

Pitching Companies  
Cleantech Capital Day 2017



**Againity**

We convert low-grade heat into electricity. The heat source can be waste heat, municipal waste, or biomass in a power plant, to name a few. Our systems are based on the Organic Rankine Cycle and can utilize heat down to 90 degrees and generate power from 20 kW and up. Take the first step towards becoming your own power producer.

<http://againity.com/>

# Arsizio

**Arsizio AB**

Today Arsizio already make profit, by licensing the patented 3D-iExtrusion® production method, enabling large saving of Energy (20-50%), Weight(40%), Material(20-50%) & Costs(20-80%) for industries such as Transportation, Construction and Energy.

We now need to grow rapidly to take care of the 500% increase of RFQ's. 3D-iExtrusion® technology is compatible with existing production lines and turn them into 3D mass production lines, enabling: 20-50% savings of weight, material & energy, elimination of machining & material waste, 20-90% cost savings in machined products, 20-80% lower process cost than injection moulding, 40-90% lower tooling cost.

Metal, plastic, rubber, Composites, TPE, TPV, Ceramics. 3D-iExtrusion® is protected with granted patents from US in the west to Japan in the east.

[www.arsizio.com](http://www.arsizio.com)



**Anolytech**

Anolytech is an innovative growth company engaged in rental and sales of own developed and environmentally safe and friendly systems for disinfection of drinking- and process water, mainly within animal husbandry and food businesses.

The system is built around the so called ECA technology (Electro Chemically Activated), based on electrolysis of a natural salt solution, water based. The Anolytech AgroRent systems deliver an opportunity to replace potentially hazardous, pollutive and harmful chemicals. It has also been shown that ECA solutions can reduce the use of antibiotics and other medicines in animal production. The current overuse of for example antibiotics is a major, growing and well documented problem.

The company is in full compliance with the EU Biocidal Products Regulation.

All this will, of course, eventually also result in better production results within animal husbandry.

The company is today mainly active on the Swedish market. However, with a few dozen installations in Denmark, Norway, Germany and Belgium, the intention is to expand internationally after successfully having further funded the company by existing and future shareholders.

<http://www.anolytech.se/sv/start>



### **Ascatron**

Full power and minimal losses with Silicon Carbide electronics.

Ascatron develop next generation SiC based power semiconductors that radically reduce losses in electrical transformers. These are needed in industry, data centers, electrical vehicles, solar power, wind turbines and the grid. Electricity is converted in many steps to adjust voltage and frequency, resulting in total losses in the order of 20% using conventional electronics. Ascatron devices are based on a unique material technology (3DSiC®) minimizing the resistance in the device. A modular design enable cost efficient production for a wide range of applications. Our business model is semi-fabless with in-house production of the 3DSiC® material and outsourcing chip fabrication and device packaging.

Partnership is established with component and module providers to offer our SiC power semiconductors to producers of high power electronics. Ascatron started in 2011, and has 12 employees in Sweden.

<http://ascatron.com/>

## **CASSANDRA OIL**

### **Cassandra Oil**

Cassandra Oil has developed an environmentally friendly and commercially viable technology to address hydrocarbon-rich waste, such as end-of-life plastics and used tyres. Our aim is to reduce landfill and enable 100% material recovery while producing a light crude oil. Other recovered materials such as, carbon black and gas are leveraged in other industries. The CASO process is continuous, where the energy is created mechanically through friction and thereby separating it from traditional pyrolysis methods. Cassandra Oil offers an excellent alternative to incineration and as the produced oil can be used to make new products, that again can be broken down to oil, it also creates a circular economy. Cassandra Oil AB is listed on Nasdaq First North, Swedish Clean Tech and is a member of the Swedish Recycling Industries Association. Cassandra Oil's strategy is to be a driver in the circular society while decreasing fossil oil dependency and keeping our environment clean.

