

## **DDLS Steering group meeting no. 13, 2022**

**Date:** *March 23, 2022*

**Time:** *12:00 – 17:00*

**Location:** *Room Air & Fire at Campus Solna*

**Zoom:** <https://uu-se.zoom.us/j/67149585927>

### **Attending members:**

*Matts Karlsson (Linköping University)*

*Erik Kristiansson (Chalmers/ Göteborg University)*

*Tuuli Lappalainen (KTH, Royal Institute of technology, §1-2)*

*Janne Lehtiö (Karolinska Institutet)*

*Erik Lindahl (Stockholm University)*

*Fredrik Ronquist (NRM, Swedish Museum of Natural History)*

*Gunilla Westergren-Thorsson (Lund University/WCMM, National SciLifeLab Committee chair)*

*Carolina Wählby (Uppsala University)*

### **Other participants:**

*Olli Kallioniemi (Director SciLifeLab, Director of the DDLS research program), Chair of the meeting*

*Siv Andersson (independent KAW observer)*

*Jenny Alfredsson (Acting Head of Operations Office SciLifeLab)*

*Johan Rung (Head of SciLifeLab Data Centre)*

*Heidi Törmänen Persson (DDLS coordinator, Operations Office SciLifeLab)*

*Titti Ekegren (Coordinator DDLS steering group, Operations Office SciLifeLab)*

*Ulrika Wallenquist (DDLS coordinator, Operations Office SciLifeLab)*

*Jessica Lindvall (Joint Head of Facility Support and Infrastructure NBIS)*

*Björn Nystedt (Head of facility for the Bioinformatics Long-term Support, WABI)*

*Elvan Helander (Controller DDLS steering group, Operations Office SciLifeLab)*

*Alexandra Patriksson (External relations office, Operations Office SciLifeLab)*

*Anna Frejd (communications officer, Operations Office SciLifeLab)*

### **Members not attending:**

*Oliver Billker (Umeå University, MIMS director)*

*Niklas Blomberg (ELIXIR director)*

*Next meeting: April 26, June 1, July 6, 2022*

This extended hybrid DDLS steering group meeting was dedicated to discussions about the future and strategy of the DDLS program.

### Agenda 2022-03-23

All documents including presentations from the meeting can be found on NextCloud:

<https://nextcloud.dckube.scilifelab.se/s/bWm8Pjc8LTtQgEQ>

1	<p><b>Meeting formalities</b></p> <p><i>Erik Lindahl was chosen to attend the minutes.</i></p> <p><i>The DDLS Steering group <b>approved</b> the previous minutes.</i></p> <p><b>Update from the Director</b> The overall aim of this meeting is to:</p> <ul style="list-style-type: none"> <li>• Discuss and adjust strategy &amp; objectives</li> <li>• Define program aims – deliverables – metrics - integration</li> <li>• Discuss what is missing – not sufficiently described?</li> <li>• Define actions and responsible people</li> </ul> <p><i>The four research areas need to be integrated with all DDLS strategic objectives in the long-term strategy (see picture 8 in the slide deck) and working groups need to be defined for each operational area. How can we connect and engage to RA expert groups in all areas?</i></p> <p><i>A big challenge for SciLifeLab and the DDLS program is to be considered as a national infrastructure and not only considered as a grant source.</i></p> <p><i>A Miro board was used during the meeting to write and post notes, the board is found here: <a href="https://miro.com/app/board/uXjVODH82m0=?invite_link_id=84718767242">https://miro.com/app/board/uXjVODH82m0=?invite_link_id=84718767242</a></i> <i>The board is still open for ideas!</i></p>	<p><i>Presenter:</i> <i>Olli Kallioniemi</i></p> <p><b>Appendix:</b> <b>1. Previous minutes, 220210</b></p>
2	<p><b>Information about WASP-HS meeting</b></p> <p><i>A networking event with DDLS and WASP-HS is planned for 8<sup>th</sup> of June at Campus Solna (room Air &amp; Fire). Each of the four research areas will be presented and moderated by one representative from WASP-HS and one from DDLS.</i></p> <p><u><i>Suggested moderators:</i></u></p> <p><b>Data Challenges</b> WASP-HS: TBD DDLS: Erik Kristiansson</p>	<p><i>Presenter:</i> <i>Erik Kristiansson</i></p>

