

## Position paper “Accelerating Smart Food Innovations”

September 2020

### East Netherlands, European region for smart food productions

Region East Netherlands is committed to contribute to the goals on sustainability and needed innovations as brought forward in the Farm to Fork strategy in the European Green Deal. We - 24 partners from the triple helix in East Netherlands bundled in Th!nk East Netherlands - welcome this integral and ambitious European effort. World-class knowledge is compiled both in Wageningen University and Research Centre and in various smaller and larger public, private and public-private R&D institutes, and connected to a large number of ambitious innovative companies (both SMEs and corporates). **In addition East Netherlands hosts a vibrant community of active citizens and consumers who are involved in initiatives towards a more holistic and regionalized “food system”, in which the relationship to the primary producer is strengthened, food waste is reduced and nutritious and tasteful food is made available for all.** Our region offers tremendous possibilities to add to a more sustainable and stable future European food system. This contributes to the health and well-being of EU citizens and the environment.

### Keywords

circular agriculture, short food chains, nature-inclusive agriculture, robotization / digitization / AI / sensor technology, precision agriculture, protein transition, consumer involvement, prevention and outbreak management, personalized / healthier food, new revenue models, eco-system services, strong cross-overs to high-tech, health and energy.



make sure Europeans get affordable and sustainable food



tackle climate change



protect the environment



preserve biodiversity



increase organic farming

In order to speed up the implementation of the Farm-to-Fork approach and to maximise its impact on societal challenges, region East Netherland focuses on the development, implementation and demonstration of climate-neutral and circular agriculture practices, smart sustainable food production and healthier diets.

Current situations like Covid-19 and the Dutch nitrogen emission crisis, the question raises how to cope with climate-related issues as periodic droughts and the (difficulty to) take over farms by the next generation. This emphasises the need to approach this transition in the agrofood systems from a European perspective.

### Paradigm shifts

Currently, we witness various shifts in agrofood. A holistic food system approach is needed when new interactions take place in the formerly vertical food chains. Stronger consumer involvement and digitalization cause a more demand driven economy. Decisions are more and more taken by combined data, making the farmer a manager. Especially in horticulture we see this trend but also other agro sectors will become managed “behind the computer screen”. Automation will take over manual tasks; robots will replace more and more labour in agrofood for repetitive tasks.

## **Regional innovation perspective**

Integral cooperation in the region and with partners across the food system is in our DNA. This makes it possible to test new developments quickly and to scale innovations in practice. A large number of education and research institutes, as well as companies in our region are leaders in Europe when it comes to innovations in the sectors AgroFood, Health, High Tech, and Energy. But what truly sets East Netherlands apart in Europe? Based on this regional innovation perspective we work together on two flagships: Smart & Sustainable Industries, and Concepts for a Healthy Life. In both flagships the regional strengths in agrofood are represented.

With such a strong and innovative ecosystem, East Netherlands wants – in relation to agrofood – to:

- 1. Position East Netherlands as leader and knowledge platform for Smart Food innovations;**
- 2. Experiment and scale-up the latest Smart Food Solutions in East Netherlands via various quadruple helix partnership set-ups like field labs, innovation & demonstration centres and living labs. Summarized we name these “test gardens”;**
- 3. Enhance further steps in the digital transition in agrofood systems, including AI applications. The regional strength is bundled in Th!nk East NL icon project “Data-driven Transition in Food”;**
- 4. Look for knowledge sharing and exchange programs with other European food regions to test solutions in other regions and cultural practices;**
- 5. Develop and implement innovative agricultural and food production techniques that reduce the environmental impact, increase animal welfare and biodiversity;**
- 6. Stimulate circular farming and circularity in food actively, giving space for innovations such as resource recovery, bio-material development and food waste prevention;**
- 7. Develop healthier and personalised food, with a strong focus on protein transition;**
- 8. Stimulate new smart food business models, not only focussing on new food products and innovation in production but also stimulate new earning models for nature via for instance ecosystem services;**
- 9. Give consumers a more central position in the chain to shift from food chains towards a more holistic, sustainable “food system”, in which the relationship up to the primary producer is strengthened;**
- 10. Work towards a more demand-driven food system in which consumers chose more consciously and on the basis of good and accessible information. This strengthens personal health and wellbeing and contributes to the prevention of illness and disease burden.**

All supported developments are directly connected to societal challenges and the UN Sustainable Development Goals (SDGs). And we are not only describing intentions and ambitions, but work with a hands-on mentality on demo facilities, implementation projects and other supporting initiatives. Regional partners, including regional authorities, also stimulate the uptake by acting as launching customer.

### **Icon project: Data Driven Transition in Food**

These developments have a strong dependency on various aspects of DATA and innovation: capturing more data via existing and new, tiny and affordable sensors, applying (artificial) intelligence, combining data in manageable information, tracking within and along chains, use of robots, giving transparency to the consumer etc. This as part of the twin transition organisations are currently going through; sustainability and digitalisation. Although many innovations are already in use, intelligent combination of data sources, actuators and management systems in a meaningful way will be needed to overcome the societal challenges as quick as possible. Th!nk East Netherlands therefore installed the icon project “Data-driven Transition in Food” to show its know-how and be ready to accelerate the uptake of digital solution in EU projects in a cooperative and coordinated way.