

# Report on the DLN search conference

14-15 November, 2018 Selbu



## Background

The mandate of the Centre for Digital Life Norway (DLN) is to create economic, societal and environmental value for Norway from biotechnological research and innovation through encouraging transdisciplinary research. Since its inception, DLN has steadily grown in terms of activities, research projects – Digital Life-funded as well as affiliated projects – and geographical spread. DLN has become a broad community for research, training and innovation. DLN has a broad scientific portfolio, and the organization is complex and distributed; hence a collective action to define common needs was necessary. This is why, on 14-15 November, 2018, DLN gathered in Selbu for a search conference. Among the 32 participants were leaders of DLN research projects (including partner projects), members of the DLN research school board, selected young scientists, and centre leaders and coordinators. The stated aim of the search conference was for participants to identify concrete priorities and steps that are needed to fulfil the mandate of DLN, which are then to be used in shaping DLN's action plan for 2019–2021.

## The search conference

A search conference is a well-established, internationally recognized method to facilitate long-term strategic thinking, learning and change in organizations and networks of organizations.<sup>1</sup> Its goal is that members of an organization jointly plan the future of their organization/system by action-based strategies that conference participants themselves develop and promise to implement. Search conferences are exclusively interactive, i.e. they make do without presentations or speeches, and oscillate between work in breakout groups and reporting back in the plenum under the guidance of a trained facilitator.

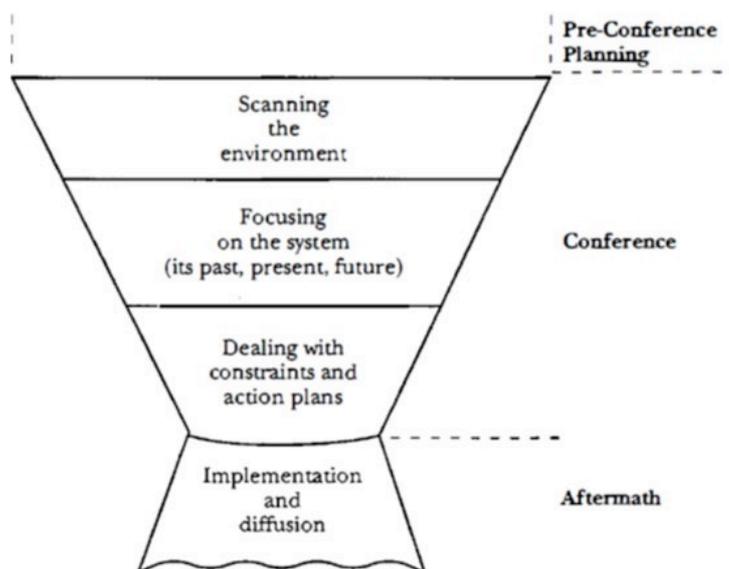


Figure 1: search conference overview (Emery 1996:13)

<sup>1</sup> Emery, M. (1996). *The Search Conference: A Powerful Method for Planning Organizational Change and Community Action*. Jossey-Bass.

The search conference methodology operates like a funnel (cf. figure 1) in that it starts from context and progresses toward specific actions while pursuing a consensus strategy. Each group work builds and depends on the results of previous group works/plenary discussions. In this manner, the search conference functions as an arrangement for reflexivity, anticipation and responsiveness, which are core elements of responsible research and innovation.

