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27.02.2017 – Looking Back and Planning Ahead

Dear Co-Owners,

2017 has started off with focused actions and results that are summarised in an update below. This time, the update also includes brief reflections on how we reached the position we have today, and how this can lead to a paradigm shift in how we perform marketing and commercialization of our product portfolio – centred around Smart Microgrids and Smart Partnering. The ambition of this document goes beyond a brief update to also trigger reflections on how the platform we have today can build the future we want tomorrow.

As always, your feedback is much appreciated.

Training for CEB in partnership with ABB, SMA, Gaia Wind, Teroc

The Smart Microgrid training that InnoVentum organised for CEB turned into a splendid success. For a whole week (Sunday-Saturday), we welcomed 5 officials from Sri Lanka National grid company, CEB to our seminar island. The first half of the training was focusing on Eluvaitivu mini grid operation and parameter optimization to decrease the use of diesel to a minimum. Based on extensive analysis and support including one of our co-owners, Stefan Sjöblom, former Head of Delta Energy Systems, we found a solution that will reduce diesel consumption from more than 50 to less than 5 litres per day – saving an extra 16 500 litres of diesel per year. This is equivalent to 44 tons of CO₂ emissions reduction per year and an additional cost saving of 28 750 USD per year. Compared to the old solution running only on a diesel generator that had an average consumption of 150 litres of diesel per day, the annual saving will be 92 600 USD per year (excl. the cost saving in diesel genset maintenance) and to the total CO₂ emission reduction of 110 Tons).

The second half of the training was focusing on the Phase II, where 3 large microgrids will be implemented by the end of the year. As the system is getting complex for such size and configuration (850 kWp of PV, 240 kW of Wind, 900 kWh battery capacity spread over 3 remote islands), we have incorporated a “plug & play” container solution from ABB. This solution includes Lithium batteries, converters and power electronics, which reduce the complexity for us to deliver a robust solution also for Phase II. Two microgrid experts from ABB joined us during two days from their centres of excellence respectively in Spain and New Dehli. ABB also signed a MOU with InnoVentum for all projects related to CEB. Upon completion of the Smart Microgrid Training, the Chief engineers and head of Procurement from CEB received a well-deserved certificate. We also took them by sea to see the roof-mounted Dali at BTH University in Karlskrona. CEB sees big potential for Sri Lanka.



Expanding our Live Monitoring

Live monitoring is essential not only for our customers to see how their installations perform, but also for us to stay on top of our installations all over the world. This is now under development for the Marrakesh installations, and the progress for the Giraffe 2.0 at the Observatory can be followed here: <http://iv-demo.appspot.com/marrakesh-giraffe>

InnoVentum invited by UNIDO to Co-Organise the Vienna Energy Forum in May

InnoVentum has been approached by UNIDO to organise a side event on smart microgrids and to solicit a speaking engagement at the energy High Level Panel during the Vienna Energy Forum in May 2017 for energy officials from Sweden. Great opportunity for us to get into the driver's seat of targeted relationship-building.

UNIDO is asking InnoVentum to bring two Giraffe 2.0 systems to Tonga & install one in Vienna during the next 12 months.

UNIDO has asked InnoVentum to install two Giraffe 2.0 systems in Tonga for the inauguration of the PCREEE in April 2017. Due to impossible deadlines, this invitation is currently under revision and new destinations, or revised deadlines, are being discussed with UNIDO. Alternative locations where UNIDO also operates Regional Renewable Energy Centres are Barbados, Cape Verde, Uganda, South Africa, Himalaya and Egypt. Morocco and Central America are planned in a next phase. Each centre has a dozen nearby member states that send people to the centre for training. The marketing-impact is significant.

The Giraffe 2.0 installation in Vienna is planned as part of the renovation project of the territory surrounding the Vienna International Centre (VIC).

In January-February InnoVentum submits bids for 3 more UN tenders

InnoVentum has submitted bids in the secondary bidding process for two large solar projects with UNDP in Zimbabwe (Project 1 value: 800k USD, Project 2 value: 2 mio USD). We are currently preparing a bidding proposal for a solar PV installation in Valencia with UNGSC.

Joining Sweden's Energy Minister Ibrahim Baylan and Energimyndigheten DG Erik Brandsma in Indonesia

InnoVentum has been selected for the Accelerator program in Indonesia, which includes financial support by the Swedish energy agency in order to promote our solutions. The support, amounting to 200.000 SEK covers travel expenses, time invested and local business development support by Business Sweden in Jakarta – including the participation at the business-delegation. The vibrant week ended with Energy Minister Ibrahim Baylan's signing of the MOU with the Indonesian Energy Minister for Triple Helix Collaboration between Sweden and Indonesia to promote smart microgrid solutions from Sweden. More than 10.000 islands are lacking access to electricity in Indonesia. Decisions from COP 22 in Marrakesh support funding by the rich nations to support smart microgrids in the countries that need them most to offset diesel and gasoline generators. For us, this is a unique opportunity to leverage the smart solutions developed for Sri Lanka in a market more than ten times the size of Sri Lanka. The week offered high-level meetings with authorities and partners interested in distributing our solutions across Indonesia. We hope to close an agreement within the next two months as the most interested partner will visit us early May.

