

PITCHING COMPANIES CLEANTECH CAPITAL DAY 2016

Acosense

Dependable online analysis is key for ensuring an efficient process industry. Acosense is a Swedish high tech company that develops and sells the ACOspector, an online instrument for non-invasive analysis of fluids in pipes. ACOspector can provide dependable online analysis of fluids in positions previously thought of as difficult, dangerous or too expensive to address in complicated chemical and biological processes. Being non invasive the solution is safe to apply, low in maintenance and easy to use.

Againity

Againity has developed a cost-effective heat-to-electricity solution based on the Organic Rankine Cycle. By simply connecting a pipe of hot gases or hot water it generates electricity from 20 to 4 000 kW. Heat in, electricity out! The heat source can be anything from a garbage or wood chip boiler or incinerated landfill gas, to hot water from solar panels or industrial waste heat, to name a few, as long as the heat exceeds 90 degrees Celsius. Heat that was previously wasted through the chimney can now be utilized as electric power. The system is based on a refined technology based on the Organic Rankine Cycle where thermal energy is turned into electricity by a steam turbine and an electric generator. Thanks to innovative components and materials, the system has a long lifetime, low operating costs and a quick payback time, allowing new market segments to profitably produce their own, green electricity.

Arsizio

Arsizio license 3D-iExtrusion®, a globally patented production 3D-production method used by industry leaders enabling:

- 10-50% weight, energy & material savings
- 20-80% lower production costs
- New design possibilities
- Higher margins.

Growth: -Large customer projects and licenses are being negotiated with multinational leaders in automotive and consumer industry.

3D-iExtrusion® is a paradigm shift that is 100% compatible with existing production lines for all materials in the 70 Billion Euro industry.

With paying customers in transportation & construction, Arsizio has proven its highly scalable business-model with licensing of technology, patents, know-how & deliveries to industrial leaders. With highly profitable customer cases and xx million licensed units shipped globally, it is proven that 3D-iExtrusion® creates customer success.

Ascatron

Ascatron develop next generation power semiconductors based on Silicon Carbide (SiC). These are used to transform electricity in industry, data centers, electrical vehicles, solar power, wind turbines and the electrical grid. The problem we target are the losses in these power converters, which can be up to 20% using conventional silicon devices. With SiC power electronics can these losses be radically reduced,

resulting in energy savings that can give a RoI within 1 year. To make the most efficient and reliable SiC power devices is Ascatron using a unique material technology based on 3D epitaxy enabling us to increase the doping level to reduce the resistance in the device – 3DSiC®. Our business model is to produce the epitaxy material in-house, outsource device fabrication at foundries and sell our SiC power semiconductors to producers of high power electronics.

Aurelia Turbines

Aurelia Turbines manufactures the most efficient small gas turbines in the world. Aurelia Turbines have successfully commercialised technology developed in Lappeenranta University of Technology, Finland. The pedigree of this technology has been established over 30 years of Research and Development in high speed technology and fluid dynamics. The company has extensive immaterial rights on the core technology and continue to develop a portfolio of IP protection around the product and its application.

The strategy of the Aurelia team from the outset, has been to have a world class product with high reliability and high efficiency achieved with modular components. To this end Aurelia will retain the core expertise and are employing industrial, world-class partners to ensure component scalability and ease of integration into Aurelia's own technology.

Bikeep

“Bikeep produces smart bike racks where you can lock your bike without using personal lock. The bike will be locked from frame and the wheel with steel bar, you can use smart card or mobile phone for identification. Bikeep also features – loadspeaker alarm, distress signal forwarding, e-bike charging and capability for bike share.

Butong

Butong is about concrete creation. The company creates the material butong, a lightweight, 3D, perforated concrete. We provide a unique modular butong based vertical park with high aesthetic value and low maintenance. We believe that the sterile walls of today must vanish for the living, breathing cities of tomorrow.

Climeon

Climeon has developed a technology that recycles and transforms waste heat into heat power and 100% clean electricity.

Even the smallest Climeon Ocean™ unit saves 200 tons of fuel and 600 tons of CO2 emissions every year. This is the same as planting 30 000 trees and letting them grow for 30 years. Truly enabling a great business case for a better world.

SSAB and Viking Line are companies that already use the Climeon Ocean™. SSAB at their production plant in the Swedish city of Borlänge and Viking Line on their new cruise ship Grace. Climeon is predicted a brilliant future and has in addition to Swedish Cleantech Business Awards won Frost & Sullivan's Best Practise Award and 33-listan.

