

## VISION 2023: Nordic Testbed Network

### Co-creating solutions for the digital bioeconomy

The network members aim to co-create solutions supporting the digital transformation in the Nordic bioeconomy. By doing so, the network will increase the general awareness of the role of testbeds and digitalisation in the development of the Nordic bioeconomy and also facilitate knowledge and technology transfer between the Nordic countries.

To enable this vision, the network members will start off by learning from each other.

### Milestone for 2020: Increased knowledge sharing between Nordic testbeds active in the intersection between digitalisation and bioeconomy

During 2020 the network will facilitate a learning process between Nordic testbeds in the intersection between digitalisation and bioeconomy. Areas for learning include both generic issues related to the management of a testbed and specific subject areas for research, development, and commercialization:

#### Managing a testbed

##### Exampels:

- Financing
- Stakeholder engagement
- International cooperation

#### Subject areas to explore

##### Exampels:

- Autonomous vehicles
- IoT solutions
- Data management

### Structure enabling the 2020 milestone

The learning process will be facilitated by a:

- **WORKSHOP** including in-depth testbed presentations and study visit
- **BEST PRACTICE REPORT** presenting testbeds (within and outside of the Nordics)
- **WEBINAR** on testbed funding and stakeholder engagement

## Network benefits – why joining?

Network members get:

- Easy access to Nordic testbeds in the intersection between digitalisation and bioeconomy
- Contact with stakeholders engaged in developing the Nordic digital bioeconomy
- Updates on relevant initiatives inside and outside of the Nordic region
- Invitation to network activities such as study visits and webinars

Joining the network is free of any charge.

## Network members – who can join?

The Nordic Testbed Network is open to anyone willing and able to contribute to the vision of the network. The core of the network is composed by **Testbeds engaged in digitalising the Nordic bioeconomy**. The network is specifically targeted towards:

- Testbeds where academia, businesses, and public organizations can interact
- Testbeds devoted to research, development, and commercialization of products and services
- Testbeds encompassing both forestry and agriculture

## Network members include:

<b>Smart Farming Centre</b> • <a href="http://eng.au.dk/forskning/forskningsprogrammer-og-centre/au-agricultural-technology-program/smart-farming/smartfarming/">eng.au.dk/forskning/forskningsprogrammer-og-centre/au-agricultural-technology-program/smart-farming/smartfarming/</a>	<b>Digitaliserat jordbruk</b> • <a href="http://www.testbedsweden.se/test-demo/digitaliserat-jordbruk">www.testbedsweden.se/test-demo/digitaliserat-jordbruk</a>	<b>Auto 2</b> • <a href="http://www.skogforsk.se/nyheter/2018/nytt-projekt-ska-utveckla-sjalvstyrande-skogsmaskiner">www.skogforsk.se/nyheter/2018/nytt-projekt-ska-utveckla-sjalvstyrande-skogsmaskiner</a>	<b>Ouluzone+</b> • <a href="http://www.ouluzoneplus.com">www.ouluzoneplus.com</a>
<b>Swedish Drone Centre</b> • <a href="http://www.dronecentersweden.se">www.dronecentersweden.se</a>	<b>Mistra Digital Forest</b> • <a href="http://www.mistradigitalforest.se">www.mistradigitalforest.se</a>	<b>FITPIG – pigs on internet</b> • <a href="http://www.iof2020.eu/trials/meat/interoperable-pig-tracking">www.iof2020.eu/trials/meat/interoperable-pig-tracking</a>	<b>Odlande stadsbasarer/Alovivum</b> • <a href="https://odlandestadsbasarer.se/alovivum-2/">https://odlandestadsbasarer.se/alovivum-2/</a>
<b>Agro- og Planteknologi</b> • <a href="http://www.teknologisk.dk/ydelsler/agro-og-planteteknologi/36802">www.teknologisk.dk/ydelsler/agro-og-planteteknologi/36802</a>	<b>Senter for presisjonsjordbruk</b> • <a href="http://www.nibio.no/om-nibio/senter-for-presisjonsjordbruk">www.nibio.no/om-nibio/senter-for-presisjonsjordbruk</a>	<b>Gigacow</b> • <a href="http://www.slu.se/institutioner/husdjursgenetik/forskning/gigacow/">www.slu.se/institutioner/husdjursgenetik/forskning/gigacow/</a>	

## Background of the initiative

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. To meet this need, and to support the digital transformation of the Nordic bioeconomy, the Nordic Testbed Network was initiated.

The Nordic Testbed Network is managed by Nordic Forest Research (SNS) and Nordic Agri Research (NKJ) and is aligned with initiatives such as the North Digital Declaration and the Nordic Bioeconomy Program. It is based on the initiative ‘Digitalisation in the Nordic bioeconomy’ undertaken by SNS and NKJ during 2018, which highlighted testbeds as an important part of strengthening the Nordic bioeconomy's profitability and competitiveness.

## Defining core concepts



**Bioeconomy** refers to the biomass-based part of the total economy. It is often associated with concepts like green economy and circular economy. In the Nordic Testbed Network, it is defined as agriculture and forestry and focus lies on primary production.



**Digitalisation** is a process of comprehensive social changes (e.g. new business models and infrastructure solutions). Digitisation is one component of digitalisation and refers to the conversion of information from analogue to digital format.



**Testbeds** are physical or virtual environments where businesses, academia and other organisations can interact in the development, testing and introduction of new products, services, processes or organisational solutions in selected areas. A well-designed testbed has effectively integrated both "hardware" (equipment, physical facilities etc.) and "software" (competence, organisation, service offerings etc.).

## Nordic added value

The Nordic countries are at the forefront of both the digital transformation and in developing the bioeconomy. As a result of the joint Nordic interest in a digital bioeconomy, there are multiple testbeds all over the Nordic countries aiming to push this development. High-performing testbeds do however require extensive resources, and testbeds are specialised on specific topics. By creating a Nordic network of testbeds, we facilitate the exchange of knowledge and technology transfer in the Nordic region. In this way, more people have easier access, and possibility to contribute, to the development of testbeds that suits them, no matter where in the Nordic region they are located. This is resource optimisation in practice.

