Nordic Testbed Network

Supporting digital transformation in the Nordic bioeconomy

Sign up by 21th May on http://simplesignup.se/private_event/180143/07bab45fab

Participating at the event is free of any charge

Digitalisation plays a vital role in the rapid development of the Nordic bioeconomy. Access to **cutting edge platforms for development, so-called testbeds,** where new digital knowledge and technology can be developed is fundamental. Managing a testbed is however a complex task.

To facilitate the development of new and existing testbeds, the Nordic Testbed Network aims to **unite and strengthen testbeds** aimed at supporting the digital transformation of the bioeconomy.

The Nordic Testbed Network is managed by Nordic Forest Research (SNS), Nordic Agri Research (NKJ), and the Nordic Council of Ministers' working group on fisheries and aligned with initiatives such as the North Digital Declaration and the Nordic Bioeconomy Program.

How to approach issues related to data access, reliability, and security?

Join us online:

Virtual meeting

WHEN: June 3, 10.00-12.00 CET

WHERE: Online via *Zoom*, link will be sent out a couple of days before the meeting

FOCUS: Highlighting opportunities and best practices, as well as challenges with regard to data management

AGENDA

- **Reflections from a testbed – Data challenges in practice,** *Kjersti Balke Hveem, head of NIBIO's Centre for Precision Agriculture*
- **Keynote lecture – Data management,** *Suzanne Dumouchel, Head of European Cooperation TGIR Huma-Num (CNRS), Partnerships Coordinator of OPERAS AISBL & Member of the European Open Science Cloud (EOSC) Association Board of Directors*
- **Panel discussion – Critical data management questions,** *Ohad Graber-Soudry, commercial lawyer (advokat) X-officio, Tomas Klingström (Gigacow testbed), PhD Swedish University of Agricultural Sciences, Erik Willén (Auto2 testbed), Process Manager at Skogforsk*
- **Interactive session,** *all participants are invited to discuss predefined questions*

Nordic Testbed Network

Supporting digital transformation in the Nordic bioeconomy

Speaker biographies (1/2)

Suzanne Dumouchel has a PhD in French Literature and is research engineer at CNRS, Huma-Num, an organisation that aims to support research communities by providing services, assessment and tools on digital research data. Suzanne further is co-coordinator of OPERAS Research Infrastructure, devoted to scholarly communication in Social Sciences and Humanities and member of the European Open Science Cloud Association Board of Directors. Scientific coordinator of TRIPLE, H2020 project (infraeosc2), she is also involved in the Social Sciences and Humanities Open Cloud (SSHOC) project.

Ohad Graber-Soudry is a commercial lawyer (advokat) working with entities active in the research, technology and science community. He supports public and private-sector clients on a variety of legal matters, including contracts, IP and business transactions, governance issues and procurement. Ohad is the managing director at X-officio (Lund-based law firm), a visiting professor at the 'Executive Masters in Management of Research Infrastructures', University of Milano-Bicocca, and a guest lecturer at the Faculty of Law, Lund University. Prior to establishing X-officio, Ohad headed the legal department at the European Spallation Source ERIC (Lund, Sweden) and practiced EU law with a leading international law firm, based in Brussels.

Kjersti Balke Hveem is the head of NIBIO’s Centre for Precision Agriculture. She has a Master’s degree as an engineer within product development and materials and work experience from a range of different industries. Kjersti enjoys working in cross-disciplinary teams and with drawing connection lines between different areas of expertise. In the interface between technology and agronomy, she gets to do exactly that. One of Kjersti’s goals is to contribute to bringing cutting-edge agriculture technology and research closer to the farmer.

Nordic Testbed Network

Supporting digital transformation in the Nordic bioeconomy

Speaker biographies (2/2)

Erik Willén (M Sc Forestry) works as Process Manager at the Swedish forestry research institute, Skogforsk. The process should act as a catalyst for the digitalisation in Swedish forestry. To exemplify, Skogforsk coordinates the testbed Auto2, addressing the key conditions to enable autonomous forest machines. Erik's R&D include remote sensing applications and decision support tools for forest operations.

