

SciLifeLab Group Leader Principles & Guidelines

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Objectives

The SciLifeLab Group Leader concept aims to create empowered and collaborative communities within the SciLifeLab ecosystem. The key goals are to:

- Enhance technology development
- Enhance cutting edge research infrastructure
- Enhance interdisciplinary research
- Facilite the profiling of the SciLifeLab community
- Promote collaborations

- Promote SciLifeLab integration nationally
- Increase SciLifeLab visibility and impact, nationally and internationally

The structured process ensures that the nomination and evaluation of SciLifeLab Group Leaders are thorough and transparent, maintaining high standards and alignment with SciLifeLab's strategic goals.

SciLifeLab Group Leader definition

A SciLifeLab Group Leader is defined as a member who plays a key role in SciLifeLab's development, locally and/or nationally. This role is based on strong contributions to the objectives of the national SciLifeLab organization:

- Developing and providing excellent life science infrastructure.
- Strengthening scientific communities, capabilities and international collaborations.
- Transforming life science data into knowledge.
- Attracting and fostering scientific excellence, and providing advanced training.
- Supporting innovation and bridge-building for the benefit of society.

Criteria

The criteria for selection of SciLifeLab Group Leaders are based on the individual's strong and tangible contribution to at least one but ideally more of SciLifeLab's strategic objectives.

See Appendix A for details and examples of contributions, as well as for activities not considered sufficient.

Affiliation and activity

The SciLifeLab Group Leader should be affiliated with a Swedish university or with the Swedish Museum of Natural History (NRM) (part of SciLifeLab through the DDLS program), and have their main activity associated with this organization.

Opportunities and benefits

The SciLifeLab Group Leader will

- Formally be designated as a SciLifeLab Group Leader and research group.
- Be included on the SciLifeLab website.
- Have access to tailored SciLifeLab Group Leader events and funding calls.
- Have membership in SciLifeLab mailing lists.
- Be invited to participate in SciLifeLab and community meetings and outreach efforts.

Responsibilities

The SciLifeLab Group Leader is required to

- Actively participate in and contribute to the SciLifeLab community.
- Subscribe to the SciLifeLab open data policy¹, ensuring all research data, results, protocols, code, and biomaterials are as openly available as possible and apply FAIR principles.
- Use the SciLifeLab affiliation and ORCID in publications, and present their SciLifeLab Group Leader status in relevant forums (e.g. scientific presentations).
- Commit and adhere to SciLifeLab's Code of Conduct² and comply with good ethical, scientific, and infrastructure practices.
- Collaborate with SciLifeLab management and adhere to relevant reporting structures.

Application

The application is submitted by filling out the nomination form, which includes:

- Key contributions to SciLifeLab's strategic objectives.
- Keywords describing expertise.
- List of key research and service outputs.
- Confirmation of adherence to requirements of a SciLifeLab Group Leader

See Appendix A for details.

¹ https://www.scilifelab.se/wp-content/uploads/2022/06/SciLifeLab-data-policy.pdf

² https://www.scilifelab.se/code-of-conduct/

Nomination, Evaluation and Decision

There is one (1) nomination period per year.

- The nomination is for a 4-year term. After the initial term, the group leader status is re-evaluated every four years to ensure that the criteria continue to be met.
- Nominations can be submitted either by a SciLifeLab Group Leader candidate (self-nomination) or by a SciLifeLab founding university or site committee member.
- A current position as SciLifeLab or DDLS Fellow, Platform Director, Platform Co-Director, or Head of Unit³ automatically includes the SciLifeLab Group Leader status, but re-evaluation every 4-years still applies.
- Pre-screening and initial selection are conducted by SciLifeLab committees at SciLifeLab sites and founding universities.
- The SciLifeLab Management Group then prepares a recommendation to the SciLifeLab Board, which takes the final decision.
- Approved nominations are publicly announced on the SciLifeLab website.

See Appendix B for details.

Termination of SciLifeLab Group Leader nomination

- If a SciLifeLab Group Leader no longer meets the criteria, their nomination can be ended as result of the evalution, or prior to the end of the 4-year term, following consultation with the relevant SciLifeLab site or founding university committee.
- Termination also occurs if a SciLifeLab Group Leader is no longer affiliated with a participating SciLifeLab university.
- Breaches of the SciLifeLab Group Leader agreement may result in immediate termination.

