

ISLAND TRADE MISSION

Fifteen sustainable startups sailed to the Wadden Islands. All startups were selected because they provided a suitable and sustainable business case for the Wadden Islands, regarding waste, energy, transportation and sustainable building. These startup solutions for the Wadden Islands will help the islands to become more sustainable.

QUOTES

*We sold an oyster mushroom farm to Schiermonnikoog thanks to the Trade Mission - **Wiebe Lamsma founder of Westerzwan***

*The can-do mentality of the islands fits the local entrepreneurs very well - **Erik Houter, entrepreneurial committee of Vlieland***

*The islands are a great contained environment for these startups to experiment and land their innovations - **Jort Kelder, tv host and ambassador***

*The Trade Mission was an ideal way to meet a with large number of local entrepreneurs and help them with their sustainability goals - **Mariska Klijnsma, Ecocreation***

*The Trade Mission helped us to set up a pilot on Terschelling or Schiermonnikoog - **Titus Braber, Kitepower***

Facts and figures

15 Startups

5 Islands

Over a **100** local entrepreneurs and policy makers

75 Leads

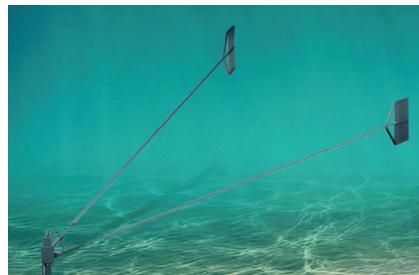
2 Boats

1 Lab Vlieland

0 CO2 emission

SLOW MILL

The Slow Mill is just about the only Wave Energy Converter with a unique blade system that easily resonates with small and short waves like those of the North Sea. It can dive in large waves and let them partly flush over, avoiding overloads while producing maximum output. Thus its construction is relatively light, making it even more sensitive to North Sea waves and allowing small and economical series along ca. 5-10% of the coastline of a Wadden Island to fill its entire energy demand; the full North Sea potential is comparable to that of the EU solar energy market. **Erwin Croughs // croughs@slowmill.nl // <http://www.slowmill.nl/>**



SEAURRENT

SeaCurrent® is founded to make electricity generation from low velocity tidal currents, like in the Wadden Sea, economically attractive. To achieve this, we develop an innovative system, using an underwater kite. The TidalKite™ Power Plant is: robust, lightweight, has an ecologically friendly design and is easy to install and maintain; resulting in a breakthrough in the cost of electricity produced from tidal energy.

Maarten Berkhout // maarten.berkhout@seaurrent.com // www.seaurrent.com

ZEPBV

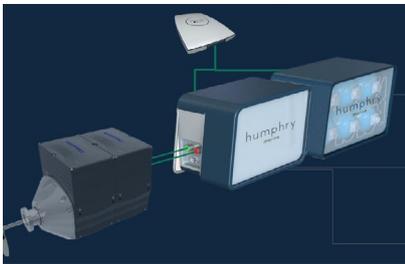
The ZEP solar roof tile is a fully-fledged solar panel mounted in a ceramic tile. Hardly visible, very durable, beautiful and effective. The solar cell roof tile meets up with the aesthetic wishes of architects, home owners and municipalities. Since especially the red solar roof tiles fit nicely into the street view, they are extremely suitable for the protected village views of the Wadden Islands. **Irene Kinderman // irene@zepbv.nl // www.zepbv.nl**



HUMPHRY MARINE

Humphry Marine creates drivetrains running with hydrogen fuel cells that do not cause direct emissions of any kind, offer a wide operating range and allow super fast refuels. Their drivetrains central controller supports multiple configurations of components to allow the drivetrain to be flexibly adjusted to a wide range of boat types, ranging from small yachts to city passenger vessels with 100+ pax.

Georg Wesolowski // georg@humphry.de // www.humphry.de



ZUIVER VAREN

Zuiver Varen offers a monthly CO2 neutral cargo route from the mainland to all Dutch Wadden islands. Goods with a long shelf life are moved to and from the islands without any CO2. The ship sails from IJmuiden and Lelystad to the islands.

Dennis Stroombergen // dennis@zuivervaren.nl // www.zuivervaren.nl



ECOCREATION

The Wadden Islands having the ambition zero-waste. How great to reduce all organic waste within 24-hours on the islands self and

saving money! So no transport, no waste and turn all organic waste into dry, valuable compost. With the Ecocreation Compost Machine this all is possible. Each kilo of food waste or organic waste that goes into the compost machine is turned into just 100 to 150 grams of compost. Rubbish is turned into soil with a volume reduction of over 85% within 24-hours.

Mariska Klijnsma // mariska@ecocreation.nl // www.ecocreation.nl



THE WASTE TRANSFORMERS

The Waste Transformers create decentralized, nutrient and energy hubs by converting residual waste streams into energy, whilst recovering (on-site) the natural resources and water in the waste. They empower local communities to leverage their waste to power positive change. Using smart business models, they do this in a way that is financially attractive today. It is a small-scale, high impact approach that is revolutionizing the way we deal with waste.

