

# LEVERAGING DISRUPTIVE TECHNOLOGIES TO SOLVE ESG PROBLEMS

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## Introduction

As more companies focus on the global goal of net-zero emissions by 2050, and embed ESG strategies into their business models, radical innovation and the development of disruptive technologies are at the forefront of sustainable value creation - for stakeholders, investors, consumers and the planet.

To explore how disruptive technologies are helping to solve critical ESG problems, The Canton of Neuchâtel in collaboration with Catalina Consulting, hosted an e-seminar this autumn 2021.

The seminar featured an expert panel including Mickael Gonçalves, Portfolio Manager, Banque Bonhôte & Cie; Max Monti, Head of Partnerships and Valorisation, University of Applied Sciences "Arc"; Alexis Roussel, COO, NYM Technologies; Giuseppe Pezzini, CEO, Pielleswiss Sàrl; and Ana Pinto, Business Partner, Service of the Economy, Canton of Neuchâtel

This article covers topics that were addressed during the discussion. Its purpose is to maintain the post-event dialogue.

### The growth of ESG

Events of 2020 have accelerated interest in sustainable & responsible investing (SRI) and in the environmental, social and governance factors that define an SRI portfolio.

Measuring ESG commitment has become a critical component in the evaluation of a company or asset's performance and in the assessment of investment risk. Indeed, ESG data is ranked alongside financial data in importance, and is frequently used as a predictor of future financial achievement.

Forecasts for further strong growth in ESG are uniform and widespread. PwC, for example, describes ESG as a 'once in a century investment opportunity'.

In spite of, or possibly because of the pandemic 2020 was another outstandingly strong year for ESG investing. 2021 seems to be going the same way as ESG aims to look beyond traditional financial metrics when picking stocks and other investments.

Until approximately three years ago ESG was simply another niche area of fund management. Now it looks like it could take over the industry. In fact, many believe that we are still in the early stages of a phenomenon that could transform our lives, not just our investment portfolios.

Global ESG assets – including segregated mandates as well as funds and other investment instruments – are said to be between \$30 to \$40 trillion today. There are at least 1,600 institutional investors with assets in excess of \$70 trillion who support the UN's PRI (Principles of Responsible Investing). Bloomberg Intelligence projects that global ESG assets will reach \$53 trillion by 2025.



On top of allocations from today's investors – retail as well as institutional – the biggest inter-generational wealth transfer in history is underway. The baby boomer generation is passing its assets on to the next generation - millennials.

Cerulli Associates estimates that \$68 trillion will be transferred over the next 25 years. Indeed, it has been widely forecast that millennials will become the richest

generation in history as a result of this wealth transfer. These emerging millennial investors are also more likely to be committed to the ESG cause than their parents, and to be interested in innovation, in terms of ESG, as Mickael Gonçalves commented.

### **Sustainable Manufacturing**

With climate change seen as the most pressing global challenge over the next decade, more consumers are rewarding businesses that place sustainability at the top of their corporate agenda.

This scrutiny has been especially heavy in the textiles industry, which is traditionally seen as a major contributor to global warming. The sector emits an estimated 1.2 billion tonnes of CO<sub>2</sub> equivalent per year, surpassing emissions from airlines and maritime industries combined.<sup>1</sup>

The Covid-19 pandemic has accelerated the shift towards sustainable products. A survey conducted by McKinsey in April 2020 showed that some 67% of consumers consider the use of sustainable materials to be an important factor when making purchases. Indeed, the supply chains of many large brands are increasingly being scrutinised amid accusations of greenwashing.

So when a company demonstrates that it can manufacture products that use processes that are non-polluting, conserve energy and natural resources, and are economically sound and safe for employees, communities, and consumers, it can clearly play a leading role in creating seismic shifts in the industry's approach to sustainability.

Such is the role of Piellewiss Sàrl, led by CEO Giuseppe Pezzini, whose recycling of waste plastic to create uniforms for multinationals including Shell has propelled its technology

to the forefront of sustainable textile development and set new industry standards.



Further developing the concept of eradicating waste in manufacturing and production is the Micro-Lean Lab at the University of Applied Sciences "HE-Arc" in Neuchâtel where the team has addressed the challenge of waste in mass production.

As Max Monti commented, 'nowadays as we are looking mass customization production. The trend is to produce smaller and smaller batches and even single parts. New technologies, including AI are making it possible to have highly personalised products at the same cost of mass production.

### **Data Governance in the ESG Era**

We are in the midst of a digitally-enabled industrial revolution funded by a business model called 'surveillance capitalism'.<sup>2</sup>

Through surveillance capitalism a new economic order is being built around aggregating human experience as free raw material, for hidden commercial practices of prediction, behavioural manipulation, and sales resulting in unprecedented concentrations of wealth, knowledge, and power in the hands of private companies. Much of their income comes from digital advertising.

On the flip side of this model is a sustainability focused alternative that is trying to reduce and avoid data collection, focusing on the service that is being delivered to the client without the need to

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<sup>1</sup> Forbes

<sup>2</sup> Evangelical Focus

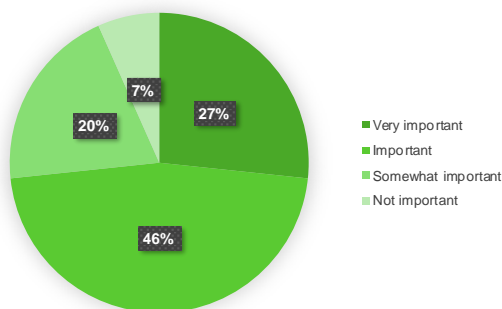
collect, retain and use the client's data, thus keeping the data fully under the control of the individual - all enabled by cryptography, as data innovator Alexis Roussel described.

Addressing the growing toxicity around protecting personal data and the need to align data management processes with ESG programmes, he additionally highlighted the challenges for small businesses in keeping data-management costs low whilst staying compliant.

The development of tools and technologies to only gather and disclose the data that is strictly needed is where he sees future sustainability in data management.

### Supporting Innovation Ecosystems

The e-seminar audience was polled on the importance of sustainable innovation ecosystems to business growth, with 73% selecting 'important' or 'very important.'



This reinforces the decision by the Canton of Neuchâtel to grow its innovation ecosystem by nurturing sustainability-focused, entrepreneurial businesses.

From a strong watchmaking heritage, where resource and energy consumption are rigorously controlled, has developed a region of academic and industrial excellence, where sustainable businesses are thriving.

A veritable incubator for high added value companies, Neuchâtel is one of the most dynamic microtechnology clusters in the world. Well served by major international transport routes, it represents the entire

value chain, fostering partnerships between science and industry.

Neuchâtel's Microcity, an innovation hub supporting innovative collaborative projects, is the biggest microtechnology competence center in Europe with over 1000 researchers, more than 20 laboratories and an infrastructure that is at the forefront of technology.

It is a nerve centre dedicated to the transfer of technologies and know-how between actors in research, education and the economy, with a view to supporting the competitiveness of businesses.

With this in mind, technical infrastructure and hosting facilities have been made available to the R&D units of private firms, providing practical and financial support for the further development of new and disruptive technologies that will address sustainability challenges now and in the future.

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**Find out about Micro Lean Lab at the University of Applied Sciences**

**Read about Pielleswiss production of apparel from recycled plastic bottles**

**Find out why personal data has become a toxic asset for companies**

**Discover Neuchâtel**

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