 $^{^{\}rm 3}$ Heads of Unit through a separate annual decision

Appendix A. Application format for SciLifeLab Group Leader nomination

- Brief explanation of nominee's key contributions to SciLifeLab's five strategic objectives. Instruction: 1-2 sentences, 3-4 at most, for each objective. If an objective is not relevant, leave empty.
- 5-10 keywords that best describe their technological and scientific expertise and input to the SciLifeLab community and life science community/society at large
- List of selected key research and/or service outputs (including scientific publications, datasets, software, patents, services provided, users supported, etc.). For these, summarise the scientific or technical content, and describe the value and influence of the research outputs⁴
 - a. List of 3 most important publications
 - For PIs: publication in relevant SciLifeLab research field. Also include overall bibliometric statistics.
 - For infrastructure personnel: publications with significant contributions from SciLifeLab infrastructure technology service and / or expertise (acknowledging the relevant infrastructure).

b. For previously nominated PI SciLifeLab Group Leaders – indicate how many (and % of total) of your publications have an affiliation to SciLifeLab since becoming a group leader. Note: if the PI has no affiliated papers and no objective contributions, the priority to remain SciLifeLab Group Leader is deemed low.

c. Indicate other research outputs with relevance to SciLifeLab, e.g. datasets, software, and describe the value and influence of these

- 4. Provide other documentation on key achievements that have a relevance to SciLifeLab
- Confirmation that SciLifeLab Group Leader commits to data sharing, adhere to open science policies and sharing their raw data: 'As open as possible, share data, results, protocols, code and biomaterial, preferably through SciLifeLab data services'
- Confirmation that SciLifeLab Group Leader will comply with good ethical, scientific and infrastructure practices and have read and will adhere to SciLifeLab Code of Conduct
- 7. Confirmation to affiliate with SciLifeLab and use ORCID (for SciLifeLab Group Leader Pls)

All SciLifeLab Group Leader data (such as publications and other contributions) will be made public if the nomination is approved, and data will be used for web profile pages. It is the responsibility of the applicants to provide exact information.

Examples of nominees' key SciLifeLab contributions ⁵

The nominating critera is based on clear key and objective contributions to SciLifeLab activities within SciLifeLab's five strategic objectives:

Develop and provide excellent life science infrastructure.

- Contribution to creating and advising SciLifeLab infrastructure⁶: Platform Scientific Directors, key infrastructure experts, alpha users (i.e. experts within the platform/unit testing technology functionality and usability) and beta users (i.e. Pl testing technology usability, functionality, security, and reliability)
- Technology co-development with SciLifeLab infrastructure (PI in SciLifeLab Technology Development Project or other collaboration with infrastructure)
- Technology development with relevance for the future of the infrastructure (PI in new technology development with high potential impact for future life science research)

Strengthen scientific communities, capabilities, and international collaborations

- Excellence in relevant research early-stage scientists⁷:
 Exceptional independent early-stage scientists in the SciLifeLab community (e.g. recipients of ERC grants)
- Excellent in relevant research senior scientist with relevance to SciLifeLab research/molecular life science:

 High-profile publications and grants that are based on or linked to SciLifeLab infrastructure
- Leadership role in the community to propagate scientific and technological contributions based on or linked to Scil ifel ab
- Formal assignment in SciLifeLab capability leadership and strategy development
- Documented scientific, technical and data contributions to SciLifeLab focus areas (active party of the community, not just participant of events or recipient of funds)
- Actively engaged in and concrete contributions toward SciLifeLab's infrastructure and its services, and/ or SciLifeLab's external collaborations (e.g. EMBL, SciLifeLab associated EU grants)

⁴ SciLifeLab supports recommendations stipulated by the San Francisco Declaration on Research Assessment (DORA), <u>sfdora.org/read/</u>. SciLifeLab is from 2024 a signatory and member of the Coalition for Advancing Research Assessment (CoARA), <u>coara.eu</u>

⁵ This list of examples is not comprehensive. Additional contributions are possible and can be explained by the candidate

 $^{^6}$ Current Platform Directors, Platform co-Directors and Heads of Unit have the SciLifeLab Group Leader status by default

