

10 SHORT STORIES ABOUT SUSTAINABILITY AND GROWTH

INDUSTRIAL ECOLOGY

Industrial Symbiosis in Kalundborg, 105 km from Copenhagen, is a collaborative enterprise in which the byproducts of one industry become valuable resources for one or several other industries. The motivation for exchange arose in the early 1970s from a mutual effort to reduce costs by seeking income-producing uses for "waste" products. Gradually, those involved realized that a carefully managed exchange of energy and materials could enable mutual economic benefit whilst reducing the environmental impact of large industrial operations.

Today, Kalundborg's Industrial Symbiosis comprises eight core companies; DONG Energy Asnæs Power Station, Statoil-Hydro Refinery, Gyproc A/S, Novo Nordisk, Novozymes, recycling company RGS 90 A/S, waste company Kara Noveren I/S and Kalundborg Municipality. Each company is bound to each other via an intricate network of flows; flows of steam, gas, water, gypsum, fly ash and sludge. Cradle to Cradle principles encourage us to make waste into food and fuel just as nature does. Kalundborg's Industrial Symbiosis shows the benefit to both economy and environment which can occur when such principles become reality. By 1988, Kalundborg could already boast that internal collaboration between industries had amounted to savings of 160 million dollars since the project's outset. *Read more at www.symbiosis.dk*

CRADLE TO CRADLE DENMARK



'We have now gone into a new geological era called Anthropocene – the era of the humans, where it is clear that we, to a large extent, are shaping the future of the earth. Right now we are doing a really bad job in handling this stewardship. We have to consciously start implementing a different design strategy for the way we interact with our surroundings. For that we need a new vision, a new big idea to guide us forward - we have to dare to dream again', said Martin Fluri, Director of Cradle to Cradle (C2C) Denmark, in his presentation at the third In100Y-seminar. According to him, Cradle to Cradle represents a crucial aspect of such a new big idea at the level of matter. It takes the premise that it is not enough to do less bad, which is what most of our sustainability thinking and initiatives revolve around today.

C2C started out as an environmental design philosophy, and it is continuously developing as such. Today it is also becoming an attractive business model for foresighted companies. Martin Fluri presented the principles of the Cradle to Cradle design process and mentioned two examples of present focus in Denmark: a growing interest from the building industry to build according to the C2C principles, and an initiative from Maersk to produce the worlds largest container ships according to the C2C principles. Watch the one minute YouTube movie (google Maersk + C2C).

There are many practical and acute reasons for why we should start practicing the C2C principles large scale, one being that we are running out of a number of materials. For instance, we are running out of copper much sooner than oil. Motivated by the materials scarcity situation and inspired by the C2C design strategy the new Danish Minister of Environment, Ida Auken, recently declared that Denmark no longer has a waste strategy, but instead now has a resource strategy. The principles behind C2C are: 1. Waste equals food, 2. Use current solar income, and 3. Actively support to diversity. *. Read more at vuggetilvugge.dk*

SAMSOE'S 2030 VISION: INDEPENDENT OF FOSSIL FUELS



PHOTO: MALENE ANNINKI LUNDÉN

The Energy Academy has set up a new vision for The renewable energy island Samsøe succeeded in becoming 100% self-sufficient with renewable energy over the course of just 10 years (1998-2008). The next goal is to gradually become independent of fossil fuels over the next 20 years. Today, 70% of fossil fuel is used on transportation by roads and the ferry, and the 4000 inhabitants plus the 3-4000 guests who visit the Academy annually can look forward to driving e-cars in the near future. A reduction in the heating of private households of around 30% towards 2020 will make them independent of fossil fuels. This means new business for car mechanics, gas stations and many other local businesses.

Read more about the renewable energy island at www.energyacademy.dk and read Malene's and Søren's comment in this ISSUES on p. 146.