	<p><b>Implementation and use</b> WASP-HS: Helena Lindgren DDLS: Janne Lehtiö</p> <p><b>Prediction and modelling</b> WASP-HS: Francis Lee DDLS: TBD</p> <p><b>Governance and Economics</b> WASP-HS: TBD DDLS: Heidi Howard</p> <p><i>To stimulate collaborative research between WASP-HS and DDLS some seed-funding will be available through an application procedure. 1,75 MSEK is allocated for collaborations in the 2022 DDLS budget.</i></p> <p><i>It is important that WASP-HS and DDLS jointly tries to drive for policy change and actions about legal and ethical issues related to data management and sensitive data. WASP-HS does not have any allocated funding in their budget for DDLS collaboration, therefore approved and funded projects must be of importance to both DDLS and WASP-HS. WASP-HS does not want to be considered consultants in the approved projects. A process for the seed-funding call will be suggested to the SG at an upcoming meeting.</i></p>	
3	<p><b>Update texts about Research Areas and the DDLS program</b></p> <p><i>The texts need to be clarified and in particular the definitions and the importance of data management and data handling in data driven Life Science. The recruitment texts should also emphasize the impact of the candidate's skills and experience in the field of data-driven life science and not just as a generator of large-scale data. This together with a clear definition of what DDLS is must be informed to the reviewers when communicating about assessment criteria for rating of applications.</i></p> <p><i>The Generic subject descriptions need some revisions, especially the Precision medicine and diagnostics research area. Olli and the DDLS recruitments working group will update the text and then send to the chair of SciLifeLab board for approval.</i></p>	<p><i>Presenter:</i> Olli Kallioniemi</p>
4	<p><b>Strategic topic: Data infrastructure in phase I</b></p> <p><i>Hardware procurement must be initiated soon to be delivered and invoiced before 2023-03-31. Investments of 47 MSEK are planned at LiU/NSC, KTH/CS and UU/UPPMAX, and the Data Centre will work with Elvan to provide an updated budget. It is important to ensure investments will strengthen the DDLS program rather than being used for general compute center capacity building. Hardware investments have not been possible to do as rapidly as planned because of the lengthy process around DAN/WABI nodes and because of considerations related to the SNIC re-organization.</i></p>	<p><i>Presenters:</i> Johan Rung / Björn Nystedt</p>

	<p><i>The Eol to host DAN and WABI staff is progressing well with in total 7 Eol submitted. The international evaluation will proceed during April/May, including a review meeting at the scheduled SG meeting, April 26, to work towards a decision for the SciLifeLab board meeting, May 31. The work to specify competence profiles for DAN and WABI staff should be started as soon as possible, and later anchored and refined together with each hosting partner organization once these have been decided. In parallel, a roadmap for long-term strategies for the DAN/WABI nodes including project priority processes was suggested to be initiated.</i></p> <p><b>Decision:</b> <i>Björn N/Johan R will jointly chair the DAN/WABI recruitments group for each RA, including the respective RA leads, RA node representative (hosting partner organization, once established), Heidi T-P (DDLS support), and the corresponding NBIS RA support manager (NBIS). This group will have the mandate to work out competence profiles and publish recruitment adds for DAN and WABI staff after the hosting partner organizations have been approved by the SciLifeLab board. The recruitment groups will report progress to the DDLS steering group.</i></p> <p><b>Discussion:</b> <i>Integration between the RA:s and the DAN actions is important to create DDLS impact in the long-term strategy. DAN's will also be instrumental to bridge the universities with Life Science data management. How will the DAN's connect to the RAs and with the steering group? One way could be to let researcher community to suggest strategies for DAN's that SG can decide upon. Since it's an Expression of Interest to host DAN/WABI nodes the SG can have a strong influence on the strategies for the DAN's. We also need to handle the universities with Eols that will not be approved in a good way. Maybe ensure that these universities have representation in the RA experts groups? DDLS needs to coordinate and steer the work in the DAN's.</i></p>	
5	<p><b>Discussion about integrational points and change/addition of program elements</b></p> <p><i>Some integrational points discussed are listed below, see page 29 for all items:</i></p> <ul style="list-style-type: none"> <li>• <b>Integration of fellows to a community</b> <ul style="list-style-type: none"> <li>○ <i>provide mentoring and leadership training, both long-term mentor programs with international scientists that include individual discussions with the fellow every other year, and more short-term ones where mentors meet fellows on a regular basis early in the fellows' career.</i></li> <li>○ <i>ask DDLS fellows how they want to shape the program</i></li> <li>○ <i>exchange ideas, data handling strategies across the RA</i></li> <li>○ <i>invite DDLS fellows to the NMMP and WCMM programs</i></li> <li>○ <i>invite DDLS fellows to an introductory meeting with RA-leads, DDLS recruitments WG and DDLS support team to present the DDLS program.</i></li> <li>○ <i>Arrange mandatory physical meetings (yearly in October?)</i></li> <li>○ <i>Evolution and biodiversity RA is planning an on-site event inviting the</i></li> </ul> </li> </ul>	<p><i>Presenter:</i> Olli Kallioniemi</p>