⁷ Current SciLifeLab and DDLS Fellows have the SciLifeLab Group Leader status by default

Transform life science data into knowledge

- Part of SciLifeLab's DDLS program (beyond fellows), e.g. DDLS Research Area expert group members, active party of DDLS-funded research (e.g. distinguished grants, collaborations with Wallenberg AI, Autonomous Systems and Software Program, WASP and WASP – Humanity and Society, WASP-HS), active party of research school supervision (main supervisor of DDLS PhD students and postdocs)
- Leading roles in SciLifeLab Data Centre and Data Science Nodes
- Developers of major data resources, tools and programs of relevance to SciLifeLab

Attract and foster scientific excellence and provide advanced training

- Active participation in organising SciLifeLab training (beyond teaching in one or few courses (e.g. management of SciLifeLab training and DDLS Research School management)
- Active in SciLifeLab community building (organising, not just taking part in community events)

Support innovation and bridge-building for the benefit of society ⁸

- Key role in SciLifeLab-associated translational medical research, with significant contributions to healthcare applications and services.
- Key role in SciLifeLab-associated translational environmental biology, with significant contributions to applications serving the global environment
- Key role in innovations arising from the SciLifeLab community

The SciLifeLab Group Leader nomination is not tied to the physical location of the group leader, and does not depend on specific funding sources (such as Strategic Research Area funding, SFO).

Any of the following activities is not sufficient to qualify for a SciLifeLab Group Leader nomination: i. having an independent research group in molecular life science, ii. participation in SciLifeLab-associated meetings, conferences and events, iii. being a regular user of SciLifeLab infrastructure units or data platforms, or iv. being a member of a steering committee or having administrative tasks linked to SciLifeLab.

⁸ While health care and environmental translation are key examples, translation to other sectors of society are possible as well.

Appendix B. SciLifeLab Group Leader nomination and evaluation process

Nomination

The SciLifeLab Group Leader process will have one nomination period per year. The nomination period and process are announced through the SciLifeLab newsletter and SciLifeLab site channels (such as email lists and information screens). SciLifeLab Group Leaders approaching the end of their 4-year term will be informed that they need to reapply.

Nominations are submitted individually by the group leader via a central SciLifeLab form, administered by SciLifeLab Operations Office. Additionally, a group leader can be nominated through the same central SciLifeLab form by a SciLifeLab founding university or site committee member. Current SciLifeLab and DDLS Fellows, SciLifeLab Platform Directors and Co-Directors, and Heads of Unit have the SciLifeLab Group leader status by default in their respective positions, and therefore do not need to be nominated if their roles or assignments are in force. However, a formal nomination is needed to continue as a SciLifeLab Group Leader when the assignment has ended.

Any questions related to the nomination process should be directed to nomination@scilifelab.se.

Nomination pre-screening

SciLifeLab committees and Directors make a pre-screening and first selection among the nominations from their associated universities, accordingly:

- KI SciLifeLab committee nominees affiliated to Karolinska Institutet (KI)
- KTH SciLifeLab committee nominees affiliated to KTH Royal Institute of Technology (KTH)
- SU SciLifeLab committee nominees affiliated to Stockholm University (SU)
- SciLifeLab Site Gothenburg nominees affiliated to University of Gothenburg (GU) and Chalmers University of Technology (Chalmers)
- SciLifeLab Site Linköping nominees affiliated to Linköping University (LiU)
- SciLifeLab Site Lund nominees affiliated to Lund University (LU)
- SciLifeLab Site Umeå nominees affiliated to Umeå University (UmU)
- Uppsala SciLifeLab site strategic council nominees affiliated to Uppsala University (UU) and Swedish University of Agricultural Sciences (SLU)
- SciLifeLab co-Director nominations from group leaders affilited to other organisations than above, including The Swedish Museum of Natural History (NRM)

The KI, KTH, and SU SciLifeLab committees should acquire support for their pre-screening from the Campus Solna committee.

Evaluation and decision

The pre-screened nominations are individually evaluated and discussed by the Management Group and Site Directors. The Management Group and Site Directors will consult the International Advisory Board (IAB) in individual cases or if a consensus opinion is not reached. The Managment Group and Site Directors will as a group create a recommendation that is presented for the SciLifeLab Board for a decision. The Board can delegate the decision on SciLifeLab Group Leader nominations to the Director of SciLifeLab.