BOOKS. 'Vingesus', Malene Annikki Lundén, 2008 (Danish and English edition). 'Fælledskaber', Tor Nørretranders og Søren Hermansen, 2011 (Danish edition). *Order the books at www.energyacademy.dk*



TRANSITION TOWNS

Climate change and dwindling fossil fuels might seem like a dystopian vision of a future far ahead, but for the Transition Town movement it is a very real challenge that affects how they live their everyday lives. Faced with the impending twin plights of Global Warming and Peak Oil, the Transition Towns not only try to avert them, but actively prepare and practice lifestyles that make the Towns and local communities resilient to the changes and challenges to come – creating a robust system that can weather the shock from changes in its surroundings through local self-sufficiency and sustainable use of resources. Based on strong local initiatives, the movement uses hyper-modern tools for organizing and enabling a return to simpler and more sustainable livelihoods. Although their practices comes from the permaculture movement and maintains its inherent ruralism, they make great use of modern technical and social technologies. The movement spreads virally by replicating self-contained units coupled in a network organization, and uses new media to share the knowledge and lessons they learn from their ongoing pragmatic experiment. *Read more about the 400 towns at transitionnetwork.org*

NATURE RIGHTS – IN BOLIVIA

One of the pressing issues when looking at the long term future of the planet and its population is the relationship between man and nature. Is mankind just one amongst many species or the supreme shaper and shepherd of the biosphere? Few doubt the intrinsic value of human life, and the legal rights that stem from this are universally acknowledged. But what is the legal status of nature? In Bolivia, the Plurinational Legislative Assembly passed "Ley de Derechos de la Madre Tierra" conferring legal rights on Mother Nature, giving nature status as a juridical player in line with human beings, corporations and ships. Whilst details on how to enforce this status have not yet been decided, Mother Earth will get her own Ombudsman and 7 specific rights: to life, diversity, water, clean air, equilibrium, restoration and to exist free of contamination

The law draws heavily on the spiritual worldview and imagery of indigenous groups, and contains a curious mix of legal designations and mythical descriptions, defining Mother Earth as both 'a collective subject of public interest' as well as a being who is 'sacred, fertile and the source of life that feeds and cares for all living beings in her womb. She is in permanent balance, harmony and communication with the cosmos. She is comprised of all ecosystems and living beings, and their self-organization.' How's that for legalese?

NOVOZYMES IN AFRICA



SEE THE ENTIRE POSTER AT
http://www.novozymes.com/en/aboutus/brochures/Documents/African_agriculture.pdf

CleanStar Mozambique Community Bio-innovation Limited is an integrated food, energy and forest protection and rural development business project, which Novozymes, as part of their sustainability and 'rethinking tomorrow' strategy, are part of in cooperation with, amongst others, CleanStar Ventures. CleanStar Ventures is an environmental venture development group that combines risk capital, technology and expertise to create sustainable long-term value for shareholders and stakeholders.

The Mozambique project is working with small-holder farmers to introduce a restorative and profitable system for producing food and energy for attractive, deep and unconventional local markets. The systems utilized by the majority of the population are inherently unsustainable, and are resulting in an interconnected downward spiral of biodiversity loss, a rise in poverty and a lowering of family health. By 2013, approximately 3000 smallholder farming families will implement an agroforestry cultivation system on 6000 hectares of their own land in Sofala province. Commodities will be produced and pre-processed through CleanStar's community-based centers, before being transported to a centralized bioprocessing facility. This project helps to reduce deforestation by satisfying demand with ethanol-based cooking fuel, and drives a major improvement in nutritional needs by introducing a more diverse and healthy mix of fruits and vegetables. By 2014, the business will have proven that all goals are possible, commercially profitable and immensely scaleable.

Novozymes is a Danish bio-innovation company using biotechnology to improve the use of resources in more than 40 industries around the world. With over 5000 employees and \$1.8 billion annual revenue, Novozymes offers the leading technology platform for bio ethanol production. Read more at www.cleanstar-ventures.com and www.novozymes.com

THE 4TH BIN

The 4th Bin (NYC) collects, reuses or recycles unwanted electronic goods in New York City in order to prevent the accumulation and export of hazardous waste; e-waste. In 2009, discarded televisions, computers, peripherals (including printers, scanners, fax machines) computer mice, keyboards, and cell phones amounted to about 2.37 million short tons.

Previously, this waste was mixed with other waste, sent to landfill or exported to other countries (including those in the developing world). It contains pollutants (lead, barium, mercury) which can have long-term devastating effects on both ecology as well as human health.