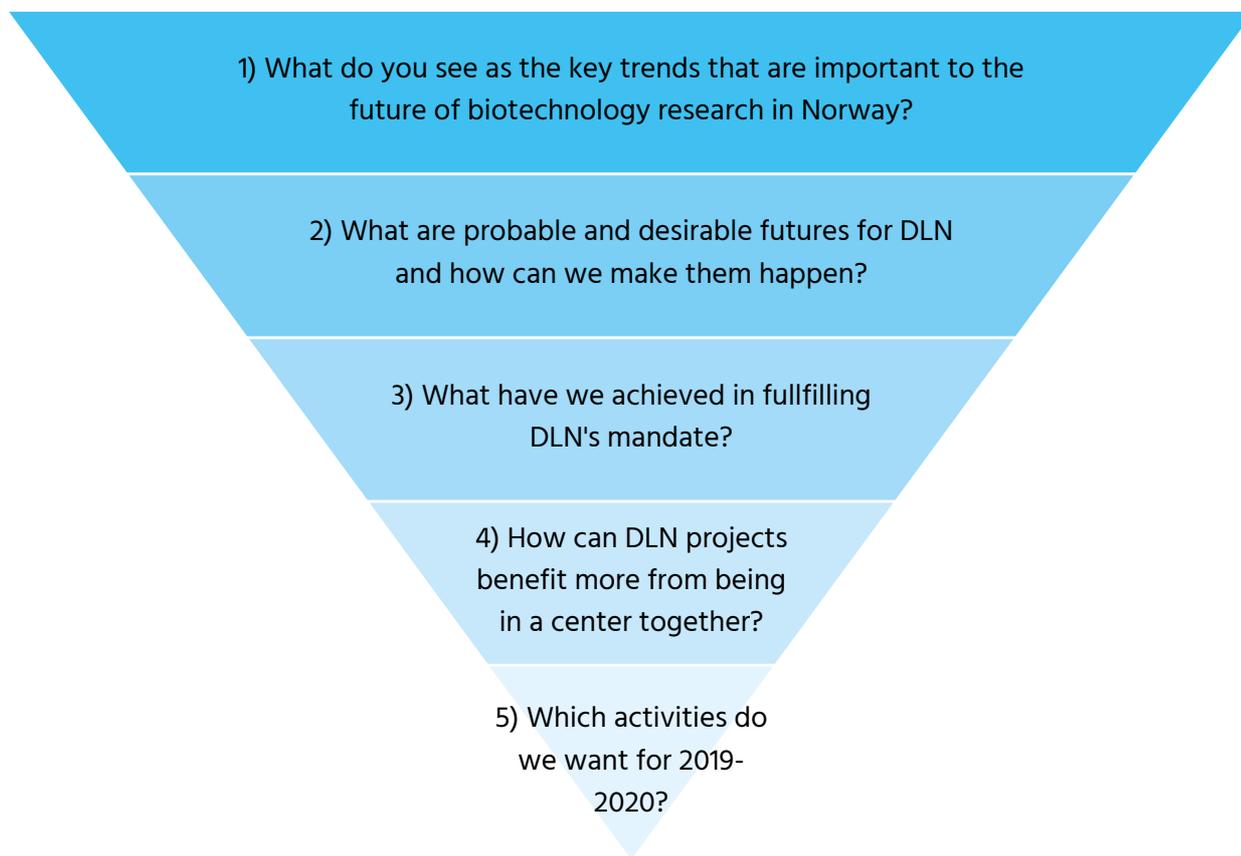


Figure 2: the session topics leading up to the activity plan

All participants were individually briefed prior to the event and tasked with the homework of thinking about trends affecting their research, as well as with re-reading the DLN strategy “Digital Life – convergence for innovation”. During the event, the participants worked in five different breakout groups whose compositions changed several times. As illustrated in figure 2, the five sessions led the participants from discussing trends in Norwegian biotechnology research, to articulating desirable futures for DLN, to stock taking, to identifying synergies and their conditions, to finally arriving at designing activities for the next two years. An additional session was devoted to the topic of innovation and what it means in the context of DLN. The following pages present an executive summary of the action plan for 2019-2020 that DLN members developed in this strategy process. It is based on figure 3, the image that depicts the action plan as it emerged during the conference, as well as the latter’s detailed transcript that can be found in the appendix.

## **Executive summary of the action plan for DLN 2019-2020**

### **1. Establish the foundation for change through sharpening and putting into practice Digital Life's vision of transdisciplinarity research, education and innovation.**

There is a clear need to further clarify the DLN vision/mandate and the meaning of transdisciplinary research for identity building and for grounding change. Mainstreamed transdisciplinary research collaborations was a desirable future but both digitalization, transdisciplinary, and system biology are loosely defined concepts. A task force could work on a white paper and engage different actor groups in discussions on transdisciplinary. Transdisciplinarity could also be a theme at the annual conference. A research paper, newspaper commentaries, and workshops are further possible "how tos". Arguably, a transdisciplinary signature course offered and developed by the DLN Research School, could be a result that would indicate some success of such transdisciplinary efforts because of the networking effect in organizing it and for the competencies course attendees would gain. Furthermore, implementing transdisciplinarity would entail effecting change on regime-level such as different evaluation criteria in academia, for example for PhD theses or employment committees. The latter points to the need for better institutional anchoring of changes (see also point 3).

### **2. Catalyse cross-project synergies through an improved flow of information regarding capabilities and best practices.**

All groups saw the need for more insight in what other projects were working with (competence mapping) in order to realize possibilities to harvest synergies and to facilitate collaboration among research projects, partner projects, and the network project. They required in particular a better oversight over methods and instruments used, as well as over best practice regarding RRI, innovation, and data management. The suggested 'how to' ranged from the web page and other web solutions, over a data infrastructure/inventory, and a newsletter, to a report, Research gate, and face-to-face meeting places (like a regular data management forum). Everybody is responsible for implementation, with a particular responsibility for DLN's communication coordinator because the flow of information within DLN (inreach) needs to improve. It is particularly important to quickly integrate the upcoming new projects from the last call.

