



# About SBIR

## Reducing Food Waste

### SBIR

**How the Dutch Government provides incentives for innovation in the private sector through public procurement**

- SBIR is a procurement programme in which the Dutch Government uses the power of procurement for finding innovative solutions to societal issues.
- SBIR challenges companies to put their entrepreneurship and innovative strength into action to develop solutions within a short time span.
- SBIR enables the government to be a first client for new innovations.
- SBIR stands for Small Business Innovation Research. The name suggests that small businesses are the only target group. This is not the case. Any company, independent of its size, stands a chance in an SBIR tendering procedure.

The government uses this instrument to provide incentives for companies to develop and market innovative solutions to societal issues.

### Reducing Food Waste

The Dutch Ministry of Economic Affairs, Agriculture and Innovation promotes the Netherlands as a country of enterprise with a strong international competitive position and an eye for sustainability." In seeking to fulfil this mission, the Ministry gives priority to policies aimed at preventing food waste and optimising residual waste streams. The current level of food waste is simply too high from an ethical and environmental point of view, not to mention economically inefficient.

To finance innovative food waste projects, €3.15 million has been granted via the Small Business Innovation Research (SBIR) programme. This funding covers the period from 2010 to 2014. The industrial partners have been challenged to deliver solutions to the social issue of food by developing innovative commercial products and services for the market. An independent committee, with members drawn from the business and scientific community, examined more than 50 submissions. Sixteen projects were selected for launch in 2011, covering areas such as smart labelling, packaging, order systems, and optimised use of residual food and food component waste streams. These projects are supported by AgentschapNL, the business support unit of the Ministry of Economic Affairs, Agriculture and Innovation.

This folder informs you about the seven most promising initiatives also received funding under the SBIR programme in 2012.



## Reducing Food Waste in the hospitality economy



Operate a zoo for day-visitors and business guests within a radius of 150 km of Arnhem. Burgers' Zoo wants his passion, wonder and admiration for nature committed for the benefit of nature conservation. Burgers' Zoo is committed to the development of an zoo that is as accurate and true as possible and that always keeps improving. On the basis of respect and loyalty to employees and external relations realizes Burgers' Zoo a pleasant day out for visitors, where they can experience nature as closely as possible and optimally kept animals. The hospitality economy in the Netherlands accounts for an estimated 51,000 tonnes of food waste, this represents a value of approximately 400 million. Objective: Develop a toolbox for the entire hospitality economy and its supply chain in 2016.

### SBIR Target

The toolbox is used to reduce 20% of food waste for the in the hospitality economm, this is 10,000 tons less food waste with value of 80 million. Also encouraging sustainability image of the Hospitality Industry.

There are five stages in the project established:

- Phase 1 development a prediction program.
- Phase 2 is the implementation of a protocol to the preparation of food at Burgers' Zoo, focussed on reduction of food waste
- Phase 3 is about information preformed by the prediction program used in the supply chain of fresh ingredients.
- Phase 4 deploy system to other zoos
- Phase 5 how toolbox transferred to Hospitality Industry.

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**BURGERS' ZOO**  
Natuurlijk in Arnhem

## ORFI-Bread Crumbs



In the B2B market NutraVit Technology is developing and producing dietary fibers out of site streams as ingredient for special applications in food products.

The ingredients of NutraVit Technology are full sustainable and contribute added value to healthier live. With know how about the nutritional and functional value of dietary fibers, NutraVit Technology is supporting her clients.

In the B2C market clinical ingredients are sold by 2PreVenT2.nl, see for example see <http://www.obstipatie.nu>.

NutraVit Technology is developing an alternative for bread crumbs out of site stream products to reduce oil adsorption during frying until 50%. First trials realize a reducing of oil adsorption of 30%. The technology process is patented.

### SBIR Target

NutraVit Technology is searching for partner who can produce in license the NutraVit Technology products who are located over more than 1.000 km from the Netherlands en NutraVit Technology is looking for agents/distributors within that 1.000 km.

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## GROENMASER2: Vegetable processing machines with maximum yield for peeling and cutting

Finis Food Processing Equipment B.V. is located in the Netherlands, a country with a reputation for setting quality standards for fresh agricultural products. Since 1924, Finis has developed and produced peeling and cutting machines for various types of products, resulting in a strong track record of partnering with worldwide food processing companies to help improve their processing plants.

In close cooperation with our customers, Finis has created new machines, which not only improve existing facilities, but also introduce new products to processing. As the market leader, our business is committed to providing customers with outstanding equipment to create value added food processing. From our head quarters, through to our worldwide network of agents, we all share the same passion for fresh produce and nature; successfully achieving the perfect quality as intended by nature; perfectly natural fresh produce.

### SBIR Target

The GROENMASER2 project is dedicated to prevent the loss of unnecessary food wastage during processing, particularly with regards to automatic onion peeling. The new technology will improve yield, yet reduce the amount of waste by using intelligent technology to assess the differences in shape, size, orientation and quality of the product to be peeled. By combining the knowledge of Wageningen UR- Food & Biobased Research BV, FWD Smart Automation BV and Finis, the new solution was created after intense studies. It is thought that a saving of up to 18% of the processed volumes could be achieved by implementing the new technology.

The project has also focused on creating a knowledge pool to be shared amongst users worldwide. A prototype will now be built to meet the set goals, while ensuring the daily function and cleaning procedures are retained to the same high standard.

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## Cardboard seal packaging with extended shelf life for fresh daily food

Packable is a packaging specialists that offers the market and consumers insights, knowhow, creativity, materials, systems and all support needed to create suitable (primary and secondary) packaging solutions.

### SBIR Target

Packable is assigned a contract to carry out a feasibility study for developing a Modified Atmosphere Packaging from cardboard with the goal to extend shelf life for fresh daily foods. By modifying the atmosphere of a cardboard packaging the optimal preservation conditions can be met.

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## Sight op sustainability Detecting of packaged food

Sensor Sense is a young high-tech company dedicated to develop, produce and sell highly sensitive, laser-based trace gas detectors for use in research, environmental monitoring, medical and industrial applications.

We are interested in bringing new products on the market and committed to make the applications successful. We continuously improve our systems to be sure that we offer, also in the future, the best solution concerning pricing, performance, user friendliness and simplicity to operate. It is our believe that fundamental research will lead to new products which will be used to solve future problems. Therefore, we maintain close collaboration with research groups from different universities and industry on laser development and in the field of different applications.

### SBIR target

Sensor Sense is developing laser-based systems for on-line gas measurements for packaged food. By sensing tiny amounts of ethylene, a gas that promotes ripening in plants, ripeness in the content can be detected and revealed.

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## Deprecated vegetables by re-using ingredients to create vegetable products



Procarrot BV is active in the food supply industry and stand for market- and customer based entrepreneurship, decisiveness, innovation and sustainability.

They consider it a challenge to give a new valuable meaning to qualitative products. Through new insights, logistic combinations and technologies, Procarrot BV aims to make a significant contribution to greater sustainability of the food chain.

### SBIR target

Purpose: Deprecated vegetables (especially carrots) suitable for consumption by reusing ingredients to create (new) vegetable products.

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More information:  
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