<http://www.cassandraoil.com/>

## **CITYNTEL** connected intelligence

### **Cityntel**

Cityntel has developed revolutionary new generation context aware street light control based on next generation self configuring wireless flat mesh network and Mist computing technologies. Instead of just remote control, like existing solutions, we have embedded intelligence into each street light making them situation and context aware and to be able to adjust streetlight brightness based on actual situation and need.

<https://www.cityntel.com/>



### Conex Bird

Conexbird makes any logistics supply chain more reliable, safe and transparent. Artificial intelligence makes it possible to avoid cargo damages by detecting bad securing of cargo and faults from the transportation units to guarantee that only flawless and safely secured cargo gets shipped.

The patented system is saving a lot of money and effort when already flawed or badly secured cargo isn't shipped any further. This instantly raises the customer satisfaction and offers an easy method to reduce CO2 footprint of any supply chain.

<http://conexbird.com/>



Convion is one of the key players in the mid-range fuel cell market for combined heat and power production. By Convion products customers can improve their energy efficiency, power security and energy independence. Since year 2000 Convion team have developed and operated several generations of 20kW and 50kW solid oxide fuel cell (SOFC) systems. A strong team with decades of experience, unique IPR portfolio including 38 patents and numerous innovations offers Convion the opportunity to achieve a substantial foothold in a fast-growing market estimated to reach 15 billion euros by end of 2022. Having started validation of first customer deliveries, with several other commercial projects in pipeline, the outlook for coming years is very promising.

<http://convion.fi/>



### Chromafora

Chromafora is selling a more efficient technology to separate heavy metals from solutions. SELMEXT™ is the brand name.

The technology leads to cost savings for the customer through the high selectivity, simplified materials handling and less energy consumption.

The customers are primarily in the energy, mining, metallurgy sector.

SELMEXT™ is robust and works in various pH, salt concentrations and also can it purify oil solutions. We can use SELMEXT to remove impurities, such as As, Sb. Or to extract wanted metals, such as Cu, Zn, U etc.

The system is cheap and scalable smart system, using a metal sequestering agent and anti-scaleants combined with ordinary membrane technology.

[www.chromafora.com](http://www.chromafora.com)



### **Cleanergy**

Cleanergy is a technology provider of Dish-based, Concentrated Solar Power (CSP). Based on the Stirling engine, Cleanergy has developed a disruptive solar energy solution for multi-megawatt scale.

Our technology and solutions – especially in the renewable energy industry are enabling governmental energy agencies and providers to reach their greenhouse gas emission targets. We have a vital role in climate change and the accelerating electricity market transition.

With the limited solar power per day, we are researching on a competitive storage solution. We believe that Thermal Energy Storage (TES) can make us competitive in the market from a commercial perspective but we are also aiming to help diminish the use of fossil fuels, so end-users have access to 100% solar power in their daily life at a low cost.

<http://cleanergy.com/>



**Disruptive**  
Materials  
**Disruptive Materials**

It was supposed to be impossible, but ... we did it! Disruptive Materials has succeeded in manufacturing mesoporous magnesium carbonate, and its properties are mind blowing. It has the highest surface area ever measured for an alkaline earth metal carbonate with a pore structure that can be precisely tailored in a manufacturing process that is efficient and environmentally friendly. It shows promising performance as a drug delivery vehicle in vitro. It can increase the solubility of poorly soluble drugs by several hundred percent and also adjust their release rate. Upsalite® has an extremely high moisture adsorption capacity at low humidity and is safe to consume.

<http://www.disruptivematerials.com/>

**dLaboratory**  
making the grid smart

**DLaboratory**

DLaboratory's unique concept for smart power grids results in a safe, secure and cost-effective electricity supply. Preventive maintenance before severe problems occur and faster identification of interruptions leads to reduced costs and less down time.

The concept consists of four parts:

- High quality recording of all disturbances in the grid
- Correct and safe fault disconnection
- Unique analysis of the disturbances with a patented method
- Immediate and continuous reporting in a modern and easy to understand format on a platform of your choice – regardless of time and place.