### **3. Create leverage for the Digital Life vision through better anchoring at its home institutions**

Many wished for better institutional anchoring. That is, DLN members asked for stronger and more formal embedding of DLN activities and ideas at home institutions. The reason for this was that institutional leverage is critical for change, impact, and career track development. A probable (but unwanted) future of DLN could be that the centre vanishes and everybody returns to their

departments after the five-year funding period. Thus, institutional anchoring is the only way forward to avoid this and to institutionalize long-lasting change. Search conference participants suggested that the DLN board, university rectors and faculty deans should be responsible for this task and high-profile meetings were the method of choice. In addition, launching an initiative directed towards the integration of transdisciplinary biotechnology education in the respective higher education programmes of the home institutions could promote and formalize institutional change and thus, institutionally anchor the vision of DLN.

#### **4. Strengthen Digital Life's capability to partake in societal and political debate as one, collective voice**

Related to point 1. and 3., participants voiced the need for more societal and political engagement in which DLN talked as one, collective, strong voice. Specifically, that would entail contributing to societal debate (for example in media), continuing our presence at venues such as 'Arendalsuka', actively seeking contact with decision-makers and relevant actors (see also point 3.), and inviting ourselves more to the RCN. It would be good to have a consistent, institutionalized consultation process within DLN to decide which standpoint one represents in hearing processes.

#### **5. Empower junior researchers to become future leaders in Norwegian biotechnology by expanding educational initiatives targeted at post-doctors**

Several groups wanted an increased activity on junior development. Although the DLN Research School is open for both PhD students and post doctors, the DLN activities could address the post doctor level more explicitly. There are many good reasons for this. One is that the transitions in biotechnology in Norway will be carried by the younger generation and thus these are investments in the future. Another reason is that project leaders already are overwhelmed with activities and synergies among projects beneficially could emerge bottom-up through increased collaboration of young researchers. There are different possibilities for implementing a post doctor focus such as organizing conferences, mentoring, or courses such as grant proposal workshops. The DLN Research School could be a hub responsible for organizing this but the main driving force needs to be the junior community itself.

#### **6. Expand collaborations between DLN and industry**

The activity list also contained two points on strengthening the link between academia and industry, and on promoting industrial involvement (through internships or network conferences). The innovation coordinator is considered the main responsible for this. As there anyways is a huge investment in innovation upcoming soon, this activity was not detailed further during the conference.

## 7. Build contacts with sister institutions abroad to foster mutual learning and scientific collaboration

Finally, DLN members saw the need to learn from similar initiatives in other countries, and to connect actively with leading international research environments in order to develop competitive EU funding proposals.



Figure 3: the activity plan as composed by the participants

## Appendix: Detailed results

1. Establish the foundation for change through sharpening and putting into practice Digital Life's vision of transdisciplinarity research, education and innovation.

What	Why	How	Who	When
Clarify the DL vision: What does transdisciplinarity really mean? What does "DL", systems biology mean?	Clarifying the meaning and significance of transdisciplinary research and thus working towards fulfilling DLN's vision	Task force on 'transdisciplinarity' Grant proposal workshops Theme at DLN conference	Roger volunteers NP/nodes NP/Raffael	2019
Research school signature course		Coordination: simple person/committee Involve PIs in the centre Frikjøp/compulsory work <-> career promoting	Research school	Spring 2020/ fall 2019
Career development of postdocs		mentoring seed funding internships Connected to: clarifying the DL vision; Mapping of competences	NP/Research school Postdocs PIs	
Initiative on education		Each [DLN] node would create their own initiative to raise the issue for their own relevant study programs	Designate senior person at each [DLN] node. E.g. Jon Olav [NMBU], Anders G & Inge J [UiB]	Late 2019? 2020? (After task force on transdisciplinarity)

2. Catalyze cross-project synergies through an improved flow of information regarding capabilities and best practices.

What	Why	How	Who	When
<p><b>Mapping of competences, methods, instruments &amp; exchange</b> of such</p> <p><b>Improved information flow</b></p>	<p>Increase project output</p> <p>Facilitate data management in project &amp; at institutions</p> <p>Facilitate collaboration between PhD/post docs/disciplines</p>	<ul style="list-style-type: none"> <li>• Build a competence and infrastructure database</li> <li>• Maintain website up to date</li> <li>• Newsletter</li> </ul> <p>Possible strategies for information collection:</p> <ul style="list-style-type: none"> <li>• Lunch to lunch meeting;</li> <li>• Individual reporting followed by centralized selection of keywords;</li> </ul> <p>Open questions:</p> <ul style="list-style-type: none"> <li>• Incentives for contributing?</li> <li>• Who will maintain the list?</li> </ul>	DLN WGs 1,4,5 & representatives from each research project	From Spring 2019
Sharing best practice: innovation, RRI, infrastructure, data management		<ul style="list-style-type: none"> <li>• Session at DL2019 on innovation / RRI</li> <li>• Workshops: Flipped classroom? Short skype/streaming?</li> </ul>	Content: researchers; Framework: NP	Now →
Establish a data manager forum		<ul style="list-style-type: none"> <li>• Virtual</li> <li>• short meetings</li> <li>• thematic workshops</li> </ul>	WG 4 + DM responsible [in projects] + institution responsible	2019 →
Increase flow of information within DLN		<ul style="list-style-type: none"> <li>• Finding bottlenecks</li> <li>• Appointed project members with specific tasks: <ul style="list-style-type: none"> <li>○ Coordinator</li> <li>○ Communication</li> </ul> </li> </ul>	DLN coordinator (communication]	2019 →