Guillermo Schneeberger // guillermo.schneeberger@thewastetransformers.com // www.thewastetransformers.com



SUSTAINER HOMES

The homes of Sustainer Homes emit more than 90% less CO2 compared to a regular steel and concrete building. The sustainable and flexible options come from our unique construction system based on CNC-milled wooden modules. All Sustainer Homes are minimally energy-neutral and generate energy with standard solar panels. **Sebastian Hamerleers // sebastian@sustainerhomes.nl // www.sustainerhomes.nl**



WESTERZWAM

WesterZwam is based on the principle of circular economy and knows how to grow oyster mushrooms on coffee grounds. We support entrepreneurs who also want to do this through in depth workshops and by delivering complete mushroom farms. As a result of the Island trade mission Waddengezwam on Schiermonnikoog is now a fact and is expected to be operational end of summer.

Wiebe Lamsma // hallo@westerzwam.nl // www.westerzwam.nl



GROENCOLLECT

GroenCollect gives organic waste a new value. GroenCollect works throughout the entire chain, from collection to processing to new materials. They do this as a social enterprise that helps people re-integrate into the labor market through work at their own pace and personal attention. GroenCollect provides a perfect solution for circular Wadden Islands.

Dilip de Gruijter // dilip@groencollect.nl // www.groencollect.nl



KITEPOWER

Kitepower is a startup in airborne wind energy and a spin-off from the TU Delft research group, where we build the next generation of wind energy systems. Our systems generate electricity by flying kites high up in the air, making them visibly less present than traditional wind turbines. In comparison with solar energy our system can be operated 24 hours. These conceptual differences to solar power and conventional wind turbines make it an interesting alternative for renewable energy generation.

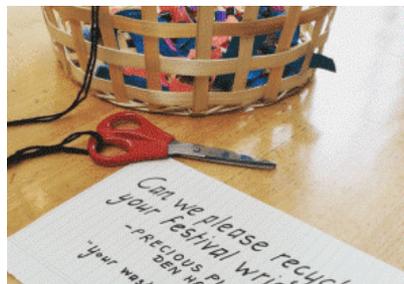
Titus Braber // titus@kitepower.nl // www.kitepower.nl



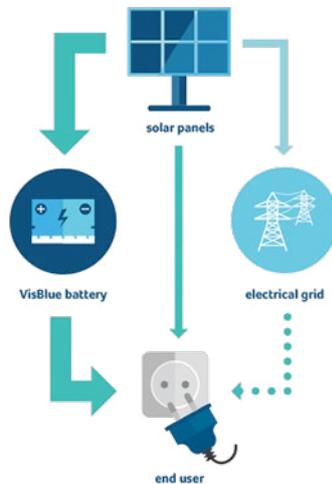
PRECIOUS PLASTIC THE HAGUE

Precious Plastic Den Haag is a local, multidisciplinary team creating design products from waste plastics. In the spring of 2017 we opened a production plant with Precious Plastic machines in The Hague. With these machines we want to create a transparent plastic recycling system to inspire and educate people about sustainability and recycling.

Alois van den Berg // preciousplasticdenhaag@gmail.com // www.preciousplasticdenhaag.nl/



VISBLUE



The VisBlue battery is an energy storage solution built around a unique Vanadium based Redox Flow battery. The VisBlue battery can store a day of solar energy, and power your home at night. With the Visblue battery the electrical power and storage capacity can be scaled independently. As the islands produce a growing amount of sustainable energy, storage on

the islands becomes more and more relevant.

Soren Niebuhr // SSB@visblue.com // www.visblue.com

HYET SOLAR

HyET Solar is working on a floating PV field that the North Sea and Wadden Sea can use to generate solar energy. Due to its unique properties, their Powerfoil can be integrated in a double layer air and watertight film. By blowing air into the intermediate layer a waterproof floating cushion is created. This air cushion has sufficient buoyancy to keep the Powerfoil above water and automatically creates a bulge whereby water also flows directly from the Powerfoil.

Max Middelman // max.middelma@hyetsolar.com // www.hyetsolar.com



BIOMEILER

A biomeiler is a large compost heap from which heat is extracted that can be used in a useful way. Bacteria break down wood chips into wood compost that is very nutritious for plants. By converting this organic waste a lot of heat is released (up to 60-65 degrees) that can be used. A perfect circular solution for the Wadden Islands, where most waste is being shipped to the mainland.

Fedde Joritsma // fedde@localwise.nl // www.biomeiler.nl



labvlieland.nl



Ministerie van Economische Zaken en Klimaat



Ministerie van Landbouw, Natuur en Voedselkwaliteit

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