<https://www.dlaboratory.com>

 **EnergyNest**

**EnergyNest**

EnergyNest has developed a new Thermal Energy Storage solution with game-changing economics for the renewable energy industry as well as for energy-intensive industrial applications. The principle of the technology is to use a high-performance solid state material and steel structures to store heat up to temperatures of 450° Celsius. Our technology is protected by patents and proprietary trade secrets. The main benefits of the technology are the cost efficiency, the thermal efficiency with minimal losses, the flexible storage duration from 3 hours to weeks, the ease of installation and operation, the lifetime of 50 years, the use of recyclable materials and the low safety requirements.

The solution is at least 50 % cheaper than any other storage alternative like batteries or molten salt, since 80 % of the solution consists of commodity materials like aggregates and steel. The storage can be built in any size in any geographical location based on a patented modular design. The technology is a key enabler for renewable energy generation and CO2 footprint reduction.

<http://www.energy-nest.com>



### **Envirotech**

In 2050, we need to grow 70% more food to feed an additional 2.3 billion people on the planet. Meeting the increasing demands with limited natural resources and the impact of climate change is one of the greatest challenges of our time.

A modular, sustainable urban farming concept that combines the need for the urban real time data access with hydroponics growth technique. Reusing the waste heat energy from the watercooled integrated datacentre reduces the cost both for the datacentre and the hydroponics farm. It also reduces the carbon footprint for both operations including saved food transportation.

<http://envirotech.no/>



### **Future Home**

Futurehome connects all the smart devices that are coming into your home in one single service. With our user-friendly app the user can connect a growing list of smart devices within lighting, heating, alarms and electronic locks and more. Not just focusing on the app and devices, Futurehome also provides online tools for installers and a turnkey platform solution for partnering ISP and utility companies who want to launch smart home services on their existing user base. Futurehome has a signed agreement with Bravida, the biggest installation company in the Nordics and a signed agreement with one of the biggest ISP-companies in Scandinavia.

Futurehome's unique business model and smart home platform with partnering companies makes offering smart home solutions scalable and creates a breakthrough in the market. The company is looking for new partners and investors to launch internationally.

<https://futurehome.no/>

# ferroamp

## Ferroamp

Ferroamp Elektronik from Sweden has developed the EnergyHub system, winner of the global EES Award 2016. The EnergyHub is a power electronics based system that integrates PV solar production, fast EV charging and energy storage in a self-regulating DC nanogrid.

This increases system flexibility and scalability and allows for easy and cost effective system modifications after initial installation when technology, policies and directives changes the conditions for an efficient power and energy management.

The EnergyHub topology supports the developing standards for connecting DC loads in buildings, the next major trend in the energy revolution. We will explain how the difference between EnergyHub and traditional technologies and illustrate system advantages with case examples.

<http://www.ferroamp.com/home>



## Flow Loop

Flow Loop is a plug&play shower panel that continuously circulates the same small amount of water through a series of micro filters and UV-purification. Compared to standard showers it reduces the water consumption up to 90% and consumption of energy for heating water up to 80%. However, the user experiences increased comfort of much higher water flow from the shower head and a yearly savings of about 5.000DKK – giving a ROI of less than 4 years. Our specially developed patent pending drain cover enables the system to recover the water directly from existing shower floor – with no need for new shower base or tray installed on the tiles. Additionally, the system's ultrasonic descaler changes the structure of calcium in the water, reducing its binding ability and the build-up of lime scale in the shower space.



Flow Loop's environmental benefits for a household include a 33% reduction of total water consumption, a 20% reduction of energy for heating, as well as reduction of chemicals used for cleaning lime scale.

<http://www.flow-loop.dk>



### **Fresh.Land**

Fresh.Land digitize the food supply chain. The B2B platform connects farmers and retailers, cutting out the middlemen and reducing CO2 emissions and chemical use. Fresh.Land allow farmers to sell directly to retailers. Today, an orange you buy in the supermarket is ~4 months old. The culprit is a long and out-dated supply chain. The solution uses technology to make the food supply chain efficient and transparent. With Fresh.Land, farmers, retailers, and logistical partners can all interact in one platform. As a result, they get better prices and drastically reduce the searching and transaction costs. Only the middlemen lose out. The 5 farmers in the 6 months pilot doubled the price they sold at. All the 7 pilot buyers increased their margins by more than 25 %.