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 adapt streetlight brightness based on actual situation and need.

Desert Control

Converting desert into fertile soil is a process that normally takes 7-15 years and uses a lot of water and resources. Desert Control does the same in 7 hours. They mix clay and water in a patented mixing process and apply it to the fields using traditional irrigation methods. The mix sinks into the soil creating a 40-60 deep layer which retains the water like a sponge. The layer stops percolation and greatly reduces evaporation. This means that only 1/2 – 1/3 of the irrigation water compared to an untreated area is needed. Thanks to the growth of mycorrhizal fungi in the roots there is also a substantial yield increase. Desert Control turns desert into fertile land for only \$4800 per hectare.

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.

Disruptive Materials

Disruptive Materials is a spinout company from the Ångström Laboratory at Uppsala University. The company was recognized globally when it presented the new material Upsalite to the world. Upsalite is a porous magnesium carbonate with world record properties when it comes to moisture adsorption and ability to increase the solubility of poorly soluble drugs.

Distence

Oliotalo connects devices and machines to business processes, specializing in demanding industrial environments. We supply a digital information pipeline between remote assets and business processes. With our proven solutions, our customers benefit from a reliable solution, faster time to market and a lower technology risk in accessing the internet of machines. With experience from installations in over 40 countries in numerous industrial sectors, Oliotalo is well positioned to partner in delivering the most demanding of solutions to unleash new value from our customers' assets.

With our solutions, our customers develop new business models, save cost, minimize waste and optimize processes.

Ecofiltration

Based on a unique scientifically verified reactive filter technology, Ecofiltration develop robust, energy efficient and recyclable waste water treatment solutions, mainly for sewage water, but also for purification of other water and air. Ecofiltration aims at becoming a global authority in stopping eutrophication by capturing and recovering the finite resource phosphorus, making the world more economically and ecologically circular.

Eliq

ELIQ is an Internet of Things Company within cleantech, offering the best home energy management solution for the smart home market. Building on our award-winning energy meter sensor and state-of-the-art data analytics technology, our app guides homeowners to the largest energy savings possible. With five years on the market and a large install base in Sweden, the smart electricity meters are now rolling out throughout the world, enabling our technology on other markets. We guide homeowners to the lowest energy bills in the world.

Electrochaea

Electrochaea is developing a disruptive grid-scale energy storage technology. Our power-to-gas (P2G) process converts CO₂ and low-cost or stranded electricity into pipeline-grade methane for direct injection into the existing natural gas grid or transportation. Our solution allows lower operating and capital costs and greater scalability and operational flexibility than comparable energy storage technologies. We are currently executing an ambitious scale-up and de-risking process and expect to reach market readiness in 2016.

Enisef

Enisef is an electronic energy manager that helps keep track of energy cost and alerts about overconsumption. It helps to reduce cost by installing efficient technologies or refurbishing. All this is achievable with the help of energy experts listed by expertise and merits. Enisef consist of four basic modules – expert database, project management, cloud based metering and reporting, supplier's database. Experts can register themselves and to be included as external advisor in the projects and to help client to set-up cloud based energy metering and reporting module to find any set deviation. If there is a need to include for project refurbishment some particular technology supplier, it can be easily done by “drag-and-drop” function and to include it to the project bank. The basic functionalities are free, but client is invoiced on metering and reporting module for alerts, downloadable reports and customization. After setting up 6th project, monthly fee is applied. Suppliers are paying on level of visibility and amount of information provided.

Exeger

EXEGER develops and produces third generation solar cells (dye-sensitized solar cells, "DSC"). The Company uses screen printing and has the world's largest DSC production plant located in Stockholm city center, Sweden. Exeger's solar cell works indoor and outdoor and is currently the world's best indoor solar cell.

Exeger has the ability to print light-weight flexible and aesthetically superior solar cells that can be seamlessly integrated into any product from consumer electronics to building integrated and building applied photovoltaics as well as automobile integrated photovoltaics.

Exeger, powering things.

Ferroamp

Ferroamp develops power electronics for solar cells, energy storage and electric vehicle charging based on a DC nanogrid technology. The DC nanogrid concept results in upfront cost savings and a future proof installation. The patented ACE technology brings further savings on grid fees and enables faster EV charging. Ferroamp is now ramping up production and expanding into China.

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 %.

GIAB Circular Solution

GIAB Circular Solution works with circular economy in practice by creating an economic value and business opportunities in products that would otherwise become waste.

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.