The 4th Bin initiative collects e-waste from private addresses and companies. Used electronic goods are then sorted and sent for re-use wherever possible. Otherwise, goods are broken down to their component or material parts and sent to source the supply of new products. 4th Bin reuses first, recycles second. Since 2009, The 4th Bin has been responsible for diverting 500 short tons (1 million pounds) of e-waste generated in New York City.

Read more at www.4thbin.com

THE PEOPLE'S SUPERMARKET

The People's Supermarket (London, UK) is a sustainable food cooperative which profits from its community (via labor time and customer commitment) whilst the community profits from it (via high quality food produce, education and training, shares in economic profit). Anyone can buy fresh, local food at reasonable prices. Anyone can become a member. When you join, you offer your time (four hours in every four weeks) plus a yearly subscription fee (25 british pounds) in return for a 20% discount on all foods. You become customer, worker and part-owner of the company. The urban community is connected with the local farming community. Priority goes to keeping food high-quality, fresh and British, before organic (although organic stocks are available and popular). Transport links are kept short, decreasing the need to refrigerate and decreasing carbon emissions.

The People's Kitchen uses food produce from the store to make soups, salads, sandwiches and ready to eat dinners. Sourcing in-store food which is close to its sell-by date means that food waste is minimized. For the people, by the people!

Read more at www.thepeoplesupermarket.org

OCCUPY WALL STREET

Occupy Wall Street (OWS) is a people-powered movement for democracy that started in Manhattan on September 17, 2011 and rapidly gained momentum. Protest against the economic exploitation of the financial sector spread rapidly to 951 cities in 82 countries. Their compelling slogan “We are the 99%” portrayed the financial sector as a parasite, amassing wealth at the expense of the rest of society, a message that resonated at a time of cuts to welfare programs and soaring unemployment.

Whilst the physical mobilization of the masses may be reminiscent of the countercultural critique of capitalism in the 70’s, this protest moves beyond mere physical space in our time. This is particularly evident in the involvement of the notorious hacktivism group *_Anonymous_*, which leaked online manifestos for the movement clad in their characteristic Guy Fawkes masks. This aesthetic draws on both cyberculture as well as mass movements and creates both a fictional universe in which the co-creators of the movement can manifest and project their dreams and desires for a fair and sustainable future, but also a very concrete space for action and change in the physical world. The imaginary world thus creates a framework where significant events can unfold. The universe reverberates in the co-participants, allowing them to manifest their message again and again, a succession of significant events like pearls on a string.



PHOTO:OWS/CC OCCUPY WALL STREET POSTER

Read more at occupywallst.org or follow Capital Institutes blog about OWS at www.capitalinstitute.org/content/responding-occupy-wall-street. Capital Institute believes OWS is a movement whose time has come.

THE FUTURE WE WANT



William (Bill) S. Becker, co-founder of The Future We Want, spoke at the fourth In100Y-seminar in January 2012 for the 80 selected participants.

The Future We Want (fww) ‘is a global initiative to envision what we want our lives and communities to be like 20 years from now.’ the idea is to gather promising ideas and visions for a positive future from all over the world using everything from modern technologies to grassroots communication.

Three years ago a group gathered and started to define ‘The Future We Want – the power of positive thinking’. “We have since then defined a program that focuses on co-creating a 20 year positive vision, which we presented to the UN. They liked it so much that they want to make it an integrated part of the Rio+20 conference 2012. We are very happy about this since it means we will now get a large distribution of the message and interaction with people worldwide to define The Future We Want and make it come through,” says Bill s. Becker, and reminded us all that the futurama new york world fair in 1939 set the standards for the design of cities and energy consumption and that we still follow those standards today even though we can no longer afford it.

The plan with The Future We Want according to Bill s. Becker is as follows: before Rio we will engage in local conversations with a focus on creating The Future We Want through actual change with a 20 year goal. During Rio, we will make the input visible in an exhibition, and after Rio we will follow up and continue worldwide distribution.

Bill s. Becker is also a senior associate at natural capitalism solutions and author of ‘the 100 day action plan to save the planet’.

Visit www.futurewewant.org to take part in the conversation.