<http://www.fresh.land>



### **Greater Than**

Disrupting the auto insurance world

Greater Than disrupting the auto insurance world because people shouldn't pay for anything they don't use. That's why we offer a pay as you drive model with individualised premiums per km, enabled by our core tech that assess risk in real-time and with advanced information, we help and protect our customers.

Greater Than invented a new approach to analyze Big Data. With this technology we attained essential insight into drivers' performance in relation to accident ratio. Real-time assessment gives each driver a unique and justly priced insurance – allowing the modern consumer to share the cost of risk with like-minded drivers and pay only for actual usage.

<http://www.greaterthan.eu>

# **\*ifoodbag**

## **iFoodbag**

ifoodbag is a Swedish start-up company and newcomer in the packaging industry. ifoodbag offers an innovative and disruptive packaging solution made from a paper composite material that locks in cold and protect refrigerated and frozen food. The ifoodbag is intended to solve the following problems; e-commerce logistics challenge such as costs and product quality, improved quality for chilled and frozen items and environmental waste.

ifoodbag contributes to a sustainable environment with fewer carbon emissions than other solutions and can become a catalyst for e-commerce globally. The product is also recyclable as well as reusable for consumers. The unique carrier bag is based on three innovations: a new paper composite material, a system that keeps cold and condensation out, and lastly a new type of closure.

<http://ifoodbag.se>



## **Infuser**

Imagine indoor air being cleansed by the same atmospheric mechanisms found in nature. A solution that turns indoor air in polluted cities into closed atmospheric environments, protecting occupants from the ambient pollution. INFUSER introduces DOMISPHERE – an intelligent air handling system that provides clean indoor air, independent of the surrounding pollution.

DOMISPHERE has built-in sensors that detect and analyse air pollutants in the indoor and outdoor environment and respond with a corresponding cleaning power. If the sensor pack detects changes in the pollution, it self-regulates its cleaning power to neutralize all pollutants while keeping power consumption to a minimum. This happens through a process mirroring the self-cleansing mechanism of the atmosphere, by breaking down gas-phase pollutants and removing particles. DOMISPHERE reduces health-risks of living in polluted cities, fight allergies, and helps alleviate chemical sensitivities.

DOMISPHERE is aimed at residential, non-residential, and industrial facilities. Either installed as part of HVAC systems or as decentralized units.

INFUSER develops, produces and implements technologies for advanced pollution control and disinfection of bacteria, viruses and spores.

<http://infuser.eu>



### **Home Control**

Home Control is a Norwegian provider of smart building solutions, including energy management and home automation systems that help customers increase safety and reduce energy consumption while maintaining a high level of comfort. In 2017 we will launch our own open and flexible software platform capable of integrating a vast number of devices, extending the smartness of homes, cabins and office buildings.

Our energy management solution offers optimized energy usage, based on the client's consumption profile, their own electrical and heat production (i.e. from solar), thermal storage capabilities in the building, weather forecast and price information for electricity supplied to and drawn from the grid. The client chose themselves the degree of involvement.

Clients have the convenience and vast possibilities of our cloud solutions, while maintaining system availability independent of an internet connection through the HomeControl multigateway.

<https://homecontrol.no>



### **Kube Energy**

Kube Energy is a Norwegian renewable energy company providing commercial off-grid solar solutions for humanitarian aid and development organizations operating in areas

without electrical grid connections. We have developed an innovative solar service (leasing) model in which Kube Energy finances, installs, owns, operates and maintains the solar systems. This model allows customers to transition from expensive and polluting diesel generators to clean solar power with minimal investment capital and technical expertise.