A member of the Management Group or Site Director will not take part in decisions on nominations from their own host university to avoid conflicts of interest. Approved nominations will be made public via the SciLifeLab website. All nominees are informed about the decision through their respective SciLifeLab site.

Re-evaluation of SciLifeLab Group Leader nominations

The term of the SciLifeLab Group Leader nomination is 4 years, with exceptions for SciLifeLab Group Leaders nominated per default. After this time period, all nominations are reevaluated by the Management Group and Site Directors to assure that the SciLifeLab Group Leader criteria are still met. As long as the SciLifeLab Group Leader fulfils the criteria, there is no limit to how many times the SciLifeLab Group Leader can be re-nominated.

A SciLifeLab or DDLS fellow, Platform Director, co-Director or Head of Unit, nominated by default for the SciLifeLab Group Leader status, must submit a SciLifeLab Group Leader nomination in the first nomination period following the end of their respective position's term, if they wish to remain a SciLifeLab Group Leader. If no action is taken, the Management Group will be informed, and the SciLifeLab Group Leader will be removed from the SciLifeLab Group Leader registry.

Ending the term as SciLifeLab Group Leader

If a SciLifeLab Group Leader is no longer qualifying, the Management Group and Site Directors can decide to end the nomination, following a consultation with the relevant SciLifeLab university or site committee. SciLifeLab management can consult with the IAB if a consensus opinion is not reached. If the SciLifeLab Group Leader terminates their contract with a participating university or is no longer affiliated with SciLifeLab before end of term, the nomination is ended pre-term.

All group leaders who no longer qualify as SciLifeLab Group Leaders will be informed that they no longer hold this status, and their data will be removed from the SciLifeLab Group Leader registry and website. They will also be informed that they can reapply during the next call.

If the SciLifeLab Group Leader breaches the SciLifeLab Group Leader agreement, their nomination will be discussed by the Management Group and Site Directors and their nomination can be stopped immediately.

Evaluation criteria and grading

Criteria to be evaluated: **objective key contributions to SciLifeLab's five strategic objectives** (See Appendix A for examples of key contributions)

All five criteria are given a score of 0 (no contribution), 1 (good) or 2 (excellent). Each nomination will get a total score, where the max total score is 10. Cut-off for approval: a group leader does not need to score on all criteria, but needs a combination of excellent + good scores, and should contribute to more than one of the five objectives.

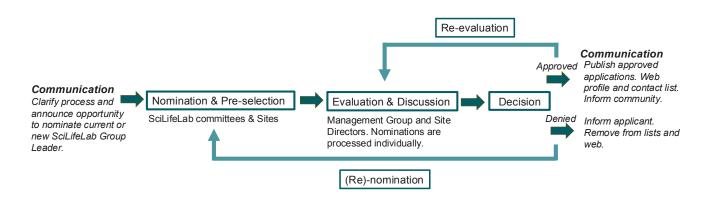


Figure 1. The suggested new process for SciLifeLab Group Leader nominations. Nominations are accepted and processed once a year. The timeline for each cycle is as follows: Month 1 - Nomination submission period, Month 2 - Evaluation by local committees, and Month 3-4 - Evaluation, discussion and recommendation by the Management Group and Site Directors (in consultation with the International Advisory Board, if needed), Decision by the Board or Delegee. All SciLifeLab Group Leader nominations are re-evaluated every four years.

Appendix C. Background of the SciLifeLab Group Leader concept

The national SciLifeLab Group Leader definition was decided upon at the Board meeting in November 2019, with an amendment during the Board meeting in February 2020. The motivation behind this definition is to facilitate the profiling of the SciLifeLab community. Inclusion criteria, responsibilities, and benefits were stipulated, and the concept was opened up to scientists, infrastructure, and technology experts at all Swedish universities. With the new definition, SciLifeLab Group Leaders were nominated from the Uppsala and Stockholm sites in 2020. Following the establishment of formal SciLifeLab sites in Linköping, Lund, Gothenburg, and Umeå, SciLifeLab Group Leaders were nominated and approved at these sites in 2022–2023.

SciLifeLab and DDLS fellows are nominated for this position by default. Platform Directors, Co-Directors, and Heads of Unit⁹ have also been nominated by default in their SciLifeLab infrastructure roles since 2021, following a recommendation by the International Advisory Board (IAB) in 2021, as detailed below.

