MAN-MADE WORLD.
THE LIGHT TOUCH SOCIETY

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In 2112, we live in a "Man-made world." If you look at that world from a 2012 perspective, you will be surprised by the responsibility that we, as humans, exhibit towards nature - the clean cities, the fertile landscape, the light-touch clean economy and high prosperity. YYou will be fascinated by new technology and new innovations, and you may be shocked by the changes in human physiology. But you will recognize general social patterns.

Let us give you the story of how this future unfolds, where it has its historic roots and what drives the transformation. Then let us describe to you the future perception of nature. Finally let us portray what politics, business, living, art, science and technology will look like in this world.

DRIVERS AND BACKGROUND

The mindset that drives "Man-made world" is responsible determination. It is informed by the realization that human activity has created a new geological epoch, the Anthropocene, where we have become the most important driving force for changing Earth's geology, climate, and ecosystems. We are responsible and we have to assume this responsibility. "Man-made world" is created by vigorous political initiative and rational science-based planning. And it arguably has roots stretching back all the way to the Club of Rome with its message of "Limits to growth" due to the finiteness of fossil energy and raw materials reserves. This gave rise to an increasing awareness of nature's boundaries to human activities. Also, it led to a process of institutionalized global political consultation, negotiation and formulation of targets. The Brundtland commission and Kyoto protocols were some early milestones in a process with plenty of twists and bumps along the way to the Anthropocene breakthrough.

In the 1970s, the oil crisis that ended three decades of historically unprecedented economic growth worked as a powerful demonstration of the exact vulnerabilities that "Limits to growth" had pointed out. This run of events was a precursor for the early decades of the 21st century when increasing temperatures, hurricanes, floods and draughts put pressure on our resources and economies thereby demonstrating the message from the scientific community about planetary boundaries.

The ideas driving Man-made world were under way for many decades, and often quite high on the agenda of public discourse and policy. They were picked up by media, by NGOs and grassroot movements and by segments of consumers and producers. But the wholesale radical change that marks "Man-made world" required a new generation of political leaders taking over as the old generation failed to inspire and weren't up to tackling the challenges.

It became clear that global action on a massive scale was needed in order to reverse, mitigate and/or adapt to the challenges. Consequently we saw a refocusing and a revitalization of political processes on local, national, regional, and global levels. New generations of policy entrepreneurs were taking the lead in taking responsibility.

PERCEPTION OF NATURE

A strong and conscious perception of nature is absolutely central in the 'Man-made world'. We see nature as a living system and a wonderful resource. We can rely on it to provide us with much of the material basis for our existence. But nature is a finite resource. Since the industrial revolution, humans have become the single most powerful force affecting nature's development, changing physical landscapes, climate, material metabolisms and biodiversity, both globally and locally. We are living in a geological epoch of our own making. Now we also named it: the Anthropocene. This was a call on us to be responsible and rational in how we use the world's resources. We learnt to be knowledgeable and conscious about how our activities effect the fragile balances of nature.

VOICES FROM 2012

'It's very hard to find a well-educated economist that thinks GDP is a good measurement of wealth/well-being/happiness, and we all know that there are more to add to this'.
– Peder Andersen, Professor, University of Copenhagen, quoted from his lecture on the first In100Y-seminar, 2011.

'Regarding the role of finance, it must evolve to serve the real needs of a sustainable economy, and it must power the transition to such an economy. This is a vital role, but also a radical shift from its current impact'.
– John Fullerton, Founder of Capital Institute, qouted from the videointerview shown at the first In100Y-seminar, 2011.

Nature requires us to keep researching and studying nature, as well as ourselves and the interplay between human societies and nature. Nature inspires us to recognize the beauty and the endless opportunities and scope for innovation that it presents us with, but also to be acutely aware and mindful of the boundaries that nature sets for our utilization.