Tomas Klingström has a PhD in bioinformatics and works at the Swedish University of Agricultural Sciences (SLU). Tomas is currently working with two different projects, Gigacow which is SLU's infrastructure for data collection from dairy farms and Defend2020 which is an EU project aiming to stop the spread of Lumpy skin disease and African swine fever. In addition, Tomas is involved in several SLU collaborations and networks with a focus on open-source software and collaboration on genetic research in low- and middle-income countries.

Nordic Testbed Network

Supporting digital transformation in the Nordic bioeconomy

How can we address issues related to data access, reliability, and security?

One way to approach this is by putting the questions into a context, making them more concrete. Another is to learn from what others have done, looking at initiatives carried out for example at European level.

Questions regarding data management

The digitalisation of the bioeconomy brings new opportunities to collect and make use of data. At the same time, it raises questions about data management. Below, we present some of the questions highlighted by the Nordic Testbed Network's members.

- When the data collected is linked to individuals, how do we take integrity and GDPR into account?
- Who owns the data and who should be allowed to handle it?
- How can we share data with other actors, such as other testbeds or associations, from a legal point of view?
- Who gets to reap the benefits from the value that the data generates?
- How to ensure the interests of small farmers or forest owners?

Initiatives at European level

The need to address issues related to data management and data infrastructure has been recognised by several initiatives at European level, such as the European Open Science Cloud and GAIA-X.

The *European Open Science Cloud (EOSC)* aims to give the European Union a global lead in research data management and ensure that scientists can benefit from data-driven science. The process to create the EOSC was initiated by the Commission in 2015, with the intention to develop an inclusive and open science ecosystem in Europe. The work of EOSC follows the FAIR principles that seek to increase the reusability of data. FAIR stands for Findable, Accessible, Interoperable, and Reusable.

The *GAIA-X* initiative aims to develop common requirements for a European data infrastructure. An infrastructure that is secure and that meets the highest standards of digital sovereignty while promoting innovation. This is in turn expected to strengthen the ability to both access and share data in a secure way. GAIA-X involves representatives from business, science and politics from several European countries.

Nordic Testbed Network

Supporting digital transformation in the Nordic bioeconomy

References

European Commission. *European Open Science Cloud (EOSC).* https://ec.europa.eu/info/research-and-innovation/strategy/goals-research-and-innovation-policy/open-science/european-open-science-cloud-eosc_en

EOSCsecretariat.eu. *Building the European Open Science Cloud.* https://www.eoscsecretariat.eu/sites/default/files/eosc_bookletb5_march2020_web.pdf

GAIA-X. *GAIA-X: A Federated Data Infrastructure for Europe.* https://www.data-infrastructure.eu/GAIAX/Navigation/EN/Home/home.html

Graber-Soudry, O., Minssen, T., Nilsson, D., Corrales, M., Wested, J., Illien, B. *Legal Interoperability and the FAIR Data Principles.* https://zenodo.org/record/4471312#.YJBDaq8zY2w

Want to learn more?

Tips for further reading:

- Learn more about legal interoperability and the FAIR data principles: https://zenodo.org/record/4471312#.YJBDaq8zY2w
- In an exploration series with researchers, the European Open Science Cloud focuses on visions, needs and requirements for future research environments: https://www.eoscsecretariat.eu/cocreating-eosc/visions-needs-and-requirements-future-research-environments-exploration-series
- Learn more about the GAIA-X Agdatahub, addressing consent and data exchange in agriculture: https://www.data-infrastructure.eu/GAIAX/Redaktion/EN/Artikel/UseCases/smart-agriculture-data-exchange-in-agriculture.html
- The Ethical Advisory Board at the Finnish Center for Artificial Intelligence highlights ethics in AI research: https://fcai.fi/eab-blog/2020/9/4/ethics-in-ai-research-what-and-how