<http://www.kubeenergy.com/>

**KYOTO™**

### **Kyoto Group**

Kyoto Group AS is a Norwegian developer of concentrated solar power solutions (CSP) for industrial process heat. The Butterfly system uses hundreds of computer-controlled mirrors to generate steam in a tower. This heat is stored in tanks to provide thermal energy on a 24/7 basis. The system also works in hybrid with biomass or waste. The Butterfly solution is designed to be modular, low-cost and quick to install. Our main focus is on the agricultural industry in the sun belt. Kyoto Group is located in the Kongsberg Innovation industrial incubator and works with several leading industrial partners in Norway and abroad.

LEYDN

### **Leydn**

Household energy storage has the potential of replacing billions of NOK of infrastructure improvement by intelligent demand side management. The electric bills of tomorrow will reflect the consumer's load on the power system and grid infrastructure. By using Leydn's solution the consumer will save 10-20% on their energy bill while helping utilities solve the challenges of tomorrow. Leydn offers disaggregated energy consumption insight paired with a smart demand side management through connected energy storage control.

**LIGHTWELL** ©  
Smart Lighting Systems

### **Lightwell**

Lightwell BV, a fast growing Amsterdam based Dutch company dedicated to making cities not only smart but also beautiful. It therefore combines cutting-edge technology for smart cities (EV, LoRa Smart Lighting) with Dutch design, of which the Spring Eye street light is a perfect example. This pole is a combination of an EV-charging location, LoRa Smart Lighting, sensors and camera, all integrated into one solution with a beautiful luminaire on top of it all. On show at the DOLL visitors Centre in Copenhagen.

<https://www.lightwell.eu/>

## manetos

### Manetos

Make your boiler smart and control it with your phone. Lower energy consumption and increased comfort.

<https://manetos.com/en/>

## modvion

### Modvion

Modvion have been called “the IKEA of windpower”, supplying modular transportable towers to the wind power industry. Wind plants are increasing in generation capacity, but in most locations require increased altitudes to reach sufficient winds. There is a need for new solutions for the supporting towers to be transportable and cost efficient. Taller towers unlock vast new areas for wind installations. Modvions towers are highly transportable and new bio-fibre materials makes the entire wind plant 10% less costly to produce. At the same time it transforms the CO2 payback time from 30 months to 0.

Modvion – Structurally sound, transportable and emission free!

<http://www.modvion.com/>



### Move About

The MOVE ABOUT Group operates EV car sharing programs for corporations and municipalities in Scandinavia and Germany. They have developed a Mobility-on-Demand concept that can include both shared vehicles, bicycles, and other mobility providers. They are the leading player in the electric vehicle shared economy sector, with more than 7000 employees using Move About in Scandinavia alone. The customer satisfaction is very high, and all contracts have been regularly renewed.

Leading the SESAM program, a Mobility-as-a-Service project that will offer seamless integration of mobility-on-demand with multiple service providers, including public transport and autonomous vehicles, the company considers acquiring or linking up with local service providers in Europe, and strengthening the group's in-house software capabilities. The goal is to build on the present experience to become the first complete provider of mobility services for municipalities, utilities and corporate entities.

<http://www.moveabout.no/>

## nornir

### Nornir

Nornir is a smart city operator company from Steinkjer, Norway. We founded our company on a visionary spirit and passion of bringing breakthrough solutions for the connected world. Our goal is to help local companies and municipalities to build communities that innovate and create new markets.

With our revolutionary technology invention, we bring local businesses to the global market. Our secret is a unique technology of linked data that in time will connect all physical things to the web from any city in the world.

<https://www.nornir.no/>



### Otovo

Otovo is the distributed energy company for the future. Otovo makes it easy to go solar through algorithm-based planning and a friendly online sales experience. Otovo also operates a virtual microgrid that connects people who want clean and locally produced energy with solar energy producers in the neighborhood.