We must assume responsibility. We must acquire the means to control and manage our own power and collective behavior in order to harness nature without damaging it. We need to take on the role of responsible and conscious custodians, stewards or managers of nature - like any landowner would his property. All in order to be able to continue to be the biggest beneficiaries of nature.

POLITICS

Previously it was sometimes said that we knew what needed to be done, we just didn't know how to do it politically. It was somewhat natural to take a cynical view given the previous disappointingly inadequate political action even in the face of a long-standing public awareness of the challenges. We were irresponsibly gambling with the future of the planet. Everybody was waiting for someone else to take the lead and do something.

The emergence of a new generation of political leaders changed the dynamics. It was a generation whose outlook was shaped by the ongoing debate on sustainability and by growing impatience and frustration with the inadequacy of political response. They entered the scene with an ambitious outlook, a firm belief that change is possible, and a deep sense of responsibility towards nature and future generations.

There was a new optimism and enthusiasm for what we can accomplish. A feeling that we actually can make a better world if we put our minds to it. "So let us be masters of our own fate and take responsibility for the destiny of our planet. We can do it!", as one political leader famously put it.

Growing public realisation that old methods and politics simply couldn't deliver urged a tectonic shift in the balance between old vested interests and forward-looking interests. The new political agenda was global in its worldview and resonated with people everywhere, especially younger generations. Beginning in North Western Europe and the EU, governments all over the world devised and implemented strategic policies using a variety of instruments. The frontrunners were countries where there was a strong awareness of the importance of a new course. A culture which was influenced by a generally high level of economic development and public welfare, and above all by education. A culture based on co-creation.

The global process that unfolded was partly negotiated, cooperative, and coordinated, and partly an uneven process of pioneers and emulators, leaders and followers. International and global institutions gained renewed relevance and were quick to pick up on this agenda assuming their designated role as facilitators of global political dialogue and will.

Democracy was revitalized primarily due to the system's ability to respond to the challenge, but also because of a new political culture based on a dynamic development in digital and local platforms creating a new responsiveness between people and politicians.

As for strategies, one key was to get prices right. Tax systems were used in various and often innovative ways to ensure that prices reflected true ecological costs. Another key was investing massively in sustainable infrastructure: Energy, smart grids, transportation systems, welfare technology, recycling and waste disposal. A third key was support for open source technological development and sustainable innovation. The overall effect was to move the economy on to a new path of development.

BUSINESS

Once the political direction was clear, businesses and consumers were remarkably quick to respond. Breakthroughs in solar, wind, smart grids, waste disposal and

VOICES FROM 2012

'We must develop a serious approach to the fact that emotions, thoughts, assessments, and decisions originate in the psyche, and as such are firmly based in human beings. Again: We cannot change the outer world without changing the inner world. This has to do with the single leader and with the single leadership team'.
– Steen Hildebrandt, Professor, Aarhus University, qouted from his lecture on the first In100Yseminar, 2011.

'Companies that mimic life are more profitable. This new reality will inspire a corporate renaissance that should redefine the next century'.
– Joseph H. (Jay) Bragdon, Author of 'Profit for Life' (2006), quoted from his lecture at the second In100Y-seminar 2011.

material technologies came in rapid succession and were speedily implemented. New patterns of consumption and production emerged that were radically more friendly to the environment. A light-touch, clean and prosperous economy emerged.

What was most surprising to many in the beginning of the transition was that the structural changes to the economic system went hand in hand with an economic boom. The new ecologically sustainable economic system was highly competitive.

Frontrunners were those businesses who not only responded to new pricing signals and market demands but who truly comprehended the new policy direction and based their vision and strategy on it. They were the ones who delivered the myriad of new products, services and business models that built the light-touch economy.

The transformation that was set in motion succeeded in completely replacing the fossil fuel based economy with one that was based on energy from clean, renewable sources. It saw a materials revolution driven by the development of new eco-friendly synthetic materials, and by super-efficient recycling markets and waste disposal systems. And not only did it succeed, but success came much faster than anyone had predicted, or even thought possible. Once set in motion the process quickly gained momentum and became self-reinforcing as political initiative, business response and technological innovation combined in a powerful drive for sustainability and renewed prosperity.