		<ul style="list-style-type: none"> <li>○ Data management</li> <li>● Low threshold web solution such as a slack channel</li> </ul>		
On boarding of the new projects		Mentoring system	WG1	ASAP

### 3. Create leverage for the Digital Life vision through better anchoring at its home institutions

What	Why	How	Who	When
Institutional anchoring	Institutionalize change & impact	DLN board members talk to deans, research departments + “undervisnings utvalg”	<ul style="list-style-type: none"> <li>● DLN board</li> <li>● Hub/Node</li> </ul>	Continuous, When possible
		High profile conference with relevant subjects with DLN, politicians, university representatives. Use established meeting places, e.g. Arendalsuka, DLN board etc.	<ul style="list-style-type: none"> <li>● DLN Board</li> <li>● Hub/Node</li> </ul>	2019 (01.01), when possible

### 4. Strengthen Digital Life’s capability to partake in societal and political debate as one, collective voice

What	Why	How	Who	When
Societal & political engagement	Form & shape a collective, strong voice	More “samfunnsdebatt”: <ul style="list-style-type: none"> <li>● Kronikker, aviser, DN/Aftenposten dagsrevyen</li> <li>● Social media</li> <li>● Arendalsuka, EU, Nord. Råd</li> </ul>	<ul style="list-style-type: none"> <li>● Everybody</li> <li>● WG1 &amp; WG5</li> <li>● DLN board</li> </ul>	Ongoing
White paper on transdisciplinary research: DLN vision & status		Publication in research policies, kronikk, aftenposten	SAB & WG 3 & WG1	2019

5. Empower junior researchers to become future leaders in Norwegian biotechnology by expanding educational initiatives targeted at post-doctors

What	Why	How	Who	When
Research school signature course	Career development and transdisciplinary education, with a focus on post doctors	<ul style="list-style-type: none"> <li>• Coordination: simple person/committee</li> <li>• Involve PIs in the centre</li> <li>• Frikjøp/compulsory work &lt;-&gt; career promoting</li> </ul>	Research school	Spring 2020/ fall 2019
Postdoc / researcher meeting place		<ul style="list-style-type: none"> <li>• Mentors</li> <li>• PhD/Postdoc research conference or workshop. ECTS points</li> </ul>	Research school, DLN, junior committee	2019 ->
Industrial internship		Legal issues need to be resolved Salary prolongation	Work in progress, network project	2019
Clarify the DL vision: <ul style="list-style-type: none"> <li>• What does transdisciplinarity really mean?</li> <li>• What does "DL", systems biology mean?</li> </ul>		<ul style="list-style-type: none"> <li>• Task force on 'transdisciplinarity'</li> <li>• Grant proposal workshops</li> <li>• Theme at DLN conference</li> </ul>	Roger volunteers NP/nodes NP/Raffael	2019

6. Expand collaborations between DLN and industry

What	Why	How	Who	When
Industrial partner network conference	improve academia/industry involvement	Presentations Networking Matchmaking	Innovation coordinator	Fall 2019
Industrial internship		Legal issues need to be resolved Salary prolongation	Work in progress, network project	2019

7. Build contacts with sister institutions abroad to foster mutual learning and scientific collaboration

<b>What</b>	<b>Why</b>	<b>How</b>	<b>Who</b>	<b>When</b>
International partnership	<ul style="list-style-type: none"> <li>Learn and position DLN</li> </ul>	<ul style="list-style-type: none"> <li>Scan for similar organizations</li> <li>Contact and meet</li> </ul>	WG1	2019
Build capacity for high quality proposals and project consortia	<ul style="list-style-type: none"> <li>EU funding/joint applications</li> <li>Competitive proposals</li> <li>Leadership training</li> </ul>	Workshops on: <ul style="list-style-type: none"> <li>Grant writing,</li> <li>project management,</li> <li>building transdisciplinary projects consortia</li> <li>Data management plans (e.g. lunch to lunch)</li> </ul>	<ul style="list-style-type: none"> <li>Late PhD,</li> <li>postdoc,</li> <li>researchers,</li> <li>career developers,</li> <li>industry/Pis/funders</li> <li>DLN, NSD, Sigma2, (NoRDi), (NIRD)</li> </ul>	Before a call, e.g. ERA/DL