Sigvald presents at Cleantech Forum San Francisco towards to VC Community

Like last year, InnoVentum was invited by the Swedish Energy Agency with the intention to showcase Swedish innovative energy companies at the largest VC forum for energy-related start-ups. This offered opportunities to deepen relationships with the most relevant VCs from last year: Statoil Ventures, Total Ventures and Emerald Technologies. Fortum also showed significant interest. We have a very focused and well-prepared target-list to act upon as soon as we are ready for a major investment. We also made progress in our dialogue with the Swedish Energy Agency for a royalty-based growth investment, which is the next step in our funding-strategy – preceding VC and IPO.

Carnegie Investment Bank Shows Interest

Carnegie Investment Bank in Stockholm has invited me for a first dialogue on a funding package – possibly ending with an IPO. We need to have a valuation of at least 300 mSEK (as opposed to current (90 mSEK) so further revenues will be necessary before an IPO will make sense. Still, it is good to get this invitation and initiate a dialogue with Carnegie, which is a very competent and renowned investment bank with excellent track-record in IPOs. Meanwhile, we continue to invite further well-networked co-owners on board and, on that note, we are pleased to welcome Gustaf Wachtmeister into the InnoVentum Family – introduced by Tomas Johansson.

Sales Representative in Norway

We have been contacted by a Norwegian company who are interested in becoming exclusive retailer and installation partner for the Norwegian market. A draft version of a collaboration agreement has been shared and two concrete projects are investigated.

Hong Kong

InnoVentum has been offered to benefit from a soft-landing programme by Invest in Hong Kong and Hong Kong Science & Technology Park (HKSTP). This includes a full week at no cost for InnoVentum (flight ticket, hotel, food paid by the HKSTP) and a flight ticket for one return to follow up for promoting our solution to clients / partners in Hong Kong. Based on

two years of preparation, our local targets are Hong Kong Electric, Ocean Park, the HKSTP campus itself and WalMart Asia. We attack these targets in partnership with Pronto Communications. We will continue not to give up on IKEA.

Support for Business Development in China and Japan

InnoVentum received financial support by the Swedish energy agency in order to promote our solutions in China and Japan. The support, amounting to 500.000 SEK covers travel expenses, time invested and consultants used. We think and hope this shall help us advance positions towards a deal with Sinopec – ideally starting with a pilot on Hainan Island in partnership with NEVS. Our partner for business development in China is SinoCarbon. For Japan, we team up with Gaia Wind and will gradually build up local partnerships to accelerate commercialization. I will join Japan Wind Expo with Gaia Wind and Tomas Kåberger now on March 1-3.

The Story with Mandelmanns Goes On

The TV4 series on Mandelmanns Gård (Thursdays 21:00 in Swedish TV) became such a success, that 8 new programs will be recorded. This time, Mandelmanns are asking if we can bring a Dali (our DIY model) for them to assemble and erect in one of the programs. The recordings will start in April so we do not have much reflection-time to confirm if we can make a Dali available with 8 Krinner screw foundations. Our total cost for this is 180.000 SEK – equivalent to two shares in InnoVentum. Mandelmanns explore the building permit issue.

Looking Back and Planning Ahead

Our strategy since company-launch in 2010 has followed four distinct steps of evolution:

1. We use the disruptive approach of collaborative university competitions® from iKNOW-WHO.com to co-create fundamentally novel solutions for renewable energy that beat all prior art in terms of modularity for ease of transport, ease of installation, silence of operation, energy density and resource efficiency. In addition, our solutions are so beautiful that we disrupt the old barrier paradigm of “Not in my Backyard” and, instead, transform this into “In my front yard PLEASE”. We start networking within the UN system to begin to understand how it works.
2. We test our three complementary products in a step-wise approach from the Dali, to the Giraffe and finally the Dalifant. All initial testing is made near our home-base with small detours to Holland and France. Lots of learnings, sweat and tears. Moving from networking to active lobbying within the UN system, including some master thesis projects analysing how a small company like InnoVentum can make business with a large organisation like the UN. We also begin to collaborate with Business-Sweden and the Swedish Foreign Ministry to get deeper into the UN system.
3. We bring our solutions to loyal lead-customers like Gunnel, Malmö City, BTH University, Mandelmanns, and certify the Giraffe 2.0 with the Swedish Energy Agency and SP. We expose the Dali Power Tower to typhoons in the Philippines Hills of Grace Village to gain well-deserved credibility towards the UN and open up funding channels from ADB with HQ in Manila. A Long Term Agreement is awarded by UNDP for the Dali.

4. We make cost-neutral installations of smart grids such as the Dali at the Lötschenpass mountain, the Giraffe 2.0 at Science Village at Max IV and in Marrakesh for COP22. The latter installation is partly supported by UNIDO and the Swedish Energy Agency. This is coupled with a first cash-flow-positive pilot for smart microgrids in Sri Lanka – our first project supported by ADB. We are the only partner delivering on time and our turbines perform so far above anticipated energy-levels and have such robustness of operation that the customer wants to get training from us and would like us to take the lead for Phase II. In January 2017, our three Dalifants in South Sweden survived the hurricane Urd, which was so severe that Vestas' core product collapsed. Resilience is key to all markets. Combined, these installations create a powerful marketing platform that opens the door to a paradigm-shift in our growth.