In the 2021 Report from the IAB, the following comments and recommendations were made regarding the SciLifeLab Group Leader definition:

'The SciLifeLab group leader definition is a step forward, but seems to be very "soft" and have no system for quality management or turnover. We recommend to set up a system for obtaining and renewing the status of SciLifeLab group leader and building in an external evaluation by default, to avoid inflating the numbers (189 is already very high!) and losing the "mark of excellence" that being a SciLifeLab faculty member must have to be meaningful. In addition, we advise to consider to integrate the Unit and platform leaders into the SciLifeLab faculty program at the same level as research faculty, to ensure they get the recognition they deserve for their important role.'

With infrastructure leaders, SciLifeLab and DDLS fellows, and all SciLifeLab sites included, there are now more than 300 group leaders associated with SciLifeLab across Sweden. The most important criterion has always been a clear role and association with SciLifeLab activities, such as infrastructure, technology development, or belonging to, for example, fellows' communities. However, this criterion needs to be clarified and made more concrete.

In 2024, the SciLifeLab Board tasked the Management Group, in collaboration with SciLifeLab founding university committees and Site Directors/committees, with executing a new process for SciLifeLab Group Leader nominations and evaluations, considering additional recommendations from the International Advisory Board and the new SciLifeLab Director. The SciLifeLab board approved the Report on national SciLifeLab Group Leader definition, criteria and process in May 2024 as basis for a SciLifeLab Group Leader Principles and Guidelines document. The Report on national SciLifeLab Group Leader definition of SciLifeLab Group Leader document (VC-2019-0033), outlines a plan for reorganising the SciLifeLab Group Leader concept. It aims to clarify criteria not solely based on research

excellence but rather focused on key contributions to the national SciLifeLab organisation in science, infrastructure, and technology. This approach is intended to embrace the full diversity and strength of the SciLifeLab community. The plan also includes a description of a new process for SciLifeLab Group Leader nominations and evaluation that aims to enhance quality and sustainability in the management and turnover of the SciLifeLab Group Leader community.

Following additional comments from the new SciLifeLab Director, this document will be approved at the Board meeting in September. Subsequently, the call for nominations of SciLifeLab Group Leaders will commence at the end of September, inviting both existing Group Leaders and new nominees to submit their applications (Decision, Board meeting no 72).

Prospects and challenges with the SciLifeLab Group Leader concept

In addition to profiling SciLifeLab's community, the SciLifeLab Group Leader concept aims to create empowered communities by identifying members who are key to SciLifeLab's development, both locally and nationally. This initiative is expected to i. promote collaborations within and across universities, sites, and disciplines, e.g. through tailored calls, ii. integrate fellows into SciLifeLab's national research environment (locally and nationally) by connecting them with the broader SciLifeLab Group Leader community, iii. enhance laboratory and computational technology development by promoting and further connecting the SciLifeLab Group Leaders, and iv. increase SciLifeLab's presence, visibility, and impact nationally and internationally, with SciLifeLab Group Leaders acting as 'ambassadors' for SciLifeLab. Importantly, the national SciLifeLab Group Leader concept is also anticipated to provide stability to the organisation during times of turbulence and restructuring.

However, several challenges have been identified in the current situation:

- Different definitions/criteria and implementations exist across various SciLifeLab sites
- The definitions/criteria are relatively vague, as is the commitment (expectations or benefits)
- 3. Balancing inclusivity and exclusivity within an already extensive national infrastructure and research community
- 4. Lack of a process for the follow-up and turnover of SciLifeLab Group Leader status in a dynamic community
- It may not be feasible to clearly define and communicate one SciLifeLab Group Leader nomination 'title' that encompasses the full diversity of SciLifeLab's key contributors, as suggested in this document (including infrastructure, research, data, etc.)
- The term 'group leader' traditionally denotes an academic leader and has been considered confusing by universities when applied to infrastructure scientists.