	<p><i>DDLS fellows within that RA</i></p> <ul style="list-style-type: none"> <li>○ <i>Encourage the DDLS fellows to pursue an active role in their research field so they feel a responsibility in shaping the DDLS program</i></li> <li>● <b>Making universities / departments (feel) as part of the program</b> <ul style="list-style-type: none"> <li>○ <i>Make the DDLS fellows as ambassadors to inform the universities about the DDLS program and engage them</i></li> <li>○ <i>Build on SciLifeLab affiliation and group leader associations and networks</i></li> <li>○ <i>Connect the new SciLifeLab sites (i.e. site directors/managers) with the DDLS National Reference Group partners and DDLS fellows at each site?</i></li> </ul> </li> <li>● <b>How do the 4 research areas work to profile DDLS in their fields?</b> <ul style="list-style-type: none"> <li>○ <i>Mini-symposia</i></li> <li>○ <i>Work closely to the DAN/WABI and DDLS fellows in the field</i></li> </ul> </li> <li>● <b>Promote availability of FAIR data (DANs in 4 research areas)</b></li> <li>● <b>Creating computational / data science / ML capabilities (DAN/DSN)</b> <ul style="list-style-type: none"> <li>○ <i>hackathons</i></li> </ul> </li> </ul> <p><b>Potential metrics of DDLS success (see page 34)</b></p> <p><i>DDLS needs to show results in projects taking on special key challenges jointly coordinated by the RA:s, “flagship projects”. We will need tools for assessment of FAIRness to show increased availability of FAIR data sets. Impact of cutting-edge computing infrastructure, data service and support shown in a catalogue of services and number of users.</i></p> <p><i>Think about how to measure impact on training, there are Impact assessment pathways for Training and other KPIs to be looked at. For training, long-term surveys about how knowledge have been implemented and empowered research could be used.</i></p> <p><i>DDLS needs to encourage newly appointed DDLS fellows to spend money and initially focus on recruitments of PhD’s and postdocs to build their research group before they start to apply for external research funding. There is sometimes a tendency to save startup funds for the future needs, but this would be bad from the standpoint of showing that DDLS is active.</i></p>	
6	<p><b>Future program aspects - planning phase II</b></p> <p><i>Presentation and discussion about the recruitment of DDLS PhDs and postdocs, DDLS training and the research school.</i></p> <p><i>The KAW donation letter encompasses in total recruitment of 185 academic and industry PhD’, and 135 academic and industry postdocs during the whole DDLS program period (2024-2032), not including the PhDs and postdocs hired by DDLS fellows. Funding for education, training and research school is not specified in the donation letter. The DDLS support team suggests that funding</i></p>	<p><i>Presenters:</i> Ulrika Wallenquist / Jessica Lindvall</p>

