements should be prepared in consultancy of the legal department of the facility's host university.

Other agreements. Agreements that concern national VR-funded infrastructure platforms that substantially overlap with SciLifeLab funded facilities/platforms, need to be discussed with the Infrastructure Director and the Management Group to clarify mandate and responsibility of potential steering groups. Unless otherwise agreed, the SciLifeLab Management and Board are fully responsible for strategic decisions of the facility.

Principles for Publications

When SciLifeLab facility staff members make significant intellectual contributions to research, the persons involved should be included as co-authors in accordance with the Vancouver principles. For all other publications that are the result of the use of routine facility services, the SciLifeLab facility should be included in the acknowledgment section of the paper. The facilities should actively encourage users to undertake such acknowledgements.

Freedom to operate and non-competition

SciLifeLab expects that the facility can provide the services to its users without interfering with commercial interests and with companies providing similar services. Freedom to operate and non-competition are particularly critical when providing full-cost services to industry and health care.

Conflicts of Interest

Facility personnel, FD and HD should avoid personal conflicts of interest e.g. involving companies providing equipment, reagents or services in the facility operations. Facility scientists can be engaged in external activities according to permissions from the host university. These may include spin-off companies arising out from SciLifeLab facilities, which should be carefully structured not to act in a competitive manner. Facility staff must disclose to the SciLifeLab Head of Operations any such potential conflicts of interest.

Scientific and Infrastructure Misconduct

If there is a suspicion of scientific misconduct either by SciLifeLab users or by the platform/facility executives/personnel, the suspicion should be disclosed according to the practices of the host universities involved. The PD and the SciLifeLab Infrastructure Director should also be notified and MG should be made aware of each such case. The host universities are in charge of investigating whether there is evidence of scientific misconduct as well as potential consequences, and should keep the SciLifeLab well informed of the progress of the investigation. In exceptional documented cases of misconduct, facility funding may be discontinued based on a board decision without an 18 month grace period.

Updates and Changes

The SciLifeLab Management Group and Board reserves the right to change and make additions to this document at any time, and such changes or modifications shall be effective after being discussed with the host university SciLifeLab committees and communicated to the platforms, facilities and host departments.