GREENMANTRA Technologies

GreenMantra uses proprietary catalytic technology to cost-effectively transform recycled plastics into high-value industrial products such as wax, grease, lubricating oil and fuels. GreenMantra is currently focusing on the \$10 billion wax market with applications including asphalt, wood boards and rubber/adhesives. GreenMantra is the lowest-cost producer within the wax market and has industry-leading operating margins. The company's products meet industry-standard specifications and are priced competitively with existing offerings. GreenMantra is the first new synthetic wax manufacturer in decades and the only one to create wax from recycled plastics. Its products can directly replace existing sources of petroleum and synthetic-based waxes and fuels. The company's technology is patent pending in the United States, as well as at the European Patent Office and the Patent Cooperation Treaty.

Infinited Fiber Company

Infinited Fiber Company enables re-manufacturing again and again of new natural fibres for the clothing and hygiene products, both from textile waste and biomaterials like wood. There is no commercial solution on the markets for manufacturing new fibres from textile waste. The technology enables extending the pulp and dissolving mills' value chain by manufacturing cellulose derivate. This will significantly cut the costs and increase sustainability in viscose manufacturing. One specific about the process is that it can dissolve cellulose out of textile waste, fractioning other fibre materials out of the solution. The base technology for this is known but it has never been utilized commercially before. Infinited Fiber Companys purpose is to be a driving force in revolutionizing the fashion industry – both by new manmade natural cellulose fibers and by building an ecosystem of other radical recycling innovators for a maximum impact.

InnoSense

InnoSense is a disruptive innovation using micro sensor platform for monitoring air pollutants. The uniqueness of InnoSense is the combination of air quality micro sensors and small size design outclassing any traditional air quality monitoring station in size and price. The InnoSense key features are small size solution, cost-effectiveness, reliability, flexibility and scalability.

I-Tech

I-Tech is a Gothen-burg based com-pany with global reach, hold-ing all IP and reg-u-la-tory rights to its all new antifoul-ing agent Selek-tope® (generic name, medeto-mi-dine). I-Tech has suc-cess-fully trans-formed the sci-en-tific inven-tion into a com-mer-cially ready and avail-able antifoul-ing agent incorporated in marine coating products sold by one of the largest companies within the industry. I-Tech is now an entirely com-mer-cially dri-ven com-pany with con-tin-u-ous rev-enue streams and a proven supply chain. I-Tech has since January 1st received the necessary regulatory approvals to serve the global antifouling market and Selektope® is one out of only three available options for the industry to use against shell building organisms, mainly barnacles. Selektope® is key to extend the antifouling protection and hence contributing to reduced fuel costs as well as emissions to air and sea.

LunaLEC

LunaLEC develops thin and flexible light sources that will require less energy in manufacturing and will be made without metals and thus can be recycled like plastic when disposed. LunaLEC offers light patches in sizes ranging from 2 mm x 5 mm to 20 cm x 30 cm, which can be driven by low voltage DC, typically 3-6V. The intended use is not yet general lighting, but rather functional lighting. Typical applications are medtech patches, where light patches are used for treatment of a number of specific symptoms. LunaLEC develops light patches that matches customers' specific needs where the primary demands are light emission from the entire surface by a thin and flexible light patch, with a given effect at a certain wavelength. This combination does not exist today except in a LEC. The customers also highly appreciate that LECs can be produced without rare and harmful metals, and thus have a more sustainable profile than the alternatives.

Nanosferix

Materials that are tough, yet light are highly desirable for many applications, such as airframes, UAVs/drones, vehicle parts, and body armor. Composite materials, especially fiber-reinforced resins, are a privileged class of materials that combine lightweight and extreme mechanical strength. A need exists for additives that could improve the mechanical properties of the resin and prevent fiber delamination without penalizing the weight of the composite. Nanosferix solves the problem by using our proprietary hollow nanoparticles. Nanosferix interphase material is exceptionally light, yet it provides most of the mechanical strength advantages of traditional silica-based fillers. Materials prepared with the use of our hollow-particle interphase agent can be up to 20% lighter than the materials currently on the market.

Ngenic

Ngenic provides products and services that enable a collaborative demand response and easier inclusion of renewable energy sources into the grid. The Ngenic system adopt to the thermodynamic individual household and increase the efficiency of the heating system. At the same time as it achieves a better, more even, indoor climate the system enables a shift of consumption of electricity from expensive hours and buys electricity at the best price. The hardware are compatible with most existing heating system and can therefore be retrofitted into most existing homes. The system consists of an app, indoor sensor, a control box for the heating system and a gateway to the internet connecting to the cloud-based services.