<https://www.otovo.no/>



Paptic's wood-based material is replacing plastics in carrier bags and flexible packaging. Finnish Paptic Ltd's patented technology enables the production of unique resource efficient, eco-friendly fiber products which combine the sustainability and premium quality. Paptic began operations in April 2015 and delivered its first products to the customer (Finnish fashion retailer Seppälä) in June 2016. Paptic has raised 1.9 million EUR of private equity and has received 2.2 million EUR of EU H2020 SME support. The EU project focuses on design and engineering of PAPTIC production scale-up to industrial demonstration scale. The investment decision will be made during 2017 and move to production scale in 2018. Paptic is aiming to raise series A investment round by end of 2017.

<http://www.paptic.com/>



## **PBES**

PBES designs, manufactures and installs high power lithium energy solutions used to optimize power and propulsion systems for commercial marine vessels, industrial equipment and grid applications.

PBES offers a unique combination of engineering expertise and unprecedented experience in this field and provides best in class value, performance and safety. The PBES energy storage system is the only lithium-ion solution to fully prevent thermal runaway in large-scale systems and is the only one to offer a remanufacturing and recycling process to reduce end of life electronic waste and increase value.

<http://www.pbес.com/>

# PLASTIX

## **Plastix A/S**

Plastix is a leading Danish cleantech company which transforms waste fishing nets and waste rigid plastics into high quality plastic raw materials. Plastix is located in Lemvig, Denmark and operates a factory of 8.500 m<sup>2</sup> with 35 FTEs.

Plastix has developed its proprietary technology and process system to handle very tough waste fractions such as trawls and nets. A collection and supply system has been established to secure stable production input. Plastix is targeting customers aiming to convert from using virgin plastic to using green plastic.

Plastix is solving a significant maritime waste problem, contributing to reduced marine pollution, reduced landfilling and re-use of valuable resources. Plastix' production has documented considerable CO<sub>2</sub>-savings compared to production of virgin plastics and hence contributes to a more circular economy.

<http://plastixglobal.com/>

## **Resen Waves**

### **Resen Waves**

Resen Waves offer continuous power and data connectivity to offshore customers, of their instruments and un-manned machinery in the sea. It enables customers to operate, over long periods of time in the most remote locations without regular ship access to their installations and yet have 24/7 web data or app access to their installations.

Resen Waves is the first company in the world to launch a fully industrialized compact, simple, cost effective, buoy concept, which generates electricity in the sea, where it is required, as "plug and play" units. The buoys are designed for full ocean exposure and act as platforms for data transmission, which provides direct data connectivity to the instruments and the machinery in the sea.

Resen Waves is game changing because it's simple, low weight and cost effective. Utilizing a patented technology the buoys resist extreme waves and are able to produce power in full ocean exposure.

<http://www.resenwaves.com/>



**Seatwirl**

The Future of Offshore Wind



SeaTwirl's new design is totally changing people's view of the way offshore wind turbines will look in the future. SeaTwirl is a floating wind turbine built for the ocean. SeaTwirl turbines are easier to build and install and will require less maintenance than the traditional offshore wind turbines. Our ambition is to provide the most cost effective solution for the production of renewable energy without compromising on quality.

<http://seatwirl.com/>



### **Sensitive**

Sensitive have developed Strips, an ultra-thin (less than 3mm thick) magnetic sensor, which enables it to be mounted invisibly in most window & doors. A strip comes with an adhesive layer, which, makes it easy to set up, and has a long-lasting battery life (up to 10 years!) Strips is Z-Wave Plus certified, which enables Strips to be connected to any Z-Wave Smart home systems, devices and services. For example you can connect Strips to a smart thermostat, and as the window is opened it turns off the radiator in order to save both heat and money for the tenants and real estate owners.

<http://www.sensitive.com/>



SenSiC AB is a producer of new gas sensors for extreme temperature applications (175-450 0C) with exceptional sensitivity/resolution at very low gas concentrations. The sensors are used to control combustion and reduce emissions in woody biomass heaters/boilers, district heating plants, diesel engines, and exhaust after-treatment systems. Improvements in combustion efficiency and emission reduction result from the sensors' ability to measure not only oxygen (O<sub>2</sub>), as lambda sensors do, but also carbon monoxide (CO) and ammonia (NH<sub>3</sub>).