⁹ Heads of Unit through a separate annual decision

To address each of these challenges, the following was presented in the Report on national SciLifeLab Group Leader definition, criteria and process document:

- 1. Clarifications of the SciLifeLab Group Leader definition and criteria, importantly decoupled from the physical location of the group leader and their SFO funding, along with a new process for nomination and follow-up to be implemented at all SciLifeLab sites.
- The document clarifies SciLifeLab Group Leader criteria, where objective contributions, as exemplified, are paramount, alongside the SciLifeLab Group Leader opportunities/benefits to motivate and attract the best, and expectations (where SciLifeLab Group Leaders failing to adhere will be excluded).
- As a national organisation and infrastructure spanning major universities, some level of inclusivity is essential, particularly across career stages, geography, or scientific disciplines.
- 4. A new process outlined in this document.
- 5. We will establish a single SciLifeLab Group Leader association, but the evaluation criteria will be weighted to ensure both scientific and infrastructure contributions are valued. The primary objective of this document is to demonstrate the value of infrastructure scientists to the SciLifeLab organisation; thus, the nomination of infrastructure scientists is equally important to that of scientific group leaders. We also advocate for a system where infrastructure SciLifeLab Group Leaders can lead research projects as principal investigators.

SciLifeLab Group Leader opportunities and benefits

Expanding upon the opportunities and benefits outlined for SciLifeLab Group Leaders in 2019 (below), additional measures to strenghten the SciLifeLab Group Leader concept with aim to attract and motivate the best candidates were proposed in the *Report on national SciLifeLab Group Leader definition, criteria and process* document. These enhancements include:

• Tailored Calls (new)

Tailored calls directed to SciLifeLab Group Leaders, e.g. annual SciLifeLab event call, KAW Proof of Concept grant, initiatives by respective SciLifeLab university and/or site, etc. At the same time, we point out that all grants from the national infrastructure and DDLS are open to all qualified scientists.

Strong network (new)

'Access' to a strong network, e.g. through new community analysis tools and events, SciLifeLab Group Leaders can identify new collaborative opportunities within the community.

Suggest and chair future Research Community Programs (new)

SciLifeLab Group Leaders can suggest and chair new/future research community programs (following the previous Research Community Programs 2019-2022), even though these programs will otherwise be open to all scientists.

In addition to the benefits outlined in the 2019 SciLifeLab Group Leader agreement, which include:

- Formal designation as a SciLifeLab research group
- Inclusion on the SciLifeLab website
- Access to tailored SciLifeLab Group Leader events
- Membership in the SciLifeLab mailing lists
- Participation in SciLifeLab and community outreach efforts

SciLifeLab Group Leader responsibilities

In alignment with the SciLifeLab Group Leader responsibilities determined in 2019, all SciLifeLab Group Leaders should:

- Commit to and follow the SciLifeLab data policy¹⁰, including FAIR principles for research data, as well as making all data, results, protocols, code, and biomaterials available as openly as possible (with restrictions for e.g. sensitive human data or industrial collaborative programs), using SciLifeLab Data Centre recommended solutions. SciLifeLab Group Leaders are also responsible for ensuring that all their team members also abide by the data policy.
- Register and use ORCID (orcid.org) for their publications
- Commit and adher to SciLifeLab's Code of Conduct¹¹

These responsibilities build upon the existing requirements for SciLifeLab Group Leaders, which include:

- Using the SciLifeLab affiliation in publications and presenting the SciLifeLab Group Leader status on local websites and in presentations
- Collaborating with SciLifeLab management and adhering to reporting structures
- Actively participating in fostering the SciLifeLab community
- Complying with good ethical, scientific, and infrastructure practices

SciLifeLab Group Leader criteria

When nominating a group leader, clear, concrete and objective key contributions to SciLifeLab's five strategic objectives must be presented, where contributions to several objectives is desired.

- Develop and provide excellent life science infrastructure
- Strengthen scientific communities, capabilities, and international collaborations
- Transform life science data into knowledge
- Attract and foster scientific excellence and provide advanced training
- Support innovation and bridge-building for the benefit of society

The group leader should be affiliated with a Swedish university and have their main activity associated with this university or with the Swedish Museum of Natural History (NRM), part of the DDLS program. Importantly, the SciLifeLab Group Leader nomination is not tied to the physical location of the group leader and does not depend on their SFO funding.

¹⁰ https://www.scilifelab.se/wp-content/uploads/2022/06/SciLifeLab-data-policy.pdf

¹¹ https://www.scilifelab.se/code-of-conduct/