Nordic Power Converters

Nordic Power Convertors technology cuts the size of a power converters to a fifth and the cost in half while increasing lifespan 2-5 times. The company's first focus will be on better LED power converters, where the products will be on the market by the start of 2016.

off2off

off2off is a transformative greening by IT-startup founded in 2011. The municipality of Malmö signed the first agreement with off2off at 2012 and we saved 3,6MSEK the first year for them, and some CO2 and energy.

We have become a knowledge leading company that helps organisations to implement circular economy through increased reuse of their functional surplus primarily, and greater knowledge in the benefits of reuse, into the organisation. We don't just help our customer to implement, we help them to change their behaviour! Our motto is "Recycling is bad reuse!"

Now we want to achieve some bigger impact, so why shouldn't you tag along!?

OK-filter

OK-filter is an innovated device for early stage and local purification of storm water. Fitted inside existing storm water wells with non-rebuilding or adjustment of the existing storm water well.

The OK-filter is a common project name for the team behind the Innovation. The team is a Joint Venture of three individual companies; the Innovator/CEO Asko Päiviö, OKsave Capital AB; Project Manager Leif Steffensen, Pen-D Consult AB; Chemist & Environment Engineer and Expert Anders Åkesson, Anders Åkesson Konsult AB.

Policon

Policon has invented a sensor system for Continuous monitoring of high voltage power lines using RFID technology. Policon's holds several innovations, which provides significant advantages over known solutions. The solution gives much faster fault detection as a result of real time monitoring of several critical parameters. It also gives the grid owner the opportunity to operate the grid dynamically and reduce stability problems, downtime and transmission losses.

RecondOil

RecondOil offers a closed loop for industrial use of lube oil. By using the unique remanufacturing technology it is possible to extend the life of lube oil almost endlessly. This enables the same oil to be sold over and over again, in a fully circular economy use.

SBT Aqua

SBT Aqua is developing a real-time bacteria sensor that significantly improves quality control of drinking water. The sensor can detect bacteria and non-organic particles in real-time and differentiate the two using an electrical detection principle. Several sensors can be installed at key locations in the water distribution system thereby creating a sensor node network, which collectively monitors the bacteria throughout the system. The product's main advantage is its sampling frequency and accuracy. Today's methods for performing quality control of drinking water are based on both manual sampling and analysis with response times of up to 3 days. The sensor being developed by SBT Aqua will increase the sampling frequency from weeks to minutes ensuring that contamination events are discovered by the utility and not by ill and dissatisfied citizens.

Sea-Lix

Sea-lix As is an independent Norwegian-based start-up developing energy conversion technologies based on a patented turbine technology. Originated from the concept of taming the tides, Sea-Lix has expanded their ambitions to include systems for energy conversion from rivers as well as low to medium height hydropower solutions. The turbine may run as a high efficiency pump – expanding flexibility even further. It may also be integrated in a housing incorporating a valve function and thus offering systems combining power production and flood control. The company is currently preparing the installation of a tidal demonstrator plant in the Municipality of Ballangen, Norway.

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.

Sensitive

Sensitive have developed Strips, an ultra-thin (less than 3mm thick) magnetic sensor, which enables it to be mounted invisibly in most windows & 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.

Skandinavisk Ecotech

Skandinavisk Ecotech is a Swedish Cleantech company with a modern and robust portfolio of small wastewater treatment plants. The product portfolio does not make use of the traditional chemicals-based cleaning process. This design principle liberates the product portfolio from active components, which is particularly valuable for small plants where regular service is a challenge. The product portfolio fulfills a cleaning performance of +90% BOD, +90% P_{tot}, +50% N_{tot} and on top of this, bacteria reduction is provided which is particularly valuable in sensitive environments. A feature on top of the reduction capability is the fact that the collected phosphorus easily can be recycled. The Ecobox portfolio is particularly well suited for the Baltic region where small wastewater plants are over represented in the over fertilization of the Baltic Sea. The Ecobox portfolio is a compact, robust and high-performing wastewater treatment solution for all sensitive areas in the Nordics, Europe and...

Sol Voltaics

Sol Voltaics improves the efficiency of solar energy capture, generation and storage through the use of nanomaterials. A small but fast-growing company with a strong intellectual property portfolio, Sol Voltaics is developing a high-volume production platform for its patented Aerotaxy® nanowire thin-film process. The company's nanowire solar cell technology will dramatically improve the efficiency of conventional solar modules at competitive costs, contributing to a sustainable energy world. Sol Voltaics is based in Lund, Sweden.

