

AMS

Sustainable Transformation: Putting Systems Thinking into Practice

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Sustainability as a necessary revolution

On 20 February 2020, around 200 professionals from business, government and civil society gathered for an event at Antwerp Management School entitled 'Sustainable Transformation: Putting Systems Thinking into Practice'. This was designed as a celebration of my Chair in Sustainable Transformation, supported by BASF, Port of Antwerp and Randstad, which was launched two years ago. In this brief reflection, I would like to give a brief summary of the evening's proceedings and highlight of what was presented.

After being welcomed by our Dean, Steven De Haes, we were delighted to have a video-streamed keynote by Peter Senge, the American systems scientist and senior lecturer at MIT Sloan School of Management. Senge is well known for his bestselling book *The Fifth Discipline* and his work on organizational learning and sustainable futures. In his books and articles, Senge has claimed that sustainability is both 'the necessary revolution' and 'not what you think it is'.

The three takeaways I noted from Senge's talk on making systems thinking work in practice are: 1. Make it visible (most of us don't know where our food, clothing, gadgets or energy come from); 2. Make it human (put names and faces to the next generations that will benefit or be harmed by our actions today); and 3. Make it collaborative (no system is ever changed without long-term, multi-stakeholder partnerships)

After Senge's talk and a brief Q&A, I chaired a panel discussion with six distinguished guests: Dr Ans De Vos, professor at AMS and holder of the SD Worx Chair in Next Generation Work; Carolina Hernandez, a Master in Global Supply Chain Management student at AMS; Eddy Annys, Chief Operations Officer of Randstad Group Belgium; Jacques Vandermeiren, CEO and Chairman of the Port of Antwerp; Marie Delvaux, Director of The Shift; and Jan Remeysen, CEO of BASF Antwerp.

On the panel, we discussed the challenges of tackling issues like plastic waste, fostering multi-level resilience, creating sustainable careers, creating and complex stakeholder partnerships, moving from awareness to action, and responding to next-generation expectations of business and leadership.

10 facts and figures on the state of the world

Following the panel, I shared a reflection on how much our world has changed in the past 24 months, beginning with the following 10 sets of facts and figures that represent an uncomfortable reality check:

- China is still in a state of emergency as a result of an outbreak of the Corona virus, which at the time of writing has infected nearly 90,000 people and killed more than 3,000.
- Australia's devastating wildfires burned 18 million hectares of land, killed or threatened a billion animals and emitted as much CO₂ in 3 months as Australia's annual emissions.
- For the first time in the World Economic Forum's annual Global Risks Report, all of the top 5 perceived risks in terms of likelihood are environmental.
- In 2019, Munich RE registered 820 natural disasters (compared with around 250 in 1980), claiming the lives of 9,000 people.
- Category 5 Hurricane Lorenzo was one of 143 tropical storms (105 of which was named) with total losses of \$150 billion (with only \$52 billion insured).
- Of the 70.8 million people forcibly displaced worldwide in 2018, 13.6 million were newly displaced; meaning 37,000 additional people were forced to flee their homes every day.
- The gender pay gap between men and women is more than 40% and has increased in the past ten years. If nothing changes, it will take 257 years to achieve gender parity.
- Recent research estimates that half of the LGBT community remain closeted at work and 41% have left a job because of bullying.
- Recent cyber-attacks have compromised the security of sensitive personal data for 1.1 billion Indians, 540 million Facebook users and 100 million Capital One customers.
- New research published in 2019 concluded that 40% of all insect species are in decline and could die out, while vertebrate populations have fallen 60% since 1970.

Perhaps the millions of citizens took to the streets in protests in the past year in India, Iraq, Venezuela, Algeria, Haiti, Spain, Hong Kong, Colombia, Puerto Rico and Iran are islands of sanity, people who recognise systems breakdown for what it is. In September 2019 alone, around 6 million people, young and old, supported the climate strikes and Extinction Rebellion protests.

7 faces of breakthrough in integrated value

But it is not all bad news. In the past 2 years, I have seen remarkable progress and breakthroughs on various fronts. In my presentation, I used the seven faces of integrated value as a framework for sharing these good news initiatives, which I summarise below.

1. Rethinking Patterns – by integrating systems thinking

One of the new systemic frameworks to emerge in the past two years – besides my own integrated value web – is the Doughnut Economy from Oxford economist Kate Raworth. This visual representation of the Earth's planetary boundaries (based on the work of the Stockholm Resilience Centre) and social foundations (drawing on the work of Oxfam and others) has provided a way to measure the extent to which our countries and cities are operating within a safe and just space for our global system.

Another example is the Trillion Trees initiative, with its mission is to be a collaborative platform to grow, restore and conserve 1 trillion trees around the world in the next decade, one sixth of the trees that used to cover the Earth. This is based on the realisation of the multiple, systemic benefits of forest ecosystems. On the panel to launch the initiative in Davos in January were Salesforce CEO Marc Benioff, Colombian President Duque, anthropologist Jane Goodall, Chadian environmental activist Hindou Ibrahim and Indian spiritual leader Sadhguru.

2. Re-aligning Partners – by integrating stakeholder perspectives

To tackle these systemic problems, we need systemic solutions and at the most basic level, this means cross-sector collaboration. It means partnerships between groups that might be competitors or strange bedfellows. Let me give a few examples. The first is the Alliance to End Plastic Waste, which is made up of nearly thirty major global companies. They have committed over \$1.0 billion with the goal of investing \$1.5 billion over the next five years to develop, deploy and bring to scale solutions that will minimize and manage plastic waste and promote post-use solutions.

