Part V

Introduction: Business Model Innovation and Transformation

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Sustainable development with significantly reduced environmental and social impacts is a challenge for business of serious magnitude (e.g. carbon neutral operations), often requiring significant transformations in business models and industry structures. It is likely to have deep effects comparable to the effects of the consumer revolution of the eighties and the IT revolution which started in the nineties. In addition to innovations in products, services and processes, business can create competitive advantage or avoid erosion of current market positions by exploring new business models developed to address sustainability issues. In fact, with sustainability in mind, innovation often results in new business models, as we see in Part IV with Illy and GE Ecomagination.

IBM realised that its PC business would over time not be able to compete with Chinese market entrants and so it sold the business to a Chinese newcomer (Lenovo) at a time when the market value was still relatively high. IBM moved up the value chain into a Total Customer Solution value proposition which included its Smarter Planet initiative—and a business operating model behind this which is significantly different. The IBM case thus illustrates sustainability transformation with an innovative business model.

BP Solarex was a market leader in the solar industry in 2000. It scaled back its business model to a pure Operational Excellence proposition (manufacturing and distributing solar panels), inspired by the fashion of focusing on "core competences"—arguably, a fashion already on its way out. Experiments with Total Customer Solutions, the approach adopted by IBM, were halted and abolished. Ten years later, BP was forced to close most manufacturing facilities at high cost in the face of stiff cost competition from China. In 2000, BP could have sold these facilities at market value and moved up the value chain. In 2010, it was too late.

As the significant changes in these two examples illustrate, business model innovation is clearly NOT about minor changes to the business model to capture easy gains in costs and efficiency, nor about a compliance driven adaptation to gradually minimise negative impacts.

Key Questions to Ask (Applicable to All Part V Cases)

How are synergies identified between sustainability and innovation success?
How can products, processes and systemic innovative solutions leverage sustainability issues and turn them into opportunities for companies?
How is sustainability-driven innovation leading to a new business model?
How is the transformation process rolling out?
What are the industry sector relevant competitive market positions aimed for? What needs are being addressed in the marketplace?
How is value created for each stakeholder?
What are the existing relevant resources to support these new positions?
Which new resources are required (knowledge, capabilities, relationships) and how are these resources acquired and integrated?

Chapter 22: Model Behaviour: 20 Business Models for Sustainability by Lindsay Clinton and Ryan Whisnant

The idea of business model innovation has long captivated business leaders. And yet, executives are often held back by vested interests in their current approach. But as global trends—environmental, social, political, technological—continue to shift the foundations of current business models, incremental innovation will become less effective in enabling companies, industries and whole economies to adapt and succeed. There is a pressing need for fundamentally different approaches to value creation.

The utility industry, for example, is currently confronting a mounting crisis within its existing business model. Changing regulations, rising fossil fuel prices, falling prices of renewables, and the arrival of improved energy storage solutions and other decentralized energy options will completely alter the playing field for large coal and nuclear-powered utilities. These large-scale, centralized systems have been disrupted by the rise of smaller, decentralized energy systems, especially those focused on delivering solar and other forms of alternative energy. While they once captured just a tiny, elite niche of the energy marketplace, companies in this space are now growing rapidly and helping speed the decline of the traditional, vertically integrated utility model. While many utilities are struggling to handle this disruption, some are acting quickly to adapt. RWE, a German utility with over 24 million customers across Europe, plans to shift its traditional utility model and instead use its expertise to help manage and integrate renewables into the grid, switching from being a power seller to a renewable energy enabler, what we would call a product as a service model. RWE is transforming from a "volume to value" business.

The proliferation of such innovation gets to the core of why the authors from Sustainability have written this contribution, trying to better understand which new business models are emerging, where innovation is happening, and how both new and established companies are experimenting to embed sustainability into the underlying structure of their businesses.

This is based on research and review of 87 company examples, and 20 distinct business models are indentified falling into five categories: environmental impact, social innovation, base of the pyramid, financial innovation, and diverse impact.

Chapter 23: From Incrementalism to Transformation: Reflections on Corporate Sustainability by Peter Lacy, Rob Hayward & Pranshu Gupta
This chapter provides an overview of how the sustainable business agenda has evolved over the last 10–15 years and asks whether it is now somehow stuck. This sentiment was echoed in the latest of Accenture's surveys of global CEO's carried out for the UN Global Compact in 2013. Business leaders think that, when it comes to sustainability, most of the "low hanging fruit" has been harvested in terms of efficiency and shared value and thus business model transformations are required to address major challenges like climate change, which are inhibited by only slowly emerging systems transformations necessary to facilitate sustainability transitions. System changes, going beyond system optimisation and partial system redesign—essential in areas like energy, transport, agro-food, and housing—require more than product and process innovation and are complicated by the involvement of a wide range of actors. According to global CEOs, the sustainability transitions are starting (too) slowly and at different speeds and trajectories for different sectors and different countries.[1] In the end, the feeling of CEOs is that this may end up being too little too late if vested interests prevail, sunk investments are defended to the end, and policy makers keep a short term (election-driven) horizon. CEOs concede that market forces may not suffice in driving change and that governments need to step in to correct both market failures and policy failures. The chapter argues that business leaders can do more, albeit it in a more interconnected, less firm-centric way.