Despite the greater capabilities of SenSiC sensors, their cost is similar to that of an ordinary, low cost lambda sensor. In addition, the sensor Control Unit offers remote control and supervision, as well as automated calibration.

<http://sensic.se/>

# SOIL SCOUT

## Soil Scout

Soil Scout massively optimizes Water & Energy usage by providing permanent buried wireless monitoring. Understanding what's happening below the soil surface is critical for many industries.

Current solutions for measuring environmental data are based on wired technology that is impractical or inefficient in many environments, or require expensive and labour-intensive manual sampling.

Soil Scout ground-breaking technology provides critical insight into data from deep below the surface wirelessly. Our small buried "Scout" sensor transmits moisture, temperature and salinity in near real-time from up to 4 metres below the surface, for up to 20 years, maintenance free. Enabling 365×24 insight and profiling allows our customers to reduce water and energy use by up to 50%.

Soil Scout was developed with agriculture in mind, but multiple industry sectors are benefiting from the ability to easily and continuously monitor what is happening under the ground.

<http://soilscout.com>



## Soliga

Soliga is a solar energy company that leases solar energy production systems to households and businesses. The energy industry is currently undergoing a much needed transition to more environmentally friendly energy sources. As a consequence of this, private households and businesses are producing more of their own energy and getting less reliant on the grid and utilities suppliers.

Soliga supports the transition to a cleaner and more democratic power supply with a solution that is easy for the customers both financially and practically. This is done by offering a leasing contract whereby the customer only pays for the power produced – at discounted prices compared to grid electricity. This ensures cost savings from day 1 for every customer. Design, investments, installation and maintenance sits with Soliga, while the customer only has to pay for the electricity produced.

<http://www.soliga.se/>



**SWATAB**

SWATAB is a family business manufacturing a patented filter system, DIRO, which makes detergents and softener redundant. The DIRO filter is put between incoming tap water and a washing machine, which allows you to do your laundry totally without the need for detergents or softener. DIRO is environmental friendly, energy saving, health improving and economic.

System DIRO is the only chemical free process with a proven cleaning effect on textiles according to the EU-Eco label. The technology is based on ultra pure deionized water, SWATAB is using this technology in a new way. The solution can be applied everywhere laundry is done, such as municipal housings, professional laundry, day care centres, care homes, hotels etc. The environmental benefits of this chemical free laundry system is huge, the chemicals in grey water from the households will be reduced, the service life of the machines will be longer and the energy consumption in laundry rooms will be lowered by up to 40 %. SWATAB have a granted patent from EPO and a PCT in USA and Canada.

<http://www.swatab.com/?lang=en>



**Swedish Algae Factory**

Swedish Algae Factory enhance the efficiency of solar panels with algae based nanomaterial designed to trap light in the most efficient way. Thereby lowering the cost of solar energy by incorporating the nanoporous silica shell that surrounds a specific strain of diatom (an algae species) that grow well in the bottom of dark and cold Nordic seas, into solar panels. When incorporated into solar cells the light trapping ability of the solar cell is increased which increase the efficiency of the solar cell. The material is produced in a process where wastewater is treated and an organic biomass that can be utilized in a lot of different useful applications for society is also produced. An increased efficiency of solar cells would enable more energy to be derived from the sun. Swedish Algae Factory have a patent pending for the utilization of industrially cultivated nanomaterial derived from a specific type of algae that are especially designed to grow well on sunlight in low light conditions in solar panel applications.

<http://swedishalgaefactory.com/>



### **Strongcrete**

Formconsult and its new STRONGCRETE method is the next generation technology that will improve the quality and give you more resistant horizontal concrete surfaces.

We compact the wet concrete from above with a machine – a kind of a light roller called RolliT RoboT. The RolliT RoboT enables you to re-compact concrete earlier in the process and reduce pop ups, delamination or cracks. Both the strength and durability of the surface is improved and you will avoid expensive repair work in near future. The method also reduces the cement powder mix with 20 %, which is equal to 20% of CO2 emission since cement production is one of the biggest contributors to CO2 pollution globally. The method is also very worker friendly avoiding heavy working moments used in traditional production.

