



CASE STUDY

Wageningen | Foodvalley

The Silicon Valley of Food

Small and medium enterprises, academic and research institutions, technology partners and government agencies have come together in the Netherlands to create Foodvalley, a multi-organisation ecosystem to develop innovative solutions for sustainable agriculture practice and the production of healthier food.

Challenge

With a population of 17 million in a small, low-lying delta region of 41,500 km², the Netherlands is the most densely populated country in Europe. Given that land and water is in limited supply, the Dutch have traditionally relied on intensive farming techniques. Over time, such techniques have placed increasing pressure on the environment and on living conditions. New methods of farming that could be both productive and environmentally sustainable were sorely needed.

However, while academic institutions such as the Wageningen University and Research at the Wageningen municipality had been generating a wealth of relevant scientific research and technological advancements, these were not easily accessible by the small and medium enterprises (SMEs) that form the mainstay of the Dutch agricultural industry. At the same time, SMEs lacked resources to carry out their own research and development.

There was a clear need to foster ties among the different stakeholders in the Dutch agricultural sector, so that they can share relevant knowledge and collaborate to improve the industry.



A Dutch greenhouse.



Krishna Udayasankar is a researcher, novelist and poet.



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Solution

In the early 1990s, attempts were made to systematically connect queries from agrifood companies with those with the knowledge to address them. Initially, this role was carried out by Kennisstad (Knowledge City) Wageningen.

Then in 2004, Foodvalley was set up in the Metropolitan Food Cluster in Wageningen. A unique, industry-led ecosystem to further the creation of healthier and more delicious food using sustainable production methods, Foodvalley comprises food companies, Wageningen University, the local government and the Regional Development Agency Oost NL. Its aim is to connect Dutch food companies with industry-relevant knowledge from the private and public sectors, and other parties abroad. It also supports SMEs with schemes that had previously been available mainly to government, research institutions or larger corporations.

Foodvalley offers a comprehensive slate of programmes to systematically accelerate innovation and market outreach.

Foodvalley is incorporated as a not-for-profit organisation. Financed by membership fees, the Dutch government, and the European Union, its membership base is a mix of smaller and larger companies, with a majority being SMEs. Taking what its Chief Executive Officer Roger Van Hoesel calls a “company-driven approach”, with the organisation’s decisions made from the bottom up, results in an environment conducive to technological collaboration as well as business-oriented alliances, such as marketing partnerships. Indeed, the Foodvalley initiative first arose from a spontaneous collaboration of research institutions, corporations and government agencies.



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To pursue its goals, Foodvalley leverages on agricultural value chains already in place in Wageningen. Cutting-edge research and solutions relevant for the industry are generated by the local Wageningen University and Research, as well as by private contract research companies. One of these, NIZO, provides a demonstration centre that helps translate research insights into commercially viable technology that SMEs can use. Other firms, such as the HAN BioCentre, offers shared laboratories and research facilities to make it more cost-effective for SMEs to engage in their own R&D.

To support its member companies, Foodvalley offers a comprehensive slate of programmes

to systematically accelerate innovation and market outreach. These range from topic- or company- specific platforms (e.g. “The Protein Cluster”), to training sessions, breakfast networking sessions, trade show contingents under the Foodvalley umbrella to enter international markets, and more. Online portal worldfoodinnovations.com showcases Dutch agrifood innovations to the world.

Such schemes benefit companies on different scales. Smaller companies enjoy better access to knowledge, overseas markets, capital and partners. Larger firms are connected with promising start-up companies and research talent from the university.

- 01 Wageningen University & Research conducts world-class agricultural research.
- 02 Foodvalley organises the biannual Foodvalley Summit to help accelerate innovation and business.
- 03 The annual Foodvalley Expo showcases innovations from the Dutch agrifood industry.

“Foodvalley has led to the formation of the largest food and nutrition research and development cluster in the world.”



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Outcomes

Today, Foodvalley farmers deploy a wealth of new approaches to farm sustainably and productively. They use LED lighting to grow crops round the clock in climate-controlled greenhouses, and a range of automated systems: from driverless tractors to drones that monitor soil quality, irrigation levels and individual plant growth. Some Foodvalley farmers have reduced their water dependence by up to 90%; many have almost completely eliminated their use of chemical pesticides. Antibiotic use for livestock has also diminished.

Foodvalley’s focus on collaborative innovation has also opened doors for members further up the chain of production. For example, in 2012, local SME and Foodvalley member Solynta was conferred the Foodvalley Award for their innovation, which significantly

reduces breeding times for new potato varieties—from 10 to 50 years to as little as three to five years. The prestigious annual Award enables companies to gain recognition and attract investments for their innovative products. According to Pim Lindhout, Head of Solynta Research & Research Development, such accolades “help tremendously” as the company looks to future growth. Two years later in 2014, Solynta was further honoured as a Dutch National Icon for its breakthrough discovery.

Foodvalley has led to the formation of the largest food and nutrition research and development cluster in the world. The Wageningen region has benefited from a virtuous cycle of development, as more producers and support services choose to locate the facilities there. This ecosystem has been instrumental in making the Dutch agrifood industry more sustainable, connected, and innovative. ●

01 Foodvalley member Q-Point won the Foodvalley Award in 2016 for their food waste solution.

02 Local SME Solynta developed an innovation that drastically shortened potato breeding times.