Suntherm

The SUNTHERM system introduces 25kWh of thermal storage to at very small package – designed to replace oil burning furnaces in residential buildings. The system is based on innovative thermal storage technology with solar thermal and heat pump. On top of the system, an intelligent cloud solution will optimize the operation, and consider the local weather, the habits of the residents and the current energy prices.

SWATAB

SWATAB offers a water treatment unit to be installed join laundry rooms. The unit makes detergents redundant and saves 40% on the energy usage. No changes in existing machinery are necessary.

Tanktwo

Tanktwo is a startup with offices in New York and Helsinki, Finland that has developed a new type of battery. This battery is mostly useful in Electric Car applications as it can be re-energized in less than three minutes. Secondly, it can be produced for roughly half the cost of a traditional battery system. Additionally, fast-charging of electric cars with traditional methods will lead to a major burden on the electric grid. Tanktwo batteries can also be charged on-board or off-board when there is excess capacity.

Cheaper electric cars, without range anxiety, are made possible by the Tanktwo String Battery – a large battery pack made with thousands of small egg-shaped cells that can be handled as a bulk solid such as sugar or grain. Industrial methods for bulk material handling, primarily pneumatic conveying, are mature and cost effective, making battery swapping finally a viable method.

Toridion

An innovative electric powertrain with a new type of electric direct drive is the product offered by Toridion. The first applications of the powertrains are exclusively tailored supercars. The first commercial product, 1MW Concept Hyper Car launch was in Top Marques Monaco 16th April 2015. In the long run all types of vehicles are targeted, from scooters to motorcycles, cars, vans, trucks, and heavy trucks, helicopters, airplanes both for propeller and jet turbines, boats and yachts. The new direct drive electric motor and light weight power electronics are significantly safer and more service friendly than current alternatives. The technology is also extremely energy efficient and robust and allows for easy battery technology upgrades.

Trifilon

Trifilon develops and produces the lightest, most rugged biocomposites for high performance applications. Trifilon develops and sells optimized biocomposites for injection molding applications. The advanced biocomposites not only cut weight and minimize a products environmental impact, they do so without any special equipment or new tooling. Unlike traditional composites that utilize synthetic fibers like glass fiber, Trifilon managed to create lightweight and rugged composites using natural fibers. They take advantage of the fact that their optimized natural fibers have a density that is 30% lower than ultra-light carbon fiber, meaning that they can create the lightest injectable composites. Additionally, because the natural fibers cost less than traditional synthetic fibers, they can help OEM's and brands reduce weight without incurring significant costs.

TRINE

TRINE aims at providing the 1.3 billion people living in energy poverty with access to solar energy. This will be done using local solar entrepreneurs and financed using their crowdfinancing platform. Combining crowdfinancing with commodity solar PV components and novel financing structures creates an innovative business model with massive potential. The solution will democratize the finance of solar energy and create a new, profitable business model that allows people to make money and do-good at the same time. The crowdfinancer in the are connected with solar entrepreneurs and specific solar projects in emerging markets.

TRINE:s pilot project was for a mini-grid installation in Sidonge, Kenya. With a strong due diligence process TRINE offer a good investment for the customers.

Unibio

Unibio, a biotech company with its main operations in Denmark, has developed an innovative fermentation technology converting natural gas into UniProtein®, a highly concentrated single cell protein, sustainably replacing current commercial protein sources in animal compound feeds. Unibio's proprietary U-Loop technology is the most novel gas-to-liquids process available to achieve very attractive, cost-effective mass transfer levels using less energy compared to traditional fermentation technologies.

Unibio: Imagine a world without protein scarcity.

Waves4Power

Waves4Power is developing and selling wave energy systems. The heart of the system is the WaveEL buoy – a point absorber – where the energy of the waves are converted into electric power. A wave power park consists of a large number of WaveEL buoys linked together in an optimized power generation pattern.

Wirepas

Wirepas is a pioneer of Internet of Things enabling world's largest single mesh networks. Embedded in devices from smart meters and environmental wireless sensors to home and building automation, clean tech, health care and lighting.

Its unique, disruptive software solution Pino allows millions of devices to independently connect to each other to form a fully autonomous and infallible network. It connects to the Internet without any configuration, independently of any third party network manager, and brings remarkable lifetime savings to the service provider.