The technology has been patented in many countries. It works both in warm and cold climate. Many reference projects from different sites are ready to inspect.

<http://www.rollit.se/>



### **Tarpon Solar**

Tarpon Solar specializes in flexible thin film solar cells reinforced by membrane technology for commercial, public and private use. Our solar membranes combine the advantages of capturing renewable solar energy with providing protection against the sun, wind and rain.

We can customize the membranes to suit the requirements of every application. Our products are light, strong and long lasting solar membranes with the most suitable solar cell technologies for each project. We are developing an automated and cost-effective production method that enables supply of large and small quantities of products of all shapes, sizes and colors.

The flexible solar membranes can be used as stand-alone structures, on a tent framework, awnings on a building and many other applications where traditional solar panels are not suitable.

<http://www.tarponsolar.no/>



## **Urbanfeed**

UrbanFeed delivers smart integrated units for large scale, year round production of fish and greens – with minimum use of energy, minimum waste and minimum greenhouse gas emissions.

UrbanFeed's solutions meet the need for both economical, ecological and social performance and sustainability, addressing the need for food security and safety for increasing populations in urban areas and communities.

<http://www.urbanfeed.no/>



## **UBIK**

Ubik Solutions OÜ has reached a brand new, patented and market leading energy conversion solution for module level power electronics (MLPE) solar industry, combining

the key advantages of the popular PV microinverters and PV power optimizers- the Optiverter Technology.

Ubik S350 OPTIVERTER is a powerful, plug & play device, supporting decentralized energy production and offering the most affordable energy conversion approach for small to medium PV installations with maximum energy harvest and lower levelized cost of electricity (LCOE).

Our solution helps to get more energy from the PV module and thereby use more sustainable and renewable energy.

<http://www.ubikolutions.eu/>



**Vultus**

Over 60% of fertilizers, and 90% of pesticides, go to waste, due to ineffective distribution of chemicals. By using drones and machine learning, Vultus helps farmers optimize the distribution of chemicals within their field. This creates larger, more high quality yields while saving costs and reducing environmental impact.

<http://www.vultus.se/>



**Ximantis**

Ximantis can forecast traffic, predict the location and future time of an upcoming traffic congestion in order to inform the customers to avoid it. Ximantis can forecast with better accuracy than competitors/state-of-the-art the location and time of a not yet occurred vehicular traffic congestion or a given route. The forecasts are available already the night before and get more accurate as time to departure nears or even during driving. The innovation solves the traffic delays many drivers face on their daily commutes. The innovative aspect is that the solution relies on a novel advance stochastic mathematical model. The technology applied to produce the forecasting is new. It is a stochastic model and in that respect it would compare to algorithms used in

the stock market. It is innovative due to a new local potential used to accurately model every single vehicle and in particular how such vehicles would interact with every other vehicle near it. The novel mathematical approach responsible for the predictive capability of our method is patent pending.

<http://ximantis.com>

## ZAPTEC

### Zaptec

Zaptec's vision is to revolutionize numerous industries including electric mobility, power grid infrastructure, and renewable energy by applying a unique and patented technology for supercompact power electronics and transformers. One of their products, ZapCharger Pro, will make it possible to charge over 100 electric vehicles in a day, using only a single 63A circuit.

<http://www.zaptec.com/>



### ZEM AS

With over 15 years experience with lithium Ion batteries, ZEM brings a knowledge driven approach to offering battery solutions to the maritime sector.

ZEM is proud to have received contracts to deliver the battery systems for 2016 ship of the Year, Vision of the Fjords. ZEM was also responsible for delivering batteries to Eidesvik's "Viking Queen" and "Viking Energy" Off-shore supply vessels – the first commercial implementations of peak shaving solutions of its kind – helping to achieve more than 20% fuel savings.

<https://www.zemenergy.com/>