Chapter 24: Umicore: A Case of Radical Reinvention by Nigel Roome and Victoria Jadot
Umicore, a Belgian multinational widely recognised as a leader in sustainable business in precious metals and materials as well as technology solutions for sustainable development, rose as a phoenix out of the ashes of its predecessor company Union Minière, which probably held the worst environmental and social record in the industry since its involvement in metal mining in the colonial era in Africa dating back to the beginning van the twentieth century. Its competitive position undermined by transformations in global markets and unable to adapt to change, its financial performance record was equally dismal. The case describes the 5 stages the company went through since the beginning of the nineties to achieve a world class position in its industry with sustainability embedded and institutionalised throughout the organisation. The case is particularly interesting because it highlights the role of change agents at the top and throughout middle management levels. They were involved in bringing about the transformation in a sequence of steps: creating vision; generating concepts relevant to the change; championing those concepts

[1] This view is underpinned by the research of Frank Geels of the University of Manchester Institute of Innovation Research (available on ABIS website supporting this book).

through organizational networks; creating communities of practice that explore, test and translate those concepts into actions and new practices, followed by creating new business models and management processes. The core concepts that senior management championed were closed material loops and clean technological applications and they committed a sixfold increased R&D budget to develop these concepts. In this way, a vision for the company developed such that it would define its future as providing material solutions to environmental problems while ensuring that the company's operations accorded with the highest possible environmental standards. At the core of the new culture were organisational learning and innovation for change. Umicore now is one of the best financially performing firms in the sector with a total return on capital consistently around 9%.

Professor Nigel Roome, a pioneer in the research on business and sustainable development passed away in early 2016 whilst we were putting this book together. His legacy will be of enduring value.

Chapter 25: IBM and Sustainability: Creating a Smarter Planet by Gilbert G. Lenssen and N. Craig Smith

IBM's *Let's Create a Smarter Planet* was launched in 2008 not by an ad campaign, as such, but by a serious speech of then CEO Sam Palmisano to the Council for Foreign Affairs in Washington. He explained how IBM wanted to contribute to a better, more sustainable world by leveraging the availability of data and networks. IBM communicated that it had something important to announce to the world, clearly going beyond a traditional marketing campaign for a new line of products and services. This was quickly followed up by a series of long text thought leadership pieces in leading newspapers like *The Wall Street Journal*, the *New York Times* and the *Financial Times* to highlight how forward-thinking leaders in business, government and civil society around the world can capture the potential of smarter systems to achieve economic growth, near-term efficiency, sustainable development, and societal progress. In 2010, Sam Palmisano followed up with another important speech at Chatham House in London, highlighting dozens of initiatives in which smarter systems were being created to solve the planet's most pressing problems. The speech aimed to inspire others to follow the leads of these innovators by helping to create a smarter planet. The case is a unique example of a major "shared value" initiative, but also of a business model transformation aimed at capturing the high value of sustainability up the value chain. Finally, IBM's initiative is hailed by marketing scholars and practitioners as revolutionary in the way it gets its messages across and maintains momentum, not in the least by employing a "Chief Story Teller" who gives the business successes a story-like narrative with human faces. It has been an outstanding success. The case asks the question: is it a long-term sustainable business model within the competitive landscape?

Chapter 26: Waste Concern: Fixing Market Failures by Joanna Wylegala and Christian Selos

Sustainable development challenges give ample opportunities for large companies, but also for entrepreneurs at the grassroots. Originating from an NGO undertaking research in waste management, Waste Concern became a for-profit enterprise inspired by the compelling idea of turning a massive problem (uncollected, unprocessed waste in Dhaka, the mega capital city of Bangladesh) into a business opportunity, thereby creating value for multiple stakeholders: the city inhabitants, local government, farmers, as well as making good returns for the business. A small scale decentralised model was piloted of house-to-house collection, composting in small plants, and marketing the compost as organic fertiliser to improve agricultural yields and reduce the toxic and land destroying use of chemical fertilisers. The newly created value chain addressed major challenges. First, the hazards caused by largely uncollected or unsafely disposed waste in a city of over 11 m inhabitants (and growing). Second, population growth far exceeding agricultural crop output due to improper waste management and the misuse of millions of tons of chemical fertiliser. To help address these major challenges, the small entrepreneurial venture needs to scale up quickly and face the critical organisational, operational, and financial choices to be made.

Chapter 27: Uber and the Ethics of Sharing: Exploring the Societal Promises and Responsibilities of the Sharing Economy by N. Craig Smith and Erin McCormick

Business models like those of Uber (transportation services by cars) and Airbnb (lodging services in private homes) with little more than an investment in a website are growing fast from small entrepreneurial start-ups to global scale companies and proving to be very profitable. They claim to contribute to the better-shared use of underutilised assets like private cars and apartments and therefore to increased environmental sustainability. The business model is disruptive, undermining the profitability of taxi companies and hotels in serious ways, a case example of creative destruction, which is inherent to growth by innovation in a market economy. However, the ethos of sharing is increasingly brought into discredit by accusations of creating a black economy with hidden employment, evasion of taxes, and omitted contributions to a social security system already under strain. To its critics, this black economy replaces an established economy which contributes to regular employment of a vast number of lowly skilled workers in the taxi and hotel industry, pays corporate and income taxes and social security contributions. This “sharing economy” also poses regulatory challenges with respect to fair competition, safety standards and consumer protection. Is the social cost of environmental gains too high? Or is this the price to be paid for disruptive innovation that promises future growth?