Our fifth step is consolidating the positive learnings and marketing-impacts from the first four steps into a new platform for growth:

1. **STRONG HOME-BASE FOR BRAND-BUILDING AND TRAINING.** We continue to deliver exclusive solutions around our home-base for continuous improvement, marketing-impact, and brand-building. We must be strong at home, because our global partners and customers come here to see and learn. Training in resilient hybrid systems and smart microgrids for islands becomes an integrated part of our value-proposition. We avoid expensive marketing, because we are successful enough to reach media without paying for it. We do make smart use of google adwords to steer traction towards focused sales-pitches that are partly web-supported. We also sell pure solar PV installations to customers with high demands so as to make profitable revenues.
2. **DIY AND DIGITALIZATION FOR AFFORDABILITY:** We make our affordability solution, the Dali, fully Do It Yourself compatible with a first pilot in Gambia happening shortly. This means that our customer makes the full installation without our local presence. We have similar ambitions with the upcoming installation in Madagascar. This is a major step towards cost-efficient global deployment of small, simple and robust island microgrid solutions. A must for a small player to grow big. We plan to progressively digitalize sales of this DIY product for which UNDP has awarded us with a Long Term Agreement with volume discount for orders of 500 units. Both Julien and Ala make sure that we capture all relevant bidding opportunities from ADB and the UN. We work closely with both to continually increase our credibility. We need to acquire working capital to capture larger bidding opportunities. This is the main-goal of our funding activities, which include Almi, EKN and the Swedish Energy Agency. Co-financing by current and new co-owners is always required by Almi, EKN and SEA, so we remain open to both avenues.
3. **SUSTAINABLE PARTNERSHIPS:** We strengthen important partnerships with equipment and material providers such as ABB, Gaia, Solar Edge, Teroc, Krinner and Derome. We value our commercialization partnerships with local entrepreneurs such as Philippe in France and Mathieu in Morocco. A number of new possible Partners is piling up, and we make it increasingly easy to convert these growth opportunities into valuable commercialization partnerships. We also explore how our equipment and material providers can give us a kick-back in terms of new sales opportunities. Increasing mutual benefits make our partnerships sustainable.

4. **THOSE WHO CAN AFFORD MAKE OUR SOLUTIONS AFFORDABLE:** Both at home and overseas, we first focus on bringing exclusive design to those who can afford – to make our own business-model sustainable. Then, we are equipped to make affordable solutions available to those who need. In developed markets, this means initial focus on well-doing ecofarms, vineyards, municipalities and progressive utilities appreciating the signal value of our solutions to secure positive market differentiation. They all buy with their marketing budget and commitment to contribute – not with their energy-budget. In emerging island markets such as Sri Lanka, Indonesia and the Philippines, we also have an initial focus on those who can afford – resorts that want to attract ecotourism and earn dollars by shutting down the diesel generators to make a statement that they care – while actually also reducing their cost of energy. A true win-win. The segmentation is simplistic:
 - A. Secure presence at the major test-sites and smart microgrid centers in the region for optimal marketing-impact.
 - B. Pay particular attention to islands and cities that have been given smart microgrid and/or smart city status – 33 in Indonesia.
 - C. Use windmaps to find the best locations and double-check that the target locations have good kite-surfing conditions.
 - D. Focus on resorts in mid- and high price ranges.

5. **PARTNERING TO GIVE POWER TO THE PEOPLE:** For the vast overseas island market of affordability customers – now counting 2 billion people without energy access, we are not a charity so we cannot serve them directly. Instead, we need close partnerships with the Swedish Energy Agency, UNIDO and ADB to first reach all their demonstration sites in places like Indonesia, India, Pacific Islands and Africa. Here, we have three years of work ahead of us to reach good penetration and massive commercialization-impact. We will have a growing number of demonstration sites to show that we can fully eliminate diesel consumption – not only reduce it. Sri Lanka has been a great learning in this regard and we already see possibilities to replace diesel with biogas – produced locally based on organic waste. Each demonstration site will lead to new commercialization partnerships with local entrepreneurs eager to make a buck while saving the Planet and giving energy to those who need it most. For this to work smoothly, we work on a simple licensing model that will make it easy for local entrepreneurs to set up their own InnoVentum shop and make us the Starbucks of renewable energy.

6. **STRATEGIC PARTNERSHIPS FOR CONTINUED INNOVATION LEADERSHIP:** We continue to run collaborative university competitions® with iKNOW-WHO.com to co-create breakthroughs that make renewable energy more affordable and convenient to use. We do this in strategic partnerships with equipment providers such as Gaia Wind in the 4040 project. An affordable microsolution for transformation of organic waste into biogas is a viable candidate and so is an affordable and sustainable energy storage system.

This will give Power to the People.