In fact, a dynamic arose in which countries, economies and businesses that embraced sustainable strategies became economic powerhouses and front-runners. To be stuck in the age of gasoline and coal was the biggest structural danger to an economy. Some large economies, notably those rich in fossils, and those poor in political effectiveness, struggled to make the transition but eventually had to follow suit. We have learned that responsible management of our relationship with nature is not only right. It is also highly rewarding in many regards.

ANTHROPOCENE – THE AGE OF MAN

The world's geologists are considering whether to formally adopt a new term for the present geological epoch: The Anthropocene or, "the age of man". Adding new epochs to the officially recognised Geological Time Scale is not something the scientific community takes likely. But humans really and truly have become a decisive force on a planetary scale: Moving earth, changing the composition of the atmosphere, affecting climate change, melting glaziers, erasing forests, influencing ecosystems and biodiversity.

Nobel Prize-winning atmospheric chemist Paul Crutzen is perhaps the most prominent advocate for adopting the term. Significantly, he sees it not only as a matter of describing geological developments scientifically accurately. He regards it as a matter of realising that we have a responsibility for the planet and that its very fate – and by extension our own fate - depends on whether we are capable of assuming this responsibility. 'We must change the way we perceive ourselves and our role in the world. Students in school are still taught that we are living in the Holocene, an era that began roughly 12,000 years ago at the end of the last Ice Age. But teaching students that we are living in the Anthropocene, the Age of Men, could be of great help. Rather than representing yet another sign of human hubris, this name change would stress the enormity of humanity's responsibility as stewards of the Earth. It would highlight the immense power of our intellect and our creativity, and the opportunities they offer for shaping the future'.

There is of yet no definitive agreement on the start date of the Anthropocene, but based on atmospheric evidence many geologists consider it to start with the Industrial Revolution (late 18th century).

Sources: Paul J. Crutzen and Christian Schwägerl: 'Living in the Anthropocene: Toward a New Global Ethos', Yale Environment 360, 24 January 2011. 'The Anthropocene', The Economist, May 26th 2011.

VOICES FROM 2012

'Humans are the dominant animal on the planet, and our behavior plays a central role for the Earth's capacity to function'.
– Minik T. Rosing, Professor, University of Copenhagen, quoted from his lecture at the fourth In100Y-seminar, 2012.

'The relationship between man and nature will need to transform in order for humankind to thrive in 100 years'.
– Katherine Richardson, Professor, University of Copenhagen, quoted from her lecture at the third In100Y-seminar, 2011.

LIVING AND ART

Life in the light-touch society is high prosperity, low-impact. Intelligent systems handled the metabolic exchange with nature, secured the safe and efficient recycling of materials and disposal of waste. Our relationship with nature was respectful and sustainable. As people lived in clean and attractive built environments, nature was not top-of-mind all the time. Many spend a lot of their time in digitalized virtual reality rather than in nature. At the same time people very much appreciated nature, and it still had a powerful appeal. It offered great experiences whether you were an adventurer seeking extreme authenticity, or whether you would rather opt for themed nature resorts where people could experience sights and landscapes, some with carefully managed stocks of wild animals. Pre-historic theme parks complete with dinosaurs and swans were particularly popular.

Remarkably, art became big business and the single-most dynamic sector in the economy. This was a result of prosperity and individualism that saw art as the ultimate form of self-actualisation. The ability to create and appreciate artistic expressions was the ultimate human characteristic, one that was eagerly sought after and high in demand. New technologies and knowledge of the functioning of the human brain and body have opened up a variety of new artistic fields and art forms.