Tackling the same problem is the Global Commitment to a New Plastics Economy, hosted by the Ellen MacArthur Foundation, with more than 450 signatories that are working to build a circular economy for plastic, including companies representing 20% of all plastic packaging produced globally and 15 financial institutions with more than \$2.5 trillion in assets under management. This builds on the pre-competitive, collaborative work of the Foundation's Circular Economy 100 companies and its new Circulytics set of metrics for tracking performance towards the circular economy.

3. Renewing Principles – by integrating synergetic values

According to the 2020 Edelman Trust Barometer, based on a global survey of 34,000 people, 56% say that capitalism as it exists today does more harm than good, while the GlobeScan Sustainability Leaders Survey found that institutional investors and the private sector is rated second- and third-worst performers in terms of their contribution to sustainable development since the 1992 Earth Summit in Rio (only national governments were worse).

Research by the Pew Centre finds that Gen Z (those born since 1997) are more strongly in favour of diversity in society, more women in leadership, bold climate action, equality in marriage roles, tackling racial discrimination and having gender-neutral options. These are mostly a strengthening of values-shifts already evident in the Millennials (born between 1981 and 1996). Greta Thunberg's generation is Gen Z and is more vocal and less patient on creating socio-political change.

4. Redefining Purpose – by integrating strategic goals

In January 2018, Larry Fink issued the first of three remarkable annual letters to CEOs on behalf of Blackrock, the world's largest investor with nearly \$7 trillion in assets under management. He is calling for business leaders to begin rethinking the purpose of business beyond shareholder returns and to take a more proactive role on tackling major societal issues like climate change.

In August 2019, the Business Roundtable released its Statement on the Purpose of a Corporation signed by 181 CEOs of many of the world's largest companies. In essence, it calls for business to adopt a stakeholder value model. And then in January 2020, the World Economic Forum issued its Davos Manifesto 2020, laying out 'the universal purpose of a company in the Fourth Industrial Revolution' around stakeholder capitalism and key principles like circular, shared and regenerative.

5. Re-assessing Performance – by integrating value measurement

In the past two years, the science-based targets initiative really started to gain traction. It is a collaboration between CDP, the United Nations Global Compact (UNGC), World Resources Institute (WRI), and the World Wide Fund for Nature (WWF) and one of the We Mean Business Coalition commitments. To date around 800 companies have signed up to targets in line with the Paris Climate Agreement – effectively committing to reach net zero carbon by 2050. Science-based targets for biodiversity have started to be tested as well.

Another exciting initiative is the Value Balancing Alliance, launched by a coalition of companies including BASF, Deutsche Bank, Porsche-Volkswagen, Novartis, SAP and others, with pro bono consultation by the Big 4 accounting firms, Deloitte, EY, KPMG and PwC. Their mission is to develop a consensus methodology for measuring the societal impacts of business in monetary terms. The initiative was inspired in no small part by BASF's Value to Society approach and the various methodologies of the Big 4, such as KPMG's True Value.

6. Redesigning Products – by integrating innovation processes

The past two years has seen an explosion of innovation on everything from packaging materials and supply chain traceability to electric vehicles and renewable technologies. For example, in the past year or so, we crossed a tipping point with renewable energy, with the several grid-scale solar and wind energy projects coming in cheaper than all fossil fuel and nuclear alternatives. According to the International Renewable Energy Agency (IRENA), over three-quarters of the onshore wind and four-fifths of the utility-scale solar PV project capacity due to be commissioned in 2020 should provide lower-priced electricity than the cheapest new coal-fired, oil or natural gas option.

According to Swanson's law, named after SunPower Corporation founder Richard Swanson, observes that the price of solar photovoltaic modules tends to drop 20% for every doubling of cumulative shipped volume. Research by the National Renewable Energy Laboratory (NREL) shows that in just since 2010, the installation cost of solar has fallen by 65%. There are similar trends happening with lithium-ion batteries. Since Tesla's Model-S launched in 2012, scaling production volumes has seen battery prices dropping about 20% per year since then. Meanwhile 175 EV models will go on sale in 2020, almost double what was available in 2019, with 400 new EV models are already in the design pipeline.

7. Reshaping Playing-fields – by integrating progressive policy

In the past two years, Europe began implementing its Circular Economy Package, including introducing revised directives for waste and a strategy for plastics. In terms of these, for example, by 2030, 70% of packaging waste must be recycled, all plastics packaging placed on the EU market has to be either reusable or recyclable and more than half of plastics waste generated in Europe must be recycled. In addition, single-use plastics are to be banned from Europe by 2021.

In December 2019, the EU also launched its Green Deal, which the President called 'Europe's man on the moon moment' – an ambitious, world-changing plan. The policy plans to make Europe the first carbon neutral continent by 2050, with interim 2030 goals such as 50% reductions in carbon (up from 40% previously), 32% renewable energy and 32.5% energy efficiency improvement. Policy reforms will be coming on circular economy, mobility, building and renovation, pollution, ecosystems and biodiversity and food and the EU Emissions Trading Scheme will also be extended and will help to fund the economic transition.

Concluding remarks

What is clear from the evening's proceedings is that sustainable transformation is a necessary revolution and that, while many challenges remain to put systems thinking into practice, the revolution is already underway and business is creating integrated value in the process.

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