	<p>is allocated for these efforts as a separate section in the DDLS budget (Education and Training where the DDLS research school will be part of).</p> <p><u>The budget section could include costs such as:</u></p> <ul style="list-style-type: none"> <li>• Management/coordination of the research school</li> <li>• Content for the research school, including delivery of training</li> <li>• Networking activities (such as annual meetings) for the research school</li> <li>• Build and design a coherent data-driven course catalogue for the life science community, covering foundational data-driven topics as well as state-of-the-art courses within the specific research areas</li> </ul> <p><u>Currently the team working with DDLS education and training is:</u></p> <p>Jessica Lindvall (NBIS, assigned to lead the planning of the SciLifeLab Training hub and to lead the planning and implementation of the DDLS training package)</p> <p>Nina Norgren (NBIS, assigned to plan the SciLifeLab Training hub as well as work with planning and implementation of the DDLS training package)</p> <p>Ulrika Wallenquist (DDLS Support team, assigned to lead the planning, organization and implementation of the DDLS research school)</p> <p>Mojgan Seraji (DDLS Support team, assigned as lead on PhD and postdoc recruitments)</p> <p><b>Suggestion:</b> The DDLS education and training team would like a SG representative to be part of the interim management group.</p> <p><b>Action:</b> Erik Kristiansson volunteers to represent SG in the Interim DDLS research school management group</p>	
7	<p><b>Common operational procedures and working methods</b></p> <p>Information and discussion postponed to a later meeting</p>	<p>Presenters: Jenny Alfredsson / Heidi Törmänen Persson</p>
8	<p><b>Other issues</b></p> <p>No further issues. The chairman thanked all participants for a nice meeting!</p>	<p>Presenter: Olli Kallioniemi</p>



Olli Kallioniemi, chair of the meeting



Erik Lindahl, Attending minutes



## IAB comments – Data Driven Life Science

- The IAB is delighted to see the Knut and Alice Wallenberg Foundation creating a large cutting-edge programme together with SciLifeLab.
- DDLs is a very impressive programme, a large scale and timely investment in young PIs, students and postdocs in data driven life science.
- **It could be stated more clearly that ground-breaking research will develop bottom up** from the young PIs. To take the best of those and **develop them into “big science”**, we encourage to consider a junior – consolidator – advanced grant funding mechanism that would also provide mid-career support and retain the best PIs in Sweden (see also 4.3 “Fellows” above).
- It is **pivotal for the success of the programme to form a very strong and closely networked cohort of excellent PIs** and not allow that the large investment disappears into the existing departmental landscape of the hosting universities.
- To ensure this, we would **strongly advise recruitment based on excellence with independent and international evaluation for all candidates recruited into the programme**. Only in this way can the DDLs programme as a whole attain a stamp of excellence that will be needed to attract additional investment into this critical area.
- Furthermore, by coordinating recruitments between universities, DDLs provides a **unique opportunity to achieve true integration of research activities across universities** and make all of them stronger than any of them could be individually.
- Finally, we feel that the four research areas DDLs sets out with are good, but rather broad and sometimes even vaguely defined in terms of the computational science requirements. It might therefore help to **quickly built critical mass by focusing the first recruitments on the computational counterparts of experimentally already strong areas in Sweden**, including for example spatial and single cell technologies or evolutionary/ecological genomics.
- Furthermore, we **strongly advise integration of the programme with the SciLifeLab fellows programme** on which it (**as well as the WCMM programme**) has been modelled as much as possible (see also 4.3 “Fellows” above, and 4.7 below).
- This will allow the **DDLs community to interact closely with the data producing** community, especially as more and more quantitative and high throughput data is generated, often by physical colocation.

- We would advise to stimulate **interactions between the different research areas within DDLS**, as well as **interactions with the WASP and SciLifeLab fellows programme by dedicated funding for joint staff**, such as for example shared postdocs or technology development engineers.
- To implement **DDLS Swedish health data management and integration has to improve**, especially for the Precision Medicine and Infection Biology research areas. SciLifeLab has a key role to address this, setting up a working group with the government to rapidly establish a pilot programme and in the mediumterm change policy. The strong support by KAW should be beneficial to achieve this.
- DDLS has substantial computational implementation challenges. We advise to **be careful with committing to use large central compute facilities**, before the specific needs of life science (e.g. GPU's and bringing compute such as AI models to large data sets rather than the other way around) have been formulated and tested.
- We furthermore **advise to form communities between the technical staff on the research side ("ResOps") in the DDLS fellows groups and the technical staff on the infrastructure side ("DevOps")** in the Data Center/DDLS data support team early on.
- DDLS puts SciLifeLab in a key position to establish the first prototypes of future compute services in several key domains of life science. We therefore encourage SciLifeLab to **actively contribute to European and international projects in this area**.