But the one parameter that came to dominate the field was authenticity. That is, the experience of a significant event which takes place at a particular place and time and therefore is unique and cannot be replicated. The development and careful staging of such events constituted a large and fast growing part of the economy and employment. New artistic megahalls and art stadiums sprang up in cities around the world in a fierce competition for the most prestigious and creative public spaces for art activities.

The goal was to merge intellect and intuition in new ways, constantly experimenting with new forms of human consciousness, expression of language, story-telling, sound, music, imagery and sensory stimulation. To many this kind of endeavour was the closest thing to having a meaning of life.

SCIENCE AND TECHNOLOGY

Science was very visibly an important driver in the transition to a sustainable Man-made world, and the string of technological breakthroughs that it spurned gave it a new-found prestige in society. Big science made a decisive comeback, not least when cheap and clean nuclear fusion energy came onstream by the latter half of the 21st century. Their cool and quiet gigantic domes were an aesthetically pleasing addition to the landscape.

Science pursued further advancement in a range of fields stretching from genetics to space. Sophisticated modelling was applied to complex systems such as ecosystems, climate and weather in order to optimize our management of them and in order to facilitate advances in the dynamic field of geo-engineering. There was a new focus on anticipation and prevention instead of problem fixing and symptom treatment.

The scientific study of nature kept offering exciting opportunities to learn from something that was not human-made. The extraction and storage of genetic information from all life forms was one project that promised to enable regeneration of any extinct species that might be deemed valuable or interesting. Given advanced knowledge of managing ecosystems, this would also make it possible to create new types of ecosystems.

Artificial intelligence, robotics, genetics, merging of man and machine, were some of the developments we saw. The re-engineering of humans and the possible prospect of immaturity began to raise a host of new practical and ethical questions.

PHOTO: SILLE ARENDT

'MAN-MADE WORLD' DYSTOPIA. Man forgot the nature of man. In 'Man-made world' we have made it. Literally. However, what is it that we have made? And what have we lost in the process? Haven't we controlled everything so tightly, including our own bodies and minds that we have suffocated spontaneity, surprise and genuine feeling? Haven't we managed life to death?

EMBODYING MAN-MADE WORLD 2011. Frames from the performance installation 'Two Sensed Futures'. The groups of people who visited this Sensed Future on the second In100Y-seminar, sat behind two wires, which were part of a larger visual web of lines. These divided the room into parts of a larger, visual geometric structure of a social performance design. Three specimens of one of nature's perfect creations, the orchid, hung from the wires, demonstrating how elements of nature have been implemented and studied as part of a defined system controlled by man – the designer.

Every move in this future was pre-planned and new developments are monitored by the two designers from IDD (Institutional Democratic Design). The designers use the advanced tools of bio-mimicry to design and develop themselves and their expression in the process in accordance with the specific situation.

Read more at http://in100y.dk/downloads/articles/In100Ysem2_article-sensed-futures-participants.pdf

ILLUSTRATION: DOMINIC BALMFORTH

Gammel Strand, the streets aorund the canal in the oldest part of Copenhagen, 2112. By Dominic Balmforth, architect and partner, Susturb / House of Futures.

VISUALIZING MAN-MADE WORLD 2112. All outside surfaces are covered with a shallow film of water (asphalt was too expensive for constant repair in inclement weather and made urban flooding unmanageable). Water is bio- filtered and drained off to underground tanks which source urban cooling, heating and the city's water supply. Personal (not private) transport (the blue) float smoothly and in constant flow. They are hop-in/ hop-out lily carts. Big white ferries (canal) for mass rapid transport (trans-urban/ trans-regional) (left side of painting). All buildings stretch upwards to double their current height. Roof funnels capture rainwater for internal heating in the buildings, cooling and water supply. Internal forest on top of Thorvaldsens museum. This absorbs C0 and C02 and emits oxygen for use in all internal environments (= buildings, sky bridges and glass walkways). People are always inside. People are separated and protected from wild nature. Tame nature is man-made and cultivated to suit human needs; as are food, energy, water and air purifiers etc.