Immediate (preliminary) feedback based on the six main comments in the IAB report

We thank the IAB for the discussions during the site visit and the written report. As there is a leadership transition at SciLifeLab, we will now only briefly comment on some of the major recommmendations and leave most of the (long-term) matters to be discussed and executed by the new leadership.

We will focus in this response to the six major recommendations below.

As the IAB reports to the SciLifeLab board, we will view the recommendations from the viewpoint of the board. Some aspects are directly under the board's mandate such as the ones that are funded by the national infrastructure or the DDLS program. In contrast, in many other matters that were brought up, the board can only try to steer the activities, and usually there are many stakeholders involved that need to interact and agree, which makes these more difficult to organize at the board level. For example, two of the recommendations concern Campus Solna which is governed under the "three-party agreement" among the Stockholm universities and that is funded by the SFO funds that these universities govern. Obviously, SciLifeLab and SciLifeLab board can still have a strong influence on both local and national collaborations and policies.

The six major IAB recommendations:

i. Aim to solve the **infrastructure problems haunting the data-driven research** efforts. These problems make it hard for researchers to take full advantage of life science relevant AI developments. National fragmentation has an impact on the productivity and feasibility of SciLifeLab projects. The IAB recommends designing internal solutions to avoid further delay.

ii. Continue to **develop a more differentiated benchmarking model** that can rank the SciLifeLab efforts separately across subareas, such as infrastructures, innovation, and training.

iii. **Provide practical onboarding solutions** solving the startup problems in the fellow's projects. These are multifactorial: infrastructure access in the project design phase, lack of mentors for each fellow, uneven integration in departments, immigration issues, guidance in handling legal issues and research ethics etc.

iv. Use the flagship model to **select a single large-scale project for each focus area** that may continue to enhance the international reputation of SciLifeLab. Consider appointing a single leader for each flagship project.

v. Argue for a **new building at Campus Solna** such that critical mass is maintained at a single physical location.

vi. Continue to work with the three Stockholm Universities to develop a coordinated recruitment plan for the Solna campus, following the DDLS example.

The management / board initial comments below to each major suggestion:

i.   Aim to solve the **infrastructure problems haunting the data-driven research** efforts. These problems make it hard for researchers to take full advantage of life science relevant AI developments. National fragmentation has an impact on the productivity and feasibility of SciLifeLab projects. The IAB recommends designing internal solutions to avoid further delay.

We fully agree with the importance of this issue, which concerns both the infrastructure and the research community. This comment is reflecting the fundamental transition towards data-centric and data-driven life science and as a whole, we are still ill-prepared for that, particularly when multiple parties in Sweden are involved.

We will need to urgently pay attention to the matters, which are very complex due to the fact that neither SciLifeLab, nor anybody else, has full mandate to act here. For example, i) universities are legally in charge of long-term data storage solutions, ii) the new national NAISS organization is taking care of HPC operations (but usually does not have interest to deal with storage solutions) iii) KAW has set up the Berzelius HPC for AI applications. SciLifeLab and DDLS program run data and bioinformatics services, but have no remit or funding to organize data storage and compute hardware at the national level. Many local university and national data/compute solutions are meant to be generic solutions to all science areas and often they do not therefore fit well with the needs of very data-intensive life science research. Sensitive personal data present significant additional challenges. The last few years have been challenging because of the transition from SNIC to NAISS organization and the delays in building compute infrastructure at a national level. Both NAISS and Berzelius systems are still lacking capabilities to handle sensitive data. Many parallel developments are now underway and SciLifeLab and DDLS program will surely need to improve the coordination of the activities.

This will be discussed with the board, but one could see that a life science-specific data/AI action group would be useful with links to both SciLifeLab and DDLS (e.g. NBIS and DC and fellows and infrastructure), NAISS, Berzelius/KAW as well as universities, need to be engaged here to solve these issues. We suggest the board to mandate the launch of such an action group.

ii.   Continue to **develop a more differentiated benchmarking model** that can rank the SciLifeLab efforts separately across subareas, such as infrastructures, innovation, and training.

We agree and will explore about finding a solution by the next IAB meeting. In many of these aspects, the role of SciLifeLab as a coordinating national network organization is easily hidden and not fully visible in the bibliometry, news or innovation statistics. While we will need to track these items better and ensure SciLifeLab gets the credit, this will not always be possible. Most if not all closest benchmark organizations are legal entities by themselves that collect these type of data much more easily and comprehensively than SciLifeLab as a networked program can.

Provide practical onboarding solutions solving the startup problems in the fellow's projects. These are multifactorial: infrastructure access in the project design phase, lack of mentors for each fellow, uneven integration in departments, immigration issues, guidance in handling legal issues and research ethics etc.

We agree with this suggestion and several actions are already underway. It is clearly defined that Scientific Directors (SDs) have a mentoring role in the four founding universities, but we will need to supplement this with research area-specific, and/or department-level mentor roles to help the fellows integrate with the community locally and nationally. Even mentors for infrastructure and data matters and to help with ethics/legal in some cases.

We will need to clearly delineate the responsibilities of SciLifeLab, host departments, and universities regarding fellow support, particularly in specific areas. These responsibilities are being clarified also in writing in the revised introductory document for the new fellows, and space/equipment commitments and arrangements can also always be improved.

In terms of the immigration challenges, we have made the points clear to the government and an investigation is already initiated on this matter (https://www.regeringen.se/pressmeddelanden/2024/04/uppdrag-om-forbattrade-forutsattningar-for-utlandska-doktorander-och-forskare-i-sverige-och-sakrare-bedomningar-av-uppehallstillstand-for-studier/)

Again, most of these matters are not directly under the SciLifeLab board's mandate, but SciLifeLab and DDLS will need to work with the departments that are legally responsible for the fellows, and e.g. in Stockholm, the Campus Solna Committee's role is key.

iii. Use the flagship model to **select a single large-scale project for each focus area** that may continue to enhance the international reputation of SciLifeLab. Consider appointing a single leader for each flagship project.

The three capabilities of SciLifeLab (precision medicine, PLP and the planetary biology) are not as such flagship projects as they are funded by the national infrastructure funding and have a mandate to serve the infrastructure. Also, national infrastructure funds cannot be applied for supporting flagship research activities, but capabilities can indeed incubate and support activities that could turn into flagships with other funding. Also, DDLS as a KAW-funded program is well suited as a launch pad for flagship projects, and the ideas to launch so called NEST programs in DDLS together with WASP, could be called, or lead to, flagships. Finally, we have been also planning to re-launch the concept of research community programs (RCPs) for the same purpose. Overall, the suggestion of flagships has been positively received in the community and the IAB has also voiced this well

Argue for a **new building at Campus Solna** such that critical mass is maintained at a single physical location.

Campus Solna matters are mostly under the three host universities in Stockholm, and the process to take charge of the beta-building is underway and also has the formal support of the national board. This process is overseen by KTH as a primary legal host for SciLifeLab. The process is also supervised by the Campus Solna Committee and the three Sto universities together.

   iv.   Continue to work with the three Stockholm Universities to develop a coordinated recruitment plan for the Solna campus, following the DDLS example.

This is a laudable goal. The national board can indirectly influence the realization of this goal, but we hope that the board does issue a strong opinion in this direction such that not only the fellows from the three Stockholm universities, but also Uppsala SciLifeLab fellows, can come closer to each other in terms of their future planning.